1. CHAPTER ONE: INTRODUCTION

1.1 Introduction

Third-party logistics (TPL) service providers are an important and growing feature of today's information and knowledge-based economy (Yeung et al., 2012). TPL service providers specialise in integrated operations, warehousing and transportation services that can be scaled, customised and differentiated to fit customers' needs based on market conditions, geographic customer-base spread and the demands and delivery service requirements for their products and materials. Nowadays, the TPL services portfolio has expanded beyond logistics and includes value-added services related to the procurement of goods, inventory management, production, information technology (IT) systems solutions, consultancy in international trade rules and domestic customs regulations, and a range of services that integrate other parts of the SC (Hertz & Alfredsson, 2003). Hence, in recent times, providers such as DHL, TNT, CEVA, Expeditors International, UPS, FedEx and others have expanded their services portfolio and are now called third-party supply chain management (SCM) providers.

Large firms with global operational reach and a globally spread customer-base offering a large range of complex products and services inevitably need to develop in-house complex SC to meet customer demands and maintain an effective competitive advantage in their respective markets. Consequently, these firms may either further invest in their own SC or focus on their core competencies by outsourcing their SC logistics to TPL service providers.

From the TPL perspective, this type of outsourcing contract could involve significant cost in large investments in systems, infrastructure, and professional staff to perform and deliver to the contractual logistics services obligations. Consequently, TPL service providers tend to be concerned with asset specificity because of the uncertainty in long-term strategic cooperation and coordination relationships between the TPL service provider and the customer. From the customer perspective, while outsourcing the logistics services to a TPL service provider allows more focus on core competencies, possible lack of long-term commitment from the TPL service provider to the customer and the end-customer could result in deterioration in service quality, customer dissatisfaction and loss

of market share. Hence the problem of ensuring the alignment of the SC partners' strategic objectives is of significant relevance and importance to the success of the SC (Fawcett & Magnan, 2001). Accordingly, alignment when implemented could have genuine influence on improving and facilitating the ease of exchanging and sharing knowledge and ultimately on the performance of the SC.

The inter-organisational relationship (IOR) among SC partners presents another problem pertaining to how the customer can face control problems; what type of and how MCS can be defined, utilised and mobilised to deal with relationship control problems individually or concurrently. Even when the global firm is engaged in a successful relationship with SC partners with the partnership achieving the performance targets contractually agreed, the lack of overarching strategy to map and manage the entire SC relationship life-cycle could mean success is unsustainable. Global firms need a comprehensive strategy that manages the portfolio of SC alliances from the vendor selection stage throughout the life of the relationship and eventually its termination.

Section 1.2 of this chapter provides a brief background to the logistics outsourcing practice of TPL service providers, the global industry, the current economic environment, trends in the industry, its importance and the advantages and disadvantages of logistics services outsourcing to TPL service providers. In addition, the section briefly covers partners' SC alignment, relationship control problems and the MCS utilised. In Section 1.3, a background to the relevant literature is provided, including identifying gaps and the research opportunities the study aims to cover. Section 1.4 outlines the research questions of this study, followed by Section 1.5 on the research method used. Section 1.6 explains the thesis structure.

1.2   Background on the TPL industry

In a SC, the core company providing services or products is considered the first-party, while the customer (or customers) is deemed as the second-party. In such a case, a third-party is a firm hired to do what neither the first nor the second-party desire to do. A TPL firm provides outsourced or "third-party" logistics services to companies for some or all of their SCM functions (Coyle et al., 1992; Forrest et al., 2008).

TPL service providers specialise in integrated warehousing and transportation services that can be scaled and customised to customer needs based on market conditions and the demand and delivery service requirements for their products and materials (Skjoett-Larsen, 2000). The provider role has

been evolving from a predominately transactional role to one that is more strategic in nature. The TPL industry evolved in the 1970s during a time of expanding globalisation and an increased use of IT (Song & Regan, 2001). These trends resulted in increased demands on firms, and possibilities for companies to operate more competitively in regional and global markets. The first generation of providers in the1970s and1980s offered services such as transportation, brokerage, and shipping, while the second generation of TPLs in the 1980s and 1990s were mostly asset or non-asset based companies with increased service offerings. The third generation of TPLs from 2000 onwards have been mostly web-based providers with advanced SC integration capabilities (Nemoto & Koichiro, 2007).

With globalisation, an increasingly competitive environment has resulted in companies striving to develop strategies that generate an advantage over their competitors (Christopher, 1998). Competition is no longer between companies, but among SCs (Li et al., 2006), and consequently without knowing the SC strategies of their competitors, it is difficult to benchmark themselves with the best solutions. While some companies could maintain a sustainable competitive advantage without recognising its source, if neither the company itself nor the competitors are able to recognise the source of their competitive advantage it will not be sustainable (Lippman & Rumelt, 1982).

Outsourcing has been traditionally perceived as the driver of the contract logistics sector where large corporations aim at focusing on business core competencies, which in most cases did not include logistics. Generally, a number of large companies divested their transport assets, although this was often more about return on those assets than getting rid of the management of logistics. This outsourcing trend has been complemented by the need to manage global SC, resulting in a new structure for the logistics industry. In an increasingly global market, and to support the manufacturing, marketing and distribution of their products and services, providers' clients felt the need to provide management capabilities as well as transport and warehousing assets. With the increasingly globalised nature of the contract TPL service provider market, SC for many product types now stretch across the world driven by the dynamics of different value-adding processes taking place in a diverse range of countries. This type of change has had an enormous impact on logistics. Company SC logistics systems are not only now more important strategically, but the nature of activities has also changed. The geographic reach of SC demands logistics services with coordination capabilities and access to vast physical resources. Issues such as inventory management have become more complex with off-shore manufacturing operations and product spread across world trading routes (Manners-Bell, 2011, p. 57).

Recent trends in the outsourcing of logistics activities have given special attention and importance to the concept of TPL service providers. Accordingly, they have become increasingly influential in the context of SC since the extent to which the logistics functions are prudently undertaken will influence effectiveness and consequently the performance of the overall SC. This will require providers to have a sophisticated understanding and collaboration with clients in order to understand their business and assist in improving the SC processes. Therefore, a closer relationship between providers and their clients may result in improvements to the performance of the SC. To a large extent the competitiveness of providers depends on their ability to add value to the bottom line of their clients' business and achieve end-customer satisfaction. Through effective cooperation with their clients, providers learn their business processes and practices and introduce innovations aimed at improving the performance of the SC. The concept of SCM has reinforced the restricted boundaries of logistics through a more comprehensive management that encompasses the entire value system from suppliers to customers (Handfield & Nichols Jr, 2004). The official definition adopted by the Council of Supply Chain Management Professionals provided that link between SC and logistics management (www.cscmp.org):

> *''Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities. Importantly it also includes co-ordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies''*.

This definition highlights the importance of TPL service providers and their key role in the context of improving SC performance through collaboration and the integration of all logistics management activities. Peck et al. (1999) argued that the dominant form of competition in coming years will be between networks of SC relationships rather than between individual organisations. This underlines the importance of the relationships among SC partners in achieving effectiveness and competitiveness in SC and the agreed levels of performance. From a relationships perspective SC take on even more importance because of the control problems arising in delivering relationship performance and the challenges of meeting agreed client target key-performance-indicators (KPIs), and the sharing of information and knowledge between multiple suppliers and partners (Weitz & Jap, 1995). It has been recognised that in order to create a competitive advantage, SCM increasingly emphasises cross-functional and inter-organisational co-ordination of activities (Ballou et al., 2000; Tan & Kannan, 1998). Relational capabilities are important to the success of SC, and the value of organisational

learning and innovation in terms of improving TPL service providers' SC effectiveness and SC performance (Panayides & So, 2005).

TPL service providers are an important and growing feature of global and domestic economies. In 2010, data collected by Armstrong & Associates estimated the magnitude of global TPL service providers revenues at about US$507.1 billion (Cap Gemini, 2010). The TPL service providers' revenues that were included in the 2010 TPL Study were: Europe US$162.3 billion, North America US$128.1 billion, Asia-Pacific US$136.7 billion, Latin America US$27.6 billion, and Other Regions US$52.4 billion. Armstrong & Associates also reported that providers' revenues were expected to increase, and while 2009 was challenging for the global economy, the mid to long term outlook projections suggest a good but modest return to growth in the TPL sector. At the same time, the study showed that significant uncertainty about the global economy continues to impact logistics spending and use of TPL service providers. Respondents to the Armstrong & Associates study (Cap Gemini, 2010) devoted an average 11% of their companies' sales revenues to logistics, and an average of 42% of that was directed to outsourcing of logistics services, that is 10 to 15 percentage points lower than in recent years. This may mean that on average, customers were able to scale back their expenditures for TPL services faster than they were able to scale back their total logistics expenditures. At the same time, 65% of respondents reported an increase in use of outsourced logistics services.

Transport Intelligence, as one of the world's leading providers of expert research and analysis dedicated to the global logistics industry, reported that the global contract TPL sector bounced back in 2010 as most economies experienced positive GDP growth and a rebound in world trade. The growth rate in 2010, at 8.36%, was not quite back to the levels of growth seen before the economic downturn and the overall size of the market is still below that of 2008 (Transport Intelligence, 2011). The overall findings of the Transport Intelligence report support the findings of Armstrong & Associates (2010) and warrants the TPL services industry an important position on the agendas of companies. This is particularly relevant to large corporations and points to an important role providers can play in the overall success of businesses with a logistics component in the achievement of their organisational goals and strategic objectives.

The size of the TPL service providers market and the strategic competitive advantage of the SC dictates the need for corporations to devote enough attention, efforts and resources to the selection of those TPL service providers that can achieve their organisational goals and SC strategic objectives.

The outsourcing of logistics activities to TPL service providers has become a common practice driven by organisation's' need to concentrate on core competencies, cost reduction, development of SC

partnerships, restructuring of the company, success of the firm using contract logistics, globalisation, improvement of services, operational efficiencies and other factors (Hertz & Alfredsson, 2003; Razzaque & Cheng, 1998; Skjoett-Larsen, 2000). Among other reasons for outsourcing, there is the capabilities of providers to support their clients with the expertise and experience that otherwise would be difficult to acquire or costly to have in-house (Razzaque & Cheng, 1998). In the TPL survey of Langley et al. (2003), researchers found that the most common outsourced SC activities are warehousing, freight and distribution, and customs brokerage. With the growing trend of logistics outsourcing, many providers now offer a range of services that encompass business-to-business relationships, where not only the client is a critical stakeholder but also end-customers that are directly affected by the quality of service of the provider and where the provider has direct impact on end-customer satisfaction and client market share. This development in logistics outsourcing has taken the provider-client business relationship to a partnership level and forced a revised set of criteria for the selection of a provider. The selection of a provider capable of handling the logistics activities of the outsourcing company has become increasingly complex due to the complexity and sophistication of the outsourced business operations, products and services, and the global and regional spread of the client.

To this end, one of the major characteristic of TPLs is the expanding range of outsourced logistics activities and tasks they can perform, customised services they provide, and many other activities and services they can handle, such as SCM IT systems, and a variety of consultancy work, studies, simulation analysis and expert knowledge. These are activities added to traditional responsibilities that may involve all or some of transportation, distribution, warehousing, material handling, inventory control, packaging and inspection works (Bolumole, 2001). According to (Sowinski, 2005), among some of the other services offered by TPL service providers in the current market are:

- dedicated contract transportation and transportation management;
- inventory and warehousing management;
- freight and freight forwarding management and audit;
- shipment tracking and tracing, and SC it systems support;
- reverse logistics and value added services;
- SC consulting services, SC optimisation services, simulation analysis; and network infrastructure feasibility studies.

There are advantages and disadvantages associated with contracting SC functions to TPL service providers when corporations aim at outsourcing part or all of the SC function. The obvious downside

is some loss of client control over managing the SC when entrusting critical segments of a business to TPL service providers. On the positive side, a company can benefit from the knowledge and expertise of specialised TPL firms with assets and contacts otherwise unavailable. Some of the advantages and disadvantages of TPL service providers, as described in Forrest et al. (2008), are listed in Table 1 below.

Table 1: Advantages and disadvantages of using TPL service providers (Forrest et al., 2008, p. 10)

Advantages and Disadvantages of Using Third-Party Logistics Providers	
Advantages	**Disadvantages**
Cost reduction	Loss of control over the logistics function
Improved efficiency, service and flexibility	Impact on in-house workforce
Focus on core competency	More distance from clients- loss of personal touch
Freeing up resources	Discontinuity of services of a 3PL provider
Elimination of infrastructure resources	Differences of opinion or perception of the service level of the 3PL provider
Risk- sharing	
Better cash flow	
Access to resources not available at one's own organisation	

Despite the advantages of using TPLs, clients of service providers can also face disadvantages arising from utilising TPLs with new kind of issues and challenges ranging from vendor relationship control problems, to vendor relationship selection and termination, redistribution of in-house workforce and resources, to the concerns of clients of becoming distinct from their end-customers and the dynamics of the markets as well as other issues pertaining to SC partners strategic alignment, and other types of problems relating to cooperation and coordination in the partnership (Caglio & Ditillo, 2008; Caker, 2008; Dekker, 2004).

In addition to the important task of devising the right tools and strategies to manage TPL service providers over the life of the relationship, the key to successful outsourcing of logistics services lies in firstly finding the provider that has the most strategic fit with the company's organisational goals and SC strategic objectives. After selecting the right provider, the focus of primarily the customer and then the provider is managing the relationship with the provider or set of providers to ensure effective co-management of the SC and ultimately the achievement of optimum performance.

As mentioned earlier, the nature of the customer's business, the complexity of the product and services, as well as the geographic spread of the customer's operations have a major impact on the

type of business transaction, the complexity of the control problems and subsequently the design of the management controls utilised to confront and resolve these issues and control problems. Control problems can develop into any combination of coordination, cooperation or misappropriation issues and can adversely impact the relationship. Resolving these problems and issues poses a challenge to the customer and providers and whether these issues are resolved will depend primarily on the design and use of formal and informal MCS put in place by the customer (Caglio & Ditillo, 2008; Dekker, 2004, 2008).

Given the large scale of the TPL service providing industry and the related logistics outsourcing sector, as well as the important role providers play in the growth of global, regional and domestic economies through supporting cross-functional SC activities, it is equally important to investigate the issues that prevent the success of the provider or vendor relationship with the customer. At the top of the list of issues and problems faced by SC partners and that could pose a creeping threat of failure to the providers, customers, and eventually the industry, are relationship control challenges and problems. Consequently, protecting the logistics outsourcing and TPL service providing industry to a large extent depends on providers and customers designing and applying the right governance structures and, more specifically, the right set of MCS to overcome the control problems.

Strategic alignment is an important prerequisite and the minimum requirement of a successful provider or vendor and customer relationship. While strategic, operational and structural alignment is crucial in ensuring a successful relationship, engineering the relationship requires the customer to have full and detailed strategies, policies, and procedures that customer SC managers understand and can apply to manage the relationship with the vendors.

1.3   Relevant literature

In this section the research literature on SCM, organisational and SC alignment, governance and MCS, and alliance portfolio management is reviewed, with the aim of linking and extending theories in these fields and addressing research gaps.

The relevant literature emphasises alignment of SC partners as important. Frohlich and Westbrook's (2001) study confirmed the growing consensus regarding the importance of SC strategy integration and alignment (Cammish & Keough, 1991; Close & Clinton, 1997; Eloranta et al., 1991; Freeman & Cavinato, 1990; McGinnis & Kohn, 1990, 1993; Morris & Calantone, 1991; Reck & Long, 1988).

Hence, there is merit in looking into alignment among SC partners to realise their SC strategic objectives and how this alignment is pursued. Alignment of SC across SC partners involves alignment of goals, interests, processes and a certain level of integration of processes and systems, which could vary according to the nature of the relationship (Cigolini et al., 2004) The alignment when involving TPL providers takes an inter-firm or inter-organisational dimension and consequently influences the SC partnership.

Lack of alignment and integration of SC partners' strategic objectives could result in risks of failure of the SC partnership inter-firm relationship and miss-alignment among SC partners. Fawcett and Magnan (2001, p. 119) conducted research work in the area of SC alignment with a thorough literature review of the factors that can impede the effectiveness of the SC integration and alignment. Defee and Stank (2005) suggested a comprehensive theoretical framework to understand the relationship of strategy, structure and performance.

A review of the prior literature and, in particular, the research works of Fawcett and Magnan (2001) and Defee and Stank (2005), covered SC alignment from different perspectives but gaps were reported where Fawcett and Magnan's (2001) study focused on the strategic dimension of the SC alignment by only looking at the common goals and objectives, shared mission and vision and common operating procedures. On the other hand, Defee and Stank's (2005) research presented a theoretical framework on strategy, structure and performance in SC partnerships but called on researchers to test their theory application in a SC partnership setting.

Defee and Stank's (2005) application of a theoretical framework to the Strategy-Structure-Performance in practical SC partnership case remains untested and Fawcett and Magnan's (2001) investigation of how the three dimensions of alignment, i.e. strategic, operational and structural are pursued and applied in SC partnerships, also required further investigation. These gaps in the literature on SC alignment, point to insufficient empirical research on how the three dimensions of alignment are pursued, presenting an opportunity to investigate and understand how strategic, operational and structural alignment together are pursued in SC and the effects of their implementation.

The literature on MCS presents multiple definitions and several frameworks exist. Chenhall (2003) found researchers sometimes use the terms management accounting (MA), management accounting systems (MAS), MCS, and organisational controls (OC) interchangeably. MA refers to a collection of practices such as budgeting or product costing, MAS refers to the systematic use of MA to achieve a goal, and MCS encompasses MAS, and includes other controls, such as personal or clan controls. OC

is sometimes used to refer to controls built into activities and processes, such as statistical quality control and just-in-time management. Prior MCS research literature has found that "the variety of the characteristics of archetypes and of the corresponding situations leads to some indefiniteness of conclusions … inconclusiveness is even more severe if we consider that the findings proposed by contributors are in some cases contradictory" (Caglio & Ditillo, 2008, p. 874).

According to Chenhall (2003), the definition of MCS has evolved over time from a formal one focusing on financially quantifiable information to assist managerial decision making to one that comprises a much broader scope of information. Consequently, the definition has evolved to include external information relating to markets, customers, competitors, and non-financial information relating to production processes, predictive information and a broad array of decision support mechanisms, and informal personal and social controls. However, approaches of sociological orientation see MCS as more active, offering individuals with the power to achieve their own ends. Chenhall's (2003) definition of MCS was found to be the broader among the other definitions, confirmed by Malmi and Brown (2008), and consequently was adopted for the purposes of this research.

The prior MCS research literature reviewed found that "the variety of the characteristics of archetypes and of the corresponding situations leads to some indefiniteness of conclusions … inconclusiveness is even more severe if we consider that the findings proposed by contributors are in some cases contradictory" (Caglio & Ditillo, 2008, p. 874). Consequently, Chenhall's (2003) definition of MCs and Dekker's (2004) classification of MCS were found to have appropriate relevance and fit to this research.

 The inconsistencies and inconclusiveness of findings in previous studies suggest that there is a need to study the problem-oriented approach of integrated MCS packages. Hence, examining control problems requires an integrated examination of MCS (Malmi & Brown, 2008). Therefore, this research addresses the packaged MCS approach utilisation and mobilisation in response to control problems by taking the view of problem-oriented MCS packages; control problems considered are coordination, cooperation and misappropriation concerns in IORs.

Regarding the impact of MCS on SC performance, a gap was identified in the prior literature reviewed where integrated packages of MCS were not linked to knowledge transfer (Choy et al., 2008; He et al., 2007). This presents a research opportunity to address the impact of MCS on performance comprising the exchange of services and exchange of knowledge.

The alliance portfolio is a new area of focus in management. The alliance portfolio management approach is thought to offer the SC customer organisation the necessary tools, techniques, dynamics and strategy to manage the mix of vendors' capabilities and competencies (Hoffmann, 2007; Wassmer, 2010). This approach could help to meet the SC strategic objectives and to manage the vendor relationship throughout all the different phases of the relationship, starting from vendor selection to vendor relationship termination. It takes control over the relationship in a scalable manner by which the complexity of the transaction or business would not limit the ability of the customer or buyer to fully control the relationship and ensure the vendor performance is maintained at optimum levels (Draulans et al., 2003). The advantage of utilising the alliance portfolio management approach is the customer capability to systematically manage the vendor relationship individually, as well as collectively and concurrently. The alliance portfolio management approach, when deployed internally by the SC firm and synchronised with the implementation of the alignment processes between vendors and customer, could facilitate the exchange and sharing of knowledge (Parise & Casher, 2003). Wassmer (2010) recommended the testing of the alliance portfolio management approach utilisation in other areas of IORs. This presents a research gap to be investigated and studied, that is the utilisation and role of alliance portfolio management in service supply chain (SSC) set up and the influence on individual alliances.

1.4   Research questions

The review of the research literature suggested the following gaps to be addressed and these gaps were the basis for formulating the research questions. The main contribution of this research is in bringing together the theoretical perspectives and bridging the research gaps between the supplier-customer inter-organisational relationship, strategic, operational and structural alignment, MCS design, control problems, alliance portfolio management, and overall relationship performance management. Furthermore, the research attempts to explain how the strategic, operational and structural alignment of organisational goals and SC objectives can create a sustainable competitive edge to the inter-organisational relationship or network of partners and improve the SC performance using the SC partners' mix of competencies and capabilities as configured under the alliance portfolio management strategy and theory.

This study aims to address the following research questions:

RQ1: How is alignment pursued in SC and what are the effects?

RQ2: How are management controls mobilised in response to control problems by buyers and suppliers? What are the performance effects, comprising the exchange of services and exchange of knowledge?

RQ 3: What role does alliance portfolio management play in the management of individual alliances and how does this change the way management controls are utilised?

1.5   Research Method

The research follows an exploratory case study approach in its design, structure and process. It is an empirical investigation that aims to explore a contemporary phenomenon in a real life context where the boundaries between phenomenon and context are not evident, and multiple sources of evidence are used (Pettigrew, 1990, p. 267). The relationship is the unit of analysis in this multiple-case study of a single buyer and its relationship with three TPLs.

The decision to adopt the comparative case method of multiple-case study as the appropriate approach for this research was based on the approaches of Yin (1984), Eisenhardt (1989), Pettigrew (1990), and Stuart et al. (2002) of theory-based multi-case study approach, theory building and enhancing, detailed open, specific and focused analysis, and qualitative and quantitative data.

Case selection of the case study organisation, STI (Smart Tech Inc.), and the three vendors for this study follows Pettigrew (1990) "planned opportunism", where multiple data collection methods were utilised as research instruments of data gathering techniques. The methods are comprised of interviews, documentation and archival data, and participant observations.

1.6   Thesis structure

This case study investigates the impact of STI's global governance model, encompassing the strategic, operational and structural alignment initiative and the alliance portfolio management approach in an uncertain business environment on the design, packaging and mobilisation of the formal and informal management controls under the influence of the global corporation (Pettigrew, 1990; Vélez et al., 2008b; Yin, 2003a, 2003b). The study examines the impact of the above governance model on management controls design, synchronisation, utilisation and mobilisation and on the control problems pre and post the introduction of the governance model. The study also examines the impact of exchange of services and knowledge on the relationship performance. Interviews were conducted with the vendor-customer relationship stakeholders and also the researcher engaged in onsite

observations and attendance of the global quarterly business review meetings (QBR meeting) and other types of meetings between vendors and customer over a period of time.

This study is organised in six chapters: Chapter One introduces the research and its background and justification, as well as an overview of the literature review, research questions and methodology presented. Chapter Two presents the literature review, which leads to the identification of the research gaps and opportunities and research questions development, and the research constructs and research framework. Chapter Three aims at developing the research design and methodology, the research scope and process, as well as the development of the research instruments and case selection. The chapter also covers data gathering techniques of interviews, documentation and archival data, and participant observations, and provides details of the three vendors and customer. Chapters Four and Five focus on data collection and data analysis and link the potential outcome to the research questions. Finally, Chapter Six discusses the research findings in response to the research questions. In addition, the research limitations and implications for theory, practice and future research will be discussed.

2. CHAPTER TWO: LITERATURE REVIEW

2.1   Introduction

In Chapter two, research literature on SCM, organisational and SC alignment, governance and MCS, and alliance portfolio management is reviewed with the aim of establishing pre-existing knowledge and identifying research gaps. Particular focus is directed at analysing the dynamics of influence of alignment among partners and within the SC as an inter-organisational relationship on design and utilisation of MCS, their impact on performance comprising the exchange of products, services and knowledge, and the role alliance portfolio management plays in the relationship management control process before and after the governance model change.

In section 2.2, the research literature on SCM outsourcing is discussed focusing on TPL service providers' role in driving the strategic inter-organisational relationships of partnerships and in achieving the SC partnership strategic, operational and structural alignment, and the impact on performance. In section 2.3, the research literature on MCS types and definitions is outlined with emphasis on the imperatives of adopting a control-problems' oriented design, utilisation and mobilisation of packaged management controls. Section 2.4 discusses the research literature on alliance portfolio management, focusing on the case for utilising this approach in SCM with attention to the alliance portfolio tasks, approaches, configurations and tools and the application of the alliance portfolio approach in addressing the strategy issues of TPL vendor selection, performance management and measurement and vendor relationship termination.

2.2   Supply Chain Management

In this section, areas of firm SC outsourcing and TPL service providers in the relevant literature are reviewed and discussed. Next, the literature on SCM and alignment is discussed as well as the effects of SC alignment on performance. This discussion aims at identifying gaps in the literature that point to problems that have not been adequately addressed and which present research opportunities.

2.2.1 Outsourcing and Third-Party Logistics Service Providers

Outsourcing as an organisational strategy and outsourcing of SCM is the contracting of any service or activity to a third-party (Drtina, 1994; McHugh et al., 1995). Over the last two decades, considerable growth in outsourcing has been witnessed in both the public and private sectors, mainly in manufacturing and logistics activities, but also in traditional in-house administrative and management functions. These activities or functions include data processing and IT operations, human resource management services, accounting functions, and internal audit and marketing (Chalos, 1995). The practice of outsourcing is an international phenomenon that has been adopted by businesses in the USA, Europe and other regions around the world. In Australia, the Commonwealth Bank has outsourced its IT, printing, record centres, supply functions and mail operations (Long, 1998).

Lieb et al. (1993) provided some initial understanding of how firm outsourcing logistics activities to TPL service providers were perceived two decades ago. The common perception at that time was that the outsourcing of TPL and contract logistics generally were the same. Abdur-Razzaque and Sheng (1998) followed a similar path by finding that there is no difference between outsourcing logistical functions and any other procurement process. It is perceived that, like a reliable supplier of materials and parts, contract logisticians should also provide their clients the highest levels of support and service satisfaction to develop their competitive edge.

Traditionally logistics services are handled internally by the firms as support functions. Logistics activities such as transportation, distribution, warehousing, inventory management, order processing and material handling have been considered as non-core competencies and consequently given low priority and focus compared with other business core functions. With product commoditisation, focus on value-add services and the need for developing sustainable competitive advantage, the growing emphasis on providing good customer service effectively and efficiently, and the strategic value of focusing on core businesses and re-engineering resulted in the evolution of outsourcing logistics which is very different from traditional logistics (Lieb, 1992; Sheffi, 1990).

Song et al. (2000) found that increasing competitiveness and complexity have made logistics outsourcing a strategic option rather than a make-or-buy decision based on cost efficiency. Saying this, a company may decide on pursuing logistics outsourcing for different reasons including: lack of logistics expertise; the desire to focus on the organisation's own core competencies; difficulty in maintaining and keeping up with communication and IT trends; the need to improve system capabilities along the global SC; and the importance of building flexibility within available resources.

Hence, among other factors representing the driving force behind decisions of outsourcing, globalisation of business has been viewed by many as one of the most prominent (Rao et al., 1993; Sheffi, 1990). The continued growth in global markets and foreign sourcing of material and services has increased the demand for specialised and qualified logistics service providers (Cooper, 1993; Fawcett et al., 1993; McCabe, 1990). Consequently, globalisation has led to the development of more complex SC requiring the involvement of transportation and distribution managers in international logistics operations where those managers lacked the essential knowledge of international trade and customs; and an understanding of destination countries' infrastructure and systems. This situation placed extensive pressure on firms to acquire the expertise of third-party SC logistics vendors. Logistics vendors often have a global expertise that is highly valuable but costly to develop in-house by firms. Thus, outsourcing can allow a company immediate access to resources, equipment, and management expertise that would be very costly to develop internally. Wal-Mart's decision to outsource is a case in point (Song et al., 2000).

Just-in-time (JIT) principles and its adaptation has been considered a major factor in justifying the case for outsourcing (Sheffi, 1990). In a complex and costly JIT delivery environment, inventory and logistics control have become even more crucial to manufacturing and distribution operations, which led many organisations to adopt the concept and supplement their own resources and expertise by using sources outside their corporate structure.

Technology and versatility of TPL service providers are two other important drivers of outsourcing. A company may be quite capable of handling its own logistics management, but may prefer to allocate its resources to its core competencies. It is resource consuming to develop and implement new technologies in-house. As an alternative, firms can utilise TPL service providers' resources, and increasing customer satisfaction, lowering liability costs, and optimising inventory levels. Need for information in a very competitive environment, where time and information are of unprecedented importance to both customer and suppliers, is extremely important through state-of-the-art communication and information systems to satisfy customer demands. Such information might include inventory control, ordering, delivery, and other critical elements when considering closed-loop SC services. Versatility and flexibility of TPL service providers enables them to provide their customers improved controls, technology, and location with respect to their global operations, and in turning fixed costs into variable costs. IT systems can be reconfigured to reflect the changing requirements of customers, in addition to changes to the markets and technological advances. Further, by outsourcing, the company can conceivably reduce its asset-commitment, preserving or investing the resulting capital more efficiently (Abdur-Razzaque & Sheng, 1998).

Outsourcing enhances the overall quality of performance in the global SC and allows a company to change its strategic allies and structure of alliances, including TPL service providers if they do not perform to agreed standards, contracted service-level agreements (SLAs) and Key Performance Indicators (KPIs). It not only allows the outsourcing organisation to achieve operational goals, such as cutting cycle and delivery times and ensuring accurate shipments, but it also promotes competition among service providers, motivating them to continue renewing and refining their services. At the strategic level, TPL service providers are not only required to abide by contracts, SLAs and KPIs, but also to recognise the strategic objectives of the principal organisation and the SC members (Song et al., 2000).

Overall, current research indicates that customers of TPL service providers place significant value on the services they are provided, technologies they use and the benefits of costs savings they achieve. The implication shows that customers see a focus on service based solutions as providing a set of benefits beyond mere cost control (Power et al., 2007).

With the growing trend of logistics outsourcing, TPL service providers are now offering a variety of services. These services, among others, involve business-to-business relationships, where not only the user is a critical stakeholder but also his customers who are directly affected by the quality of service of the provider (Jharkharia & Shankar, 2007).

Hertz and Alfredsson (2003) argued that the growth of the TPL business has caused many firms to enter the field and in developing their strategy, the new entrants have been shown to be highly influenced by existing business and its network. However, at a later stage the case firms in the study focused on moving into more advanced and complex services, such as fourth-party logistics services at the expense of their traditional business strategy. This move into TPL seems to have been based on following, and integrating with, existing customers rather than being a strategic choice. This adjustment can be described as a learning process where the TPL providers are part of the development of the emerging field. The new entrants mostly lack the knowledge to decide what they want in the earlier stages. Rather, at this stage, the TPL business is mostly value-added services to existing business. Therefore, they undertake to perform services that are less profitable and less interesting from a development perspective, which they might avoid later on.

In their study, Hertz and Alfredsson (2003) found that in the process of adjustment, the TPL business is often separated from traditional business functions and subsequently it tries to develop into the higher end, taking a larger part of TPL customers' activities. In one way, TPL service providers tend to move into a higher degree of internationalisation with more mergers and acquisitions between

different TPL providers. With intensified competition and the pressure to increase the knowledge of the different types of TPL service providers, it becomes necessary to form alliances where for instance, consultants join TPL service providers firms with an advanced knowledge in transportation management and warehousing, IT and communications, international trade practices and other areas of specialisation. Hertz and Alfredsson (2003) conclude that since the network of TPL service providers heavily influenced strategic development it could be that this trend will continue to the next stage. Therefore, both customers and TPL service providing partners will heavily influence the business development because the TPL service providing firms will always has a high degree of customer adaptation. However, it is important that the dynamics of the adaptation process between TPL service providers and customers take place in a strategic readjustment and realignment environment.

These arguments are supported by the research work conducted by Persson and Virum (2001). Their two studies of six organisations cooperating in two SC alliances found that due to industry pressures and individual strategic position, strategic choices were increasingly limited and led to some strategic directions that may explain the structural changes in the industry.

Significant global growth in utilisation of TPL provider services as part of outsourcing the logistics functions of the firm across different industries and geographies have been witnessed over the last two decades (Aktas & Ulengin, 2005; Coyle et al., 1992; Ohmae, 1989; Peters et al., 1998; Phusavat & Kanchana, 2007, 2008; Sahay & Mohan, 2006).

Bolumole's (2001, 2003) research represented a shift from traditional and functional TPL to comprehensive SC solution relationships that had significant implications for the role of TPL service provider. The research reported on four factors that influenced TPL SC function and played varying roles in the SC: the strategic orientation of the outsourcing organisation; its perception of TPL roles within logistics strategy; the nature of the resultant client-TPL relationship; and the extent to which logistics is outsourced.

Bask (2001) noticed the increasing use of SCM term in logistics research, representing an opposite view to the functional perspective studied in logistics where purchasing, supply manufacturing and selling are separate functions. Drawing on Christopher's (1992) work on SCM, Bask considered the SC to consist of a chain of vertically networked companies from raw material producers for the consumption of end-users. Christopher (1992, p. 5) identified the SC as "the 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 customers". Pagh

and Cooper (1998) considered an effective SCM to include creative thinking as to how to integrate and perform logistics and manufacturing activities.

In his study, Bask (2001) discussed a strategic perspective for organising TPL services aimed at assisting in the development of different types of SC strategies. There has been a movement of growing importance for TPL providers to provide logistics strategy solutions for their customers in a more efficient way rather than functional logistics support of the business operations.

The relationship between TPL provider and principal firm has significant impact on SC performance and the firm's competitiveness. In order for an organisation to achieve the full potential of competitive advantage, the outsourcing of the logistics functions to a TPL provider needs to be fully integrated in the organisation's SC strategy.

Indeed, market competitive forces and customers' ever evolving demands for customisation and specialised products and services have placed organisations under pressure to bring out not only more technologically innovative products at an affordable cost but to provide the customer with the unique value-added and competitive edge in the respective market. Hence, organisational relationships can no longer survive on a transactional-basis relationship but must build this relationship in the context of networks, alliances and partnerships (Vandermerwe, 1996, p. 773).

The knowledge and resources required to develop and produce complex and sometimes customised competitive products, services and business solutions can be very specific because customers do not want to buy such products "off-the-shelf" but want suppliers to take on the responsibility of facilitating customer processes. In these cases suppliers need to perceive and perform their role as service providers rather than manufacturers. Consequently, the relationship between the customer and suppliers has evolved from a transactional to an on-going interactive one between the customer owned processes and the enabling organisations.

To preserve continuous customer satisfaction and a competitive edge in the market, optimisation of the inter-organisational processes and relationship assumes a sequential structure of SC. It also requires improved interaction between the principal organisation and suppliers and improved SC performance to build close relationships with the customer. The knowledge and trust required to develop customer solutions by the product or service suppliers in the SC can be of such specificity that the inter-organisational relationship inevitably has to evolve into a tighter and more collaborative relationship. Obviously, this inter-organisational relationship has to be part of the suppliers' strategy with the customer by which the structure and interfaces of the relationship form a complete offering

(Kornelius, 1999). As IORs evolve they should lead to more strategic objective alignment and not just meet operational needs.

While the growth in outsourcing SCM to TPL service providers represents an important change to firms' strategies, alignment among the SC partners represents a critical task for the firm to achieve the optimum level of performance. Saying this, the alignment efforts of the firm and its TPL service providers as the SC partners still face problems in the approaches to implementation.

2.2.2   Supply chain management and alignment

2.2.2.1   Supply chain Management: Definitions and schools of thought

Compared to other areas of management, SCM can be claimed to be one of the most recent disciplines. Since a branch of knowledge is defined through scientific inquiry and experience of practitioners and researchers in that discipline (Kaplan, 1964), definition of SCM as an emerging discipline still lacks consensus among academics and practitioners.

Oliver and Webber (1982) marked the appearance of the term SCM in the literature after which SCM definitions proliferated. These definitions were a set of disparate descriptions; some were very narrow and from a functionally-based perspective, i.e. SCM and logistics management; some were broad, as in SCM and integration of business processes. Consequently, there have been considerable calls to get both SCM academics and practitioners to agree on a consensus SCM definition. In this context, Christopher (1998, p. 18) defined SCM as, "The management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole".

Gibson et al. (2005) reviewed the results of a survey study by the Council of Supply Chain Management Professionals of its members' views of SCM in an attempt to understand SCM and create a consensus SCM definition. The Council adopted the following definition of SCM:

> *"Supply Chain Management encompasses 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, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies". (www.cscmp.org).*

This definition reflected the participants' belief that SCM is a combination of strategy and activity and encompasses collaboration. Two points worth pointing out in the above two definitions: the view of SCM as a strategic level concept (Mentzer et al., 2001) and the emphasis on the multi-firm focus in creating and maximising the strategic differential advantage in the value chain to the customer.

Bechtel and Jayaram (1997) reviewed the SCM literature and classified about 50 SCM definitions into five schools of thought:

- Functional Chain Awareness School, recognises the existence of a chain of functional areas;

- Linkage/Logistics School, recognises that there is a chain from suppliers to end users and begins to address the material flows through this chain;

- Information School, emphasises the flow of information between SC members which is the backbone of effective SCM;

- Integration/Process School, focuses on integrating SC areas into a system defined as a set of processes;

- Future School, two themes provide visions into future SCM, (1) emphasis on relational as opposed to transactional factors with association of SCM to concepts of partnership, strategic alliances and cooperative relationships with SC members, and (2) seamless demand pipeline where the end-user and not the supply function drives the SC.

Lambert et al. (1998) and Sadler and Gough (2005) endorsed the changing trends in SCM where SC is no longer a chain of businesses with one-to-one, business-to-business relationships, but a network of multiple businesses and relationships. A trend of integrational-relational SCM research with interpretive case studies and exploratory model building and testing has become apparent (Sachan & Datta, 2005).

It is worth noting that over the last three decades, the SCM perspective has facilitated a better understanding of the relationship between strategic level and functional level activities of the organisation in developing competitive and dynamic SC strategy. This trend emphasised the increasing critical importance of the strategic alignment element in SC relationships between client and TPL service providers or customer and suppliers.

Fawcett and Magnan (2001, p. 7) defined SCM as "the collaborative effort of multiple channel members to design, implement, and manage seamless value-added processes to meet the real needs of the end customer. The development and integration of people and technological resources, as well as the coordinated management of materials, information, and financial flows, underlie successful supply chain integration". They based their definition on observing the facts that SC integrators demonstrate the following characteristics: they are relentlessly customer centric, driven to improve asset efficiency, recognise inter-firm collaboration as critical, focus on processes rather than functions, view open communication as a must, factor people into every decision, invest in IT as an enabler, and are obsessed with performance measurement.

In a study conducted by Cigolini et al. (2004), researchers derived data from 100 case histories appearing in the literature relating to companies that implemented SCM in various industries and across different geographies. In Cigolini et al. (2004, p. 21), the researchers defined SCM Strategy as: "The set of configuration and management techniques that a company has implemented, together with the set of tools that were chosen to support them". In their approach, SCM strategies were examined *a posteriori*, considering the whole set of actions implemented in order to achieve a firm's strategic goals and objectives regarding SC integration. The investigation of the SCM strategies was carried out from an operational view, that is what companies actually did rather than what they claimed their strategic intent to be.

Organisations may look beyond their companies' horizon to evaluate how the resources of their suppliers and customers can be utilised to create the exceptional value demanded by customers and consequently look to align objectives and integrate resources across organisational boundaries in what is called SCM initiatives. In their study developing a SC alignment and integration model, Fawcett and Magnan (2001) concluded that the overall value proposition of the SC is whether the ultimate customer is satisfied and only when the overall value proposition is clearly understood will managers understand the critical value-added roles that must be played for the SC to be successful. In this context SC competes against SC and a company must choose to which SC team it belongs in order to be able to determine who best delivers on the overall SC's value proposition.

2.2.2.2 Supply chain alignment

Discussion about strategic alignment can be traced back to the late 1970s when emerging research initiated and later promoted the concept as a central topic in the IT and business strategy domain (Brancheau & Wetherbe, 1987; Coleman & Papp, 2006; Henderson & Venkatraman, 1989; Luftman, 1996; Luftman & Oldach, 1993; Parker et al., 1988; Sabberwal & Chan, 2001). Initial discussions

perceived strategic alignment as the dynamic fit between the external and internal domains of the organisation product marketing strategy, administrative and organisational structures, business processes and IT. It was argued that a firm's economic performance and competitive advantage would be enhanced by striking the right fit or alignment between external positioning and internal arrangements (Chandler, 1966). Despite the dominant influence of IT on the organisation as the backbone function for competition and the drift of the strategic alignment research program towards more work on the connection between strategy and IT, strategic alignment has increasingly been the centre of attention in the different areas of management.

Researchers in strategic management addressed the interrelationships among strategy, structure, process and performance from different perspectives of organisational design, economics and sociology (Chandler, 1966; Williamson, 1970, 1975). It was argued that new opportunities to the firm necessitated the adjustment of the structure to maintain or even improve efficiency, that is aligning strategy and structure to improve performance (Chow & Henrikssen, 1995; Galbraith & Nathanson, 1978; Rumelt, 1974). Accordingly, strategic fit has been considered a basic requirement for sustained organisational performance (Miles & Snow, 1978). Following this logic, aligning partners' SC strategies within structures and inter-organisational relationship that can achieve the strategic goals of the SC should yield the optimum strategic fit and optimised performance.

Alignment of SC across SC partners involves alignment of goals, interests, processes and a certain level of integration of processes and systems, which could vary according to the nature of the relationship (Cigolini et al., 2004) The alignment, when involving TPL service providers, takes an inter-firm or inter-organisational dimension and consequently influences the SC performance.

Lack of alignment and integration of the above mentioned SC elements can result in risks of failure of the SC partnership or inter-firm relationship and mis-alignment among SC partners that can be captured by the MCS through performance monitoring and control. Fawcett and Magnan (2001, p. 119) conducted research work in the area of SC alignment with a thorough literature review of the factors that can impede the effectiveness of the SC integration and alignment.

Alignment of mission statements, goals, and operating procedures can reduce inter-organisational conflict and assist in aligning the partners of a SC in the same competitive direction. The mechanisms of achieving alignment comprise:

a. **Common goals**. Working with partners towards common goals and similar objectives. Compatibility of goals can be assessed based on past experience as well as

in the negotiation process. Consensus among partners on basic goals underlying the SC relationship for collaboration and integration is essential to the success of the IOR.

b. **Shared mission and vision statement**. Shared mission statements are viable only for SC teams that have achieved a high degree of independence, maturity, and stability.

c. **Common operating procedures**. Adopting common operating procedures is an essential factor in the SC integration process and in meeting the key performance indicators between the partners.

Defee and Stank's (2005) Strategy-Structure-Performance theoretical framework suggests that a company's SC strategy should be complementary with that of SC partners. Disjointed strategies across the SC prevent firms from developing shared goals and utilising SC capabilities as a competitive differentiator. Consequently, misaligned strategies will result in the firm's goal of achieving high quality delivery of customised products may not be realised by utilising SC partners focused on a low cost strategy. The framework suggests as well that a SC structure is required to support the SC strategy implementation.

Recognising that a company's SC strategy is complementary with that of the SC partners, the inter-organisational relationships, internal firm strategy and SC structure have significant impact on performance and performance measurement systems. Synchronised strategies across the SC firms allow the development of shared goals and utilising SC capabilities as a "competitive differentiator" (Defee & Stank, 2005, p. 44). Defee and Stank's research related the nature of the relationship between a SC strategy and the critical structural factors including:

- Technology integration: requires investment in computer systems technology to support coordination and flexibility among SC member firms;

- Communication: creation of formal and informal modes of communication to facilitate the dynamic sharing of information and business plans;

- Standardisation of information and processes;

- Decision-making location: centralised planning decision making supporting decentralised implementation of plans;

- Reward and compensation programs: integrated individual and organisational reward structures that target overall SC goals.

Defee and Stank (2005) highlighted that effective SC require member firms to have either consistent or complementary SC strategies. Conflicting SC strategies existing across member firms will limit overall SC performance. Supply chain structural and performance outcomes may be predictable by employing certain tools that will equip managers with predictive abilities to assist in making proactive adjustments to SC membership, policy and processes.

The research propositions of Defee and Stank (2005) relate the nature of the relationship between pursuit of SC strategy and critical structural characteristics including technology integration, communication, standardisation, decision-making location, and reward and compensation programs. In addition, their proposed framework specifies that SC strategy implementation requires investment in computer systems technology that supports coordination and flexibility among SC entities, creation of formal and informal modes of communication to facilitate the rapid sharing of information and business plans, standardisation of information and processes, centralised planning decision making supporting decentralised implementation of plans, and integrated individual and organisational reward structures that target overall SC goals.

Hence, based on the works of Defee and Stank (2005) and Fawcett and Magnan (2001) SC alignment can be seen to comprise strategic, operational and structural dimensions or types of alignment. While strategic alignment tends to imply the alignment of the vision, mission and strategic objectives of the SC partners as well as sharing common vision and mission, operational alignment tends to imply SC partners' alignment of processes and the adoption of common operating procedures. The structural alignment tends to mean the common SC design reflected in critical structural characteristics including technology integration, communication, standardisation, decision-making location, and reward and compensation programs.

Frohlich and Westbrook (2001) empirically demonstrated that the degree of SC integration is strongly associated and positively correlated with higher levels of performance. The study confirmed the growing consensus regarding SC strategy integration and alignment (Cammish & Keough, 1991; Closs & Clinton, 1997; Eloranta et al., 1991; Freeman & Cavinato, 1990; McGinnis & Kohn, 1990, 1993; Morris & Calantone, 1991; Reck & Long, 1988).

Hence, there is merit in looking into the nature of the coordination and alignment among SC partners in realising their SC strategic objectives and how this coordination could mutually influence management controls design. The different levels of partners' power and degree of influence can determine the design of the management controls as the tools of measuring the performance of the partners in achieving the SC strategic, tactical and operational goals and objectives.

Studies on integration (Frohlich & Westbrook, 2001) and alignment (Fawcett & Magnan, 2001) have demonstrated their positive effect on SC performance. The right SC strategy in implementing the right SC processes and systems has been considered the basis of improved SC performance. But this is only part of what is required. Strategic alignment within the SC, by ensuring the alignment of the strategic goals and objectives among the partners SC strategy, is also required. Indeed, strategy needs to be always relevant to the organisation through being relevant to the competitive conditions and environment of the business, of which the IOR is the core part of this environment. Therefore, the SC strategy alignment among the partners is a live and dynamic process of continuous alignment and realignment of the processes and systems of the SC through performance measurement and management to achieve the strategic goals and objectives of the IOR (Chorn, 1991; Sun et al., 2009a).

In arguing the case for living SC, Gattorna (2006) considered the ingredients of SC as not just technology and trucks but more importantly, the people who design and run them. While SC may seem uncontrollable, they are in fact "living systems" driven by humans and human behaviour. He describes SC as a mix of infrastructure, information systems and technology, and more like an organic model. In recognising the fundamental role of humans in SC, acquiring people with talent and capabilities becomes crucial to differentiating one SC from another and giving it a competitive edge in the market. Furthermore, making human groups in the different parts of the SC interact to achieve the competitive edge, Gattorna proposes dynamic alignment versus static alignment as the key. To ensure that all partners of the SC are aligned, performance measurement is required against pre-set goals and objectives; in cases of any partner's misalignment, performance needs to be managed to realign the partners' SC strategy or replacement of partner is required. Waggoner et al. (1999) argued that performance measurement systems are not simply designed and implemented, but that they also evolve over extended periods of time. Researchers found four generic categories of force that have been claimed to influence and shape the evolution and change of organisational performance measurement systems: internal influences such as power relationships and dominant coalition interests; external influences like legislation and market volatility; process issues, for instance manner of implementation and management of political processes; and transformational issues, such as degree of high level support and risk of gain or loss from change.

Bititci et al. (2005) found that due to structural differences between traditional and extended enterprises, the systems required to measure and manage the performance of extended enterprises, whilst being based upon existing performance measurement frameworks, would be structurally and operationally different and consequently performance measurement systems for measuring and managing performance in extended enterprises should include intrinsic and extrinsic inter-enterprise

coordinating measures. Intrinsic coordinating measures occur as a result of deployment, such as profit measures across the extended enterprise or lead-time measures of the order fulfilment process related to partners inter-firm lead-time measures. Extrinsic coordinating measures need to be consciously designed into the measurement system.

Despite the close linguistic meanings of collaboration, which implies working jointly with others or together, and coordination, which indicates harmonious functioning of parts for effective results (Merriam-Webster Inc., 2003), Wong et al. (2004) described SC coordination as aligning all decisions and global system objectives, while Kampstra et al. (2006) proclaimed SC collaboration to be a joint decision-making process with adequate SC strategy and defined goals governed by the continual process of strategy alignment and SC change as a dynamic process. Consequently, SC strategic objectives alignment in such inter-organisational relationship is claimed to be a critical factor in achieving higher performance through collaboration and coordination.

Cooper et al. (1997) endorsed the risk of sub-optimisation that could arise when each organisation in the SC attempts to optimise its own results rather than integrate its goals and activities with other organisations to achieve SC wide optimised results. Kampstra et al.(2006) argued that SC collaboration is an ongoing relationship-focused process where SC decision making has been presented as loops of strategy, change and control and characterised with interaction and continuance. Consequently, in Kampstra's strategy loop, successful transformational change requires the right leadership, where the leader and selected group of strategic partners are responsible for making involved SC organisations develop the vision and appropriate SC strategy with detailed customisation at the firm level. Therefore, the evaluation and selection of the strategic SC partners, and the identification and alignment of the appropriate SC strategic objectives is a key factor in achieving common goals. The change loop helps in clarifying and prioritising strategic objectives at the SC execution level, whereas the control loop governs the course of the SC with respect to business dynamics, and control governs the execution of the changes. The three loops collectively bring the SC to a higher performance through improved alignment between the participating parties.

Moving further into the coordination dimension, coordination is a more formal relationship than cooperation with objectives and actions aimed at achieving inter-firm benefits which are mutual, compatible and common, and not necessarily a centralised authority in the SC (Wong et al., 2004). When considering IOR from a coordination perspective, most of the coordination issues are mainly due to the nature of interdependency, where coordination has been defined as the integration, or linking together of, the different parts of the organisation to achieve a collective set of tasks (Ven et

al., 1976). According to Frohlich and Westbrook (2001), the SC could be integrated in terms of information and processes so that it becomes coordinated and consequently, integration can be perceived as the means to achieve coordination. In concluding the point of definitions, although interaction was claimed to refer to the process of exchanging information (Hakansson & Ford, 2002), interaction is a process of mutuality which is also a key element of collaboration defined as a mutually beneficial and well-defined relationship entered into between two or more organisations to accomplish common goals.

2.2.3   Section summary: Supply chain management and alignment

Defee and Stank's (2005) theoretical framework on the application of the Strategy-Structure-Performance in practical SC partnership case remains untested and Fawcett and Magnan (2001) fall short of investigating how the three dimensions of alignment, that is, strategic, operational and structural are pursued and applied in SC partnerships. In conclusion, the literature on SC points to insufficient empirical research on how the three dimensions of alignment are pursued. This identified gap in the literature represents an opportunity to investigate and understand how strategic, operational and structural alignment together is pursued in SC and the effects of their implementation. Therefore, the first of the research questions is:

RQ1: How is alignment pursued in SC and what are the effects?

2.3   Management Control Systems

2.3.1   Definition and types of management control systems

The literature on MCS presents multiple definitions and several frameworks exist. Simons (1987, p. 358) defined MCS as "the formalized routines and procedures that use information to maintain or alter patterns in organisational activity". Simons' points out that these systems are multi-purpose and include formalised information-based processes for planning, budgeting cost control, environmental scanning, competitor analysis, performance evaluation, resource allocation, and employee rewards. These tools can be "diagnostic" control systems and used as a primary tool for management-by-exception or "interactive" when top management uses these systems to personally and regularly involve themselves in the decisions of subordinates.

Anthony and Govindarajan (2007, p. 6) define management controls as "the process by which managers influence other members of the organization to implement the organization's strategies". In a broad sense, management control is a critical function in organisations and its failure can lead to organisational failures, large financial losses, reputation damage and sometimes bankruptcy (Merchant & Van der Stede, 2007).

Otley (1999) criticised Anthony's approach, stating that it was intended to achieve two aims. Its first aim was the intention to broaden the scope of information beyond just accounting information and paradoxically, it was largely unsuccessful in achieving this aim because of its deliberate neglect of "operational control". Neglecting operational control was due apparently to the differences among organisations in using different practices at the operational level. Consequently Anthony focused on the commonalities which allowed him the use of a common language capable of including all organisational activities. Accounting provided such a common language and management control became largely synonymous with MA at a time when it was being widely criticised (Johnson & Kaplan, 1987). The second aim was to bring issues of managerial motivation and behaviour to attention, thereby influencing much of the behavioural MA work for the 1970s and 1980s. Another weak link in the MCS framework was its deliberate neglect of the process of "strategic planning", which at best it took as given and, at worst, ignored completely. This intentional neglect inevitably led to the specification of control systems and measures that were common to all strategies and again accounting measurement was stressed and non-financial performance measures were neglected.

Otley (2003), in a review of the developments in the area of management controls, noticed that although the achievement of organisational purposes continues to be a central issue, the way it is expressed has changed as the context within which organisations operate has changed. This is reflected in some changes in terminology, such as the use of the term performance management to reflect the same issues and concerns. At a higher level, there has been a major change in the philosophy of organisational structure as well. In the 1960s and 1970s, the established line to organisational control was seen to be in vertical integration and divisionalisation, where in the 1990s and beyond this developed into outsourcing, business process re-engineering and value chain management. Therefore, Otley found the control problem, initially seen as a primarily internal matter, has transformed into having to deal with connections and ties between enterprises connected in a business process or value chain. Consequently, the central role of budgeting as a control technique has declined, as well as the use of MA information as the major tool of internal control. This latter change has been reflected in the use of the term "strategic management accounting" which, although diffuse

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in its meaning, is perhaps best characterised by a change in focus from cost to an increasing concern with value.

Malmi and Brown (2008), when reviewing the definition of MCS in Abernethy and Chua (1996), Flamholtz et al. (1985), Merchant and Van der Stede (2007) and Ouchi (1979) found that these definitions are based on a common assumption that a senior manager from the top management team in the dominant coalition is seeking to control the behaviour of middle management or employees. With the exception of Flamholtz et al.'s (1985) definition of organisational control systems, Malmi and Brown found that the remaining definitions can easily fit both management and organisational control systems that senior managers use to influence the behaviour of middle or junior managers and employees, as well as the systems senior managers produce to facilitate efficient decision making by themselves or at the middle management level.

Malmi and Brown (2008, p. 290) suggested that "those systems, rules, practices, values and other activities management put in place in order to direct employee behaviour should be called management controls. If these are complete systems, as opposed to simple rules (for example not to travel in business class), then they should be called MCS. Accounting systems that are designed to support decision-making at any organisational level, but leave the use of those systems unmonitored, should not be called MCS and instead termed management accounting systems". Malmi and Brown's (2008) definition is broader than those aiming for goal congruence or motivation, which excludes some avenues managers may utilise to influence behaviour, but conversely Malmi and Brown's suggestion is narrower than Chenhall's (2003) understanding, as accounting systems designed and used only for decision-making support are excluded.

Chenhall (2003) found researchers sometimes use the terms management accounting (MA), management accounting systems (MAS), MCS, and organisational controls (OC) interchangeably. MA refers to a collection of practices such as budgeting or product costing, MAS to the systematic use of MA to achieve some goal, MCS to encompass MAS and includes other controls such as personal or clan controls. OC is sometimes used to refer to controls built into activities and processes such as statistical quality control and just-in-time management. The prior MCS research literature reviewed found that "the variety of the characteristics of archetypes and of the corresponding situations leads to some indefiniteness of conclusions … inconclusiveness is even more severe if we consider that the findings proposed by contributors are in some cases contradictory" (Caglio & Ditillo, 2008, p. 874).

According to Chenhall (2003), the definition of MCS has evolved over time from one focusing on more formal financially quantifiable information to assist managerial decision making, to one that comprises a much broader scope of information. Consequently, the definition evolved to include external information relating to markets, customers, competitors, and non-financial information relating to production processes, predictive information and a broad array of decision support mechanisms, and informal personal and social controls. However, approaches of sociological orientation see MCS as more active, offering individuals with power to achieve their own ends.

From a contingency-based research point of view, Chenhall (2003) found that there have been attempts to explain the effectiveness of MCS by examining designs that best suit the nature of the environment, technology, size, structure, strategy and national culture, but redefining them in contemporary terms. Chenhall suggests that to maintain the relevance of MCS contingency-based research, scholars will need to focus their attention on contemporary dimensions of MCS, its context and organisational and social outcomes. In addition, there is the need to study issues of contemporary relevance, such as the work of original organisational theorists and more recent thinking in areas such as strategy, organisational and cultural change, manufacturing, IT, and human resource management. Other approaches stemming from economics and psychology can instantly be included within contingency-based frameworks, insights drawn from "alternate" theories, which can assist in elaborating the traditional contingency-based model. Moreover, contingency-based research can provide an ordered way to integrate thinking about the sociological processes effecting MCS in action, perhaps combining these insights with conventional elements of contingency-based models. Therefore, due to the breadth of Chenhall's (2003) above definition of MCS, it is adopted for the purposes of this research.

Lately, there has been intensifying debates concerning the role of MCS in strategic alliances and outsourcing, specifically focusing on the failure risk associated with outsourcing mainly non-core activities versus in-house activities. Among the factors causing this high risk of failure is the lack of proper levels of cooperation with partners who have different objectives and the potential for "opportunistic" exploitation of the dependence relationship that exists between partners. Appropriate governance structures, including MCS and the development of trust, may work to reduce risk and decrease failure (Cuganesan et al., 2006; Das & Teng, 2001).

Research has been undertaken into the criteria that should guide decisions to outsource, and investigations of both successes and failures in outsourcing have been reported but tend to focus on the size of the contract, and the identity of the successful bidder. Outsourcing success or failure is

often judged by whether the outsourcer achieves cost savings, or experiences cost over-runs. Few studies have considered how the inter-firm MCS can be designed to suit the particular characteristics of the outsourcing relationship (Langfield-Smith & Smith, 2003).

Design of MCS and governance structures, has increasingly attracted the attention of researchers in the last few years, especially where the situation extend beyond the traditional organisational boundaries to cover strategic alliances and outsourcing IORs. Outsourcing SCM is one form of IORs and involves significant levels of risk and uncertainty for both customer and service provider, which is reflected usually in the form of complex contracts that cover common areas of IOR and not only supply and receipts of goods and services. This complexity may preclude the ex-ante specifications of detailed contracts (Heide, 1994). The extent of flexibility in the IOR that can still be maintained given the impact of formal control systems or mechanisms in outsourcing set ups, has been substantially debated. While some researchers call for less reliance on formal controls (Gietzmann, 1996; Ittner et al., 1999) to ensure flexibility of IOR, others argue for formal control systems that enable further control and transparency with an impact that might span beyond the IOR over to strengthening control within the outsourcing firm (Mouritsen et al., 2001).

Langfield-Smith and Smith (2003) reviewed MCS and found that IOR control systems have been grouped, categorised and conceptualised in different ways: formal versus informal controls, outcome versus behaviour controls, mechanistic versus organic controls, and bureaucratic versus clan controls. Overall, these classifications are not distinctively separate and there is some consensus among researchers that all organisational control systems consist of unequivocally formal controls as well as unwritten informal or social controls that cannot be designed in an explicit way. This method of classifying controls will be used in this thesis and the next subsections expand on each control type.

2.3.1.1   Formal controls

Control forms of IORs have been classified as formal and informal control mechanisms (Smith et al., 1995). Formal controls can be a combination of contractual obligations and formal organisational mechanisms for cooperation and can be classified into outcome and behavioural control mechanisms (Ouchi, 1979).

In formal control or outcome and behaviour controls, ex-ante control mechanisms serve to mitigate control risks through the alignment process of partners' interests and reduction of coordination needs before the implementation of the inter-organisational relationship (Ouchi, 1979). Outcome control mechanisms determine outcomes to be attained by the IOR and its partners and monitor the

achievement of the performance targets. Goal and target setting determine direction for task performance, clarify mutual expectations and increase goal congruence when rewards are explicitly linked to goal attainment (Das & Teng, 1998, p. 506). Behaviour control of IOR details how partners operate, act and monitor actual behaviour in adhering to the pre-specified behaviour. Ex-ante behaviour controls include planning, programs, standard operating procedure (SOP), rules and dispute resolution procedures (Gulati & Singh, 1998, p. 786).

Langfield-Smith and Smith (2003, p. 283) distinguished formal controls as "outcome controls measure and monitor the output of operations or behaviours, using techniques such as performance measurement. Behaviour controls, such as rules and SOP specify and monitor behaviours".

Cuganesan et al. (2006), in a study re-examining the role of formal controls and their utilisation in outsourcing agreements, listed two types of mechanisms, namely contractual and accounting controls.

The usefulness and benefits of using management controls need to be cautiously evaluated in light of the risks that could arise from the nature, type and way of utilising these controls as well as the opportunities that can be available to the firms in the relationship.   In most cases, firms are forced by virtues of law or professional regulations and rules to utilise formal controls such as performance measurement, budgets and contracts controls regardless of their benefits and use to the business. Saying this, the information outcome of such controls represents opportunities and can be of use to other controls especially when controls are mobilised in a synchronised way (Chenhall, 2003). Even when formal controls are used in a synchronised way against control problems, the unbalanced utilisation of these controls can pose significant risks to the perceived outcome to the buyer-supplier relationship. Consequently, for instance excessive use of performance measurement indicators that are operationally unattainable by the vendor from an industry standards perspective could lead to business failures and conflicts between the partners regardless of the contractual terms. The benefits of using specific type of formal controls can be determined by their ability to mitigate the risks the relationship is facing and arising from the control problems.

Contractual controls

The contract can be considered as one of the major mechanisms to govern IORs and consequently addresses the issues arising from these relationships. Outsourcing supply chain activities to TPL providers can create issues and risks in the IOR. It is important for companies to plan the creation of the outsourcing contract effectively if they are to maximise the benefits and minimise the risks of outsourcing. Zhu et al. (2001) indicated that in contract intensive outsourcing, successful outsourcing

process relies upon a good contract. Platz and Temponi (2007) found the existence of an outsourcing contract is essential but developing the contract in itself is not enough to protect the customer-vendor relationship. Given that contract is central to the customer-vendor relationship, outsourcing contracts must consist of a specific set of key elements specifically describing all expectations and details for the customer-vendor relationship. It should address the general nature of outsourcing and the SC model as a whole. As organisations are increasingly outsourcing functions within the SC and relying upon the outsourcing contract to dictate the nature of the customer-vendor relationship, management should acknowledge and address these issues when building the customer-vendor relationship. Since contract is the framework on which a majority of customer-vendor relationships is based, developing the contract is essential in ensuring a successful and valued customer-vendor relationship. The contract should represent the shared objectives of the relationship and in not addressing the key elements of the outsourcing contract the costly consequences can affect all members of the SC. In outsourcing SC activities, contracts should reflect the specific nature of the organisations involved and their respective industries. Therefore, a single contract cannot be used as a blanket to cover all relationships and the terms within each of the key functions and elements of the contract should be tailored to meet specific demands.

Blomqvist et al. (2005, p. 498) explained contract as it "refers to a formal written contract between two or more competent parties, which creates obligations, whereby one party becomes bound to another to do or omit to do certain acts that are the subject of that contract". Thus contracts provide the "frame" for the economic exchange, outlining the nature and term of the relationship, what is to be provided and the rights and obligations of parties to the contract.

Characteristics of human nature, such as bounded rationality and opportunism, can influence the IOR among collaborating firms. Investments made by these firms in the IOR set up, which might have little or less alternative value outside the IOR, could produce appropriation concerns by opportunistic parties. Protecting the investment becomes important, especially when the future state of the IOR is uncertain and partners potentially start to face adaptation problems as unexpected contingencies arise. In such events, bounded rationality tends to provide constraints through contingent claim contracts covering different scenarios of every future contingency. Overall, incomplete contracts are subject to adaptation, which consequently allows for opportunistic behaviour. Hence, to be managed, incomplete contracts require alternative control mechanisms where hierarchical controls are considered effective by aligning incentives, providing monitoring and realising control by fiat (Gulati & Singh, 1998).

Therefore, contracts also fulfil an important role in minimising potential opportunistic behaviour. This can occur through ex-ante mechanisms that bind the parties together, such as requiring parties to undertake transaction-specific investments or credible commitments to the relationship (Williamson, 1983). Alternatively, ex-post mechanisms may be incorporated that provide parties with rights and sanctions over others in the event of non-performance or other pre-specified situations. Thus contracts involve parties binding themselves to carry out the actions necessary to achieve the goals of the contract. Both the body of contract law and the institution of courts that underpin contracts provide an avenue for contract parties to seek external dispute resolution. Thus, important elements of contractual controls comprise: terms of appointment and nature of responsibilities; arbitration and termination processes; and governance mechanisms such as reporting and audit procedures (Cuganesan et al., 2006).

While contracting represents the cornerstone in IOR controls, contracting issues have increasingly posed problematic debates in IORs. Both bounded rationality of parties and possibilities of opportunism point to the costs of describing possible future states of the economic exchange in the contract, and verifying realised ex post states leads to incomplete contracting (Williamson, 1985, 1991). Furthermore, flexibility-creating mechanisms such as 'agreements to agree' may be intentionally designed into the contract. Thus, classical contracting law, which is based upon the presumption of discrete contracts, becomes insufficient in the face of contracting gaps and uncertainties. Either contracts are incomplete or are overly rigid in the face of uncertainty (Cuganesan et al., 2006).

There are advantages in instituting legally actionable, conceivable and generalisable contracts between contracting parties. The lack of flexibility and richness of such contracts can pose a major disadvantage, especially when partner roles and obligations change over time (Borys & Jemison, 1989).

Alternative contracting systems, such as neoclassical and relational contracting have been proposed (Macneil, 1978). However, even neoclassical contract law has been perceived as inadequate for dealing with situations such as inter-organisational alliances. Gaps recognised were mainly in the duration and complexity of contracts and their incompleteness, where more transaction specific adjustment processes, such as third-party arbitration are utilised. In contrast, accounting controls are seen as a useful complement to contractual controls (Cuganesan et al., 2006).

Accounting controls

Van Hoek (1998) argued that control in measuring performance in a SC is no longer based on ownership only but rather on networking across interfaces between functions and companies so that measurement system may be measuring activities not under the control of an individual company. Measuring activities of IOR under the control of SC partners require the SC to be transparent to a level not experienced before and leading the way for performance improvement and optimisation.

Achieving SC control and optimisation can pose a challenge in measuring SC performance when it implies that individual companies may have to compromise internal efficiencies. Allocating revenue or dividing benefits among the SC partners becomes even more complex when the focus shifts from customer driven logistics cost savings to adding value to customers and where some of the SC partners are involved in multiple SC (Cooper et al., 1997).

There is an acknowledged need to control IOR performance as part of SCM given the increasing competitive edge attributed to SCM. With the recent developments in research works in both areas of MCS and SCM, many issues of controlling SCM are raised that span across the IOR spectrum and range from definition and conceptualisation, to integration and information, through standardised reporting and strategic alignment (Bremmers, 2006; Gunasekaran et al., 2001; Seuring, 2006).

Accounting controls are considered part of formal control mechanisms and can be either outcome or behaviour controls provided outcomes or behaviours are measureable (Dekker, 2004). Behaviour controls stipulate and monitor the partner's IOR whether actual behaviour is in accordance with pre-determined behaviour controls such as planning, rules and regulations, developed SOP and dispute resolution procedures (Cuganesan et al., 2006). On the other hand, outcome control mechanisms are concerned with specific outcomes to be achieved by the IOR and the partner through the achievement of performance targets and KPIs. Both controls have ex-ante and ex-post impacts, where the process of specification and implementation aims to reduce goal divergence amongst partners at the start of the relationship, and the monitoring of behaviours and outcomes accompanied with reward provision seeks to provide information about adherence to these controls and is aimed at mitigating unresolved control problem (Dekker, 2004).

Accounting controls can confirm the adherence to existing expectations of the capacity to meet contractual obligations and performing to the agreed service levels, through the provision of information about the performance of exchange partners. Accounting controls provide objective representations of the performance levels of counterparties to IORs. In addition, outcome measures enable a level of flexibility and innovation to be preserved in the relationship as they do not require

compliance to pre-specified procedures or behaviours but only specify the end-results required from the IOR. In outcome controls, the pre-specified end-results have to be quantifiable to allow understanding, communication and alignment among IOR partners (Cuganesan et al., 2006).

Until recent years, open book accounting (OBA) as a well-known practice in SCM (Romano & Formentini, 2012) has been classified under inter-organisational cost management (IOCM) and part of the area of management accounting, as one of the management controls of buyer-supplier relationship (Mouritsen et al., 2001). OBA practice has received unfocused attention and scattered empirical evidence (Windolph & Moeller, 2012). Kajuter & Kulmala (2005) described OBA as a means of improving the cost efficiency of SC and a tool for building trust into buyer-supplier relationships. Windolph and Moeller (2012) believe little research addressed the extent to which OBA has influenced the relationship satisfaction of the exchange partners. Other researchers believed that OBA is still fairly a new phenomenon (Kajuter & Kulmala, 2005). OBA has been claimed to consist of management accounting information exchanged between firms to support inter-organisational action (Cooper & Slagmulder, 2004; Dekker, 2003; Ittner et al., 1999).

On the point of definition, there has been open debate regarding the characterisation of OBA where Caglio and Ditillo (2012) claim that consistent definition of open book accounting has not emerged yet because different researchers refer to different types of information when the definition discussion comes to this point. Accordingly, some researchers maintain that financial information, and in particular cost information, represent the core part of OBA, while others talk about both financial and non-financial information and more specifically management accounting information that would normally remain undisclosed beyond corporate limits.

The literature on OBA has generally focused on functions and consequences on one side and difficulties and determinants on the other as two pairs of issues. It is assumed that the main function of OBA is to support IOCM measures (Cooper & Slagmulder, 2004; Dekker, 2003; Kajuter & Kulmala, 2005). Accordingly, same research tends to assume that cost transparency between customers and suppliers should lead to cost reductions. Justification of prices and price change were also mentioned as another function of OBA and a means of transparency but also claimed to facilitate price negotiations which ultimately could lead to improvement of relationship by creating trust between the customer and supplier which are consequences of OBA rather than functions (Carr & Ng, 1995; Seal et al., 1999).

Research focused on one of the inherent difficulties coexisting with OBA pertaining to increased pressure on supplier margin resulting from the fact that the purchasing costs are equal to supplier's

revenue. Accordingly, customer knowing supplier's cost structure can utilise such knowledge during price negotiations (Dekker, 2003), and in some cases OBA can be used to the disadvantage of the supplier (Carr & Ng, 1995). Other researchers found benchmarking cost among suppliers can be another source of OBA failure (Kajuter & Kulmala, 2005), and others raised the concern of circulating ones supplier to competitors to induce lower quotes (Free, 2008; Lamming et al., 2005). The distribution of IOCM projects benefits between companies highlighted the risk that more powerful companies tend to obtain more of the benefits through OBA (Cooper & Slagmulder, 2004).

Operational implementation hurdle associated with OBA arises from the fact that in many cases relevant accounting data cannot be always readily available to the supplier in the first place (Seal, et al., 1999), and in some other cases the hurdle can be the difficulty of reaching practical analysis due to the differences in the suppliers and customers accounting systems or lack of professional staff who can perform the analysis (Kajuter & Kulmala, 2005).

The intentional exchange of manipulated data has been lately raised as an issue which is still to be further researched (Caglio & Ditillo, 2008; Lamming, et al., 2005). Exploring other determinants of OBA in the buyer-supplier relationship framework, researchers investigated the impact of power, trust and volume of business on ICOM (Kulmala, 2004) and the appropriateness of trust and formal controls in the prevention of opportunistic behaviour (Dekker, 2004). As an important determinant in the decision of introducing OBA, trust was seen as an essential prerequisite in developing a long-term relationship that underlies the exchange of data between customers and suppliers firms (Carr & Ng, 1995; Mouritsen, et al., 2001). In addition, the absence of trust was seen as a key determinant of OBA failure (Seal et al., 2004) and accordingly trust has been seen as a determinant and consequence of OBA. While OBA determinants could influence firms engagement through trust-based approach, other scholars found power asymmetry to impact the relationship by which OBA approach is forced instead of being introduced and built on trust (Seal, et al., 1999).

Action controls

Coordination, as a more formal relationship than cooperation, aims through its objectives and actions at achieving mutually compatible and common inter-firm benefits, and does not rely on a centralised authority in the SC (Wong et al., 2004). When looking into inter-organisational relationships from a coordination perspective, most of the coordination issues are mainly due to the nature of interdependency, where coordination has been defined as the integration or linking together of the different parts of the organisation to achieve a collective set of tasks (Ven et al., 1976). According to Frohlich and Westbrook (2001), the SC could be integrated in terms of information and processes so

that it becomes coordinated and consequently, integration can be perceived as the means to achieve coordination. In concluding the point of definitions, although interaction was claimed to refer to the process of exchanging information (Hakansson & Ford, 2002), interaction is a process of mutuality which is also a key element of collaboration defined as a mutually beneficial and well-defined relationship entered into between two or more organisations to accomplish common goals.

Ultimately, collaboration differentiated from the more advanced level of relationship, coordination, by its collaborative structure, which determines the joint authority structure (Wong et al., 2004). Coordination in SC requires mechanisms that are predetermined sets of rules and procedures of interaction decisions among involved parties aiming at achieving agreed optimal objectives or course of actions. Some organisational coordination mechanisms are conceptualised to deal with uncertainty, that is, the difference between the amount of information required to perform a particular task and the amount of information already possessed by the organisation, and consequently, the larger the task uncertainty, the larger the amount of information required to be processed between the decision makers. Therefore, increasing the information processing capability, and reducing the amount of required information are appropriate principles for dealing with uncertainty (Galbraith, 1973). Essentially action controls, as part of the behaviour controls such as decision making rules and SOP, are required and play an important role in these situations.

Dekker (2004) explained behaviour control mechanisms and specified how IOR partners need to act and monitor and if actual behaviours conform to the pre-specified behaviour and listed standard ex-ante behaviour controls employed in IORs such as planning, programs, rules, SOP, and dispute resolution procedures, as in Gulati and Singh (1998). Similarly, and as was mentioned earlier, Das and Teng (1998, p. 506) believed that behaviour monitoring involves "reporting and checking devices, written notice of any departure from the agreement, accounting examinations, cost control, quality control, arbitration clauses, and lawsuits provisions". They also contended that since IORs are often characterised by goal incongruence and performance ambiguity, behaviour control mechanisms can be important to ensure expected behaviour.

2.3.1.2   Informal controls

Informal control can be classified as social control mechanisms where trust falls at the centre in controlling IORs (Ring & van de Ven, 1992). Trust has been defined as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another" (Rousseau et al., 1998, p. 395). In the context of their definition of trust, Rousseau et al. argued that "Trust, as the willingness to be vulnerable under conditions of risk and

interdependence …. is not a behaviour (e.g., cooperation), or a choice (e.g., taking a risk), but an underlying psychological condition that can cause or result from such actions" (1998, p. 395). Das and Teng (1998, p. 495) argued that trust cannot be considered a control mechanism since "self-control does not involve influencing behaviour of others". On the other hand, Dekker (2004, p. 32) claims that "as self-control is the basic principle of social control, trust can be regarded being an important component of social control".

The role of trust as an informal control mechanism, and its relationship to formal control mechanisms, has attracted a substantial volume of research and debate (Das & Teng, 1998; Jones et al., 1997; Nooteboom et al., 1997; Ring & van de Ven, 1992; Rousseau et al., 1998; Zaheer & Venkatraman, 1995). Informal control, or social control and relational governance, consists of informal cultures and systems (Ouchi, 1979).

It can be argued that trust is the major informal or social control mechanism, but did not receive the appropriate recognition in Transaction Cost Economics (TCE) Theory and its effect on the IOR and repeated interaction among individuals as well as firms was generally ignored. In saying this, repeated interaction can cause an IOR to become embedded in a strong economic and social context impacting the formal structure, but this social context can result in informal coordination and monitoring and trust between partners that consequently touches upon some of the TCE key assumptions (Dekker, 2004).

There have been different definitions of trust. Moorman et al. (1993) provided two general conceptions of trust, trust as a belief or expectation about a trustee and trust as a behavioural intention that reflects a reliance on the trustee and involves vulnerability and uncertainty on the part of the trustor. Mayer et al. (1995) defined trust as the willingness of a party to be vulnerable to the actions of another party on the expectations that the other party will perform a particular action which would be important to the trustor. In Langfield-Smith and Smith's (2003) review of trust definitions, the various definitions of trust reflect the controversy surrounding this research area. Most definitions of trust highlight:

- the exposure of one party to vulnerability (Mayer et al., 1995);
- the confidence in one's expectations (Luhmann et al., 1980);
- the entailment of positive expectations regarding the other in a risky situation (Gambetta, 1988);
- adopting a belief without having complete information to confirm that belief, and the link between trust and information requirements (Tomkins, 2001).

Sharing information pertaining to cost reports or performance is an extremely important element in IORs. Consequently, the sharing of information entails an element of risk that is an important aspect of IOR to manage (Luhmann et al., 1980).

Trust depends on time and context (Nooteboom et al., 1997), and may develop over time through learning and adaptation processes that are crucial to the solidification of the IOR between partners, making the relationship more durable in the face of conflicts and boosting interactions between partners involving knowledge exchange and mutual promotion of interests (Johanson & Mattsson, 1987). Close ties and IOR involving exchange of information with suppliers may entail joint product and processes development as well as cost optimisation activities. In such cases, trust allows IORs to prosper assuming certain minimum levels of trust are essential; trust reduces possible opportunistic behaviour and may assist in better predictability of mutual behaviour through each party honouring their commitments (Birnbirg, 1998; Langfield-Smith & Smith, 2003; Sako, 1992).

Merchant (1985, p. 39) stated that "almost every control system involves some degree of trust that the individuals of concern will do what is best for the organisation without any, or with only incomplete monitoring of actions or results". The relationship between MCS and trust has become complex and heavily debatable in recent research work (Dekker, 2004; Tomkins, 2001; van der Meer-Kooistra & Vosselman, 2006).

Das and Teng (1998) argued that MCS and trust are not alternatives and the introduction of MCS does not necessarily assume the lowering of trust. Tomkins (2001) argued against ignoring the dynamic process of building trust and looking at trust from a static perspective where MCS and trust can be either substitutive or complementary. MCS impact on trust changes over the life-cycle of the IOR. At the early stages of the IOR, MCS have a positive association influence on trust and in later stages, as trust reaches higher levels, the introduction of new MCS may cause damage to the IOR.

In cases where IOR duration is limited to a specific project or venture, Tomkins (2001) claimed that as the intensity of trust becomes established at higher levels, the successful development of the associated activity needs less control to sustain the IOR. On the other hand, in opened-ended IORs, stability at mature stages could provide a platform for continuous evolution and the positive feedback on the trust element of IORs will encourage partners to extend the collaboration, which in turn may encourage the parties to expand the scope or complexity of their activities involving more resources and time and consequently increasing the level of interdependence. This evolution could impact both information needed to control and monitor the IOR and the recognised trust (Vélez et al., 2008a).

Informal controls of openness, respect, integrity and trust can be described as an intrinsic requirement of any type of partnership, which without business relationship could not exist. Accordingly, there are benefits arising from the utilisation of informal management controls and unlikely to have detrimental effect on the partnership when used individually or concurrently in synchronisation with other formal or informal controls. Nevertheless, there are risks associated with the excessive use of informal controls that could result in negative side effects as in the case of relying on the values of openness, respect and integrity without adequately defining the performance measurement indicators or using trust to compensate for lack of proper contractual terms to govern the partnership. By the same token, informal controls need to be well balanced and synchronised from within and together with the formal controls to effectively resolve control problems and mitigate risks arising in the relationship. Potentially, informal controls can always present to the buyer and supplier a major opportunity to rejuvenate the relationship when going through difficulties, which present an opportunity other management controls could fall short of providing such benefit.

2.3.2   Effects of MCS in IORs

2.3.2.1   MCS design and performance

Some research suggests that lack of coordination and opportunistic behaviour of partners are two main reasons for relationship failures (Dekker, 2004). Hence, well designed MCS can arguably prevent such failure if based on appropriate governance mechanisms to control the relationship (Ireland et al., 2002). Inter-organisational MCS have been investigated from different perspectives, such as outsourcing (Anderson et al., 2000), inter-organisational cost management (Cooper & Slagmulder, 2004), partnership (Seal et al., 1999), strategic alliances (Dekker, 2004), networks (Kajüter & Kulmala, 2005), joint ventures (Kamminga & Van der Meer-Kooistra, 2007), and manufacturer-supplier relationship (Pernot & Roodhooft, 2008). MCS governing IORs are a combination of different types of formal and informal controls. According to Pernot and Roodhooft (2008), the design and combination of MCS will depend to a large extent on the phase of the IOR with the supplier and characterised by the different levels of antecedents and risks visualising the association with the management controls tuned to govern the risk of the IOR. As one of the suppliers in their study scored relatively high on all contingencies and subsequently on both performance and relational risk, the MCS accordingly was designed with high levels of outcome and behaviour controls. Besides these formal controls, however, customers pay considerable attention to informal control, more specifically to different kinds of trust building techniques and social pressure. Interestingly, where the existence and the role of a structured supplier team, in governing the

manufacturer-supplier relationship, operated as a clan, both structuring and strengthening customer's trust building and social pressure, this also extends control towards all suppliers. Consequently, management control on dyadic supplier relations is strengthened by the clan of all suppliers. This combined MCS is designed specifically to improve performance, which corresponds to earlier inter-organisational research (Anderson & Dekker, 2005).

Anderson and Dekker (2005) studied how close partners who are exposed to opportunistic hazards structure and control a significant transaction. The analysis focused on the terms of contracting to determine whether transaction and supplier characteristics that generate opportunistic hazards are related to the formal management control structure. Researchers also examined whether misalignment between transaction and supplier characteristics and the control structure is associated with ex post performance problems. In their findings, characteristics associated with hazards are found to be positively related to contract extensiveness. Characteristics associated with hazards are positively related to the use of four dimensions of management controls: assignment of rights; product and price; after-sales service; and legal recourse. The different hazards are associated with different controls. Researchers also examined the relation between transaction characteristics and ex post transaction problems, demonstrating that even in the presence of mutually agreeable contracts, hazards remain. Researchers concluded that costs of contracting are associated with increased use of contract terms on assignment of rights, after-sales service, and legal recourse. Anderson and Dekker's (2005) study presented evidence that management control structures that are better aligned with transaction hazards mitigate subsequent performance problems, though at a non-trivial cost of contracting. They observed that when buyers are exposed to increased risks of supplier failure (i.e., asset specificity), reliance on contract terms related to rights assignments and legal recourse increase. At the same time, increased transaction complexity gives rise to more reliance on rights assignment. It is found that increased competition in the supplier's market is associated with reduced effort to assign rights and more effort to define and specify the product and price. On the opposite side of the argument, when the supplier is in a position of power relative to the buyer at the creation of the transaction, greater efforts are taken to stipulate terms of after-sales service and avenues of legal recourse in the event of transaction problems.

Research on inter-organisational relationships reflected arguments that at mature stages of the relationship and when trust among partners has reached a well-established level, further MCS could damage the relationship. A key point in IOR to prevent failures is ensuring a certain adequate level of confidence among partners and in each other's cooperation (Das & Teng, 1998) to the extent that firms tend to have higher confidence when they assume an appropriate level of control over their

partners (Sohn, 1994) and when they trust each other (Das & Teng, 2001; Ring & van de Ven, 1992). In a recent study by Velez et al. (2008a), evidence was provided contrary to the common perception that in an open-ended and evolving relationship and even when trust was well established, MCS were found to build it even further. Therefore, high trust was found to provide the platform where success encourages the partners to cooperate even further, which in turn demands more MCS and greater levels of trust to support cooperation and coordination in the relationship.

The buyer-supplier inter-organisational relation has been investigated from an incentive problems perspective under which buyer-supplier transactions take place and extends the discussion to the inter-firm design instruments that can be utilised to mitigate these problems. Noticeably, most of the literature is based on the more realistic incomplete contracting model, which is more appropriate to analyse inter-firm issues. Baiman and Rajan (2002a) argued that the misappropriation by one contracting party of ideas and technology brought by the other contracting party, and the interactive effect of the contracting parties' outside opportunities and their agreed-upon contractual relationship, implies the need to model rather than exogenously assume those outside opportunities. Accordingly, most of these issues are better captured within incomplete contracting models and, hence, most of the discussion will be in the incomplete contracting arena. One of the potential outcomes of incomplete inter-firm contractual relations is buyer-supplier power differentials arising, for instance, from restrictions on the information which can be incorporated in the contract. It is often claimed that enhanced efficiency associated with SC, as opposed to arm's-length transactions, comes from increased information sharing among the SC partners. Despite the fact that little discussion in the literature has been devoted to discussing the question of how trust is achieved among SC partners, this information sharing can be attributed to the increased level of trust inherent in SC. In looking further to understand how non-contingent contracts can affect buyer-supplier relations outside opportunities, researchers found the source of inefficiency arising from incomplete contracting subsequent to the investment to indicate that neither party could trust the other to refrain from trying to use the renegotiations to extract more of the surplus yielded from the investment. Although for self-centric investments the inefficiency can be mitigated or reduced with an initial non-contingent contract, this non-contingent contracting does not mitigate the investment inefficiency causing either party to refrain from trying to fully exploit the renegotiations stage (Aghion et al., 1994; Baiman & Rajan, 2002a; Demski & Sappington, 1991; Noldeke & Schmidt, 1995).

Another dimension in the buyer-supplier relationship was investigated in the literature, where one of the important characteristic of any buyer-supplier relationship is the amount and type of information that is exchanged between the contracting parties. Increasingly, buyer-supplier networks have featured

greater information exchange than arm's-length transactions. This enhanced information exchange allows for greater production efficiency but increases the potential for information misappropriation. Baiman and Rajan (2002b) considered the set of innovations for which each of these forms of exchange relationship is efficient, after which researchers explored the effect of an initial information linkage between the buyer and supplier. Researchers found that these linkages increase the set of innovations for which networks are efficient. However, such linkages have a negative effect on the buyer's incentive to innovate as well as an ambiguous effect on the supplier's incentive to invest in flexible production techniques. Baiman and Rajan identified settings in which the buyer-supplier surplus is greater with such linkages.

It has been argued in the literature that the flow of planning, budgeting and control processes from one organisation into others as part of the IOR has the potential to create more explicit awareness of the state of action interdependence and the role of joint action can play in organisational and inter-firm success, especially in cases of IOR failure, which reflects the difficulty of managing these increasingly more complex relationships (Hopwood, 1996; Ireland et al., 2002). The design of MCS and structure of governing IORs has critical impact on the success of the relationship among partners (Ittner et al., 1999; Osborn & Baughn, 1990), in addition to the recognition of governance as an important basis of inter-organisational competitive advantage (Dyer & Singh, 1998; Ireland et al., 2002). Understanding the consequences of IOR structure and design of management control issues, as well as the issue of coordination mechanisms and processes utilised for managing IORs, are two issues concurrently raised in literature reviews (Grandori, 1997; Gulati & Singh, 1998; Ireland et al., 2002; Sobrero & Schrader, 1998). Both, the concept of appropriation concerns and coordination requirements and from organisational theory perspective were considered by Dekker (2004) to explain the use of control mechanisms in IORs. Dekker (2004) found that appropriation concerns and coordination requirements are powerful concepts in explaining IOR management and control, when jointly described collaborating firms' need to manage the creation, and to protect the appropriation, of value. Hence, governance mechanisms are useful in the management of these problems. A conclusion shared by Gulati and Singh (1998).

2.3.2.2   MCS design and knowledge transfer

Li (2005) in a study conducted on the subsidiaries of 75 Western multi-national companies 'located in China examined the effects of trust and shared vision on inward knowledge transfer and the difference in importance in intra- and inter-organisational relationships. The study highlighted the importance of trust and shared vision in facilitating knowledge transfer. It also provided new findings that the effect of trust and shared vision may be contingent upon different contexts. Li also found that in managing

knowledge transfer, trust is a more influential factor in IORs, while shared vision, in contrast, is more influential in intra-organisational relationships. The study's findings are supported by previous findings of a study conducted by Luo (2002), which examined the trust–performance link in international strategic alliances from a contingency view. Lou argued that the trust–performance link varies according to its underlying contingency variables, such as alliance age, risk commensuration, market uncertainty, resource interdependency, and reciprocal commitment. The analysis of 255 alliances in a dynamic environment (China) provided supporting findings that trust plays a stronger role in improving the performance of alliances such as sales and profitability when an alliance is younger, risk is more proportionate between parties, market is less volatile, IOR partners' dependency in resources is greater, and commitment to the ongoing partnership from each party is higher. Cultural distance between alliance parties does not moderate the trust–performance link but influences the level of trust.

While researchers like Schlz (2001) argued different view on the effectiveness of knowledge sharing in inter- and intra-organisational IORs, others shared Li findings that suggested that trust and shared vision are important determinants to effective knowledge transfer (Tsai & Ghoshal, 1998; Yli-Renko et al., 2001).

IORs provide opportunities for knowledge transfer (George et al., 2001; Mothe & Quélin, 2000; Soekijad & Andriessen, 2003), knowledge access (Grant & Baden-Fuller, 2004; Jolly, 2005) and learning (Inkpen, 1998; Larsson et al., 1998). Knowledge is certainly one of the best resources and the only sustainable competitive advantage. Knowledge transfer is critical to firm success and allows the firm to access knowledge that is otherwise unreachable. The IOR environment provides organisations the opportunities for knowledge transfer, knowledge access and learning. Firms may significantly improve their knowledge and innovative capabilities by leveraging other organisations' skills through the transfer of knowledge in an IOR setting. However, knowledge transfer is a complex phenomenon even in an intra-organisational setting and few factors were identified as affecting the effectiveness of the transfer and the outcome as well (Szulanski, 1996). Knowledge transfer has its own theoretical and practical issues that encompass knowledge transfer processes in IORs, through learning processes and influence of knowledge transfer on the firm competitive advantage. The nature, structure and complexity of IORs, within and inter-firm, raise issues and problems around knowledge transfer processes, such as roles of boundaries, relationships between IORs, leakages and trust (Easterby-Smith et al., 2008).

Van Wijk et al. (2008), in reviewing literature on knowledge transfer, found that knowledge from both internal and external sources has implications and consequences for organisational performance and innovativeness. A positive relationship between transferred organisational knowledge and performance was reported by previous researchers (Lyles & Salk, 1996; Steensma & Lyles, 2000). Knowledge transfer participates in the development of organisational capabilities, which would be hard to imitate (Szulanski, 1996). Organisations that can acquire and learn about customers, competitors, markets and regulators can adapt products and services to the external business environment much faster than the competition through higher performance (Day, 1994). On the other hand, knowledge transfer enables organisations to produce new ideas and develop new products and services in addition to creating linkages with innovative sources of knowledge and in the accumulation of organisational knowledge (Tsai, 2001).

The trust impacts of knowledge transfer in IORs have attracted considerable attention in the literature (Beccerra & Gupta, 1999; Becerra et al., 2008; Dyer & Chu, 2003; Li, 2005; Mayer et al., 1995; McEvily et al., 2003). Some researchers argued that while knowledge transfer in IORs can be considered as mechanisms for firms and partners to learn from each other and repair some of their dysfunctional processes, the process of knowledge transfer involves some level of risk because the partners in the IOR may not be able to completely control the flow and use the other partner may make of the transferred knowledge. In some instances, partners in the same IOR may actually become strong competitors due to the newly developed competencies through the IOR (Becerra et al., 2008). Thus, IORs may contain both private and common scopes that create tension in the trade-off between sharing, protecting and maintaining a tight balance between competition and cooperation. Therefore, the knowledge transfer process between partners may be beneficial to the IOR, but it also poses a state of vulnerability to the actions of each partner (Khanna et al., 1998; Parkhe, 1993). In such cases of potential risk in the learning IOR, the view of trustworthiness of the other partner becomes critical for the partners to be willing to take risks and to participate in potential exchanges of knowledge with other partners (Mayer et al., 1995). Consequently, for knowledge transfer to take place, an appropriate level of trust in the IOR is necessary (Ring & Van De Ven, 1994).

Becerra et al. (2008) found that the transfer of tacit knowledge can be more closely correlated with IOR performance than explicit knowledge transfers, the positive effects of which on the success of the IOR is negligible. On the other side, the transfer of explicit knowledge requires greater willingness to take risks than the transfer of tacit knowledge. Therefore, the explicit knowledge is more protected by management, where these results represent contradiction and paradox when compared to the results of the larger impact of tacit knowledge transfer on IOR success.

Li (2005) and Luo (2002) found that effects of trust and shared vision on knowledge transfer may be reliant on different contexts. In managing knowledge transfer, trust has more impact in IORs, while shared vision is more influential in intra-organisational relationships.

2.3.3 *Imperatives to adopt problem-oriented control research: Utilisation and mobilisation of MCS packages*

While a number of insights are provided by the prior literature, two main deficiencies exist: inconsistent or inconclusive findings and consequently the need to adopt a problem-oriented approach and integrated package of MCS; and lots of studies have looked at fit rather than effects (Chenhall, 2003), such as that of knowledge transfer which has not been linked to an integrated MCS.

Reviewing prior MCS literature on IOR control archetypes, Caglio and Ditillo (2008) observed that an integrational approach needs to refocus attention on control problems rather than on control solutions. The progressive theoretical approach of Caglio and Ditillo (2008) indicates that an integrational focus to the problems of cooperation, coordination and appropriation can provide the right platform to investigate the IOR control mechanisms and outcome of an integrated MCS.

Dekker (2008) considered inter-firm governance effectiveness in dealing with control problems in IOR in focusing on the selection of an appropriate partner and the design of the right governance structure. Partner selection would primarily focus on mitigating control problems by finding a reliable and competent partner, and the design of governance structure focuses on both mitigation and management control problems. Dekker's (2008) framework considered control problems of appropriation concerns, coordination requirements, and dependence under the prior experience of a business exchange partner.

Studies of Dekker (2008) are utilised in defining the outsourced logistics and SC services control problems of appropriation concerns and coordination requirements. While appropriation concerns can be indicated by business size, asset specificity and uncertainty, coordination requirements of the firm can be indicated by task interdependence. Impact of control problems on selection effort and partner experience can be defined by using Dekker's (2008) study. In the context of this research, the partners have had a longstanding experience with the buyer and therefore, the control problems would have lesser impact on the selection effort of partners. Consequently, the focus shifts towards the relationship between control problems and partner experience.

Examining control problems requires an integrated examination of MCS. There have been different motives and reasons for strongly flagging the need to mobilise an integrated MCS approach to control IORs among organisations. While Ferreira and Otley (2005) realised the complex relationship between strategy and MCS and used an integrative approach when examining the objectives influencing the organisational performance, Henri (2006) found that performance management when used in an "interactive" way contributed positively to the deployment of the different capabilities of market orientation, entrepreneurship, innovativeness, and organisational learning. From another angle, when using formal accounting controls and accounting performance measures to control IORs among organisations, a number of dysfunctional consequences, such as gaming and manipulations, can arise, calling researchers to examine the utilisation of non-financial controls and measures to improve organisational performance (Banker et al., 2000; Ittner et al., 1997).

The new forms of organisation including among others sub-contracting and outsourcing, strategic alliances, and SC, have been characterised as "virtual", "boundaryless", "flat", "lean", and "intelligent" organisations and point to the need to implement flexible forms (Ezzamel et al., 2004). Reviewing studies on organisational transformation, Berry et al. (2008) found that this transformation might signify a broader dissemination of new organisational forms, but could be as well arising within specific business environments. Nevertheless, at the core of these organisational forms falls the need for further flexibility, which means that controlling these flexible IORs among organisations requires an integrated management control approach.

Berry et al. (2008) debated the controversy both for and against the management control of new organisational forms and how an integrated management control approach can meet the requirements of both internal and external hybrids. While some argued for abiding by the formal and legal conceptions of the firm (Hodgson, 2002), others argued for coordination and control through cross-functional teams and inter-organisational networks as hybrid relational arrangements that are different from classical dichotomy of markets and hierarchies forms (van der Meer-Kooistra & Scapens, 2008; Zenger, 2002). Berry et al. (2008) and Foss (2002) proposed a solution to merge both perspectives by keeping the traditional organisation-market distinction on legal grounds, but supplementing it with a developed understanding of control and coordination mechanisms utilised within the two governance structures. Consequently, an integrated management control can be achieved when internal hybrids with the characteristic of the market, such as autonomous work teams and group based incentives (Zenger, 2002), fused with external hybrids controlled by both formal arrangements, such as project teams inter-organisational budgets and performance management systems, and informal characteristics, such as development of trust-based relationships that can be found in hierarchies

(Dekker, 2004). Therefore, in SCM, where both internal and external hybrids exist, an integrated management control becomes a necessity to coordinate relationships within and among organisations.

Taken from different theoretical perspectives, in management control theory, organisation theory and actor-network theory, claims have been raised stressing the need for both formal and informal control mechanisms for controlling inter-organisational relationships (Dekker, 2004; Latour, 1987; Law, 1991). While formal controls of contractual obligations, service level agreements, structural arrangements, planning procedures, performance monitoring, and reward systems can provide visibility and ease of process tracking inter-organisational relationships, informal controls or social controls that encompass informal cultures and systems influencing organisational members, inspire self-regulation of behaviours and trust between collaborating parties developing expectations based on experience that organisations in inter-organisational relationship will not behave opportunistically (Berry et al., 2008; Tomkins, 2001). The relationship between trust and control is rather complex, where trust can be an alternative to control (Dekker, 2003), effective control systems can build trust (Seal et al., 1999), or control systems themselves could become obstacles to trust (Mouritsen & Thrane, 2006). Despite the complexity of the relationship between trust and control, the criticality of trust as a social control mechanism in hybrid relationships stems from its ability when utilised properly to reduce costs of governance, such as costs of coordination, monitoring and enforcement of arrangements, and to increase relationship investments, improve performance of partners and develop broader inter-organisational social activities (Berry et al., 2008; Dekker, 2003; Laaksonen et al., 2008; Langfield-Smith & Smith, 2003; van der Meer-kooistra & Vosselman, 2000).

The point made is one that supports the argument for the necessity of controlling SC relationships by utilising a well-designed MCS of formal and informal controls. This requires careful balancing of the mix of these controls, especially the social controls and specifically the element of trust among the organisations in the SC partnership to achieve an optimum position of coordination and control. Such well-designed MCS can be mobilised to control problems of SC relationships and buyer-supplier relationships and monitor the interaction between organisations to ensure cooperation and coordination among them.

Conceptually, the MCS package is a collection or set of management controls and control systems (Abernethy & Chua, 1996; Otley, 1980; Simons, 1995). Malmi and Brown (2008, p. 287) argue that, apart from accounting-based controls which are typically focused on formal systems, there is still limited understanding of the influence of other types of control, such as administrative and cultural and whether/how these controls complement or substitute each other in different contexts. Sandelin

(2008, p. 323) shares such understanding when suggesting that "there is little prior theory on the linkages between formal and informal control elements". Sandelin (2008, p. 323) further debated that "the functionality of a control package depends on internal consistency and specifically on the reciprocal linkages of design and use between a primary mode of control and other control elements … control package variety is driven by the way in which management responds to functional demands". Malmi and Brown (2008) suggest that achieving broader understanding of the MCS as a package may assist in the development of better theory of how to design a range of controls to support organisational objectives, control activities and drive organisational performance. Although studies have investigated and considered control systems individually and occasionally as a combination, the challenge is still in understanding how all the systems in an MCS package operate as an inter-related whole. Abernethy and Brownell (1997, p. 233) believed that "it is clear that organisations rely on combinations of control mechanisms in any given setting, yet virtually nothing is known about how the effects of any one control are governed by the level of simultaneous reliance on other forms".

According to Malmi and Brown (2008, p. 289), "the lack of clarity wide variation and inconsistencies in how MCS have been conceptualised has created a number of problems in MCS research in regards to the interpretations of research results and the design of MCS". Furthermore, Malmi and Brown's (2008, p. 295) assertion of "the fact that little empirical research has addressed the issue of MCS as a package of controls", represents a research gap and an opportunity to investigate.

While discussion is focused on management control mobilisation in packages in response to control problems in IORs, SC performance is always the focus especially under the influence of knowledge transfer. Hult et al. (2006) argued that capitalising on knowledge can create superior performance in SC provided the relative emphasis on various knowledge elements matches strategy. This area has been under-researched and not until recently researchers started looking at attempting to reflect the impact of knowledge factor on IOR performance through integrated MCS (Choy et al., 2008).

Consequently, little research effort has been taken to explore the nature of the SC partnership as an inter-organisational relationship and the nature of knowledge transfer and exchange processes in SC inter-firm partnership, where it has been suggested that factors such as nature of knowledge transferred and the internal characteristics (e.g., organisational structure and routine) can influence the SC inter-firm relationship (He et al., 2007).

2.3.4   Section summary: Management control systems

In light of the ongoing controversy in academia around the definition and classification of MCS, in the preceding section, the relevant research literature was reviewed. Prior MCS research literature reviewed found that "the variety of the characteristics of archetypes and of the corresponding situations leads to some indefiniteness of conclusions, … inconclusiveness is even more severe if we consider that the findings proposed by contributors are in some cases contradictory" (Caglio & Ditillo, 2008, p. 874). Consequently, in the context of this section, Chenhall (2003) definition of MC and Dekker (2004) classification of MCS were found to have appropriate relevance and fit to this research.

The cost-benefit analysis of utilising formal and informal controls emphasises and supports the packaged MCS approach provided a balanced position attained through the synchronisation and mobilisation of the controls by which risks arising in the partnership are mitigated and opportunities of tackling control problems achieved.

Therefore, the gaps in the literature present opportunities for further research. One such gap is the problem-oriented approach of integrated MCS packages. Hence, examining control problems requires an integrated examination of MCS (Malmi & Brown, 2008). In particular, this research addresses the packaged MCS approach utilisation and mobilisation in response to control problems by taking the view of problem-oriented MCS packages; control problems being considered are control problems of coordination, cooperation and misappropriation concerns in IORs.

Regarding the impact of MCS on SC performance, a gap was identified in the prior literature reviewed which did not link integrated packages of MCS to knowledge transfer and presented a research opportunity (Choy et al., 2008; He et al., 2007) in addressing the impact of on performance comprising the exchange of services and exchange of knowledge. Prior research looked at fit rather than effects (Chenhall, 2003) and based on the above discussion, the second research question is:

RQ2: How are management controls mobilised in response to control problems by buyers and suppliers? What are the performance effects, comprising the exchange of services and exchange of knowledge?

2.4　Alliance Portfolio Management

This section aims to review the research literature in the area of alliance portfolio management, focusing on reasons for utilising alliance portfolio management and tasks of alliance portfolio management. Special attention is devoted to applying the alliance portfolio strategy, configuration, approaches and tools in the context of MCS.

In order to review the alliance portfolio definition and literature, it is logical to start by defining what is "alliance" and the definition of alliance in the management literature. The literature reports differences among researchers in defining alliance and more specifically strategic alliance. Gulati (1998, p. 293) defined alliance as a voluntary arrangement among independent firms to exchange or share resources and engage in the co-development or provision of products services, or technologies. Gebrekidan and Awuah (2002, p. 679) found that "Strategic alliances are an important form of inter-organizational co-operation" which has the focus of researchers' attention and has received extensive coverage in the management literature. Furthermore Gebrekidan and Awuah (2002, p. 679) consider:

> *"Firms forming strategic alliances are also not self-sufficient; hence, gaining access to external capacities is crucial for the realization of their respective goals. Importantly, all kinds of firms, small, medium-sized and large ones, are likely to take advantage of strategic alliances. A firm's need of links with resourceful actors (business organizations or non-business organizations) in today's dynamic and heterogeneous global market has to do with the fact that the internal capacity needs be complemented by those of some significant actors. Gaining access to complementary resources and/ or activities externally can be expressed in many different ways. For example, firm A may have different co-operative arrangements such as 'joint development agreement', 'alternative sourcing agreement', and 'joint product development' with various actors".*

Czinkota and Ronkainen (1995, p. 456) defined strategic alliance as an "informal or formal arrangement between two or more companies with a common business objective". According to Czinkota and Ronkainen (1995, p. 456), "strategic alliances are seen as a manifestation of inter-organizational cooperative strategies that entail the pooling of skills and resources by the alliance partners in order to achieve one or more goals linked to the strategic objectives of the cooperating firms". Parkhe (2001, p. 581) view strategic alliances as ''Relatively enduring Interim cooperative arrangements, involving flows and linkages that use resources and/or governance structures from autonomous organizations, for the joint accomplishment of individual goals linked to the corporate mission of each sponsoring firm". Walters et al. (1994, p. 5) found that the term strategic alliances

refs to less-than-arm's length agreements, less-than-arm's-length long-term sourcing agreements, but the term "does not include mergers and acquisitions, arm's-length sales contracts, and traditional arm's length distribution, franchising, and licensing agreements".

The definition of strategic alliances has not been coherent in the existing literature, and the various ways strategic alliances have been defined reflects the fact that each proponent of a particular definition tends to concentrate on particular characteristics of the phenomenon that best suits an individual researcher's point of view. Accordingly and for the purposes of this work, the definitions Czinkota and Ronkainen (1995), Gebrekidan and Awuah (2002), and Parkhe (2001) tend to cover the strategic long-term customer-supplier relationship in the context of customer outsourcing SC services to one or more TPL service providers.

Wassmer (2010) found disagreement, variation and confusion of what constitutes an alliance portfolio, a case possibly linked to the fact that the "phenomenon" has been studied by researchers from different fields of organisational management, which resulted in confusing the alliance portfolio conceptualisation.

In his review of alliance portfolio research literature, Wassmer was able to identify the different directions and schools that defined alliance portfolio and according to their approaches (Table 2).

TABLE 2: EXISTING CONCEPTUALISATION OF ALLIANCE PORTFOLIO

Existing Conceptualisations of Alliance Portfolios	
Study	**Alliance Portfolio Conceptualisation**
Bae & Gargiulo (2004)	The set of alliances in which a firm is involved
Baum et al. (2000) and Rowley et al. (2000)	A focal firm's egocentric alliance network (i.e., all direct ties with partner firms) (social network perspective)
Doz & Hamel (1998)	The set of bilateral alliances maintained by a focal firm
George et al. (2001)	A firm's portfolio of strategic agreements or relationships
Hoffmann (2005, 2007)	All alliances of a focal firm
Lavie (2007)	A firm's collection of direct alliances with partners
Lavie & Miller (2008)	A firm's collection of immediate alliance partners
Parise & Casher (2003)	A firm's network of business-partner relationships
Reuer et al. (2002)	A firm's accumulated international joint venture experience (learning perspective)
Reuer & Ragozzino (2006)	All international joint ventures of a focal firm
Adopted from Wassmer (2010, p. 143)	

Among the common approaches to defining an alliance portfolio is the additive perspective, which views an alliance portfolio as the aggregate of all strategic alliances of a focal firm (Bae & Gargiulo,

2004; George et al., 2001; Hoffmann, 2005, 2007; Lavie, 2007; Lavie & Miller, 2008). Other approaches emerged from the network literature defining an alliance portfolio as a focal firm's egocentric alliance network, which covers all direct ties with partner firms (Baum et al., 2000; Ozcan & Eisenhardt, 2009; Rowley et al., 2000). From a social network theorist's perspective ((Baum et al., 2000; Rowley et al., 2000), the use of the term alliance network referred to a focal firm's direct ties with different partners (i.e., its alliance portfolio), while some other authors use the identical term to refer to multi-party alliances (i.e., a strategic alliance with more than two partners) (Doz & Hamel, 1998; Goerzen, 2005). Some authors, however, refer to such multi-party alliances as alliance constellations (Gomes-Casseres, 1994; Lazzarini, 2007), or alliance blocks (Vanhaverbeke & Noorderhaven, 2001).

Wassmer (2010, p. 144) adopted a broad alliance portfolio definition to include research linking to the alliance portfolio phenomenon, which includes the alliance capability literature, and thus he defined "an alliance portfolio as a focal firm's past as well as ongoing strategic alliances of all types". Consequently, Wasserman and Faust's (1994) definition of an alliance portfolio refers to a firm's collection of direct alliances with partners. It is analogous to the concept of the egocentric network, which encompasses the focal firm (ego), its set of partners (alters), and their connecting ties. Consequently, this research adopts Wassmer's (2010) broad definition of alliance portfolio.

2.4.1   Reasons for alliance portfolio management

Ozcan and Eisenhardt (2009) and Wassmer (2010) reviewed the theoretical background that explain the origins and reasons for alliance portfolios and researchers focused on how the resource dependency theory, exchange theory, agency theory and social network theory explained the motives for firms to enter into or build alliance portfolios. Some researchers like Baum et al.(2000) and Chung et al. (2000) integrated the social network theory and resource-based theory of the firm in reviewing alliance portfolio research. Others integrated TCE with social network theory (Goerzen & Beamish, 2005), organisational learning and network theory (Gulati, 1999; Powell et al., 1996), the relational view and organisational learning (George et al., 2001), real options theory and resource-based view of the firm (Vassolo et al., 2004), network theory and resource dependency theory (Bae & Gargiulo, 2004), and the knowledge-based view of the firm with evolutionary economics and dynamic capabilities (Lorenzoni & Lipparini, 1999).

Wassmer (2010), in a unique literature review on alliance portfolios, looked into the motives and reasons for firms to enter into alliance portfolios. Firms enter into alliance portfolios for different

reasons. Some firms enter into alliance portfolios in order to access new scarce resources from partners (Langley et al., 2005; Sowinski, 2005), to reduce transaction cost (Kogut, 1988), to learn from partners (Kogut, 1988; Stern et al., 1989), to improve competitive position (Ezzamel et al., 2008; Kogut, 1988), or to deal with uncertainty by means of future expansions (Franco-Santos et al., 2012). From a social network perspective, firms entering into alliance portfolios could have different set of motives. Firms might try to take advantage of opportunities by exploiting structural holes between themselves, such as an existing partner and a new potential partner to increase the social capital already existing in the alliance of partners through the formation of additional alliances (Walker et al., 1997). In addition, firms may enter into relational or structural embeddedness, where in the first firms may engage in new alliances to expand certain parts of their alliance portfolios (Gulati, 1995; Gulati & Gargiulo, 1999), and in the second, firms may enter into alliance portfolios when the focal firm and a potential new alliance partner are engaging in a new alliance if they have had prior indirect alliance ties (Gulati & Gargiulo, 1999).

Lorenzoni and Lipparini (1999) found the external environment to be another important factor justifying the reasons for firms to build alliance portfolios. For instance, firms utilise alliance portfolios as a mechanism to "coevolve" with the competitive environment to structure the nature of competition, or firms can be shaped by the completion by an industry-level competitive dynamics complex process. Other researchers found that motives for firms to enter into alliance portfolios can be the entrepreneurial nature of the firm where firms with a strong entrepreneurial nature could be more inclined to use strategic alliances to build alliance portfolios compared to firms with a weak entrepreneurial nature.

Reuer and Ragozzino (2006) investigated the reasons for firms to enter into alliance portfolios from an agency theory perspective, questioning the assumption that most of the alliances are formed by firms who are rational and the alliance portfolios are built for strategic reasons to fulfil shareholders' interests. The researchers found that firms' decisions to invest in alliances can be influenced by agency hazards resulting from the separation of ownership and control, where managers' own interests and efforts to obtain private benefits from creating or extending an alliance portfolio can harm the interests of the focal firm and its shareholders.

Essentially, depending on the ultimate motive for the firm to enter into alliance portfolios, the alliance portfolio configuration could vary accordingly. Wassmer (2010) found that alliance portfolios which are the result of a rational strategy process and aimed at improving firms' strategic competitiveness

could be more coherent than alliance portfolios that transpire as the outcome of agency hazards potentially leading to a more random mix of alliances.

2.4.2 Alliance portfolio management tasks

Apart from the influence of alliances on firms' operational and financial performance, it is critical to understand how companies mange alliances, especially when the alliance is involving global companies. Hoffmann (2005, p. 121), in a study of 25 leading European firms, identified four tasks of portfolio management.

Portfolio strategy is the first of these tasks identified, which is necessary to develop the main direction for all alliances in the business and establish general rules for their management. Portfolio strategy constructs the focal firm's position regarding levels of formulating and implementing portfolio strategies, the strategic alignment of the portfolio, and the objectives and content of the alliance policy and alliance strategy.

Portfolio monitoring entails performance measurement to ensure that strategic goals are being achieved. Firms have to monitor strategy implementation against the formulated strategic objectives at the different organisational strategy levels. Monitoring starts from the development and performance evaluation of the individual alliance to the development and evaluation of the alliance portfolio's performance. Evaluation of the individual alliance as well as the entire alliance portfolio forms the core of monitoring the implementation of portfolio strategies. Evaluation processes and criteria play a critical role in initiating the development of the alliance portfolio, and the starting point of portfolio evaluation is the assessment of the performance of the individual alliances. Evaluation of the entire alliance portfolio requires assessing the contribution of the portfolio to the implementation of business and corporate strategy.

Portfolio coordination is necessary to ensure that synergies are achieved and that alliances are not in conflict with each other. Interdependencies among the individual IORs of the focal firm create the need to coordinate the dyads and alliances, and in particular when multiple dyads or alliances are utilised to implement a joint strategic goal. In such cases, firms need to coordinate the ways of developing individual alliances with the overriding goal or basic strategy. To ensure synergies are achieved at the alliances and portfolio levels, certain mechanisms need to be utilised. Generally, synergies among alliances can be utilised by transferring information and resources from one alliance to another by means of mutual specialisation between alliances. Transferring information and resources allows economies of scope, while mutual specialisation allows economies of scale.

Additionally, pooling activities and resources to form one unified cooperation unit between dyadic relationships can create synergies. The coordination intensity is maximised when pooling activities and resources, and minimised when exchanging information and resources.

Establishing an alliance management system supports all the requirements of managing individual alliances as well as the portfolio. This task involves creating and operating an alliance management system that provides infrastructures such as standardised tools and formalised processes as well as specialised roles and positions that support the tasks of managing individual alliances and the entire portfolio. The alliance management system objective is to improve the firm's multi-alliance management capability. Developing alliance management capability involves the continual collection and revision of alliance management experiences developing best practice for them, and replicating and sharing these capabilities company wide. Institutionalisation of multi-alliance management systems requires professionalising and standardising multi-alliance management practices and the creation of specialised positions. Some large firms tend to create centres of competence to emphasise the tasks of alliance portfolio management. Major responsibilities of the centre of competence are formalising core processes of alliance management and creating tools that support the implementation of these tasks, and associated with these tasks are formalising task implementation and developing standardised instruments. Instruments ensure the execution of the alliance management tasks properly and support the recognition, anchoring, transfer and implementation of knowledge around how to cooperate.

According to Wassmer (2010), types and outcome of interdependencies that may occur in alliance portfolios have received little attention in research works. Interdependencies in alliance portfolios could result in either synergies or conflicts, where synergies in alliance portfolios include knowledge transfer across alliances (Powell et al., 1996), economies of scale and scope (Doz & Hamel, 1998), and the development and institutionalisation of firm-level alliance capability (Kale et al., 2000). Conflict in alliance portfolios could be redundancy or competitive overlap between alliances and partners in the portfolio (Baum et al., 2000; Ezzamel et al., 2008). The synergies and conflicts in an alliance portfolio create what is tagged as the alliance portfolio effect, that makes the overall value generated by the alliance portfolio to be either greater or smaller than the sum of the values created by each of the individual alliances in the portfolio (Vassolo et al., 2004).

Synergy or conflict-creating interdependencies in alliance portfolios could occur at different levels, such as between individual alliances (Vassolo et al., 2004), or between various alliances of different business units (Hoffmann, 2007), and could also occur between a focal firm's partners within an

alliance portfolio (Parise & Casher, 2003). Conflict between partners occur when they affect one another negatively because they are members of competing networks, are rivals in the same industry, or promoting competing technologies. Wassmer's (2010) study endorsed the fact that little research has been reported in investigating the effect of interdependencies in alliance portfolios on performance of portfolio.

Wassmer (2010) and Hoffmann (2007), while reviewing the alliance portfolio research literature, found the alliance portfolio configuration a complex concept embedding multiple dimensions and consisting of: 1) size dimension and decided by the number of alliances and partners; 2) structural dimension and determined by breadth, density, and level of redundancy within the portfolio; 3) relational dimension and determined by the strength of the ties of individual alliances in the portfolio; and 4) partner dimension which focuses on certain partner-related attributes. Another aspect of alliance portfolio configuration complexity pertains to the level of analysis, where size and structural aspects of alliance portfolios are at the alliance portfolio level of analysis, the relational aspect is at the individual alliance level of analysis, and the partner aspect is at the partner firm level of analysis. For instance, and looking at the configuration of the alliance portfolio, configuration is determined by the quality, quantity, and diversity of information and resources the focal firm has access to, the access efficiency to the resources network, and the flexibility or stability of the focal firm with respect to the inter-organisational field.

While the alliance strategy determines the configuration of the alliance portfolio including configuration parameters (Hoffmann, 2007), approaches and tools are critical and important for managers responsible in the alliance portfolio decision-making process.

In managing an alliance portfolio, Wassmer (2010) believes it is important that managers take a holistic approach covering the entire portfolio without treating each alliance in the portfolio as a standalone transaction (Hoffmann, 2005; Parise & Casher, 2003). The holistic approach covers the following areas: (a) partner selection based on portfolio fit, leveraging knowledge across partners and managing alliances as a set of competences (Duysters & De Man, 1999); (b) performance measurement at the three levels of individual alliance, alliance portfolio and alliance strategy (Hoffmann, 2005; Parise & Casher, 2003); (c) exploiting synergies and avoiding conflicts over the entire portfolio (Hoffmann, 2005; Parise & Casher, 2003); and (d) developing and implementing portfolio strategy, monitoring and coordinating the portfolio, and instituting an alliance management system (Hoffmann, 2007).

The alliance portfolio may become a source of competitive advantage when the alliance portfolio is utilised as a knowledge sharing network in exploiting tacit knowledge and transferred between the focal firm and the alliance partners (Dyer & Hatch, 2004, 2006; Parise & Casher, 2003). Researchers emphasised assessing trust and knowledge exchange between partners, monitoring the influence portfolio alliances have on individual alliances and overall portfolio performance, changing portfolio configuration over time, and the alignment of alliance and corporate strategy objectives. An integral part of the holistic approach implementation is the utilisation of formalised processes and tools such as knowledge management as in sharing alliance best practice and related knowledge, portfolio analysis, partner programs, alliance database, and alliance score cards.

An important aspect of alliance portfolio management is portfolio performance measurement. While Draulans et al. (2003) suggested an unstructured evaluation approach at the individual alliance level and cross-alliance comparison at the organisational level, Bamford and Ernst (2002) and Hoffmann (2005) suggested that performance measurement should be continuous, systematic and performed at the:

- individual alliance level, where individual alliance performance is assessed;
- business unit level where performance of the alliance portfolio is assessed, and the performance evaluation criteria are the alliance portfolio's financial and strategic contribution to business performance;
- corporate level where the effectiveness of the firm's alliance policy is assessed, performance evaluation criteria at the corporate level include the degree of alliance capability, the reputational capital and the degree of inter-organisational trust to strategically important partners and the positioning in cross-industry networks.

From an inter-organisational relationship perspective, the utilisation of MCS in monitoring and evaluating the performance of the alliance portfolio has not received the appropriate level of interest in the alliance portfolio research literature especially in looking at the holistic concept of alliance portfolio strategy, partners' alignment and alliance portfolio performance. At a higher level, little research was reported in investigating management control problems such as appropriation problems in alliance portfolios (Wassmer, 2010).

Wassmer (2010) reported many areas of alliance portfolio management that require further research and where empirical research is still in its infancy.

2.4.3   Section summary: Alliance portfolio management

Alliance portfolio management, although an emerging area, has introduced the design and utilisation of management controls into the domain of service SCM, but touches on a critical area of managing TPL providers' relationships. The alliance portfolio management approach offers the customer SC organisation the necessary tools, techniques, dynamics and strategy to manage the mix of vendors' capabilities and competencies (Hoffmann, 2007; Wassmer, 2010). This approach could help to meet the SC strategic objectives and to manage the vendor relationship throughout all the different phases of the relationship starting from vendor selection to vendor relationship termination. The approach takes control over the relationship in a scalable manner by which the complexity of the transaction or business would not limit the ability of the customer or buyer to fully control the relationship and ensure the vendor performance maintained at optimum levels (Draulans et al., 2003). The advantages of utilising the alliance portfolio management approach are the customer capability to systematically manage the vendor relationship regardless of the geographic spread of the customer operations at global and regional levels and to manage the vendors' relationships individually as well as collectively and concurrently. The alliance portfolio management approach when deployed internally and synchronised with the implementation of the strategic, operational and structural alignment processes between vendors and customer could facilitate the exchange and sharing of knowledge due to the enforced element of trust in the vendors-customer relationship (Parise & Casher, 2003). Wassmer (2010) recommended the testing of the alliance portfolio management approach utilisation in other areas of IORs. Accordingly, the prior alliance portfolio management literature reviewed did not look into the role of the alliance portfolio in SSC and presents a research gap to be investigated. This research gap identified represents a research opportunity to address the utilisation and role of alliance portfolio management in SSC set up and the influence on individual alliances. Hence, the third proposed research question is:

> RQ 3: What role does alliance portfolio management play in the management of individual alliances and how does this change the way management controls are utilised?

2.5   Chapter summary

In developing the research framework, research methodology and definition of research constructs are required based on the literature review and the three research questions. In the framework, gaps identified in the research literature mapped to constructs will be investigated through the three research questions where first how alignment is pursued by firms in SC and what are the effects is

examined. The investigation also focuses on answering the second research question on the forms of utilisation and mobilisation of the management controls in response to control problems arising individually or concurrently. I also investigate the utilisation and mobilisation of synchronised and packaged management controls to tackle one or more of the control problems individually or otherwise, sequentially or concurrently from a problem-oriented perspective. While the globalised nature of the buyer in the partnership has an important impact on redefining the management controls, the complexity of the buyer-supplier relationship and business transaction has an impact on the type and nature of the control problems and the utilised management controls too.

In parallel and part of the second research question, the research aims at addressing the influence of knowledge exchange and sharing on the overall relationship operational performance construct as part of the exchange of product and services construct. The investigation and analysis will specifically examine the impacts and results of the above relations in how and what the outcome will be after the introduction of the alignment process and the alliance portfolio management approach.

Alliance portfolio management is an emerging area, the role and impact of which on SCM has been under researched. I investigate the individual alliances and the impact of the alliance portfolio management approach on the definition, design, utilisation, of MCS when resolving the control problems.

3. CHAPTER THREE: RESEARCH DESIGN AND PROCESS

3.1   Introduction

In this chapter, the research design is discussed and introduced. In Section 3.2 the research approach is outlined, with consideration of the exploratory multiple case study for theory building. In Section 3.3 the research site is discussed, covering research process, case selection and looking closely at the buyer and suppliers' organisations. Section 3.4 is devoted to discussing the research methodology and data collection methods of semi-structured interviews, documentation and archival and participant observations. Section 3.5 discusses the research analysis process focusing on the data analysis part of the research by following within-case and cross-case analysis approaches. Section 3.6 summarises the main points of the chapter.

3.2   Overall research approach

The research follows on the case study approach in design, structure and process. The case study approach is characterised as an empirical enquiry, that aims at investigating a contemporary phenomenon in a real life context, where the boundaries between phenomenon and context are not evident, and multiple sources of evidence are used (Pettigrew, 1990, p. 267). In adopting the comparative case method of multi-case study as the appropriate approach for this research, the decision was based on the approaches of Yin (1984), Eisenhardt (1989), Pettigrew (1990), and Stuart et al. (2002) of theory-based multi-case study approach, theory building and enhancing, detailed open, specific and focused analysis, and qualitative and quantitative data.

Eisenhardt's (1989) approach is characterised as an open approach where the analysed phenomenon is fairly unstructured and the applicability of specific theories is not readily deductive. In addition, it allows for variables to be filtered and a theory to be built which allows further generalisation based on multiple observations.

Although case-study and qualitative research are used interchangeably, Yin (1984) includes both qualitative and quantitative data types in case study research. While the quantitative evidence can sometimes uncover less important relationships to researchers, it inhibits researchers from drifting towards false conclusions in qualitative data and could strengthen findings from qualitative evidence. On the other hand, qualitative data can be critical in understanding the rationale underlying relationships revealed in quantitative data or may suggest a theory (Jick, 1979).

Prior knowledge of the literature in the research areas of SC alignment, MCS, performance, and alliance portfolio management was utilised in the development of research constructs where the exploratory approach is considered key in explaining the relationships among these constructs.

SCM has been viewed as a new discipline with a need for further work on its conceptual frameworks. Exploratory case study research presents itself as an appropriate research strategy to engage with phenomena that have to be yet firmly identified and defined. A case study is defined as "an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined" (Yin, 1993, p. 13). Such a methodology is relevant for research in SCM because it can help gather better information about the realities of SCM and develop better and more complete theories about it (Eisenhardt, 1989; Yin, 2003b).

Case studies can be used to provide descriptions of phenomena, to test existing theory or to generate new theories. Eisenhardt (1989) has particularly focused on describing the process of building theory using a case study method. In her approach, the main strengths of the method are its novelty, testability and empirical validity. The theory-building approach is particularly well suited to new research areas or research areas for which existing theory seems inadequate (Eisenhardt, 1989; Ferreira & Merchant, 1992).

Since there is not adequate knowledge in the literature to allow organisations to understand how inter-firm SC strategic alignment influences performance and how arising control problems of the relationship between inter-organisational SC partners can shape the design of MCS, especially in the case of relationship interdependencies and interactive effects, scientific inquiry will enable organisations better control of their environment. Yin (1994) discusses three relevant conditions that should be considered when making decisions on research strategy: the type of research question, the control of an investigator over actual behavioural events, and the focus on contemporary versus historical phenomena.

The type of research question is primarily "how", since the purpose of the study is to provide inference and advance knowledge in the areas of research constructs of SC alignment, MCS, performance, and alliance portfolio management and provide implications of relevance to practitioners. The research question suggests the case study should be of an explanatory nature, as the purpose is to provide an explanation of the studied phenomena in complex business systems. However, the study not only provides explanations, but also gains a deep understanding about the various interactions of the studied business research areas. As the researcher gets involved in the studied phenomenon, the knowledge created through the research process will not be independent from the subject (the researcher). Therefore, the research objects are perceived subjectively, although the research material could also consist of some quantitative data that is primarily objective (Collin, 2003).

Marshall and Rossman (2006) suggest that research design and methods serves three major purposes: presenting a plan for conducting the study; demonstrating the researchers' capability in conducting the study; and asserting the need to offer strategies that preserve the flexibility of design, which is possibly the most challenging.

Yin (1994) describes research design as the knowledge creation process where methods are applied in detail. It is also understood as an action plan for the whole research process. In recent years, Stuart et al.'s (2002) five-stage process has gained increasing acceptance and popularity in the SCM and operations management research field. The process shown in Figure 1 consists of research question, instrument development, data gathering, data analysis and dissemination.

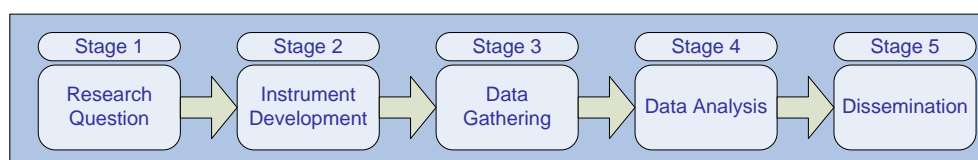| Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Research Question	Instrument Development	Data Gathering	Data Analysis	Dissemination

FIGURE 1: THE FIVE STAGE RESEARCH PROCESS MODEL ADOPTED FROM STUART ET AL., (2002)

Research questions can be asked at different levels of analysis depending on the scope of the study. There has been debate regarding the extent to which pre-determined frameworks should guide case investigation. Yin (1994) positions theory development as an integral part of case study research design and a critical step in the pre-data collection stage. Eisenhardt (1989) states that a priori identification of constructs from literature can help establish a better grounding for the emergent theory, and a "loose inductive design" could be a waste of resources (Miles & Huberman, 1994). One of the counter-arguments is that a solid theoretical framework could raise issues of data collection

limitations by pre-determined decisions as to what to collect and analyse. Koulikoff-Souviron and Harrison (2005, p. 269) suggests a middle grounds position of "a continuous interplay" between "no theory ideal" and "strong a-priori explanation". In the context of SCM, which lacks the rigorous and significant body of a-priori theory, Stuart et al.'s (2002) proposition that case studies can be utilised as the way to develop stronger theory, can be applied. Their study categorises and lists theory development in the different areas of strategic alignment management, logistics, relationship management, MCS, alliance portfolio management, best practice, and organisational behaviour drawn from the various bodies of literature.

This exploratory study attempts to develop a conceptual framework by utilising the previous research work in the areas of inter-organisational relationship management, SCM, MCS and alliance portfolio management to guide the development of the model to answer the research questions. It is expected that the framework will provide general guidance throughout the process without limiting the space of theoretical development of the model.

3.3   Research Site

The case study organisations are Smart Tech Inc. (STI), the customer, and three partners providing outsourced logistics services, namely, Delta Logistics Solutions (DLS), Total Global Services (TGS), and International Logistics Services (ILS). At the request of the organisations researched the real names of the organisations remain confidential.

The scope of this research is limited to the inter-organisational relationship between the STI SSC division on the one hand and the three TPL service providers as partners or vendors of SC solutions and services, where the unit of analysis is the relationship between STI and the partner. Although the focus is on the Asia Pacific (APAC) operations of STI and the inter-organisational relationship with the three vendors in the APAC geography or theatre, the scope will cover the global dimension of the relationship and the global operation of STI. Given the global nature of STI's operations and its matrix type service SCM end-to-end (E2E) process, as well as the hierarchical structure of the vendors' account management globally, regionally and domestically, the scope expands further from APAC to globally when discussing STI's implementation of the alliance portfolio management approach in managing the STI-vendor relationship or alliances.

Eisenhardt (1989) considers the selection of the case from the appropriate population as one of the important elements in case-based research that would assist in eliminating the effect of extraneous

variations. In contrast to survey design, the selection of a case study site largely follows theoretical rather than statistical reasoning (Stuart et al., 2002). This study follows Pettigrew's (1990) "planned opportunism" in the process of selecting the case of STI.

Access to the research site was given as part of the researcher's role as an employee working for STI in the SSC Delivery area. This presented an opportunity to interact with key actors in the partnership between STI and the three service providers but I was not directly involved in the relationship. Hence, while being at a distance from the relationship dynamics, I was able to observe the relationship developing in action.

Yin's (1994) rationale for the selection of multi-case study is maintained in selecting the three TPL Service providers, DLS, TGS, and ILS that will be studied. The three vendors represent on average 86% of STI monthly spending on TPL service providers and are the top three vendors in volume of business with STI The inter-firm relationship between STI and the three vendors features different levels of influence and mutual impact on each other's business not only in APAC but also globally.

3.3.1 The outsourcing organisation: Smart Tech Inc. (STI)

STI is a publicly listed company and a recognised world leader in networking and communications positioned as one of the top organisations in the industry worldwide. STI is the worldwide leader in networking for the Internet. STI networking solutions connect people, computing devices and computer networks, allowing people and organisations to access or transfer information regardless of differences in time, geography or type of computer system utilised.

With over 65,000 employees and operations across the globe STI average quarterly revenue of over USD 11.5 billion. STI's current portfolio of products and services ranges from networking devices and security solutions to data centre and video conferencing, and is focused upon three market segments: enterprise and service provider; small business; and the home. The solutions for each market are segmented into architectures, which form the basis for how STI approaches each market.

STI has a complex SC that caters for the delivery and service of the equipment install-base of the vast customer base across many countries worldwide and in collaboration and coordination with a significant number of partners and TPL service providers.

Networking has become the core connectivity technology and an essential part of modern communications where without Internet Protocol networking, IT would be less significant, fragmented and organisations and people isolated. Therefore, this is crucial to the technological

transformation of the business environment and that of people's day to day lives'. STI's vision as a leader in this world-changing technology is based on its view of networking as not just a platform for connecting people and companies to improve communications and productivity, but transforming human experiences and furthering human progress.

STI provides not only hardware and software products but "smart"[1] E2E networking solutions that customers use to build a unified information infrastructure of their own, or to connect to someone else's network. An E2E networking solution is one that provides a common architecture that delivers consistent network services to all users. The broader the range of network services, the more capabilities a network can provide to users connected to it.

STI offers a range of hardware products used to form information networks or give people access to those networks; STI software, which provides network services and enables networked applications; expertise in network design and implementation; and technical support and professional services to maintain and optimise network operations. STI and its partners serve and support customers in three key target markets:

- service providers — companies that provide information services, including telecommunication carriers, internet service providers, cable companies, and wireless communication providers;
- enterprises — large organisations with complex networking needs, usually spanning multiple locations and types of computer systems, enterprise customers include corporations, government agencies, utilities and educational institutions;
- commercial/consumer — small- and medium-sized businesses or individuals with a need for data networks of their own, as well as connection to the internet and/or to business partners.

Through vast number of acquisitions and partnerships, STI has been able to develop a significantly large and diversified portfolio of products and solutions allowing it to execute against its intelligent information network vision by investing in architectures tailored to the needs of various customer segments. It has an active program of Research and Development (R&D) with innovations in advanced technologies, which has positioned STI at the forefront of the organisations that are not only acting reactively to customer needs but proactively introducing new products, solutions and programs to the market. The high quality of products and services has allowed STI the opportunity of influencing the establishment and development of the global industry standards.

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[1] "Smart" is STI label of the new generation of proactively developed end-customer products, services and solutions compared to the old reactive approach.

STI SSC division is the business arm that provides the post-sales service support of spare parts procurement, repair, warehousing, delivery and installation of customers' faulty equipment through a complex network of warehouses spread around the globe and managed by means of complex systems of Enterprise Resource Planning (ERP), inventory management, freight and distribution linked to partners' systems through Business-to-Business (B2B) technology. The complex SC connects STI to its partners, which provide the services of ocean and air freight of spare parts worldwide, goods export and import clearance through domestic customs, warehousing and distribution of spare parts to intermediate depots and end-customers, customer on-site technical support of spare part installation, and faulty spare parts return and asset recovery activities back from end-customer to STI network of depots and to repair vendors to be repaired and deployed back into the SC.

It is important to highlight STI's annual fiscal year planning and budgeting processes. STI financial year starts in August and ends in July of the next calendar year. Two quarters before the next financial year starts, STI launches the planning and budgeting processes to determine global and theatre based business projects and required funding for these projects as well as the funds required to run the operations in the next financial year; called "run-rate budget". Based on business plans and the budget for the next financial year, divisions and departments, including STI Services within which Service Supply Chain Delivery Department (SSCD) operates, determine the annual financial, operational, commercial and people training and management objectives. Outsourcing the SSC and logistics operation to TPL vendors is one of STI's critical business strategies which is heavily utilised. SSCD total annual spent budget represents 75% of the entire Technical Services Business Unit budget under which SSCD operates as part of STI Services of post-sale service support to end-customers. The spent budget on TPL vendors rises to around 65% of the entire SSCD budget, which would be around USD 45 million annually.

Since some of STI's partners operate globally and cover several areas of the above mentioned activities, some of its partners are large enough to provide full SC solutions. Such complex SC requires sophisticated and advanced inter-firm relationship MCS to ensure partners perform against pre-set targets and KPIs. Consequently, those partners can be influential to STI business due to their size and their customer-facing activities, making the inter-firm relationship between STI and its partners a strategic factor in the success of STI.

3.3.2   Third-Party Logistics Vendors (TPL)

APAC incorporates over 17 Southeast Asian countries in addition to India, Sri Lanka, Australia and New Zealand. In this region STI has built a close and well maintained inter-firm relationship with three TPL service providers, all of which were selected for the study: DLS, TGS and ILS. Among the three partners, DLS ranks first in terms of STI average monthly spending on services rendered in APAC and represents approximately 60%, compared to 30% by TGS and 10% by ILS. The three vendors were selected as they are the only partners STI contracted to deliver services to end-customers (Ferreira & Merchant, 1992).

3.3.2.1   Delta Logistics Solutions (DLS)

DLS's international network links more than 220 countries and territories worldwide and employs about 300,000 employees. The company offers expertise in express, air and ocean freight, overland transport, contract logistics solutions as well as international mail services, with a portfolio that includes international air and ocean freight, contract logistics and value-added services along the customer's entire value chain. DLS combines geographical reach with expert knowledge about target industries, which enables the company to support manufacturers and trading companies to manage their complex SC across the globe. As one of the world leaders in the intercontinental freight business, DLS has a long history in providing logistics services and SC solutions mainly through its two business divisions, DLS Global Forwarding & Freight and DLS Supply Chain.

DLS Global Forwarding and Freight division employs around 150,000 employees in over 175 countries through 700 branches and moving over 2,500,000 tonnes of goods, as well as managing over 700 distribution centres in about 50 countries with warehousing space of about four million metre squares. On the other hand, DLS Supply Chain has two main businesses. One is the contract logistics business that includes ground-based SCM services such as warehousing and distribution, assembly, and just-in-time services. The second is its freight management business, which includes airfreight and ocean freight forwarding, customs brokerage, and multimodal services (arrangement of freight transportation by a combination of road and rail).

STI has a long standing and strong business relationship with DLS that globally spans across most of STI's operations theatres, where the inter-firm relationship matrix is managed by management teams from both organisations at territory, regional and global levels by means of MCS implemented, controlled and managed against contractual terms and pre-defined targets and KPIs.

In APAC, DLS provides STI call centre services for customer order management and customer spare part order tracking and notification. In addition, DLS provides a range of logistics services that cover freight forwarding and customs clearance, warehousing, distribution and spare parts delivery to end-customers. Utilising DLS' vast network of depots in APAC, STI has covered a larger geography in the region reaching to a larger customer base that, in some instances, has the capability of satisfying through the vendors two hours and four hours service delivery contract to the customer site. DLS has also, and where appropriate, sub-contracted other second tier partners to perform customs clearance tasks, meet service targets of spare parts order delivery to customers in remote geographies, and warehouses in some areas where DLS has no economically viable case to set up their own warehouse.

DLS utilises an advanced modern warehouse management system (WMS) to manage STI inventory in the vendor's network of depots across APAC. The WMS system is linked to STI's ERP system through a newly upgraded advanced B2B technology. In fulfilment of the inter-firm relationship's contractual requirements, DLS collects and provides STI with a vast set of reports on each part of the SC through both manual and system transmitted data. DLS reports both raw data and dashboard based information measuring DLS performance against the pre-set targets and KPIs. At each point in the SC operations, well detailed and defined targets and KPIs are set for the vendors to adhere to and achieve under a set of contractual terms and statements of work (SOW) and operational SOP. These targets and KPIs are reviewed by STI's and vendors' management teams at the end of each month and on quarterly basis for evaluation of performance, corrective actions required and realignment of goals and targets of both STI and vendors.

3.3.2.2   Total Global Logistics (TGS)

TGS employs more than 150,000 people, serves 200 countries, flies 50 aircrafts, runs about 30,000 road vehicles, and has a worldwide network of more than 2,300 depots and hubs, 460 mail hubs and fully owned operations in over 70 countries. With the Company's operating units, TGS provide a portfolio of services that ranges from picking up to transporting, sorting, handling, storing and delivering documents, parcels, and freight by combining physical infrastructures such as depots and trucks, electronic infrastructures such as billing and track & trace systems, and commercial infrastructures to its customer base and market.

TGS provides these services by means of different delivery networks and are served by different operators that range from time-sensitive air and road express networks operated by integrators to sea carriers. Freight forwarders operate virtual networks, using block space on other operators' planes,

ships and trucks, and their own depots and sites in harbours and at airports. Couriers focus on same and intercontinental next day delivery with a focus on light weights.

In APAC, similar to DLS, TGS provides STI services that span across the different areas and functions of SC either directly or through other sub-contracted partners and vendors. TGS provides call centre services for STI customers in the asset recovery of returned faulty parts for repair operations where customers with unreturned faulty parts over 30 days are followed up by the call centre agents to facilitate collection and return to an in-country depot in preparation to be shipped to repair vendors. TGS also performs the full range of activities involved in SC from freight forwarding and customs clearance, to warehousing, distribution and faulty parts collection and shipping.

TGS utilises a sophisticated WMS to manage STI inventory in the vendor's network of depots across APAC. The WMS system is linked to STI's ERP system through advanced B2B technology. As part of the inter-firm relationship, TGS collects and provides STI a vast set of reports on each part of the SC through both manual and system transmitted data. TGS reports both raw data and dashboard based information measuring TGS performance against the pre-set targets and KPIs. At each point in the SC operations, well detailed and defined targets and KPIs are set for the vendors to adhere to and achieve under a set of contractual terms and statements of work (SOW) and operational SOP. These targets and KPIs are reviewed by STI and vendors' management teams at the end of each month and on a quarterly basis for evaluation of performance, corrective actions required and realignment of goals and targets of both STI and vendors.

3.3.2.3   International Global Logistics (ILS)

ILS employs over 50,000 employees worldwide and has over 1,000 offices in more than 100 countries around the world, serving customers in market sectors including automotive and tyres, technology, industrial, retail and consumer goods, health care, publishing, aerospace and energy. ILS has been vigorously promoting the image of a leading global logistics company providing E2E design, implementation and operation of logistics solutions in contract logistics, freight forwarding, distribution management and transportation management for large and medium-sized national and multinational companies. Despite the frequent attempts to become an all-round SC solution provider, the strength of ILS has been in freight forwarding, distribution and transportation management, which can be attributed to its historical business origins.

STI has a long standing business relationship with ILS due to its history in the freight forwarding industry and the strength of the latter in serving markets in the United States, where STI has sizeable

operations. Compared to DLS and TGS, ILS ranks third in the volume of STI business captured by each of the three partners.

ILS services provided to STI are limited to ocean and air freight forwarding, export and import activities, and customs clearance. Similar to DLS and TGS, ILS has a set of operational targets and KPIs to meet but provides STI less automated performance reports and follows the same structured periodical operations performance review meetings especially at the STI and ILS management levels.

3.4   Research method

A common research strategy in case studies is combining multiple data collection methods as an effective way of substantiation of constructs through triangulation. Most researchers use one additional method to interviews to provide construct validity (Pagell, 2004).

When collecting interview data, Voss et al. (2002) recommend considering a trade-off between efficiency and richness of data, where the latter in broad sampling allows convergence and clarification but is resource intensive and takes time. Eisenhardt (1989) suggests ceasing data collection when saturation is achieved, that is, the point at which additional data is only adding incremental value.

The planned approach for this study is to use three data collection methods: semi-structured interviews, with documentation and archival data, and participant observation.

3.4.1   Semi-structured interviews

The interviewees represent the different strategic, operational and tactical levels of responsibilities and those who possess a good understanding of the inter-organisational relationship between STI and partners. All interviews were conducted in Sydney, Australia except in some limited instances where interviews were conducted by means of telephone or teleconferencing.

By interviewing informants from different perspectives, the potential for bias is reduced. The interview is a reciprocal interactive process of data collection (Groenewald, 2004). Informants were chosen from different levels of management within the Asia Pacific SSCD Department as well as the three TPL vendors. Interviewees were deliberately selected from the different functional areas of SSC as well as from the appropriate and relevant business areas of the three TPL vendors' management at different managerial and professional levels. This resulted in a total of 14 interviewees during the

course of the study. Key informants, who are critical in providing access to data or feedback on relevant research topics and emerging themes, are listed in Table 3. The interview sample consisted of informants from different departments and organisations to allow the verification and triangulation of sources as well as compare the different points of view. Each interview was planned to last for an hour on average unless the interviewee offered to extend the time and depending on the richness of information extracted. Interviews were complemented by informal conversations with the interviewees.

All vendors' interviewees have APAC responsibilities except TGS which has an additional Operations Manager responsible for Australia and New Zealand, only due to the size of the operations in Australia, but who acts as a regional sponsor of TGS relationship. From STI, the interviewees were APAC Vendor Senior Manager, APAC TPL Vendor Manager, APAC Vendor Manager, and Transport Vendor Manager. The interviewees from the vendors' side were account managers and operations managers of the three partners DLS, TGS and ILS as detailed in Table 3.

Little variation exists in the reporting lines, nature and level of relationship between STI team members and the three vendors' team members. As reflected in Figure 2, the STI team under the leadership of the APAC SSCD Director has three Vendor Managers reporting into the APAC TPL Vendor Manager, who reports into the APAC Vendor Senior Manager. On the vendor's' side, depending on the size of the operation in APAC as in the case of TGS, one or two Account Managers and Operations Managers report into the Regional Director, Managing Director, or Senior Vice President. At the senior management level of both STI and vendors, the relationship is mainly of a strategic nature and tends to move into operational at middle management and account management levels but generally tactical at STI vendor managers level.

Table 3: List of interviewees

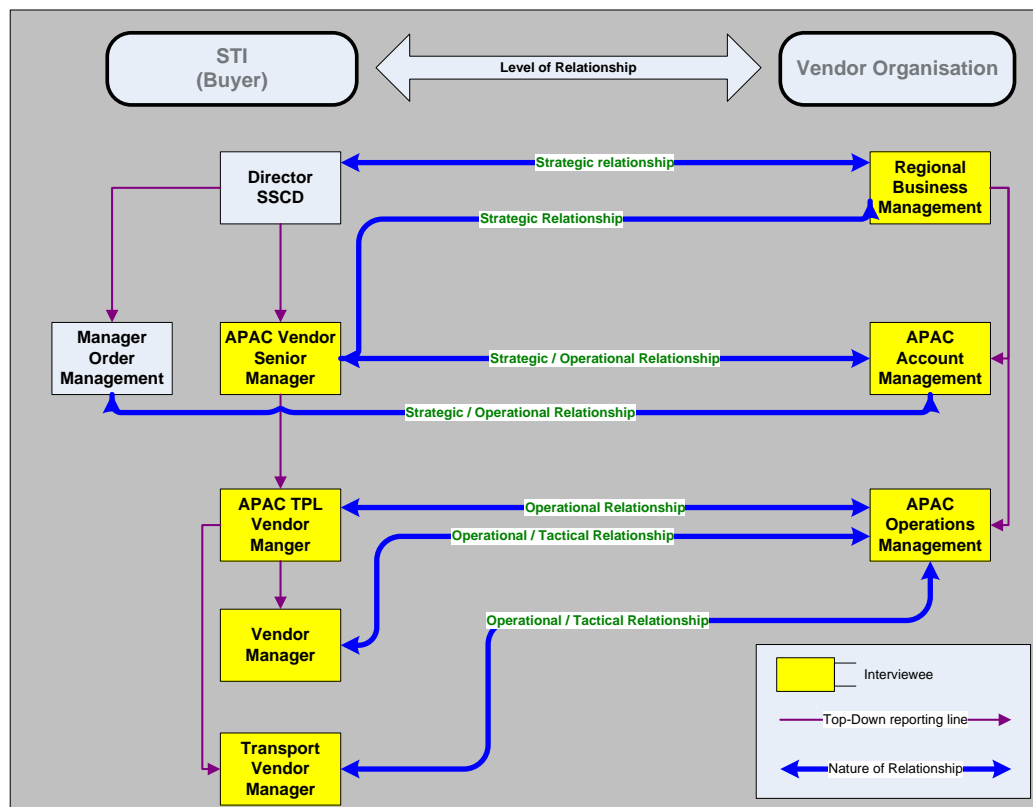| 1st wave interviews		
Organisation	**Senior Management**	**Interviewee Location**
STI	APAC Vendor Senior Manager	Sydney, Australia
TGS	Director Special Services, and APAC Executive sponsor	Sydney, Australia
ILS	MD Freight Management, South Pacific	Sydney, Australia
DLS	SVP DLS Express, Oceania & APAC Executive Sponser	Sydney, Australia
2nd wave interviews		
Organisation	**Account Management**	
ILS	APAC Account Manager	Sydney, Australia
ILS	APAC Sales Support Manager	Sydney, Australia
TGS	APAC Account Manager	Beijing, China
TGS	Australia/NZ Operations Manager	Sydney, Australia
TGS	Operations Manager	Sydney, Australia
DLS	APAC Account Manager	Sydney, Australia
DLS	APAC Operations Manager	Sydney, Australia
Organisation	**Middle Management**	
STI	APAC Vendor Senior Manager	Sydney, Australia
STI	APAC TPL Vendor Manager	Sydney, Australia
STI	APAC Vendor Manager	Sydney, Australia
STI	APAC Transport Vendor Manager	Sydney, Australia

FIGURE 2: BUYER AND VENDORS' LINES OF REPORTING AND LEVEL OF RELATIONSHIP

First-wave interviews focused on the high-level research topics: vendor management roles and responsibilities; vendor and customer organisational strategies and goals; importance and role of the SC and its strategy and goals in relation to the customer-supplier relationship; challenges, issues, and factors influencing the relationship success or lack of it, and solutions; SC management and actions to enhance and realise the added value to the customer-supplier relationship; role of formal and informal management control mechanisms (Appendix A).

Analysis of the first-wave interviews, conducted with all three vendors senior managers and STI senior manager, provided the overarching strategic perspective for the research, explaining the high-level policies of the vendors and STI, and set up the expectations for analysis of the second wave of interviews.

Second-wave interview analysis verified the vendors' and STI senior managers first wave of interviews regarding high-level strategies and relationship management, and also provided more in-depth detailed insights into the strategic-operational levels of the relationship between vendors and STI (Appendix B). As part of the second-wave interviews, a special interview was conducted with STI's Vendor Senior Manager on the alliance portfolio management approach implemented by STI (Appendix C).

In addition to first-wave interview topics, second-wave interviews with vendors and STI middle management, account, functional and operational managers, covered the topics of SC and SC strategic objectives alignment between vendors and STI, alliance portfolio management approach to managing the vendor relationship, and knowledge management exchange between vendors and STI.

Where both first-wave and second-wave interviews were conducted separately and consecutively with each of the interviewees independently, the QBR meetings were crucial in getting all vendor-customer relationship stakeholders, global and regional senior, top senior, regional, functional and operational account managers together to discuss and answer questions on all aspects of the relationship. This meeting can be seen as on-the-spot verification process of the relationship.

The first wave of interviews consisted of four senior managers being interviewed for one hour each. Questions were structured and clustered around the constructs and with focus on the strategic nature of the senior managers' responsibilities and their strategic level of relationship. Input from the first wave of interviews was used in structuring, focusing and clustering the second wave interview questions, and in improving and sharpening the constructs and the research framework model. Second wave interviewees were middle and line managers from vendors' account management teams and STI

APAC SSCD Team. Data was coded against concepts of research interest. Data triangulation was achieved through building on the outcome of the first wave interviews for input into the questions of the second wave interviews. In the second wave of interviews, 11 middle and line managers from both vendors and STI SC organisations were interviewed in addition to a second interview with an STI APAC vendor senior manager who was interviewed in the first wave, and this brings the total number of interviews from both waves to 15 interviews and equivalent to 15 interviewing hours.

The majority of data collected is primary data collected from face-to-face interviews except for one interview that was conducted via telephone conference-call with an interviewee in Beijing, China. The interviewees are key informants and directly involved in managing and influencing the vendors-STI relationship at strategic, operational and tactical levels. The interviewees were interviewed individually and each took one hour on average, where interviews were tape-recorded and subsequently transcribed. Using semi-structured interviews, the questions were structured in a way by which interviewees were allowed the opportunity in almost every question to express their views and state facts freely rather than opinions and in his or her style. The interviewees in each of the waves were asked the same set of questions, which allowed the researcher to compare the responses among the vendors and STI and reflect on archival data, and later cross-examining responses against the date collected at the global QBR meetings.

Interviews were taped and transcribed to allow the researcher enough time to focus on what is being said by the interviewee instead of being distracted by taking notes. Prior to the interviews an ethics application was approved by Macquarie Graduate School of Management to conduct the research (Appendix D), interviewees signed approval form to take part in the research interview and received copies of the interview questions to read before the interview started and, where given the opportunity, to refrain from answering any of the questions if they chose; none of the interviewees exercised this right. Interviewees were also given the opportunity to go beyond the predetermined interview questions in expressing their views and the facts they shared, which were all incorporated in the collected interview data and analysed.

3.4.2   Documentation and archival data

Archival data provides knowledge of the history and context surrounding a specific setting that comes from reviewing organisational as well as non-organisational documents. This method of data gathering supplements the other methods of data collection but might not be a major part in this process. Review of documents is an "unobtrusive method, rich in portraying the values and beliefs of

participants in the setting" (Marshall & Rossman, 2006, p. 107). Documentation and archival data included QBR meeting presentations, partner selection process and policy statements, STI FY2010 Vision, Strategy and Execution (VSE[2]) Report, Balanced Scorecard (BSC) and cost reports (Appendix E).

Internal STI financial performance reports and reports on TPL operational cost spent in acquiring the SC services of TPL service providers are an important source of information on critical aspects of the STI-vendor relationship. These reports not only represent valuable vendor performance trend indicators, but also are a barometer of the relationship health reflecting the successes and failures in the relationship and the impact of strategic decisions taken by STI or the vendor at critical times, represented in volumes of the business contracted to the vendor.

In addition, financial reports provide information on vendor performance in the business relationship with STI in adhering to the contractual terms, in terms of billing, both in terms of cost rates accuracy and frequency. These aspects of the financial reports provide important input into the performance measurement reports against target KPIs and the BSC Tool report, which are part of the QBR meeting presentation and discussion points.

3.4.3 Participant observations

Part of the research data collection process was participant observation of the two main annual business review meetings with DLS and TGS partners and an internal STI strategic planning session on the partnership alignment initiative in FY2010. The QBR Meeting takes place at the end of each quarter between STI and each of the vendors, representing an opportunity for the STI SSCD TPL vendor management team to review the entire relationship between the TPL vendor and STI and plan ahead. The review covers several aspects of the relationship at mainly the strategic and operational levels, by reviewing the vendor's performance measured against contractually pre-determined target KPIs and agreed common objectives, as well as progress on projects against plans and projects roadmap for the remaining period of the financial year.

From a buyer-supplier relationship management perspective, the Global QBR meeting has different dimensions to be highlighted, discussed and explored. In this type of meeting, three levels of management from both vendor and STI get together in an interactive way, exchanging both formal and informal information and knowledge. At the strategic level of management, meetings include

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[2] VSE is STI Vision, Strategy and Execution document issued every financial year that details the Vision for the next five years; Strategy for the next two years and Execution for the next 18 months.

senior global STI and vendors managers, STI and vendors' APAC senior managers, vendors' account and operations managers, and STI vendor and operations program managers. At this strategic level meeting, both vendor and STI senior management teams ensure the strategic alignment of the SC are adhered to, and share the organisational goals and SC strategic objectives of both STI and vendor organisations. The meeting also represents an important event for the vendor to share and exchange knowledge on strategic plans to develop new products, services and business solutions that can be potentially offered to STI to increase competitive advantage and meet STI end-customer service demands and requirements. STI, in return, shares and exchanges knowledge relating to potential new business acquisitions that would positively impact the SSCD operations, expansion and organisational restructuring plans, new service programs STI is planning to introduce, and differentiated and customised STI end-customer service requirements, as well as the strategic planning workshop session between STI and vendor.

The second major opportunity arising from the QBR meeting for both STI and vendor SC teams is represented in sharing best practice of what the particular vendor is offering to SSCD Teams across different STI theatres. A certain level of operational standardisation can be potentially achieved with each vendor across all theatres adopting best practice. In the same space, internal benchmarking among vendors can be achieved as an objective to improve performance and boost competitiveness among the vendors. In the last two years STI has introduced a global annual award program to formally institute this approach as part of its alliance portfolio management approach to manage relationships and provide incentives to vendors.

While STI ran QBR meetings for both DLS and TGS, no QBR meeting was arranged for ILS. For the purposes of this research, the DLS QBR meeting of FY2010 third quarter (Q3FY2010) and the TGS QBR meeting of FY2010 first quarter (Q1FY2010) were selected for in-depth investigation and analysis based on direct observations by the researcher. Each of the two meetings runs for three hours during which vendors' managers and STI managers from global and theatre management teams run through a predefined agenda and meeting templates presenting on topics of:

- general updates from both STI and TPL vendor regarding organisational changes, programs, acquisitions, quarterly financial results, and top senior management changes;
- strategic announcements of changes in both organisations;
- changes in TPL vendor's relationship contacts, i.e. account management team, and organisational charts of both STI and TPL vendor, these changes impact STI accounts directly and needs to be communicated and observed;

- vendor's quarterly operational performance measurement against contractually agreed KPIs, review of operational warehousing, freight, distribution and other service delivery KPIs, highlighting successes and failures;

- performance issues, service delivery failures including root cause analysis and corrective actions implemented by vendor;

- changes to SOP and operational improvements in processes;

- historical performance trends highlights;

- financial performance such as cost and pricing of services, any reductions asked by STI and reasons, any rate increase raised by TPL vendor, and cost trends and analysis;

- accomplishments by vendor, covering projects implemented and updates on projects pipeline, and systems improvements;

- carbon emissions reduction programs, corporate citizen activities, social and public events, and other general business updates.

In parallel, the researcher attended two global QBR meetings. The QBR meetings outcome was critical because it brings the vendors-STI stakeholders together in a face-to-face situation where discussions are spontaneous, open, transparent and interactive. These meetings not only allowed data triangulation, but also verified the responses collected from the interviews and the validation of the constructs and model design. Being participant observer, the researcher's attendance of the meetings represented a good opportunity to cross-exam the data collection process and validate the sources given the experience and exposure to the day-to-day operation and vendors-STI relationship and access to the archival data, financial and cost reports, as well as emails, communication memos and operations review meeting minutes and reports.

3.5   Analysis process

Little prior theory exists on the linkages between the theories of strategic alignment management, MCS, knowledge transfer, and alliance portfolio management. Accordingly, the case study has been selected as the natural choice for this exploratory research, which provides the deep-probing research method into the subjectively constructed research model given the small sample of partners, and provides a comprehensive approach to the study. Since this research studies three vendors, it follows a comparative logic of analysis aimed at identifying similarities and differences between cases and helping in understanding the relationships. Hence, the analysis can potentially explain the theoretical

linkages among constructs and the suitability to this type of research (Ahrens & Dent, 1998; Collier, 2005; Greenhalgh, 2000; Keating, 1995; Otley & Berry, 1998; Perren & Grant, 2000).

Combining the multiple data collection methods of interviews, observations, and archival sources is commonly used by inductive researchers building theory. While some researchers employ a subset of such data collection methods or other methods might be added, the triangulation goal can be better achieved through multiple data collection methods. This approach provides stronger substantiation of constructs and hypotheses (Eisenhardt, 1989).

The interview transcriptions were encoded and distributed in a tabular format against the corresponding variables for each of the vendors and STI. The data was later utilised in the analysis process with the other data sources for the within case analysis and across case analysis.

The most difficult and concealed part of the research process, Eisenhardt (1989) describes data analysis as the heart of theory building in case studies. Despite the commonly missing link of data analysis that falls between data collection and conclusions, it is important to identify and understand this part of the process in the research as a key aspect of confidence in the conclusions.

One essential part of the data analysis process is the within-case analysis, and the second is the cross-case analysis. Within-case analysis involves detailed case study write-ups for each vendor, which are basically simple authentic descriptions, but critical to the generation of insights. It aids the researcher in handling the large volumes of data early in the data analysis process (Pettigrew, 1988). Since there is no standard format to follow for this process, the researcher employed a combination of tabular displays (Leonard-Barton, 1990) and sequence analysis to organise then analyse data (Abbott, 1988). The aim is to ensure familiarity of researcher with each case study as a standalone entity and the emergence of patterns in each case on its own to inform the next phase, cross-case analysis. To avoid leaping to conclusions based on limited data (Kahneman & Tversky, 1973), data needs to be looked at in different divergent ways, such as using the tactic of listing similarities among the three cases coupled with inter-group differences. Another tactic is dividing the data according to data sources to utilise the unique insights available from different types of data collection. When a pattern from one data source is substantiated by evidence from another, the finding is stronger and better grounded, and when evidence conflicts, the researcher can sometimes reconcile the evidence through extensive searching.

The aim of the cross-case data analysis is to focus more deeply the research to develop reliable theory with a close fit to the data, and improve the chances of capturing unique findings that may exist in the

data. The data analysis of this research is based on these tactics and methods of within case and cross-case analysis among the three vendors and STI, and the categorisation of data in tabular format as well as the graphing of the financial data and vendors' performance. In addition to applying the triangulation technique, the sequence of conducting the interviews and the global QBR meetings as the qualitative data part of the study and paralleled with the quantitative data of vendors' financial and performance data, meant that the qualitative data input from the interviewees was verified. The overall data analysis approach produced emerging tentative themes, concepts and relationships among variables, which helped with the evidence from the cases in the iterative process of comparing the emerging frame to gauge how it fits with the case data.

3.6   Chapter Summary

This research adopts a multi-case study approach, comparing across different supplier relationships within a service supply network. It is a theory-building case study. Because of the need for continuing exploratory research and theory building in what is still largely a hazy area of SCM, case study research presents itself as an appropriate research strategy to engage with phenomena that still has to be identified and defined. The case study is relevant for research in SCM because it can help gather better information about the realities of SCM and develop better and more complete theories about it.

The buyer STI, as a leading global organisation in the networking industry has managed a unique inter-organisational relationship with three TPL vendors over a period of time. STI has outsourced the SSC operations to the three vendors, DLS, TGS and ILS which enjoy global coverage of varying geographies and varying levels of expertise in SC solutions and capabilities as well as size of operations.

The case study research tools that have been decided for this research include semi-structured interviews where 14 interviewees were interviewed during the data collection phase of the study. The interviewing sample consists of informants from different departments of buyer and suppliers' organisations allowing the verification and triangulation of sources as well as comparing the different points of view.

In addition to participant observation where two global quarterly business review meetings and an internal STI strategic planning session were attended, documentation and archival data included minutes of meetings of buyer and partners, QBR presentations, announcements, vendor selection process and policy, BSC reports, and cost reports.

4. CHAPTER FOUR: DATA ANALYSIS — ALIGNMENT, MANAGEMENT CONTROLS AND PERFORMANCE

4.1 Introduction

This chapter is focused on within-case and cross-case data analysis of STI and three of its vendors with emphasis on alignment, management controls, performance, and alliance portfolio management. Section 4.1 introduces the chapter, followed by Section 4.2 in which the STI global governance model approach is discussed focusing on reasons for change and the new global governance controls to drive alignment. Section 4.3 covers the STI-DLS relationship prior to the change, effect of the change on alignment, effect of the change on relationship control-problems, and impact of the change on performance in relation to influence on exchange of services and knowledge. The same analysis follows in Section 4.4 on the STI-TGS relationship and in Section 4.5 on the STI-ILS relationship. Section 4.6 discusses and analyses the three vendors' cross-case and Section 4.7 concludes with a summary.

While the chapter focuses on these discussion topics, historical comparison of the impact of the changes on STI-vendor relationships, the result of the introduction by STI of its global governance model in 2009 underlies the data analysis works. The alignment process and alliance portfolio management approach used in the global governance model resulted in major transformation of the STI-vendor relationship.

Analysis of the data collected from the three TPL vendors and STI through the two waves of interviews, notes and observations collected from attendance at two global QBR vendor meetings, and analysis of performance reports and financial statements, all provided good in-depth understanding of the vendor-customer relationship. Analysis revealed some differences in the relationship among the three TPL vendors as SC service providers on one hand and STI as the customer or service buyer on the other.

The variability in the different aspects of the relationship was observed when analysing the responses of the vendors' managers to the questions concerning SC and strategic alignment, relationship MCS, control problems and knowledge exchange. In addition to these topics, STI vendor managers answered a series of questions on knowledge exchange and alliance portfolio management, which is

an approach STI developed and implemented internally and was not shared with vendors. Further understanding of these aspects of the relationship was gained through the global QBR meeting process. Only DLS and TGS participated in these global meetings; ILS was excluded for reasons relating to incompetency of handling STI operations in Canada and subsequent poor performance in other STI theatres. Disqualifying ILS from these meetings and other meetings was an important indicator of the status of the relationship, which provided a kind of confirmation of the type of control problems raised and discussed in the interviews as well as the status of the relationship.

The qualification criteria for vendors to attend a global QBR meeting, the meeting preparation process, and the proceedings, revealed the type of differences in the nature of the relationship between STI on one hand and among DLS and TGS on the other. Although in the course of analysing the DLS and TGS relationship with STI vendors seemed to be on the same side, differences in many aspects of the relationship existed between the two vendors. The analysis of the performance reports and TPL cost statements explained other dimensions of the management controls in place, the underlying vendor-to-vendor relationships, the relationship with STI, and the factors influencing the exchange of knowledge associated with the operational collaboration and service delivery aspects of the relationships.

4.2 The STI Global Governance Approach

4.2.1 Background and reasons for change

The information economy after 2000 has posed new types of economic and financial challenges to businesses and governments around the world. One of the major issues was the rebirth of a gigantic service economy influencing a change in the old economic dashboard utilised by domestic governments, regional, national and international economic and financial institutions to manage national and global economies. The Global Financial Crisis (GFC) brought a new set of financial issues and challenges that required a significant level of understanding, innovation and creativity to manage, survive and succeed in the new environment. Accordingly, since the GFC the operating environment for STI, as well as TPL vendors, is different and strategies and policies that worked before the GFC in 2009 are no longer effective in some cases.

Before 2009, alignment between STI and vendors' organisational goals and strategic objectives was unplanned, incidental, short-term driven and one sided. Consequently, instead of introducing changes to the SC infrastructure based on shared and agreed strategic objectives of STI business expansion

plans and introduction of new types of products and services, changes were requested by STI from the vendors when required and without warnings or forward planning. Other incidental alignment changes are driven by corrective actions stemming from investigating root-cause analysis of performance failures. Alignment changes are sometimes short-term driven by operational process improvement suggested by either STI or a vendor to take advantage of a tactical cost saving opportunity or to absorb an increase in operational capacity such as the need for additional warehousing space due to sales growth or an increase in operational activities.

STI SSC management teams at theatre level have had freedom to control and manage vendors without much coordination and planning among each other and with corporate STI senior service SCM. Vendors[3] have had better internal alignment through their global account management (GAM) teams and were able to coordinate globally and sometimes play a "power game" in obstructing or even rejecting STI business demands and ignoring the sharing of best practice from some theatres with the rest. Consequently, STI did not have the sufficient power in the relationships to influence vendors' performance and lacked the flexibility in influencing vendors' plans to make vendors take STI's strategic objectives into consideration. The situation becomes even more difficult when terminating a specific vendor contract and ending the relationship due to poor performance and a failure to meet target KPIs for three consecutive months. The complexity of STI SC operations, business nature, and products and services have significantly contributed to STI reluctance in taking the decision to terminate a vendor's contract and subsequently selecting and recruiting a new vendor.

The relationship between STI and its vendors witnessed different types of control challenges and problems that ranged from STI demanding uncontracted out-of-scope work from vendors through operational process continuous improvement, cost saving and reduction projects to raising some target KPIs to maintain competitiveness in the market. Vendors have been increasingly inclined not to cooperate when contracts are due for renewal due to associated risks of indemnities and liabilities resulting from accepting spare parts trade and customs rules and regulations, and product certification non-compliance risks. Vendors generally refused to accept the cost of investments demanded by STI in IT systems, new depots, freight and distribution networks expansion and other major business improvement requests. Other problems were represented in vendors demanding STI grant new business to bidding vendors based on good performance. Performing vendors expressed disappointment too due to lack of rewards and incentives program for meeting and exceeding target KPIs as well.

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[3] The terms TPL service provider, supply chain partner and vendor are interchangeably used by STI SCM

Frequent organisational and structural changes within partners organisations and STI managers and vendors' account management team members, and associated risks to vendor performance and STI, were problems that impacted the STI-vendor relationship. Not the least of the challenges and problems were a competitive environment, financial and economic crisis, market impact and service pricing.

Perceiving the situation as an opportunity to improve rather than purely one of challenges and problems, STI realised the need to be able to manage the vendor relationship at the global level to neutralise vendors' ability to play the power game but without sacrificing the freedom to manage the vendors at the regional level due to the uniqueness of each of the theatre's overall internal and external environment and business requirements. This type of critical change cannot be introduced without the support, cooperation and coordination of the vendors. At the same time, and in order for the change outcome to be sustainable, it has to be at strategic, operational and structural levels, with mutual returns for both vendors and STI. To achieve such wide-ranging objectives, a new business approach and innovative relationship control mechanisms were required to handle and resolve control problems and maintain successful outward relationships with the vendors. Internally, STI needed to have an internal apparatus for the global and regional service SCM teams to use as a reference point in formulating the strategies and tools defining numbers and types of vendors, configuration of vendors' competencies and capabilities, mix of vendor's' knowledge, vendor contract termination and new vendor selection strategies and policies, and vendors' performance measurement and management.

The strategic, operational and structural alignment initiative addressed most of the control problems that existed in the relationship between STI and its vendor before 2009, but post-GFC a new set of control challenges and problems were generated. Some of the problems were related to vendor poor performance and the challenge of terminating the vendor relationship and some were issues of cooperation, coordination and appropriation with performing vendors. More specifically, for some of the vendors who agreed to alignment implementation, processes did not agree to match the detailed execution of some of the strategic objectives. Another set of new challenges was due to STI's global focus on sharing vendors' best practice across all theatres and managing vendors at a global level through which vendors lost most of their influence in the power game they enjoyed before.

Internally, STI initiated the alliance portfolio management approach that helped in setting up the strategies, policies and rules of engagement with the vendors in facing and resolving the arising challenges and problems, and in redefining management controls. While management controls prior

to 2009 were, to a large extent, influenced by each theatre's unique strategic and operational considerations, the alignment process drove STI to standardise management controls that would otherwise tend to neutralise the effectiveness of the global governance model. The change process of implementing the alignment initiative was completed globally across all qualified vendors, but the change process of introducing the alliance portfolio management approach was gradual by virtue of the evolutionary nature of the process of developing the related strategies and tools as needs arose. APAC led in this domain.

4.2.2   New global governance controls to drive alignment

In 2009 and with STI's APAC senior vendor manager holding dual responsibility as the TPL vendor management global discipline team leader as well, APAC took the lead in implementing STI's new global governance model, which aimed at addressing the issues discussed above (Figure 3). The model represented STI's global approach under which two foundational stones were introduced: the strategic, operational and structural alignment initiative aimed at aligning the organisational goals and strategic objectives of STI and vendors SC; and the alliance portfolio management as the approach to formulate strategies internally and develop the tools needed to define numbers and types of vendors, configuration of vendors' competencies and capabilities, mix of vendor's' knowledge, vendor contract termination and new vendor selection, and vendors' performance measurement and management.
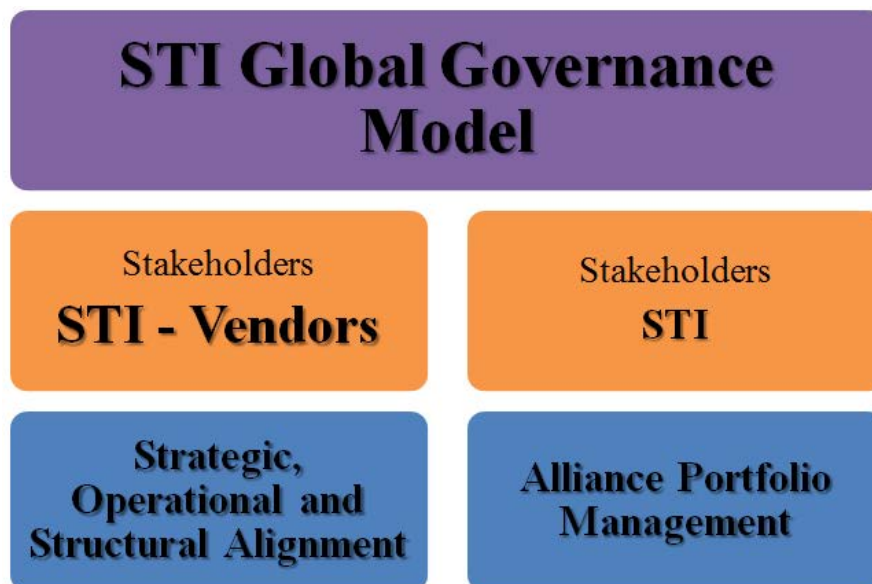

FIGURE 3: GLOBAL GOVERNANCE MODEL

The model consisted of two major parts: the strategic, operational and structural alignment initiative, and the alliance portfolio management approach. With qualified vendors who met target KPIs, STI openly shared the alignment initiative, which involved annual strategic planning sessions with the qualified vendors where STI introduced the VSE document explaining the VSE process of STI over the next 2–5 years. Part of the sessions involved mutual exchange of the organisational goals and strategic objectives of the SC and high-level strategic plans of how these goals and objectives would be incorporated in each other's strategies and policies so that medium to long term planning and budgeting processes are executed. These strategic planning sessions were accompanied with global QBR meetings between STI and qualified vendors. With STI driving the alignment process, new controls were introduced as part of the change the global governance model dictated.

The performance measurement control was transformed from a simple service delivery performance (SDP) target KPI to a BSC scoring system where the scoring encompassed the subjective and objective elements from STI vendor managers rating the handling of communications, escalations and problem solving by vendors' account managers to a set of operational target KPIs, financial reporting KPIs, pricing and on-time billing and invoice accuracy. The BSC scoring system allowed STI the standardisation of the performance measurement control by which the individual vendor's performance was benchmarked across theatres and vendors' performance was benchmarked against each other.

The QBR meeting was also transformed from a normal regional QBR meeting to a global one where the global vendor team from vendor corporate management to regional account management teams attended the video conference call with STI corporate to regional management teams reviewing the entire relationship aspects. In the meeting, vendor's best practice was shared among STI regional teams, and vendor performance across theatres was compared and benchmarked. STI announced vendor's failures and achievements and rewarded the performing vendor of the year. STI management started moving the contracts control from a theatre based control to a global control where strict measures, guidelines and policies were introduced to ensure all contracts per vendor and across different vendors enforced the objectives of the global governance model. These new management controls collectively disciplined the vendors not only into applying the alignment process but also changed the approach of tackling the control challenges and problems as well.

The alliance portfolio management part of the global governance model was an internal approach STI introduced and implemented globally across all theatres to provide the strategy and policy making foundations to STI SSC senior corporate and regional management teams. While STI's global

governance model gave a certain amount of decision making freedom to the theatres, the alliance portfolio approach provided the structure and mechanism to produce the strategies and policies required to manage STI relationship with the vendors throughout the different phases of the relationship life cycle. As mentioned above, the alliance portfolio management approach aimed at internally formulating the strategies and developing the tools needed to define numbers and types of vendors, configuration of vendors' competencies and capabilities, mix of vendor's' knowledge, vendor contract termination and new vendor selection, and vendors' performance measurement and management. The specific changes that comprised the alliance portfolio management approach and its effects are discussed more fully in Chapter Five.

Both parts of the model influenced the type of control problems STI started to face after 2009. The model also influenced the management controls utilised and mobilised to face and resolve the arising challenges in the relationship between STI and vendors.

Discussion and analysis from STI's perspective as the customer partner of the three vendors takes different shapes in not only understanding STI's position on alignment, management controls design and utilisation, control problems, and performance, but also in understanding what actions, policies, strategies, tools and techniques STI put in place to address the different types of challenges and problems arising in the relationship between STI on one hand and each of the vendors on the other.

Therefore, in the following section discussion will focus on alignment, management control problems and challenges, management controls design and mobilisation, and performance. While discussion of STI's global governance model implementation and the underlying strategic alignment process adoption will be part of each of these headings, specific headings will be devoted to discuss the alliance portfolio management approach STI implemented as a new method under the model to address gaps in managing the vendors' relationships.

Major changes took place as STI implemented the global governance model and the underlying alignment initiative and alliance portfolio management approach. The changes touched almost every aspect of STI's SSC and its contact with vendors. These changes affected the way STI operated internally and managed vendors as well as the strategic planning processes of STI and vendors, policy formulation and decision-making processes. Although the change created a new set of challenges and relationship control problems, the overall effect was positive and opened the doors for developing and progressing STI-vendor relationships at the strategic level and in the right direction. The right direction stems from the fact that STI started to manage the vendors globally and according to

internally agreed strategies and tools compared to a random and segmented approach based on each theatre's unique needs regardless of the corporate strategic direction when existed.

In the next three sections, the alignment process implementation and impact on control problems and effects on the design, utilisation and mobilisation of the management controls is analysed. The research focuses on how the formal and informal management controls are utilised and mobilised in response to control problems and how these controls are synchronised, packaged and mobilised in the response process and impact on vendors' performance.

4.3   Case 1: DLS

4.3.1   STI-DLS Relationship prior to the change

Before analysing the changes to the relationship with DLS created by the introduction of STI's global governance model in 2009, the state of the relationship before that date is illustrated. DLS can be described as the vendor with the longest serving history with STI's SSC not only in APAC but globally. The long STI-DLS relationship history combined with DLS size and reach as a global TPL vendor and the extensive experience and knowledge of DLS in managing outsourced SC operations, gave DLS the opportunity to influence STI's SSC management and performance and to a large extent influenced the way STI managed the vendor relationship.

Before the changes introduced by STI in 2009, the relationship between STI and DLS lacked the strategic alignment aspect and because STI did not have a formal global strategy to manage vendors' relationships, it was relatively easy for DLS to fill in the strategic planning vacuum in the relationship by occasionally proposing some process improvement projects or cost saving projects in certain geographies. Anthony, DLS account manager explains the approach saying:

> *"… because we know how STI business works, or I hope I do, through our relationship and then I can use that to develop a Customer Development Plan, share that internally and then I share it with STI folks as well".*

STI's position as articulated by John, TPL Manager from STI and global TPL discipline lead, describes the lack of alignment in the relationship with the vendors:

> *"One of the challenges over the years at STI has been to take the vendors from the levels of where they were at, to where we have them in the structure today. One of the challenges was to*

ensure that the communications with our, I'll continue to call them partners, so what's been critical to the success of the engagement of our partners to ensure the strategies and goals and our customer successes met, is that our partners understand our business to the level where they become an extension of our business and our requirements, otherwise, the success will not be met. Early on when I started at STI that was certainly very evident across the board where was regular disconnects between ourselves and our partners and understanding the businesses and structures and the low KPIs that have been met compared to the actual target of what was put in place. ... So we continue to communicate on roadmaps visibilities, our overall STI strategies and what's moving forward to ensure our vendors and partners stay aligned with what we are doing and how we continue to move. In a Company such as STI as you'd well and truly know, the acquisitions and activities that is going on in the space of new business certainly need to align to what our partners also required to do to continue STI success across the board in the supply chain and if we do not communicate this clearly with them and explain the changes that needs to be done with our vendors and partners we'll definitely again fail in the supply chain activity and what's needed for our success".

DLS was proactively proposing solutions to certain issues relating to STI operations in certain countries, which provided the leverage to DLS to bid and successfully win new business as the preferred supplier of services. Compared to other vendors, DLS IT systems, operational processes, warehousing network, and freight and distribution network infrastructure have always been collectively one step ahead of STI's other vendors which gave DLS the advantageous position to win new tenders of STI for new businesses.

From the management-to-management relationship perspective, DLS's relationship was primarily based on strengthening the relationships at corporate and regional levels with STI senior SSC management but each separate from the other. This type of relationship worked well for DLS due to STI internally lacking the global SSC strategic planning means which allowed the theatre SSC managers to have more freedom in defining their relationship with DLS and other vendors based on mainly regional operational needs and demands. Consequently, the dynamics of DLS's relationship with STI before 2009 was defined and approached differently from that after 2009, reflected in the comments of DLS's account manager:

"So probably the only changes that we're engaging, probably less on having a free just get together chat time. ... Oh, it's great to be able to have that – I guess a little bit of a bonding, you know? Like, not just sit here and always beat each other up over how the process should

work. It's good to be able to sit down and actually discuss business. Everyone's feeling it. I think definitely everyone's saying… and I've noticed probably from STI's side, they tend to be… you know, it's less impersonal, I've noticed. I don't know if that's schedules, people being busier now, or just don't have the time because they're so busy – they don't have the time. I'd say that's probably the biggest change".

Since the relationship was free from any strategic alignment requirements, most of the control problems that existed between STI and DLS were of an operational nature such as order delivery failures to key customers, additional or stricter target KPIs, incidental IT system's enhancements, service pricing or rate increase, and cost saving initiatives demanded occasionally by STI.

The type of formal and informal management controls were mainly the same controls before and after 2009 but changed in definition and scope. The major difference is that before 2009, DLS was able to influence the definition of STI APAC target KPIs and the overall performance measurement discussion which was mainly subject to negotiations between APAC regional DLS management and STI Theatre management. The same concept of regionally or theatre-based negotiations of contracts and service pricing applied.

Until 2009 strategic alignment was lacking in the DLS-STI relationship and DLS was following an adoptive approach to STI organisational goals and SC strategic objectives without committing to these objectives and goals. In summary, interview data indicated that the DLS team managing STI's account assumed high levels of alignment due to the amount of operational knowledge and the depth of understanding of the STI SSC by DLS and not the direct commitment to the strategic alignment goals, explained by Julie, STI Operations Account Manager from DLS, in one of her responses:

"STI knows exactly how we are managing their operation … STI knows that we have detailed operating procedures; that we understand their business needs; and obviously we are operating in accordance to STI requirements, and we are compliant to their needs. So I think we have a very good understanding, and a very good engagement model in terms of when we come across something that is out of the norm we definitely will raise the issue, sit down with STI, and agree as a joint party on what's the best steps".

Observer could develop some idea of the advanced level of business relationship history between STI and DLS. DLS would not need to give too much attention to ensure strategic alignment was established with STI. To a certain extent, DLS would predict STI business and SSC needs and with

some effort could accommodate most of STI's business requirements. Anthony further explains DLS views of the alignment process with STI by saying:

"... We know how STI works, or I hope I do, through our relationship and then I can use that to develop a customer development plan, share that internally and then I share it with STI folks as well.... We share that plan and say ... "This is what our goals and targets are. Does this match with what STI planning and does this make sense?" Because, I guess, if our development plan matches what STI's needs are, then we both benefit, really".

Effectively, STI indirectly allowed DLS to dictate operational alignment requirements through process redesigning and occasional cost optimisation projects, especially with the nonexistence of other TPL vendors of STI who challenged the practices and strong position of DLS, which was able to capture not less than 50% of STI TPL business.

On the other side of the relationship, STI was dominating the networking industry and the global market. STI faced some moderate competition and was able to enjoy the advantages the industry leadership position permitted and in particular good returns to the stakeholders. In fact, both DLS and STI found little need to discuss and ensure strategic alignment was in place. This relationship continued until 2008 when the GFC hit with some effect on the relationship. At the same time competition started to impact STI market share and sales volumes of products and services started to decline and it was obvious that keeping end-customers satisfied meant improving on the services side and ensuring the running of an agile, robust, efficient, and cost optimised SSC.

Although direct strategic alignment between DLS and STI was lacking, DLS believes that the survival of the relationship for all these years can be fundamentally attributed to DLS appreciation of STI as a strategically important global customer and STI's need for a capable tier-one TPL vendor. STI needs have been always considered as part of DLS's portfolio of global customers when DLS develops their internal organisational goals and strategic objectives. Greg, Senior Vice President DLS Express for Oceania explains the vendor strategy is:

"To make sure that DLS provides a range of what's called time-definite international services, and maintain a market leadership in specific regions such as Europe and Asia. ... We want to dominate this industry in Europe and Asia; DLS will always be number three in America because of the size of FedEx and UPS as large domestic competitors in North American market".

In discussing formal management controls, Greg, Senior Vice President for Oceania DLS Express believes performance management processes are extremely good, and setting the right SLAs and reviewing them is also important. Contracts should be reviewed only once every three years, that is, based on what is agreed with respect to pricing and other contractual terms of business. Greg thinks these controls are key metrics and extremely important to achieve performance and serve performance management review processes. DLS agrees to the review of controls but to add more both parties have to be comfortable with the key metrics agreed. If there are needs for more controls, that needs to be from the angle of addressing a specific issue and not for the sake of more controls. If there has been no issues with actual processes performing well and the metrics are being achieved, but STI wants to raise the bar occasionally to increase competitiveness, cost needs to be considered versus competition.

At a higher level and after being signed, contracts from DLS's perspective are not frequently and directly referred to in managing the relationship with STI. Generally, contracts are referred to in cases of conflict as a good legal reference document, both in disputes and in managing and controlling risks. All of DLS's managers agree that overall, contracts are there as a reference and not to be referred to for every business transaction or in daily business, and would be looked upon to define and determine each party's rights and liabilities. DLS adheres to contract obligations, terms and conditions so that action in court has not been required. Both DLS and STI are clear on deliverables, and contracts have been effective as a control mechanism of the relationship. Saying this, DLS has been delaying contracts renewal for the last three years and is in ongoing negotiations with STI, arguing that the indemnity clauses in the import-of-record statement of work (SOW) puts DLS under severe risk of being sued in court by STI in case of failure to follow domestic authorities importation and exportation regulations of any of the countries in which STI operates. All other controls, like incentives mobilised by STI, failed to move DLS to accept renewing the contracts. Although the element of trust was not damaged between STI and DLS, the relationship was put under stress. It is important to note that DLS's issue with contract renewal started before 2009 and was not related to the changes to the relationship that was generated by the introduction of the global governance model. DLS managers assured STI that a resolution should be reached and that the issue was brought about by the legal department of DLS, which was influenced by group of lawyers brought on board from another TPL vendor company acquired few years ago by DLS.

Performance measurement was the most favourable management control to DLS, the managers of which agree that they are strong on performance measurement and there are lots of processes developed to manage the relationship, that have been effective with performance measurement control mechanisms in managing the relationship with STI. To DLS, performance measurement as an MCS is

considered the centre of relationship performance. Julie, STI account operation program manager from DLS, is more passionate about performance measurement since she developed, applied and defended this control mechanism over the life of the relationship with STI. Julie believes that DLS performance is measured in all aspects of E2E operational processes and target KPIs are in place to measure all aspects of the relationship.

> *"We probably have about 15 KPI metrics that we measure in total, with service delivery, docking-to-stocking, in-bound receipt on time, even in pick-pack time to when we ship out, and updating ETAs and PODs. And we probably… we're measuring everything, you know…"*

On the other side of the relationship, STI is committed to measuring performance which has been effective as a control mechanism of the relationship with DLS. To STI, performance measurement increases the visibility of DLS performance, and it also keeps the incentive and drive to improve. Julie describes this point in her words saying:

> *"So we have a lot of KPIs in force within the operation. It's been very effective obviously because it does drive us to improve our performance. You know, if we didn't measure ourselves as closely as we do, or keep trying to achieve these targets that STI pushes towards, then we're not going to become a better service provider. STI's very, very – I don't know what's the word – they're very passionate about measuring service performance".*

In summary, performance measurement and target KPIs have been driven by short-term plans from STI regional SSC management and were not used in the optimum way to manage vendor relationships.

Incentives are a difficult area for all three vendors, especially DLS. DLS believes more processes and policies are needed around incentives to manage the relationship with STI, and expects more work to be done on performance bonuses and incentives. Before 2009, incentives were used in an arbitrary way by granting the selected vendor business in some countries without any underlying program or policy guidelines.

Benchmarking before 2009 was not too different from how this management control operated after 2009. However when used in conjunction with the BSC scoring system, benchmarking started to become more of a global management control than a means of finding new ways of improving on operational processes and creating more cost saving projects. Saying this, internal benchmarking continued to be the safest for STI due to the complexities associated with external benchmarking and risks of selecting the wrong business model to benchmark STI operations against. Although DLS

introduced one or two benchmarking projects per year, the application of the findings was always risky and did not get into the deep parts of the STI SSC.

Before 2009, the DLS-STI relationship was managed with mixed periods of successful accomplishments and achievements, challenges and problems. Efforts were made to manage the relationship at a regional level and when issues were too critical and too big they were escalated to senior corporate management of STI would be possibly the right and inevitable path. During that period, the STI global SSC senior management left it completely to their regional and theatre SSC managers to manage the relationship with DLS and were governed by master agreements customised to fit regional STI business requirements and management controls, which at best were customised via best practice shared among the regions and theatres of STI.

Prior to 2009 DLS faced significant pressure from STI to meet the increasing demands of improved operational process efficiency and cost optimisation. DLS claimed to suffer from lack of knowledge about STI plans and strategic direction and required STI to share more of the strategic planning and insights with DLS. DLS concerns were detailed in the feedback Anthony provided as to what knowledge DLS needed STI to share, especially that of a strategic planning nature:

> *So, I guess, it is really knowing what services you're looking to offer to your customers. So, how you see... will you be evolving to what... how you tend to support customers; I mean, that's really where we come in. So, is it that you move to more a direct model, or will it be looking to... to pick which of these; is it a cost focus you need, or is it high service level, or do we need to focus on... well, cost, service level are two extremes; just looking at which sort of direction, within those, so that we're not looking at service level all the time, where cost is more important to STI and these things do change over time. You get your service level right and then you need to say, "I need to cut my costs", just so that we're looking at the same high level cost, service level type of approach, or the secondary level, "No, we need innovation", or "We need flexibility" so we can say, "We need innovation, now let's really look at... in terms of innovation, what innovation are you after? Are you after IT investment, or do we need warehouse automation, or do we need the flexibility that we want for greater customers... greater customer segmentation?... So it's starting that high level, which one is important: costs, innovation, service level, flexibility? Or and then how does that translate into something that we can get out teeth into and share ideas".*

DLS demands that STI shares strategic planning knowledge with STI, which could in one way reflect a healthy sign of relationship growth where DLS feels the shared responsibility with STI to ensure

running efficient operations. The relationship has been managed in an organic way where STI, the organisation and the SSC has grown fast over time, but under global economic conditions and competitive forces has slowed down lately. DLS has managed the relationship by responding in a timely and agile fashion to STI needs, which might be the reason for loose but robust SOPs.

Before 2009, one of the serious control problems that took place every time STI requested DLS enhance its IT systems or grow its warehousing network or transportation and distribution infrastructure expansion was the sharing of these projects cost of investment between STI and DLS. Changes to the target KPIs would trigger major debates between DLS and STI. Similar types of debates would take place when DLS requested service price rate increases on STI agreed rates.

DLS cooperates with other vendors in supporting STI E2E customer spare parts orders delivery process. This is a problem for DLS, as for other STI vendors, because they are concerned at losing competitive knowledge to other competing vendors as well as losing any possible advantage in wining further STI business.

Over the life of the relationship, both DLS and STI have been able to establish a trustful and respectful relationship. Before STI implemented the global governance model in 2009, and despite the lack of strategic alignment, DLS was able to understand, recognise and fulfil STI's business growth needs to the point where the vendor was benefiting from the margin of freedom and lack of alignment allowed but still were able to maintain STI's SC minimum support to operate. Respecting STI relationship demands indirectly meant delivering to the contractual obligations which meant the contract remained a management control. DLS account management understood in the early days of the relationship that STI 'lives and dies' by performance measurement management controls and the SC is governed by an extensive set of target KPIs; adhering to delivering to these KPIs means everything to STI. Until 2009, with such overarching understanding of the relationship with STI, DLS was able to balance STI requirements up to the point where, if sensing that STI needs could not be compromised, DLS resorted to workshops and negotiations between senior managers to agree on a middle ground position.

Prior to 2009, STI's regions continued to enjoy the relative freedom of decision-making on vendor relationship management, termination, selection and recruitment of new vendors. In other words, with no corporate strategy to manage and control vendors, theatres' SSC managers on the one hand had no choice but to manage the vendors to the best of their regional professional capabilities and on the other were focused on achieving their target KPIs. Relationship control problems continued to be managed within the boundaries of the relationship as designed by STI and DLS. This balance in the

relationship was lost post-GFC when control problems took on a different size, nature and meaning and hence new management controls were required to address the arising relationship problems.

In the next three sections, discussion focuses on the alignment, control and performance between DLS and STI in the changeover phase or period immediately after 2009 and the ongoing relationship.

4.3.2   Effect of changes on alignment

The discussion in this section of DLS case will focus on the alignment efforts of STI with the vendor. The approach emphasises the state of the STI-DLS relationship and the changes that took place in the relationship after the introduction of the global governance model in 2009.

Julie, STI Operations Account Manager from DLS, describes the change in the relationship between STI and DLS:

> *"Definitely [STI], a lot more demanding. Where they used to be laid back, they now want to monitor and measure every single little thing. Definitely that has increased over the years with my experience with STI. If they are driving initiatives now to increase customer satisfaction by 15% and improve service delivery by so many cent, the more STI does that, the more it's going to impact on STI vendors, like DLS and so forth. ... So I'd say it's STI probably commitments to their customers that's driving the increase in complexity and with us, you know, that service delivery".*

Given the state of the global economy and the impact on the global and regional networking industry and market, in 2009 STI took an important move by establishing a global governance model that involved important changes to the way its relationship with TPL vendors was managed.

DLS's current strategic goal is to concentrate on core product lines to maintain a strong service performance focus. As part of its structural alignment efforts DLS has recently completed organisational restructuring to have a "very country-centric model, where countries managed their operations through country management team". This area management structure takes away most of the layers in the organisational structure and frees up what was a high degree of bureaucracy, streamlining the decision making process without sacrificing the relationship with the customer and improves the communication channels within DLS and with STI. DLS's organisational strategy and goals reflect more maturity and confidence in their competitive position in the global market without overstating their strength and presence in the North American market specifically. DLS's approach to managing the customer relationship has been adjusted, aiming at accommodating and balancing the

impact of the new global and domestic economic conditions on DLS and customers by reviewing and restructuring the account management system and the way of managing the relationship with customers.

To DLS, the customer relationship plays a very important role in defining organisational strategies and goals. STI as a global customer has been identified as one of the key global customers with which DLS aims to establish and maintain a strong relationship. Because STI is a global customer, DLS needs to ensure the relationship is structured at the global level. Consequently, relationships of a global nature, such as that of STI, are differently classified by DLS through positioning the customer in what the vendor terms as the "Top 100 key customers" with account management structured on a global basis and with special access to DLS Global Customer Solutions (GCS), which is considered a privilege. Therefore, such global customers would have hierarchical account management and relationship managed by global, regional, and country account teams. On the other hand, DLS aims at mirroring STI's structure, focusing on ensuring the representation is also right across all business units. Given DLS's arrangements and customer relationship set up, the DLS GCS account manager offers not just the Express Air Freight service but the complete product portfolio package, including the global forwarding and SC solutions suite to customers like STI and sometimes customised to STI specific needs. This approach demonstrates the type of relationship that DLS has built with STI over time. In current economic conditions, the customer relationship must be developed and driven into a partnership rather than a standard customer-supplier relationship by understanding the customer expectations and how the vendor can deliver accordingly.

4.3.2.1   Impact of STI global governance model on DLS-STI relationship: Mutual strategic alignment implementation

With the increasing intensity of the GFC in 2009, STI started implementing the new global governance model in managing the relationship with TPL vendors. STI SSCD management realised that tier-one vendors like DLS have relationships with the manufacturing SC of STI but also have been operating the SSC differently across theatres and following different logistics services pricing policies. When dealing separately with STI's SC organisations — manufacturing SC management and SSC management — DLS attempts to influence the relationship to suit its strategic goals and objectives and in most instances maximise its revenue by following different logistics services pricing tactics that generally deprive STI from enjoying optimised cost of services or economies of scale if the two SC are synchronised or eventually aligned. The essence of the new global governance model is to ensure that STI manages the vendors' relationships by mutually sharing and implementing strategic alignment of organisational goals and SC strategic objectives, and implementing

management controls that take into account the vendors' relationships across different theatres and among each other, that is, alliance portfolio management approach.

As part of the global governance model, STI's SSC management started running strategic planning sessions with performing vendors where STI and DLS mutually shared strategy and vision for the next three to five years. This change in STI's approach to managing relationships with vendors is an essential part of the strategic alignment effort between vendors and STI, and consequently the exchange and sharing of knowledge is both a result and a condition of the strategic alignment process. DLS emphasised the global dimension of the relationship with STI and cautiously endorsed the global governance model approach STI has been implementing in managing the relationships. Although vendors' senior managers have regional responsibilities, STI global governance approach in managing the portfolio of alliances is evident through the close interactive cooperation and collaboration between STI's global and regional TPL vendor management teams and vendors' global and regional account management teams, as well as senior management teams from both sides.

The other change in managing the relationship with vendors and DLS as part of the global governance model is replacing regional QBR meetings with global QBR meetings with the vendors where full visibility and openness prevails in these meetings and both vendor and STI management teams exchange knowledge, information, best practice and regional projects planned and implemented, in addition to relationship operational and financial performance reviews.

Under the influence of strategic alignment and strategic planning at both organisational and SC levels, it is observed that overall the global QBR meetings of both DLS and TGS reflected a strategic change in the relationship. The changes have been manifested in:

- the strategic alignment of the SC reshaping the way the SC is designed regionally and globally;
- the common understanding and execution of the strategic SC objectives;
- the strategic planning of developing products and services that contributes to the requirements of both vendors and STI growth strategies at regional and global levels;
- recognising and getting DLS involved in STI's end-customer requirements;
- the exchange of implicit knowledge between DLS and STI;
- the synchronisation between the vendors especially DLS and TGS in the way their capabilities are utilised as part of the new global governance model.

The feedback from vendors' managers in both the interviews and the global QBR meetings indicates a similar positive change in perception in the way the vendors perceive the relationship, the future of the relationship with STI, the strategic alignment of the SC, and the utilisation of the formal and informal control mechanisms in managing and resolving the control problems and advancing the relationship.

The alliance portfolio management approach was the second component of the global governance model STI implemented. The first component was strategic, operational and structural alignment; this portfolio approach helped STI's SSCD TPL management team in managing the vendors' relationship as standalone relationships as well as part of a mix of capabilities providing synchronised services according to a predefined configuration of vendors globally and regionally. The portfolio approach also helped in formulating one strategy for all vendors at both global and regional levels with freedom in taking decisions at a regional level to accommodate regional requirements of STI service SCM. As a consequence of utilising the alliance portfolio management approach, STI was able to achieve the right mix of vendors' knowledge, capabilities and competencies in the SSC. Utilising and mobilising management controls as a package was another important goal STI implemented as part of the portfolio approach.

4.3.2.2   Influence of organisational goals and strategic objectives on DLS-STI relationship

After STI introduction of the global governance model in 2009, DLS feedback on its role in achieving STI's organisational goals and SC objectives was fairly consistent. Anthony, STI Account Manager, finds the relationship DLS has with STI aimed at achieving STI's goals and objectives by establishing specific STI strategy by using DLS's knowledge and relationship with STI to develop and build specific STI plans.

> *"Part of our role [DLS] is to establish a strategy, a customer level strategy, a customer development plan. So, within that we're the key champions for the customer within DLS, so we use that knowledge and relationship, guess we have with STI, to derive, develop a plan and the way they measure development plans is really, I mean, any objectives, organisation's goals is really to grow the business, to increase revenue share, or not a revenue, but, I guess, a revenue with customer, so with STI, to make more profitable, make it more efficient, and to build the business really, I mean, that's what we are looking at. That's, really, ultimately, how I'm measured, I'm measured on growing the business, getting paid on time and then a range of targets on different ... spreading the business we share, so making sure we use our different*

business units , because ultimately, I mean, that's probably the easiest way to measure
effectiveness of an account. Does it make money? Do you get paid on time? Is it growing?"

Another objective is to grow customer business and increase profitability and revenue share with STI, which can be measured by business growth and improved operational efficiency. In addition, DLS's third objective is to increase account effectiveness by increasing STI performance using DLS business units. A key objective is aligning DLS's business plans and strategy to STI's business plans and strategy to ensure running effective and efficient cost optimised projects, mitigating liability risks and increasing productivity. The focus of Julie, STI Operations Account Manager from DLS, is more in line with her program management role and for DLS it is more to achieve goals and objectives of customer satisfaction.

According to DLS, STI's strategic objectives have influenced DLS's investment capabilities. STI needs consistency and visibility of service that requires DLS to invest in employing and training people to achieve these goals. Over time, STI demanded not just a commodity but intrinsically packaged services and business solutions across DLS business units. Some of the major strategic objectives of STI's differentiated, customised and flexible service offerings are targeting STI end-customers. DLS will accommodate and support STI objectives if these objectives fit DLS business units' strategies, otherwise these objectives will need to translate into what should fit DLS's portfolio of service offerings including the corresponding investment plans. According to STI TPL vendor managers, together with DLS they play an important role in achieving STI's organisational goals and objectives. That's because STI SSC team is responsible for the actual delivery of products or solutions that have been sold and installed on end-customer sites and if STI's SSC team cannot complete the post-sales service contractual obligation, STI has a dissatisfied customer and consequently deteriorating profitability. Consequently, the STI SSC team and, in particular the APAC team, contributes to the overall STI organisation success.

To illustrate this point, Anthony, STI account operations manager from DLS, explains how STI B2B IT strategy influenced DLS, where the vendor was not prepared to meet STI's IT strategy requirement. Consequently, DLS developed a strategic partnership with STI and invested in IT enhancement and upgraded projects to support the progressive STI IT strategy. DLS has to have the technology, people and infrastructure to support customer strategies to ensure STI's strategic direction is adopted by DLS. Over time, DLS is finding it necessary to lead with STI towards more innovative solutions, where DLS can place the margin or revenue target as a second priority after ensuring the successful solution implementation. Ultimately, if a demanded solution is strategically critical to STI

operations and is a relationship stability threatening requirement, DLS would have to cooperate in investing in the solutions development and implementation even if the solution is completely customised to suit STI's unique requirements. Consequently, DLS would still work to share solution development and set up costs with STI to maintain its share in STI business and protect the partnership relationship with STI against other competing TPL vendors.

4.3.2.3 Influence of supply chain strategy tools and techniques on relationship

Although until 2009 strategic alignment was lacking in the DLS-STI relationship and DLS was following an adoptive approach to STI's organisational goals and SC strategic objectives, STI service supply strategy played an important role in maintaining the relationship by means of a set of tools and techniques which DLS adapted and was happy to maintain. Consequently, this section discusses the influence on communications, standard information sharing, integrated IT and systems, common operating procedures (SOPs), and standardised decision-making processes on the relationship.

From a DLS team perspective, both formal and informal communication networks are established with STI's TPL vendor management team. Formal and informal communications existed at the different management levels from global to regional and country levels through direct calls and meetings with STI's operations team. Formal communications created between DLS and STI would cover global and regional QBR meetings, monthly, weekly and fortnightly operational review meetings, in addition to a well organised portfolio of reports on business and operational performance, and regular business newsletters. In QBR meetings vendors provided updates regarding organisational changes, programs, acquisitions, quarterly financial results, and top senior management changes and strategic announcements of changes in both organisations. In parallel to formal communications, informal communications were built over time and would cover any type of casual calls at all levels of management, mutual visits between STI and DLS senior managers and professional subject-matter experts as well as occasional invitations to business events, business dinners and teams' casual "get-together" event meetings. Such meetings DLS account managers consider important to maintain.

STI and DLS have standards for information sharing agreed on as part of contractual terms and the relationship needs have evolved and structured around STI operational and financial performance reporting needs. Apart from standard information dictated by contractual terms, work instructions, and processes and procedures reporting requirements, DLS shares information through a daily electronic feed on inventory movements, end-customer order deliveries, and operational performance and issues log reports. Standards of what and how information shared may be generally as per contract but DLS

could selectively agree to certain STI reporting requirements, and DLS shares in a standard way all service delivery KPI reports for operational and financial aspects of the business in all areas.

Integrated information systems did not feature prominently in the interviews with DLS's account management team. Anthony, STI account manager, briefly touched on the B2B messaging system that integrates DLS WMS system with STI's information systems. The B2B solution between DLS and STI systems allowed the two organisations to exchange standard information electronically and reports in real-time, which reduced human error in manually handling information. In addition, DLS has some level of access to STI's network and systems, which allows DLS access to vast amount of general information and updates on STI business. Saying this, the issue of DLS systems stability has been negatively impacting the relationship at operational level through poor performance and not meeting the performance KPIs.

Due to its strategic and operational impact on the relationship, integrated IT and systems are always at the top of the QBR meeting agenda between DLS and STI. While the IT and systems projects already implemented between DLS and STI have covered the main areas of STI IT and systems strategy, continuous improvements are always required to maintain the competitive level of performance of these systems. In this regard, DLS activities on the IT systems during the third quarter of financial year 2010 were limited to improvements to the global Logistics Control Services Centre (LCSC call centre) systems. In this respect, it is important to mention that generally, DLS IT systems are slightly more mature than those of other STI TPL vendors and in particular TGS. Although this should give DLS the competitive advantage over TGS to win more of STI's business, DLS's inflexible negotiating approach in positioning the cost of investing in any STI demanded IT systems projects as a top priority over the mutual total business returns to both DLS and STI gave TGS the advantage. TGS tends to win with their flexible and positive "can-do" attitude. In addition, TGS has had a strong commitment to make the relationship with STI successful by prioritising its partnership with STI first and cost of investment second.

Common operating procedures play an important role in indirectly ensuring all corrective actions stemming from conducted root-cause analysis on operational failures documents are undertaken in order to eliminate the chances of these failures reoccurring. Consequently, these procedures maintained by DLS have an important influence on the operation by mitigating risks of failure and maintaining continuous improvement policy. Anthony, STI account manager from DLS, agrees, while work instructions are in place for all areas, some gaps in converting work instructions to SOP. In addition, there is the missing link between work instructions, contracts, global policy and SOPs,

which ultimately need alignment and calibration. Julie, STI account operations manager from DLS, was more positive on SOP by stating that STI has full access to all operating procedures and knows how DLS manages the operation. DLS has operating procedures defined for E2E operational processes and by country. This means that DLS understands STI's business and associated operational processes and complies to STI's requirements, which contributes to building trust and a strong relationship between DLS and STI. Saying this, DLS pays special attention and care in maintaining the operating procedures as dynamic and current.

Generally, the "root cause analysis and corrective action" process is one of the main sources of change and improvement to the SOP of TPL vendors in managing STI operations. SOPs are an important formal control mechanism of the relationship between the vendors and STI. In the QBR meetings, DLS provided root cause analysis of underperformance in particular areas of the operation, such as missed order dispatch from a South African country[4] depot in the Emerging Markets East Theatre (EME). With corrective action implementation, no reoccurrences were reported after that incident, and more importantly SOPs were progressively updated.

In a separate incident, SOPs were reviewed to reflect the improved work instructions in the area of orders estimated-time-of-arrival (ETA) calculation by LCSC agents as well as system reports updates. Falling within the area of potential operational improvement of LCSC performance, STI EME Theatre vendor managers requested DLS to collect call centre performance data to be reported in the next QBR meeting for review and to consider possible corrective action and change to SOP. The LCSC manager, jointly with the global STI program manager, both from DLS, contributed to the discussion and took action to conduct the appropriate investigations and analysis to be shared and discussed with the STI team.

Overall, DLS inclines towards informal decision making mechanisms and processes between DLS and STI at different levels of management, but also relies on structuring and formalising these mechanisms and processes. While internally DLS has instituted formal processes for monthly updates and coloured-flags processes relating to customer escalations, DLS believes that these standard decision making processes still needs calibration. DLS considers the trust built with STI during the life of the long relationship compensates for the lack of decision making processes that are not in place. In this environment where standard decision-making processes are vague, DLS emphasises the need to continue discussions with STI to reach a decision on any action that could have operational, financial or legal impact on the relationship through the engagement model between DLS and STI.

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[4] A country depot is the main warehouse that replenishes spare parts stocking levels of the Rapid Fulfilment Depots (RFD)

4.3.3   Effect of changes on relationship control problems

In this section I discuss and analyse the challenges and problems faced by STI and DLS as part of managing the relationship and controlling the alignment process between DLS and STI. The analysis focuses on the changes that occurred in the relationship after 2009 and the implementation of the STI global governance model, compared to the state of the relationship before 2009. There were both problems and successes in this period and the factors contributing to these are examined. Further, the analysis covers the formal and informal management controls applied. The analysis focuses on the changes that took place after 2009 and the influence on the relationship challenges and control problems after STI introduced the global governance model with special attention to the management controls utilised and mobilised.

4.3.3.1   Challenges and problems in managing the service supply chain and relationship between DLS and STI

The challenges faced by DLS in managing the relationship with STI varies in some aspects from those faced by other vendors, especially TGS, and cover some unique areas as well. From an external perspective, DLS considers the GFC to have had a significant impact on the businesses and their relationships. Managing customer expectations and committing to what DLS Group can deliver represents another serious challenge to DLS, which was keen to focus on express shipping services as the core competency of the network. DLS did not dismiss, but focused on those that compliment its key core offerings. Generally, DLS management faces a dilemma when customers like STI, or some of the other key global accounts, demands more of the vendor service capabilities, which might require some customised solution that could drive DLS to move away from the comfort zone in the relationship. DLS believes it is good for a company of their size or other global TPL vendors of same status, to have demanding global customers. Such demanding customers can always make the vendor strive for the next level of self-capabilities development and business solutions improvement. On the other hand, to DLS it is an act of balancing customer demands against its capabilities and core competencies developed by be able to accommodate STI's requirements as well as those of other customers. DLS presents the "control tower" concept as an example of a solution developed by DLS in meeting STI's requirements to manage spare parts shipments around the region. In this approach, the DLS Express shipping service exerts enough effort to achieve the right financial return to the business based on the services DLS offering to STI.

Overall, DLS has a stable relationship with STI's SSCD team but not without challenges and problems. There might be challenges in what is required in certain countries against the scope of a

project or SOW, and this might be due to vague SOPs, undefined project scope or unclear contractual terms. This could also result in financial problems covering what is out-of-scope when STI demands certain jobs or tasks to be performed by DLS. Escalating such challenges and problems sometimes means referring back to what could have been verbally agreed but there was no clearly stated answer, and the challenge becomes negotiating and sharing information on the impact to DLS. Contract renewal negotiations of vendor import and export of record SOW, and related liabilities have been a challenge for the last three years. DLS has concerns of impact on relationship too, as discussions are at senior management levels of both organisations. Large projects such as the B2B messaging technology project requested by STI required significant investment from DLS and the challenge was in sharing the financial burden of the project cost between STI and DLS, which required negotiating the investment strategy of the project at both organisations' senior management levels, and eventually the project was initiated in 2006 and concluded in 2009.

In this type of relationship, DLS has no choice but to always aim to overcome the challenges and problems and strive to accomplish and achieve to stay in business and to maintain the relationship with STI. Global QBR meetings allow direct and open discussion between vendors and STI, where the feedback is instantaneous and from all levels of management on both sides of the relationship. DLS has worked hard to overcome challenges, but also to take these challenges as opportunities to present accomplishments and customer solutions to STI. A DLS success occurred in the third quarter of fiscal year 2010, which included significant vendor work on reporting requirements and capabilities, and carbon footprint and emission reduction across the APAC, Japan, EU (European Union) and EME Theatres. These reporting requirements represent serious challenges to DLS given the wide spectrum and global coverage scope where processes and systems adjustments are required. In the reporting space, DLS aligned and standardised the B2B system message reporting methodology, as well as the BSC performance measurement report format to conform to STI requirements. As part of reporting improvements, DLS also implemented and deployed the split of the operational performance reports by depot type. One of the important reporting improvements has been the alignment of the Root-cause analysis process by globally standardising the failures coding and reporting. This improvement was essential to the global performance measurement tools and systems in achieving the alignment goals. All these DLS reporting achievements were across all theatres and in line with STI's global governance model. These accomplishments signal the success factors imbedded in the relationship between DLS and STI, on which DLS can capitalise in facing control challenges and problems.

Working and coordinating with other TPL vendors of STI, DLS completed the faulty parts return process optimisation project, including the alignment of the process with that of TGS to improve operational efficiency. In the depot network operational optimisation area, DLS rolled out new depots in the EU resulting in improved customer spare parts orders delivery performance. Overall, the alignment of reporting and operational optimisation assisted in knowledge sharing as a by-product of the overall work towards performance improvement objectives of STI.

DLS's near-future growth outlook highlights some of the challenges being actively addressed which are mainly around the finalisation of STI logistics centre improvement efforts, the closure of misused customer accounts and resolving associated billing issues, and other challenges in international shipping and transportation operations.

While STI endorsed DLS's accomplishments in the meeting, there were disappointments raised by the STI Team, which were spread across operational failures, lack of adequate focus on cost savings projects, and failure to meet customer expectations. STI's SSC team expressed disappointment on Macau customer order delivery failures and resulting customer dissatisfaction in the way DLS performed. There was further disappointment about recurring international shipments misrouting and handling errors resulting in poor performance, although the corrective actions DLS have taken were also noted.

While DLS does not seem to have done enough to rise to STI's SSC team expectations of focusing on the domestic transport cost savings initiatives, STI's Japan team expectations on improvements on order proof-of-delivery information reporting were also not met by DLS.

The STI Team in the EME Theatre expected DLS to devote more attention and realise the sense of urgency in working with K & N vendor in Europe on operational reporting and refocus in resolving Senegal operational disruptions. The STI SSC team in the EU and EME Theatres expressed disappointment at the impact on performance caused by the migration of UK-Belgium Logistics Services Call-centre support to Malaysia and demanded DLS focus on resolving the associated issue.

DLS also were proactive in improvement, presenting a set of innovative operational improvement and optimisation projects, IT systems development, integration and enhancements plans, and cost savings initiatives with execution timelines in all four theatres planned throughout financial year 2011.

So far the discussion has covered the challenges and problems DLS has had in its relationship with STI as well as the accomplishments and achievements DLS delivered in managing STI's SSC. In this part the success factors in the relationship are discussed.

According to Greg, Senior Vice President DLS Express for Oceania, DLS considers STI as:

> *"... one of those 100 top customers and to me it's a relationship where because STI is always striving for what I would term affection or inspiring to be one of the best in the game for us in DLS, it is incredibly important to have STI as a Partner and work together as a partner of that aspect of improving processes, improving models, and working together to identify how we can do things a lot smarter, a lot more efficient. So it's vital important".*

DLS considers STI as one of those successful business relationships the vendor has had not just in APAC but also globally. Greg perceived the relationship with STI as a genuine and true partnership. DLS believes that one of those reasons why this relationship of cooperation and collaboration operates so well is the development of a partnership relationship supported by well designed "program management structure" on both sides and a good escalation process between both organisations. Both STI and DLS have collaboratively designed the right performance measurements and conducted reviews in the right way as more of a team rather than as customer-supplier relationship and following clear guidelines, metrics, and target KPIs. DLS considers recent successes in implementing the control tower project, providing STI regulatory and business advice on operations expansion projects in new countries and other knowledge exchange related projects as important success factor of the relationship.

DLS believes the hierarchical account management model, structured and aligned with STI's SSCD business model, and utilising DLS's GCS model, represents one of the main factors of success of the relationship. In addition, both DLS and STI senior management teams are remotely and dynamically involved in any arising issues. For Greg, at every quarter-end the account managers provide updates on issues encountered in the relationship with STI and resolutions provided. At DLS senior management level, frequent communications with STI senior management represent practical test of the resilience and effectiveness of the relationship structure strength that has been set up between the two organisations and the dynamic nature of the relationship. The amount of experience and knowledge that has been accumulated by DLS and utilised by STI, represents another core competency critical to DLS in managing STI's global and regional operations. DLS believes that as STI expands globally through business acquisitions and new markets, that competency becomes a mutually valuable resource of business growth for STI as well as DLS.

DLS has a consistent overall approach in managing relationship problems with STI. From DLS's perspective, challenges and problems arising from the relationship with STI are managed through negotiations and sharing information of potential business and financial impact to DLS. In some

instances, challenges can be significant and impactful such as when STI requires DLS to accommodate to changes in customs regulations. In facing challenges and facilitating discussions and resolutions, DLS shares business studies, industry and market knowledge, and how and what resolutions and solutions are reached. STI does their own reading and translation of information by which conflicting views are resolved. Essentially, DLS's preferred approach is to get all stakeholders from DLS and STI in workshop meetings, where STI presents requirements and business justification and DLS explains concerns and challenges. The main question for DLS becomes whether these STI requirements are critical business needs and have to be met in order to allow STI to maintain competitiveness in the markets. In these instances, DLS would then ask for sharing the responsibility and investment cost with STI. Therefore, an essential part of this DLS approach is sharing information and business knowledge with STI and communicating concerns and relationship bottom-line, which is crucial in managing the challenges and reaching a win-win resolution of problems. DLS believes that this approach has always worked and protected the relationship.

4.3.3.2   DLS actions to manage the relationship risks and problems: Enhancing and realising value provided to STI

Over time, a more robust and professional relationship between DLS and STI developed. Greg, Oceania DLS Express Senior Vice President expresses his confidence in the strength of the relationship saying,

> "I have seen it maturing; it is more like set in concrete. I think it continues to evolve, but it is definitely a very professional, well-oiled partnership".

According to Greg, the future is incredibly exciting because if DLS can create the whole range of E2E SC service offerings which STI can leverage, then DLS is well positioned to be one of STI's global distribution arms and an integral part of the STI SSC model.

Since 2009, STI, in a well-timed move with respect to the overall change in business environment globally and regionally, formally introduced the strategic alignment approach mentioned earlier to ensure the alignment of the partners' SC strategic objectives through the global governance model.

Although adapted to STI's needs in a responsive way, DLS has been trying to slow down and apply ground rules agreed on in the contracts. DLS feels that this shift should happen as a natural adaptation to the newly established strategic alignment approach to manage the changing relationship with STI, but keep the focus on having documented SOPs to control the operations and having a flexible country and regional relationship through trained and technically qualified teams. A similar type of

message came from Anthony, STI's account operations program manager from DLS, claiming that over the 12 years of the relationship,

> *"We all got busier and volumes increased with associated levels of operational complexity rising too. Socialising times between DLS and STI have been less where we do both need the "get-together" time to chat and talk in a relaxed environment about business and personal matters".*

This could be due to cost cuttings in the current pressing business and economic environment. While the relationship is becoming more difficult and complex, STI tends to become more demanding and wants to measure a wide range of aspects of the relationship and the operation. To STI, this may be due to more commitment from demanding end-customer and senior management. The challenge in building common views of such demands of STI is that, while STI might see these demands of operational optimisation and performance reporting as a natural evolution of the relationship and an impact of operational complexities, these demands to DLS translate to more investment in resources required to meet STI's demands. On the other hand, DLS can be proactive and forthcoming in proposing the value-added solutions that STI is seeking.

Despite the pressure from STI, DLS has developed plans aiming at enhancing the value-add service to STI. DLS GCS can customise and bring to STI any component of that whole SC suite of DLS services. Essentially, STI has one account manager, be it global or regional, through which STI can request any warehousing capability to be established in China, for instance, or other services in other geographies and markets. Working with GCS and leveraging DLS capabilities, DLS's account manager would work closely with STI's SSC team in APAC to capture the opportunity to improve STI's SC. For instance, when STI requested the control tower solution, DLS's account manager sought GCS support to develop that solution. In this instance the DLS account manager acted in a consulting and solution developer capacity compared to other instances where STI, for instance ,needed to establish an ocean freight container service between Los Angeles and Sydney. STI's account manager would work with the GCS team to develop and deliver such a service through the global forwarding function. "So literally, GCS operates like STI broker into the DLS world", Greg, Senior Vice President for Oceania DLS Express, describing the STI account manger's role as a major value enhancement provider to STI.

The "control tower" service solution developed by DLS for STI soon moved to become one of DLS's standard offerings to their customer base. Similarly, the value-add of DLS contributions to the setup of STI's spare parts network was realised not only by STI utilising that spares network but other IT

business customers of DLS using that network as well. STI and the likes of Sun Microsystems pioneered the account management model and in turn DLS has been able to use that same account management structure for some of its major customers.

The essence of these services offered by DLS is customisation to fit STI's demands based on the need to strategically align DLS's functions as in the GCS case to meet STI's customised and differentiated services and business solutions. The explicit strategic alignment process between DLS and STI gave DLS the needed guarantees to take big steps, such as establishing the GCS cross-functional team of professionals to support STI's strategic objectives of customised and differentiated services and business solutions aimed at enhancing and realising the value-add to STI. Accordingly, DLS has the courage to take key actions in managing risks and problems arising from the relationship with STI. One of these actions is the continual review process of risks and problems instigating acts which aim at minimising the risks of failure to STI. The risks are controlled and managed by DLS through measuring, reviewing and communicating the outcome with STI. The other key process in managing risks and challenges to DLS is the escalation process tree of hierarchical responsibilities, where if a problem is faced there are steps in place to address it; if it gets to Greg's level it has to be a big and serious problem. If Greg is not hearing from STI SSC senior management in APAC, it means the issue has been managed and resolved at a lower level. Essentially, Greg believes that whole performance review and performance management process mitigates the major risks arising in the relationship.

4.3.3.3 Extent and effectiveness of STI using formal management control systems in the relationship with DLS

In order to ensure strategic, operational and structural alignment processes are successfully implemented, strategic organisational goals and SC objectives need to be achieved. Given the relationship challenges and problems mentioned above, the alignment process would not achieve these objectives without having management controls in place to realign, monitor and improve performance. Saying this, these controls did exist before 2009 but with the implementation of the global governance model and the redefinition of the governance space to be global and regional with a packaged approach to management controls utilisation and mobilisation, the alliance portfolio management approach brought a different dimension to the relationship. Therefore, in the sections to follow, the impact of the alignment and alliance portfolio management approach on the utilisation and mobilisation of the management controls is considered.

Contracts as a formal management control took on a different global dimension with the implementation of the global governance model in 2009. The global approach that was influenced by the model was translated into a new global framework dictating the terms and conditions of the different types of contracts and SOWs, the approval process, the scope of the contracts, and the margin of freedom the new policies left to the regional management in defining the risks and associated indemnities and liabilities. While this global approach was mainly driven by the global governance model, the issues STI faced in DLS's ongoing refusal to accept the indemnities and liabilities associated with trade non-compliance and violation of domestic customs risks reinforced STI's belief in the appropriateness of the new policies and overall contractual framework.

Performance measurement is considered one of the important topics in the STI-DLS global QBR meetings for its significant impact on the relationship between the two parties. After 2009, the QBR meetings run by STI started to become global and in compliance with the STI global governance model where STI and DLS senior and account managers and different business managers attended. At the second part of the third quarter of financial year 2009-2010 global QBR meeting, DLS focused on reviewing operational warehousing, freight, distribution and other service delivery KPIs starting with the global E2E SDP KPIs report. This part of the presentation was led by STI's account global Operations Program Manager with support from DLS regional account managers. Overall performance was good with target KPIs met. Operational results of the quarter were presented in figures and trends graphed for each of the theatres and theatres' performance measurements were compared against each other on same graph. This style drove discussions mainly by STI aimed at extracting lessons-learned from comparing the operational performance across different theatres and sharing best practice of what DLS is implementing in some other theatres. DLS presented delivery performance measurement against target KPIs by functional areas of warehousing and distribution. DLS pointed out an increase in Return-Material-Authority (RMA)[5] customer orders delivery performance in Europe as well as an increase in allocation orders delivery performance. [6] The quarterly DLS performance comparison among all theatres on warehousing scored high against target KPIs in all theatres as reflected in the dock-to-stock and inventory cycle count accuracy results. Despite system outages due to systems gateway migration and resulting customer orders delivery failures, DLS met the quarterly global systems B2B electronic systems messaging up-time target KPI

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[5] Return-Material-Authority (RMA) customer orders are created by STI service engineers subject to customer's service contract to authorise the dispatch, delivery and replacement of new spare part and the collection of the faulty spare part to be repaired.
[6] Allocation orders are spare parts replenishment orders shipments generated overnight by STI's Inventory Planning system and shipped from USA main spare parts depot that feeds all country depots globally.

except for the EME Theatre which slightly missed meeting the target KPI for premium customer orders.

On premium orders delivery performance, DLS supports 260 premium rapid fulfilment depots in EU, EME and APAC, where premium orders delivery performance suffered in EME and EU, as well as scheduled orders.

On international transportation of both good and faulty spare parts, DLS presented good on-time delivery performance results against target KPIs over the financial years of 2009 and 2010 for APAC and as of the second half of 2010 for EU and EME. DLS APAC met the E2E target KPIs for inbound Asia. In-transit shipment handling target KPIs were met too.

Warehousing objective BSC score indicated DLS's overall good performance in all theatres except in APAC where the score dipped slightly. The Premium Rapid Fulfilment Depots (RFDs) objective BSC reflected overall above-average to good performance except for EU which dipped slightly in the third quarter of FY2010. DLS's overall international transport objective BSC for APAC showed poor performance in FY2010 and a sharp drop against the target KPI. Changes in the BSC calculations methodology was partially responsible for the drop in performance.

Under the global governance model and post 2009, performance measurement as a formal management control was obviously receiving different attention where the measurement and target KPIs are presented in a matrix approach to account for regional performance but with a global dimension. STI theatres shared best practice of DLS across different theatres and were able to start the process of measuring DLS performance globally through the BSC scoring system.

The BSC scoring system was one of the important changes to the formal management control of relationship performance measurement introduced by STI as part of the global governance model to the performance measurement process. With the change, performance measurement as a critical management control encompassed the global and regional dimensions of measuring the relationship performance and not only the operational performance as in the case of the individual delivery target KPIs. As was mentioned before, the standardisation of the BSC scoring system allowed STI the opportunity to compare the performance of one vendor across different theatres and globally and to compare one vendor against another within the same theatre and globally. The effectiveness of the new scoring system increased by having the system measuring both objective measures, such as DLS operational, financial reporting and pricing and billing accuracy target KPIs, as well as the subjective

measures that focus on DLS account team communications, escalation support and problem solving capabilities.

After 2009, DLS management began pushing more of the commercial knowledge to the program management team and authorising the account managers to have more decision making rights on basic aspects of the business and relationship to balance their responsibility of focusing on performance measurement. This allowed program managers to appreciate the impact of operational issues on financial aspects and the need for the two to be considered together when committing to STI requirements or agreeing to changes in delivery target KPIs. With this change DLS attempted to make it harder for STI to get any wins without rewarding the vendor for through incentives program. Similar messaging on incentives comes from Anthony, STI account operations program manager, who does not believe in the fairness of the BSC scoring system performance measurement when utilised by STI to measure and recognise vendors' overall relationship performance and establish incentive programs, as it ignores all the achievements and focus on the failures. DLS claims that the BSC scoring system focuses more on the subjective score, feedback given to John, TPL Manager from STI and global TPL discipline lead. Based on the BSC scoring system tool, a vendor managing one depot was awarded a best vendor award in the EU Theatre, and for this reason and others, DLS does not support the BSC tool and it's utilisation since the tool does not take into account the complexity of the operation and the level of customisation applied. Despite these issues, STI focused on making the BSC scoring system the right and acceptable performance measurement mechanism so that the new approach to incentives and the newly developed incentives program is based on the BSC scoring system results. STI has moved in that direction and during FY2009 and 2010 vendor of the year award was granted to TGS, while DLS was granted vendor of the year in transport.

In the third quarter of FY2010 during the Global QBR meeting, DLS highlighted some contributions to STI operational excellence upon which best BSC objective score year-to-date for major improvements was achieved in APAC and other theatres.

STI's team in EME, while expressing appreciation of the DLS account team' good performance and support during the FIFA Championship event in South Africa and the operational improvements in customs clearance process in Africa, was keen on transferring the improvement processes in other theatres especially in APAC over to EME. The STI Team in APAC expressed appreciation of DLS's good work and achievements on the B2B systems integration improvements, Philippines import permit support, India logistics support, and transport in-transit reporting improvements. On the other side, STI's Japan team reflected their satisfaction with DLS works on the process improvement

initiatives resulting in cost reductions as well as the works on the spare parts screening centre setup. The STI Team in EU was content with DLS support on the operational migration from another TPL vendor to DLS and the successful LCSC system implementation in Belgium as well as the commitment from the EU management team of DLS to operational excellence. John, STI global TPL discipline lead, and his successor, acknowledged DLS's steady performance and global QBR reporting progress over the last two years.

STI's appreciation of DLS's performance needs to be understood in the context of the current lack of progress in the contract renewal negotiations which has been progressively impacting the relationship. Despite the changes to the relationship that started to take shape through the global governance model since 2009, incentives management control for DLS was in suspension mode. Consequently, STI have had to mobilise the incentives management control to put pressure on DLS in order to achieve some breakthrough in the contracts renewal negotiations. This approach of mobilising different management controls when one is not achieving the objectives of STI was obviously working, especially when TGS's performance and how the progress on contracts renewal negotiations with TGS opened the way for STI to have an incentives program agreed on with TGS is reviewed.

Overall, both STI and DLS did not pay enough attention to benchmarking topic. DLS believes that a clearly defined policy and processes are needed around benchmarking to manage the relationship and some work started in this area. Generally, DLS does a benchmarking exercise once a quarter or twice a year with a company or customer in same market as STI. A requirement of benchmarking to be successful is ensuring the model company fits the business model DLS is supporting. DLS did benchmarking in the area of asset recovery of defective spares collection. STI is unique with this business model where faulty spare parts are replaced in advance and the benchmarking of the STI business model was mainly with companies who return faulty parts before replacement spare parts are delivered to the customer. Ultimately, benchmarking can be complex to implement and it is difficult to yield good comprehensive results if the researched company does not fit STI's business model with a high degree of similarity. Given the complexity and difficulty faced with external benchmarking, after 2009 STI wanted to take advantage of the implementation of the global governance model but focusing on internal benchmarking. STI's main aim was benchmarking DLS within and across theatres so that best practice delivered by DLS in one theatre can be applied in others. STI aimed also at benchmarking DLS against the rest of the vendors.

4.3.3.4 Informal MCSs design and effectiveness: Trust and values alignment in STI-DLS relationship

Informal management controls between STI and DLS existed since the beginning of the relationship. Given this fact, trust and other shared values started to become more important to STI and DLS and more effective in managing the control problems after 2009. While before 2009 vendors, and especially DLS, resisted the idea of sharing knowledge with the other partners and STI, the attitude started to change since STI introduced the global governance model and DLS became more receptive to the idea. This came as a result of the implementation of the strategic alignment process that also gave DLS more confidence to trust STI in particular and being open to knowledge exchange and sharing ideas.

Greg, DLS Express Oceania Senior Vice President, believes a key element in any supplier-customer partnership is to have complete trust, and have the same values aligned. "Each organisation should be aligned with the values of integrity, respect and honesty", Greg adds that all these elements are required in the relationship to enable working with a professional organisation. To DLS, trust and ethics are incredibly important in managing the relationship. DLS considers the values between two organisations have to be aligned; otherwise there will be dangerous disconnections. Therefore, from both organisations' perspectives, DLS can assist STI to reach their shared goals and work together. Greg concludes:

> *"It is like a marriage, you're going to have some trust. It is partnership, you are going to have ups and downs, and a marriage should last forever, and you're going to have issues, but if you cannot be open and honest and be prepared to work together then you are not going to have a long relationship".*

DLS's view of shared values, although positive, can also be one of mistrust, for example, DLS's account team tends to accuse STI of changing the relationship environment. It is important to note that even on DLS's side and after the acquisition of another large SC service provider company three years ago, Anthony, STI's account manager admits that from DLS the relationship started to become more rigid, ignoring the history and shared values between DLS and STI. Shared values were built over ten years, through direct collaboration, hard work and joint "give-back-to-community" activities as a good example. These activities are not self-interested only but add value to the relationship, providing faith in the information exchanged and protection to DLS and STI. Without shared values even small gaps in SOPs threaten the relationship, and shared values also compensate for the missing SOPs and contractual liabilities. Without shared values DLS tends to move closer to pure formal

controls and a rigid relationship as described by Anthony, STI's account manager. Different views were shared by the operations program manager who believes that STI is leaning more towards KPIs than to trust in managing the relationship. Julie, STI's account operations manager from DLS, feels the relationship with STI has changed and tends to be based more on numbers than on the personal touch compared to how the relationship was few years ago.

Anthony considered the strength of the informal networks and the shared values have contributed and influenced the success of the relationship between DLS and STI. In addition, DLS and STI combined their efforts and initiatives to grow the relationship, have helped growing the business relationship with mutual benefit. The combined network has been instrumental in promoting and influencing the partnership relationship and further exchanging and sharing knowledge.

Julie believes open communications and transparency are major success factors in the relationship between DLS and STI. Sessions of brainstorming issues and problems have influenced the success of the relationship where both DLS and STI shared information and knowledge which contributed to resolving these issues. Working in partnership and collaboration between DLS and STI teams has been another factor in tackling issues arising.

The feedback from Anthony and Julie summarises the change in the way trust and shared values have been mobilised by STI in conjunction with formal management controls. The feeling of a more rigid relationship and less personal get-together events is a reflection of a change in the relationship focus from regional to global where DLS is sensing that trust is not just at a personal or relationship level but has been surrounded by a more formal network of relationships at global, theatre and cross-theatre levels. By the same token, Julie's comments that the relationship has been more driven by numbers than trust reflects STI's reliance on the BSC tool to measure DLS's performance at global and regional levels, where STI tends to be more strict in the approach of measuring the performance to ensure fairness and equity of the measurement outcome within different theatres for DLS and across other vendors as well.

Trust and values have been crucial in sustaining a successful and positive relationship between STI and DLS despite the ups and downs along the long journey between the two partners. Both DLS and STI knew the right balanced combination of formal and informal management controls after 2009 and both were able to maintain this balanced mix of trust and performance management KPIs in particular among the other controls in place. Consequently, even during recent rough times in the relationship during the contracts renewal negotiations, STI mobilised management controls without damaging the

relationship and proved that performance can be maintained even though the relationship is under stress in some other areas.

4.3.4   Impact of change on performance: Influence of exchange of services and knowledge between DLS and STI on performance

Overall, DLS performance has been relatively stable over the life of the relationship; no sharp deterioration in performance was found without it being investigated, root-cause found and corrective action applied in a relatively short period of time. Effectively, DLS management has high levels of commitment to STI's operational objectives. After all, DLS is very keen on ensuring the best performance and relationship is maintained with STI as a global account. Despite the fact that DLS enjoyed the top vendor position for almost the life of the relationship with STI, DLS position was challenged after STI selected TGS to be the second top TPL vendor. However, DLS's commitment to the STI account did not change. Even with the recent issues surrounding the contracts renewal, DLS performance was unshaken and maintained at high levels. After 2009, performance measurement took a different dimension with STI's implementation of the global governance model, where strategic and operational alignment, together with the alliance portfolio approach, started to influence performance levels in a positive way. DLS started to understand that operational performance has become an important management control not just at the regional level but also globally, taking effect beyond the achievement or failure of delivery target KPIs, to touch on the issue of incentives, vendor ranking and STI annual vendor awards, and not ending at the possibility of losing STI business. In addition, another important aspect of the post 2009 changes is complexity arising from the fact that the relationship between STI and DLS has moved beyond the exchange of services to cover another critical dimension which is exchange of knowledge. Exchange of knowledge became a crucial part of the relationship and an effective factor in performance due to its role in the success of the strategic, operational and structural alignment of the organisational goals and SC strategic objectives of STI and DLS.

4.3.4.1   Influence of supply chain strategic alignment on performance and knowledge exchange

In the third quarter of FY2009-2010 at the Global QBR meeting, DLS presented the "2015 Strategy and Vision" which was part of a strategic planning session that took place in Sydney with STI's Global SSCD TPL Management Team. DLS presented their strategic direction for the next four years and their focus for the future on Technology Group customers and how DLS's different functional

capabilities can be leveraged to service customer like STI. This discussion covered DLS systems improvements, cost optimisation initiatives, new service products and controls to monitor progress. In the meeting, DLS demonstrated their efforts in working on leveraging the synchronised services of the different business units in order to develop differentiated, flexible and customised smart customer solutions that can be offered to STI Services and SSCD in distribution, repair, operations in new markets, and collaborative flexible solutions. These types of DLS services are expected to strategically and operationally align with STI's strategic objectives and goals. These solutions, among others, target STI end-customers and their needs. In the meeting, DLS management expressed interest in having another extended strategic planning follow up session with STI Global TPL Management to gain a better and more detailed understanding of STI's strategic directions regarding Services and SSC objectives. STI global and theatre TPL management teams further enquired about DLS' strategy and how to increase the level of SC strategic alignment. DLS's response confirmed the smart solution concept of DLS, which meets STI's smart solution products and services that have been initiated through go-to-market planning to the global markets and how STI can optimise the returns from DLS's smart, differentiated and customised solutions and smart products and services.

In the same space, DLS presented their SC consulting services available to STI and other DLS customers as well as the operational knowledge on new SC research developments, SC models and systems, customs importation and exportation regulations as well as market dynamics in different geographies impacting STI's services business. The presentation covered DLS's knowledge sharing in regard to commercial and business experience on implementation of new SC solutions, modelling and statistical tools that can be leveraged by STI, and DLS subject-matter-expertise available to STI and other customers of DLS. STI's management team was interested in what was presented by DLS, which not only implies exchanged and shared implicit knowledge by DLS, but also reinforces the effectiveness of aligning the SC strategic objectives.

In the same global QBR meeting, DLS's GAM updated the attendees on the services delivered for STI's Manufacturing Department, which awarded DLS a new contract to establish new warehouse in Brazil and initiate warehousing and transportation business in Nigeria. This new awarded business was an indicator of DLS's strategic interest in the combined future SC between STI Manufacturing and STI Services SSCD. DLS has been undertaking consultancy for STI's Manufacturing in Chongqing City. On the IT side, DLS implemented a direct B2B messaging system integrating STI and DLS systems and starting air freight services between Netherlands and the Middle East to improve the regional and global reach. Further, DLS offered expertise and knowledge exchange and sharing between STI Manufacturing and STI SSCD through DLS's support role for both SC.

STI Europe's SSCD Director presented the FY2011 VSE document. The VSE presentation stresses STI's innovation and differentiation strategic approach to support end-customers by providing smart solutions and how DLS and other vendors can support STI to deliver this strategic objective. The presentation from STI also highlighted the need for DLS and other vendors to support the architecture of smart differentiated, flexible and innovative solutions targeting STI enterprise customers in particular as a major segment of the market. Although STI at this stage is not working towards outsourcing and utilising advanced type of services from SC and logistics service providers, there seems to be some level of interest in pursuing more input from vendors on cloud services. It could be speculated that STI's request to get more knowledge on cloud services from the vendors is mainly driven by interest in new developments in the industry and how cloud services can be leveraged in designing the long-term strategy of STI SSCD and Manufacturing integration. In the same meeting, STI invited DLS to provide feedback on how TPL vendors can assist in operating the network and provide added value, as well as developing advanced talent to support STI's future plans. Essentially, STI wanted DLS as the party facing and interacting with end-customers to listen to their input and feedback to STI for the sake of developing the right solutions with the theme of a partnership relationship.

Although STI Services SSCD management team has not openly discussed with any of the vendors the strategy of combining and optimising Manufacturing and SSCD SC, DLS has been at least able to meet STI's expectations in long-term strategic planning and indicate to STI their ability and preparedness.

4.3.4.2   DLS performance measurement and DLS share of STI TPL cost spent in Asia Pacific

Although this section is intended to discuss the relationship between cost incurred by STI to DLS representing DLS services revenue to run part of STI SSC and DLS performance, it makes more analytical sense to introduce the topic from a comparative approach of the financial performance among the vendors first taking into account the element of relevance of each of the vendors cost and spending to the other two within STI's overall TPL cost management context.

There is a direct correlation and relationship between vendor performance and the volume of the business transaction with the customer and eventually the volume of STI TPL cost spending per vendor. This relationship stems from STI's policy of granting new business opportunities to the performing vendors. This relationship can be very obvious for a particular vendor, such as in the case of ILS that is covered in subsequent sections, and sometimes be subtle as in the case of DLS.

Although STI was keen not to appear as if rewarding DLS for lack of cooperation on contracts renewal negotiations, temporarily DLS picked up some of the freight business that resulted from STI gradually terminating some of the services ILS was rendering in APAC to STI. Consequently, the TPL vendor service cost to STI by DLS showed some increase during 2009 and 2010.

In QBR meetings, discussions on financial performance tend to focus on analysing the cost of services rendered by the vendor to STI and any discrepancies in the billing process but excluding service pricing and cost rates discussions which take place in a separate quarterly workshop session and in parallel to the QBR meeting. In DLS's third quarter of FY2010 QBR meeting, the Japan, APAC, EME & EU theatres cost trends of warehousing activities were presented accompanied with serious discussions on DLS's efforts to improve warehousing cost reporting. The improvement required involved splitting cost of country depots against Small Rapid Fulfilment Depots (RFDs).

Cost reduction is an ever present topic in all STI meetings with DLS and another area STI considers as one of the factors that determines a vendor's efficient performance in running the SSC. In the QBR meeting DLS announced their management approval of the warehousing rate reduction for the Japan Theatre. In addition, another cost saving initiative was reported representing the granted approval of Export Permit Process allowing STI shipping without pending export approval from Singapore Customs Authorities and resulting in reduction in shipping lead-times from five to seven days and consequently cost savings in spare parts safety stock level at the depots for STI. Further operational cost savings initiatives were reported by DLS, which resulted from the implementation of a new faulty parts export process in India leading to reductions in warehouse storage requirements and improvement in repaired parts lead-time process and cost savings through reduction in imported new-buy spare parts to STI. The Japan Theatre has had a share of operational cost savings too resulting from warehouse space optimisation of faulty spares storage and also from excess stock relocation. DLS informed STI and as part of the billing process review and the closure of accounts which were misused by STI end-customers resulted in cost savings in EU and EME.

As was mentioned earlier and before analysing DLS's share of STI cost spent, it is important to understand the overall picture of TPL cost STI incurred for the period starting first quarter FY2008 to fourth quarter FY2010 and its relationship with performance. Based on STI's internal financial reports, monthly spending in TPL operational cost earned by TPL vendors represented a considerable part of the overall global and theatre SSCD monthly cost budget. TPL vendors represents 22% of total SSCD cost spending including fixed departmental and overhead costs.

There are TPL vendors with operational coverage expanding beyond APAC to cover most STI theatres, such as DLS, TGS and ILS. In APAC (as shown in Figure 4) all three vendors rank in the top three spots in sharing the largest percentage of the TPL cost. Out of the total monthly TPL cost of APAC, the three vendors combined capture 86%, while only 14% is shared among the other vendors. Within the 86% DLS comes first with 54% of TPL cost followed by TGS 36% and ILS 10% (Figure 5).
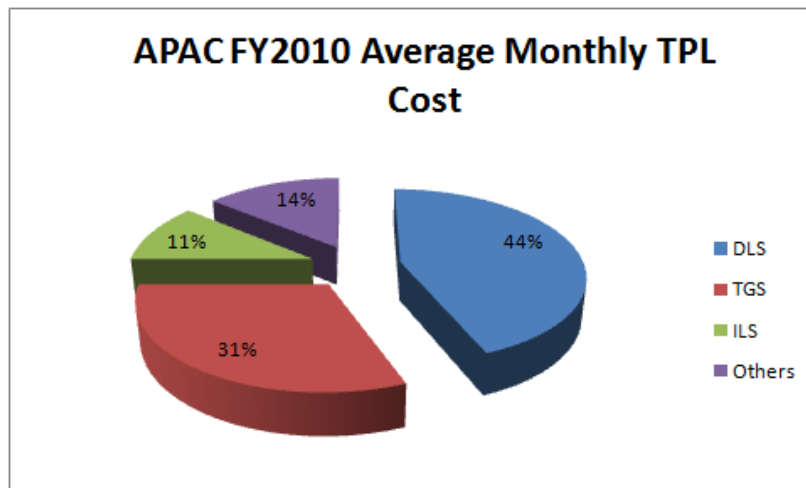

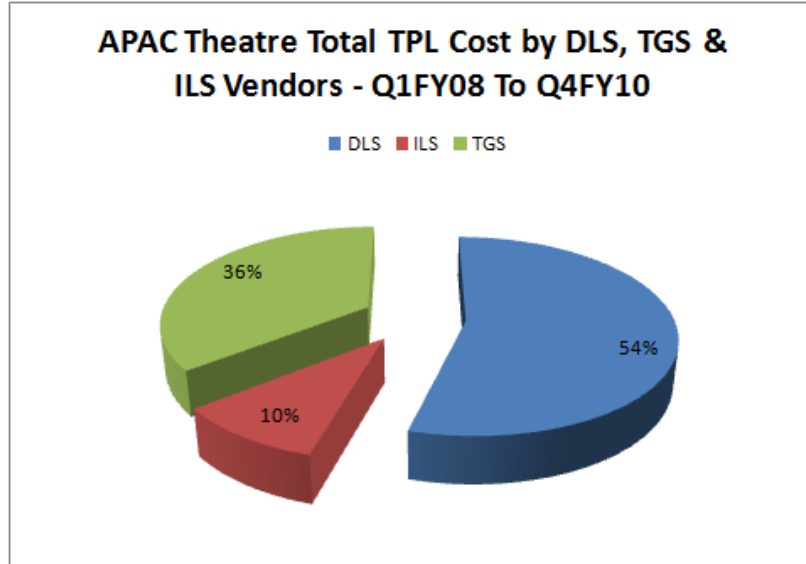FIGURE 4: APAC FY2010 AVERAGE MONTHLY TPL COST

FIGURE 5: APAC THEATRE TOTAL TPL COST BY VENDOR: DLS, TGS AND ILS FOR THE PERIOD FY2008 – FY2010

Comparing TPL vendors' performance against cost incurred by STI, that is revenue earned by vendors for rendered TPL services to STI, provides an overview of the growth in each of the vendors' business with STI based on their performance. Studying the trend of the cost incurred by STI to the vendors is considered a vendor performance indicator and one of the success measures of business growth or otherwise of the relationship between STI and vendors.

Performance measured by means of the BSC scoring system represents both subjective performance factors, such as operational KPIs, and objective performance elements, such as vendor communications, responsiveness to escalations, process improvement, and account management of the relationship aspects which are reported quarterly.

DLS performance was generally flat and at a quarterly average of 83.5% in FY2008 and increased to a quarterly average of 86.8% in FY2009 to slightly drop again to a quarterly average of 83.3% in FY2010. On the other hand, TGS performance as shown in Table 4 was slightly trending upwards from 82.3% in the first quarter of FY2008 to 92.9% in the fourth quarter of FY2010. Performance of ILS was low in FY2008 at a quarterly average of 66.4% to slightly increase to a quarterly average of 69.2% in FY2009 to drop back to 68.3% in the second quarter of FY2010 after which both Figure 6 and Table 4 shows a drop to zero for the two third and fourth quarters of FY2010. The graph in Figure 6 indicates that despite the slightly better performance scores from TGS, both TGS and DLS vendors have been performing at high BSC scores for the entire graphed period in APAC Theatre except for ILS in the third and fourth quarters of FY2010. In addition to the low performance scores of ILS in FY2008, the lack of ILS performance scores in the last two quarters of FY2010 was due to a decision by STI Global SSCD Senior Management to discontinue utilising ILS TPL services. STI decided to contain the risks of using ILS due to trade non-compliance issues ILS caused in Canada by being negligent in declaring the wrong information to the country's customs authorities. It is worth mentioning here that ILS's performance did improve in FY2009 but deteriorated again as shown in the first two quarters of FY2010. While STI Global SSCD Management was trying to avoid any further risks of utilising ILS's services, STI was also avoiding getting into a position where the relationship has to be legally terminated and allowing a window of opportunity in the future for reconciliation and relationship rebuilding if any by ILS.

The level of STI SSC cost spending on TPL services with each of the three vendors as reflected in Table 4 has been largely influenced by the performance of the vendor and the level of collaboration and cooperation of the vendor, the level of success of the relationship, as well as the level of alignment between vendor and STI. Although DLS takes the largest portion of STI TPL cost spent

among the three vendors as in Table 5, the stall point reached between STI and DLS in negotiating the contracts renewal has influenced STI decisions to tender new business to DLS. The contract renewal negotiations has been the major obstacle due to the tough negotiations on the liabilities clauses which is considered by STI a major hurdle preventing further growth in business between the two organisations due to major risk exposure in international trade. On the other hand, this situation is gradually impacting STI business in some of the Asian countries and posing some non-compliance issues with customs authorities in some of South East Asian countries as well.
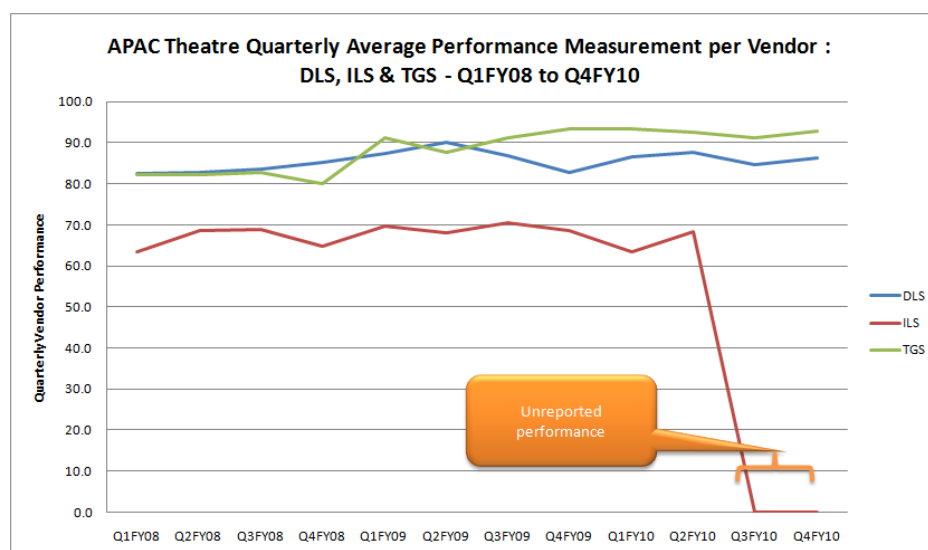

FIGURE 6: APAC DLS, TGS AND ILS AVERAGE QUARTERLY PERFORMANCE FOR THE PERIOD FY2008 – FY2010

TABLE 4: APAC DLS, TGS AND ILS AVERAGE QUARTERLY PERFORMANCE FOR THE PERIOD FY2008 - FY2010

Vendor	Q1FY08	Q2FY08	Q3FY08	Q4FY08	Q1FY09	Q2FY09	Q3FY09	Q4FY09	Q1FY10	Q2FY10	Q3FY10	Q4FY10
DLS	82.5%	82.7%	83.5%	85.2%	87.5%	90.1%	86.8%	82.7%	86.4%	87.8%	84.6%	86.2%
ILS	63.4%	68.6%	68.8%	64.9%	69.7%	68.0%	70.5%	68.6%	63.3%	68.3%	0.0%	0.0%
TGS	82.3%	82.3%	82.9%	80.1%	91.2%	87.6%	91.3%	93.4%	93.5%	92.7%	91.1%	92.9%

TABLE 5: APAC DLS, TGS AND ILS QUARTERLY COST SPENT BETWEEN FY2008 – FY2010

Vendor	Q1FY08	Q2FY08	Q3FY08	Q4FY08	Q1FY09	Q2FY09	Q3FY09	Q4FY09	Q1FY10	Q2FY10	Q3FY10	Q4FY10
DLS	42.6%	42.3%	46.3%	53.9%	59.1%	56.3%	59.7%	58.5%	57.3%	54.8%	54.7%	61.8%
ILS	17.8%	15.7%	13.2%	8.8%	8.1%	14.5%	13.4%	10.7%	8.6%	6.3%	3.4%	1.7%
TGS	39.5%	42.0%	40.5%	37.4%	32.9%	29.2%	26.9%	30.8%	34.0%	38.9%	41.9%	36.5%

Collectively, these cost saving initiatives reported by DLS reflected DLS's commitment to improving their operational and financial performance which ultimately influenced STI's decision as to DLS's share of the TPL business transaction. In order to compare and understand the trends of the STI

quarterly spending for each of the vendors or the vendor share of STI business transaction against their performance, DLS quarterly average BSC score was plotted against the quarterly percentage volume of STI TPL cost spending on DLS as in Table 6.

In the case of DLS, Figure 7 shows the performance against the TPL cost over the last three years FY2008, FY2009 and FY2010. While the cost has been generally trending upwards over the three year period, performance has been slightly and overall trending downwards.
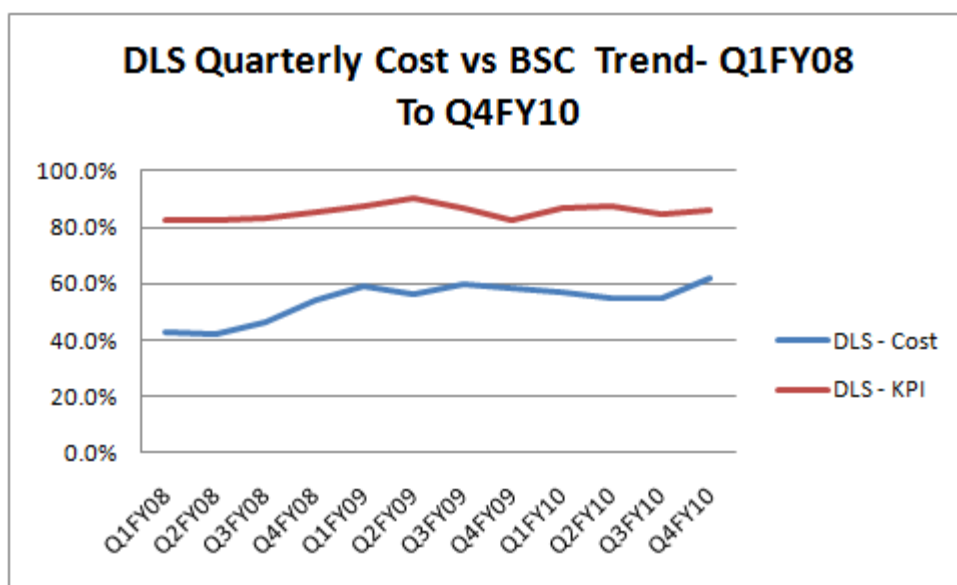

FIGURE 7: DLS QUARTERLY COST SPENT VS. BSC TREND BETWEEN FY2008 & FY2010

TABLE 6: DLS QUARTERLY COST SPENT VS. BSC TREND FOR THE PERIOD FY2008 – FY2010

Vendor	Q1FY08	Q2FY08	Q3FY08	Q4FY08	Q1FY09	Q2FY09	Q3FY09	Q4FY09	Q1FY10	Q2FY10	Q3FY10	Q4FY10
DLS - Cost	42.6%	42.3%	46.3%	53.9%	59.1%	56.3%	59.7%	58.5%	57.3%	54.8%	54.7%	61.8%
DLS - KPI	82.5%	82.7%	83.5%	85.2%	87.5%	90.1%	86.8%	82.7%	86.4%	87.8%	84.6%	86.2%

On the other hand, DLS's share of STI TPL cost spending among the three vendors as demonstrated in Table 6 increased from 42.6% in the first quarter of FY2008 to a high of 61.8% in the fourth quarter of FY2010. DLS's share among the top three TPL vendors of APAC SSCD has increased over the FY2008-FY2010 period by 19.2%. While DLS maintained steady and good operational performance over the three years period, STI granted DLS more and more business.

Concluding the analysis in this section, STI cost trends in spending pattern on TPL vendors show an overall positive correlation between performance and amount of cost incurred by STI in TPL

spending to vendors. The increase in STI spending on DLS cost of TPL services since mid FY2008 against a rather flat level of performance was due to STI's decision to gradually start to utilise less of ILS services and more of DLS services.

4.3.5 Case summary: DLS

For the life of the relationship between DLS and STI and until 2009, strategic alignment was lacking and the relationship was virtually dependent on DLS's indirect comprehension and understanding of STI general business direction. The services DLS developed, provided and offered to STI were mainly dependent on its business strategy and expansion goals to dominate the TPL services industry in Europe and Asia. DLS's product and service strategy is to provide a range of "time-definite international services", with focus on core product lines that guarantee DLS's strong service performance. DLS business expansion strategies were impacted by the GFC and influenced DLS's relationships with its customers by redefining and restructuring the relationship with global customers such as STI to a more centralised model. The change involved removing a lot of the layers of the organisational structure, reducing the degree of bureaucracy and streamlined the decision making process.

Before 2009, DLS strategic planning of STI strategic objectives was based on assumptions and the account management input. STI size and influence as a global customer encouraged DLS to give STI access to its vast product portfolio package of SC services. In addition, DLS worked to understanding STI end-customer requirements and to design customised services and solutions. The loose contractual scope represented a challenge to DLS, but made DLS always looking for the next level of improvement triggered by an ever demanding customer. DLS believed that relationship openness with STI was important in managing customer expectations and in controlling the relationship within the boundaries of their capabilities and ensuring any opportunity compliment to DLS core offering.

After 2009, STI started the implementation of the global governance model which involved strategic, operational and structural alignment between STI and DLS and the utilisation of the alliance portfolio management approach to manage the relationship with the vendors individually and collectively at both global and regional levels concurrently. As a consequence of the alignment efforts that involved the direct and mutual exchange of strategic planning information about organisational goals and SC strategic objectives, DLS came closer to understanding and developing services and business solutions for STI and end-customers that accommodate the strategic objectives of STI but takes into consideration DLS's strategies and plans. One of STI's main strategic objectives is the development

of smart services for end-customers which meant inviting DLS to develop customised and differentiated business and SC solutions to accommodate these requirements of STI. Accordingly, DLS created the cross-functional GCS team to be able to offer cross-functional processes to develop customised and differentiated solutions for STI which eliminated DLS internal departmental complexities and met STI expectations when they demanded the services by providing STI the service as one DLS package. Driving this type of relationship is DLS's ambition to be a recognised SC organisation. Therefore, it is important for DLS not only to have a customer like STI but a good business partner working together on improving processes, developing best practices, and designing customer business solutions. DLS sees the relationship with STI as a "true partnership", because the relationship extends beyond the service provider service delivery into service solution design from which DLS generates many benefits. DLS's program management structure combined with the escalation and review processes performed well between DLS and STI and in a synchronised way by which "service-failure preventive maintenance" of the relationship was in development.

The combination of STI's global reach, industry and vast business knowledge on one hand, and DLS's service capabilities, vertical knowledge in the different areas of the SC industry as well as horizontal knowledge in the different geographies globally on the other, strengthened the strategic vendor-customer relationship.

DLS believes that the well-structured partnership with STI is the main success factor of the relationship which has been proved through DLS Executive Sponsorship Program and close control by the senior management of both organisations of daily operational issues. DLS's GCS capabilities is another major relationship success factor and an important source of value in the relationship that helped DLS to design and deliver flexible and agile SC solutions whenever STI demands customised solution to solve a business problem or meet business need. Consequently, DLS is not just a source of knowledge but also a source of solutions and a unique service provider. Ultimately, the enhanced value to STI arises from the innovative IT solutions that DLS has managed to offer to other DLS customers.

Success comes with challenges and problems in the STI-DLS relationship that require control mechanisms. The continual review process and communication channels between DLS and STI, combined with the agreed escalation process, play an important role in minimising the risks and problems that arise in the relationship. To DLS, having a performance measurement process as a formal control is important together with service level agreements (SLAs) to manage the operations and customer expectations, but contracts are there just in case of a dispute. From DLS's perspective,

more or less of the formal controls is not a key issue as long as both STI and DLS are in agreement on the key metrics. Formal controls of performance measurement and target KPIs need to be adjusted when there is an issue with the processes, or if STI wants to maintain competitiveness in the market through continual review of target KPIs.

DLS believes that aligned values of trust, respect and honesty are extremely important to both DLS and STI in managing the relationship as much as the formal control systems. Over time, the relationship has been increasingly more robust, professional and nurturing. The knowledge exchange between the two organisations and specifically the vast amount of business knowledge DLS has acquired and invested in the relationship with STI, has further contributed to the success of the relationship.

Despite the fact that both formal and informal management controls existed before 2009 and were extensively used by STI to manage the relationship, there were changes to the way these controls were utilised after 2009. Formal management controls under the global governance model and the utilisation of the alliance portfolio management approach were mobilised as a package by STI taking into account the global and regional relationship with DLS. It is important to note here that the alliance portfolio management approach has had a major influence on the formal management controls in controlling the relationship at the individual vendor level and concurrently taking the relationship with the other vendors into account. The same was observed regarding informal management controls of trust and values where these management controls facilitated the knowledge exchange among vendors and with STI, which became critical to STI especially after the implementation of the alignment processes.

Overall and at a high level of analysis, DLS and STI SCs are aligned at strategic levels and they share the strategic objectives which are mutually incorporated into their respective strategies and executed through strategic planning and implementation. Despite the fact that DLS demands more of STI strategy related knowledge exchanged, DLS indirectly acknowledges STI's change in approach by running global and regional strategic planning sessions and mutually exchanging strategies and strategic knowledge of what to expect in the next two to five years. Essentially, both DLS and STI's strategic objectives are mutually influencing the partnership relationship. STI's alignment efforts with the vendors did not stop at the strategic level but moved to cover the operational and structural aspects of managing the relationship. The strategic objectives alignment and its impact on the relationship can be tracked between DLS and STI through the formal and informal communications, standardised information sharing, and SOP, but some work is still needed from STI on standard decision making

processes. Of special impact on the DLS-STI relationship is the challenge of creeping scope in projects demanded by STI and executed by DLS. This challenge has been associated with the partnership relationship history and both organisations can still reach some solution. Contracts renewal has been a major challenge to the relationship, and while negotiations must not pose a serious threat to the relationship, the partnership might be at risk if no resolution is reached on the liabilities aspect of contracts renewal. DLS and STI have endorsed the associated risks, and STI believes that DLS's account team needs to get their legal team, who are negatively influencing the contracts renewal negotiations, to realise the relationship is at risk and attempt to mitigate these business risks.

Formal control mechanisms have had a good influence on the DLS-STI relationship. Despite the contracts negotiations issues, DLS and STI have a good portfolio of contracts and SOWs in place to control and guide the relationship. Saying this, DLS believes contracts after being signed have no influence on the relationship in carrying out the operational responsibilities and would be referred to in case of disputes. DLS considers the performance measurement KPIs as the critical and effective control mechanism, where huge efforts have been put into developing detailed and comprehensive operational KPIs. Regarding incentives, DLS expects STI to create incentives programs which result in more business to DLS in reward of DLS's good performance continually achieved. Consequently, DLS was not happy with the annual vendor of the year awards and would like to see the BSC reviewed, utilised and implemented in a more fair and effective way. Both DLS and STI seem to agree on the complexity of benchmarking as a formal control mechanism and not much emphasis was placed on benchmarking from both organisations.

Both DLS and TGS shared values of trust, respect, integrity, openness and transparency, and endorsed the positive influence of the shared values on the relationship and in driving it to even more advanced partnership between DLS and STI and across and within both teams.

The facilitation of knowledge exchange through service delivery processes is not at the right level where there are several factors impacting this area: first, STI is reluctant to push the vendors to exchange knowledge through service delivery and only operational information is exchanged where necessary among vendors; second, STI has no clear and formal policy in this regard; third, STI needs to develop its position on knowledge exchange through processes and as part of a complete suite of policies in this area; fourth, DLS claims that STI is not exchanging and sharing enough of the strategic knowledge on objectives and plans which is obscuring DLS's visibility of knowledge needed from STI to develop their strategy; fifth, in the last two years, STI has started running strategic planning sessions exchanging strategic types of knowledge about plans, customers and solutions.

Consequently, STI needs to take the lead in the area of knowledge exchange since great potential exists for vendors to come together and develop synergies in SC business solutions from exchanging knowledge. DLS is ready but needs the signal from STI.

4.4   Case 2: TGS

4.4.1   STI-TGS Relationship prior to the change

Prior to 2009, the relationship between TGS and DLS on the one hand and STI on the other has had generally different characteristics in at least two aspects: history and maturity. Until 2009, TGS was in the same situation as DLS, where the strategic alignment direction from STI was missing, but because of the shorter history and developing maturity of the relationship, TGS's strategic planning differed from that of DLS in being mainly influenced by STI. While DLS influenced STI's operational policies and plans and was able to solely and indirectly drive the operational, and to a certain extent the strategic, alignment processes based on its predictions of STI's strategic objectives and understanding of STI's organisational goals, TGS was generally a recipient of STI's fragmented feed of strategic objectives. That is the relationship was a 'one-way' relationship because of TGS's major reliance on STI's account and experience to ensure the success and growth of the newly established "Store-a-part" services. STI is the second largest account of TGS's "Store-a-part" newly developing service in APAC. Following STI's strategies was the only feasible option available to TGS to grow the new service by keeping a key global account, and to absorb the knowledge needed by TGS from STI to manage the spare parts business and develop and grow this particular service. This was the strategy TGS followed to align to STI's strategic objectives as shaped by STI and described by Dave, TGS Director Special Services:

> "STI is a global customer and part of our [TGS] global management account structure. So just being on that list means customer very important to the organisation and wouldn't get on that list if they are not important , because that means they have global opportunities and global prospects of growth. Secondly, it is important to the organisation in the Australian terms because the store-a-part business is a new and growing business and STI represents a benchmark customer for the high profile customer which in a market which we are trying to grow, it is important to have. So, from my perspective, STI is a very important customer because it gives me the platform to grow the business. Because it is a global account customer, STI is important for us in the region as part of our regional structure. ... I mean at the end of

the day we all have a series of contracts and formal commercial agreements but the success of the relationship really comes down to the people and how they work together and how much there is trust and how much of alignment in terms of where STI wants to go with its supply chain solution and whether TGS is aligned to that direction or different direction. TGS in Australia is aligned with STI strongly because the store-apart business is a product that we want to grow and develop in the market place. We've got some big businesses in Germany but there is no reason why we cannot have much larger organisations in Australia".

This type of TGS-STI relationship created control issues for both partners. Target KPIs set by STI were frequently missed by TGS in the early days of the relationship. TGS was in the learning phase of the relationship, and worked closely with STI on the operational aspects of the relationship and eventually were able to achieve the contractual target KPIs. STI was prepared to even get involved in coaching and training the TGS team managing the SSC operation. While performance improved and target KPIs met, TGS has had to face the issue of misappropriation in the relationship where STI managed, in most cases, to have the upper hand in dictating TGS's service pricing and the type of transportation network infrastructure development projects. STI also managed to avoid, in the main, contributing to the cost of investing in such projects because STI knew that TGS needed the account as the backbone of the vendor's "Store-a-part" service success opportunity in APAC.

STI have had TGS operational performance improvement as the top priority, and managed to use the contractually agreed target KPIs and SLA to the best of the mutual relationship. On the other hand, building on the success in improving performance and driving the relationship with STI in the right direction has won TGS a competitive position with respect to DLS and in wining STI confidence, trust and respect as the second tier-one vendor after DLS. TGS started to assertively show interest in expanding and taking over more of STI growing business in APAC. TGS have had interest in expanding into STI business globally and in other theatres and regions. TGS's senior corporate management focused on promoting APAC successes with STI corporate management and were able to grow an influential role in managing the SSC in Europe and Emerging Markets and eventually becoming one of STI's global vendors. Although TGS senior management avoids discussing such topics openly and admitting to the control problems and subsequent improvements in the early days of the relationship or the exponential growth in TGS's share of STI global SSC business, this has been demonstrated in TGS winning the competition against DLS as the performing vendor of the year and becoming an integral partner in managing STI's SSC, participating in the annual global QBR meetings and strategic planning workshops.

In the context of discussing the TGS-STI relationship prior to the changes influenced by STI when introducing the strategic alignment initiative and the alliance portfolio management approach under the new global governance model in 2009, it can be clearly stated that while DLS was influencing the terms of the relationship with STI, TGS was receptive of STI's influence.

In the next two sections, the discussion shifts to focus on the impact of changes introduced by STI through the global governance model on alignment and performance between STI and vendors.

4.4.2   Effect of changes on alignment

In this section, the analysis examines the impact of STI changes introduced through the global governance model on the alignment of STI-TGS strategic objectives and SC strategy.

Although TGS was more responsive to STI changes from adoption and execution perspectives than DLS, both vendors were meeting STI management expectations concerning the overall strategic alignment objectives. Despite that, the particular relationship history and maturity of each of TGS and DLS with STI played a differentiating role between the two vendors and impacted the strategic, operational and structural alignment process. Both, the longer history and the more mature relationship between DLS and STI made the alignment process more efficient and informed, compared to that of the shorter history and developing relationship between TGS and STI. Saying this, TGS successfully tried to close the gap by expediting the learning process and promoting a leaner relationship in adapting to STI demanded cost savings, process improvement and IT projects. TGS was able to successfully adapt to STI's relationship governance and control strategy and policy change and sharing knowledge among their teams in the different STI theatres to improve the learning process and business capabilities.

As a consequence, and from 2009 onwards, TGS successfully worked with STI to ensure execution and implementation of STI strategic, operational and structural alignment processes and in following the subsequent policies and strategies. In the first quarter of financial year 2010, and not too far from the time STI initiated the alignment process, TGS launched projects in the Asia Pacific, Europe and Latin America regions, expanding and linking their transportation, warehousing and distribution network systems and infrastructure. At the same time, TGS actively started developing business solutions to STI and developing new customised services and products to accommodate STI's SC strategic objectives and organisational goals.

4.4.2.1 Impact of STI global governance model on TGS-STI relationship: Mutual strategic alignment implementation

Since 2009, STI has started implementing the new global governance model to manage the relationship with TPL vendors. TGS was quick to embrace the changes generated by the new governance model STI introduced. One of several reasons for its introduction was the strategic importance of TGS services to STI's SSC success and the vendor's role in achieving the aligned strategic objectives and organisational goals. In other words, STI was able to implement the strategic, operational and structural alignment processes with TGS that meant vendor access to valuable information which helped TGS in focusing and tailoring the type of services developed to STI's strategic requirements and TGS was able to provide STI value-add services and business solutions. This approach increased the level of alignment and synchronisation between TGS and STI strategic planning and increased TGS's value as a vendor to STI.

From a different perspective, the global governance model boosted TGS's position among STI vendors by allowing TGS access to STI's global SSC operations across other theatres and regions and by utilising their performance in APAC as the platform to launch expansion plans. Given TGS's potential for capabilities to spread globally and its well-developed infrastructure, the expansion into EU and the Emerging Markets was fast. TGS aimed at not only expanding services in STI's operational areas of the SSC business, but also attempted at increasing its value to STI by sharing targeted knowledge through TGS's team of consultants and providing STI with white papers, research studies and direction in areas of need to STI. TGS's regional program manager was clear in articulating these facts by saying:

> *"For STI it is one of our 100 top accounts and that's why you got me to take care of your business instead of just local country people and obviously because STI has global business with us and that warrant a global account management attention because in global account management we go by vertical market and STI sits in our hi-tech portfolio and currently belongs to computing and semi-conductors sector, but because of the service nature in Asia we grouped it under telecom. Obviously at global account we got our hi-tech strategy, we've got our telecom development strategy and in both we take STI supply chain requirements into consideration. That drives us for continuous improvement. Also in our lately released 2015 vision Special Service Delivery (SDS) it is part of our vision of 2015, and also Emerging Markets development it is part of our 2015 strategy and that aligns very well with STI geographical focus and also your growth strategy".*

Apart from the implementation of the strategic, operational and structural alignment processes, STI's introduction of the alliance portfolio management approach as the second branch of the global governance model in managing TGS-STI relationship reinforced the three levels of alignment and the global dimension of the relationship. These changes were observed through TGS's updates and presentation in the first quarter of financial year 2010 Global QBR meeting and the strategic planning sessions organised by STI to mutually exchange the strategy and vision for the next three to five years.

Post 2009, the strategic changes in the relationship between TGS and STI were similar to those between DLS and STI, which influenced STI's structural design of the relationship with TGS and reshaped the global SSC. The knowledge sharing and exchange between TGS and STI was critically important in the execution of STI's smart services strategy and in developing customised products, services and business solutions as the major pillars of STI's SSC strategic objectives.

In concluding the discussion on TGS-STI alignment efforts, special attention should be given to the relationship between DLS and TGS where, although the competition between the two vendors over STI business intensified, the global governance model has allowed both vendors the opportunity to compete at the global level by moving deeper into other theatres and regions of STI. This change was closely monitored and controlled by STI through alliance portfolio management tools and mechanisms, ensuring the achievement of objectives of the global governance model.

4.4.2.2   Influence of organisational goals and strategic objectives on TGS-STI relationship

After 2009 and the initiation of the alignment process, TGS focused its efforts to adapt to STI's strategic objectives. To TGS, the main organisational strategy and goal is to lead in Australia, where about 65% of STI operation in APAC have been captured by TGS. This TGS goal needs not necessarily be translated as "the biggest" vendor but to be the best transport provider in the express market, Dave TGS Director Special Services elaborates and continues to explain,

> "Our aim and ambition is to provide a range of domestic and international express services, that we operate as the best in the highest best performing part of that market segment".

TGS became focused on the development and linkage of domestic and global networks. This direction was translated in TGS's strategy of providing an extensive infrastructure, a significant development of people, innovation in products and services, and growth of international business. TGS has a single common objective of being customer centric, where vendor looks at customers by industry grouping.

Customers are grouped both, horizontally as in global customers or major accounts, small-medium enterprise customers (SME), and ad-hoc customers that rank below the first two groups, and vertically as well in terms of industry segments. The global customers are managed by global account managers with business development managers at a country level focused on vertical markets, and structured as a matrix organisation. Effectively, TGS has been working closely to align their organisational strategy and goals to those of STI by focusing on customer objectives, goals and needs and by aligning the strategic goals of product and services development, infrastructure and networks to meet that market segment based on the classification of their portfolio of customers and investment strategy.

To TGS, customer relationship means understanding the mechanism of interfacing and meeting customer needs. According to Dave:

> *"Some people buy product or services because of functional fit, others might buy the service for price, and some because of mix of reasons. One of those reasons might be the relationship where a customer feels comfortable dealing with that person or that organisation that reflects or echoes the ethics, values and culture a specific customer holds. Sometimes, it is more than just the pure operational aspects that are important, if the customer wants non-standard service a good relationship makes it achievable otherwise that might not happen".*

Customers like STI are at the top list of TGS accounts, and the interface with such customers is much stronger, more complex and relationship management requires more effort. Customers like STI have a different relationship focus which is more about what TGS does better. STI finds that TGS attempts to establish close relationships with contacts at different levels of management and geographies. This type of relationship is different from that of SME market customers where the vendor does not have the time nor the information to manage the performances as closely as the bigger companies that dedicate part of their resources to manage these particular distribution functions. Therefore, while customers like STI outsource SC services to TGS they are prepared to invest in their own resources to manage that relationship.

Post 2009, in terms of alignment process initiation and implementation, the STI-TGS relationship has played a role in influencing and consequently achieving the mutual strategic objectives and organisational goals. STI is one of TGS's strategic accounts not only in Australia and in APAC but globally as well. It is crucial to grow STI's relationship for the "Store-a-part" service since STI is one of the main customers demanding this service. At both APAC and global levels, STI is crucial to TGS and one of the top 100 accounts. STI's importance to TGS is reflected in of its role in TGS's hi-tech

portfolio and belongs to the computing and semi-conductors sector or market segment in Asia, TGS has grouped STI under telecom market vertical as well. STI's SC strategic requirements are taken into consideration when developing TGS's hi-tech portfolio strategy for global accounts and these requirements drive TGS's continuous improvement initiatives. In TGS's "2015 Vision on Special Service Delivery", STI is part of the vision and STI SSCD requirements are part of TGS Emerging Markets development plans and part of the "2015 strategy" which aligns with STI's geographical focus and growth strategy.

STI's business growth reflects growth to TGS as well and in the same geographies and markets. STI's acquisitions strategy of other companies complementing the portfolio of products and services generates more growth opportunities for TGS, and requires TGS in certain instances to support STI by moving, for instance, from B2B to B2C systems integration technological support scenario. TGS was ready to accompany STI as the organisation grew into the markets of low-end products in addition to current enterprise, telecommunications service providers and commercial sector market verticals. Strategically, as part of its vendor strategic alignment efforts, TGS has to find solutions to support STI's new strategies through developing innovative end-customer delivery solutions, and return of faulty spare parts to STI for repair and reuse as well as spare parts warranty orders support under the guidance of the common environmentally green strategy. From an APAC regional perspective, alignment is a prerequisite whether operational or systems related in order for TGS to grow the business with STI. Therefore, STI's strategic objectives alignment process certainly influences TGS's strategic alignment, visibility, integration, and development. The B2B systems integration technology and its evolution, WMS, spare parts management system, Special Delivery System (SDS), and the application of these systems across APAC between TGS and STI for FGI and DGI spare parts shipments, shows STI business requirements and its influence on TGS technology and systems development since 2009.

4.4.2.3   Influence of supply chain strategy tools and techniques on STI-TGS relationship

Although STI SSC strategy tools and techniques managed the relationship with TGS even before the implementation of the alignment initiative in 2009, after that date the SSC strategy tools and techniques were influenced by the strategic, operational and structural alignment processes implemented, which led to improvement and consequently played a positive, supportive and corrective role in managing the STI-TGS relationship. Hence, this section analyses and discusses the influence of communications, standard information sharing, integrated IT and systems, common

operating procedures (COPs), and standardised decision-making processes on the TGS-STI relationship and how the alignment processes influenced these tools and techniques.

There was some kind of general agreement among TGS's team members as to the existence of good formal and informal communications between TGS and STI. Formalised communication is part of TGS's engagement model, which spans from Global Annual, Quarterly and Monthly Business Review meetings (GABR, QBR and MBR), to fortnightly and weekly operations review meetings. The meetings focus is mainly on the review of KPIs and vendor business and operational performance. Informal communications can be as basic as a "catch up" meeting over the phone or casual visit between STI and TGS senior managers and operations managers as well as individual contributors when needed. This approach keeps the relationship live, active, effective and personal. Informal communications range from daily emails exchanged, to conference calls, and project calls. The formal and informal communications have a great influence on the partnership relationship, and culture of transparency and cooperation between TGS and STI where phone calls and casual "catch ups" over coffee at the different levels of management is common. Global QBR meetings were introduced as part of STI's new global governance model and the strategic alignment initiative and have had a significant positive impact on the global level of communications between vendor and STI and subsequently the improvements to the ways TGS-STI relationship was managed after 2009.

TGS has standard formats of information sharing in place with STI. Templates have been designed and developed over time to address STI's information sharing needs and this set up has helped in driving the collaborative relationship. In addition to standard information sharing through QBR meetings, corporate information is shared, although only from the TGS side, according to the TGS APAC program manager. TGS publishes a quarterly bulletin distributed globally via email to respective key customers, decision makers and stakeholders in APAC STI and global SSCD management. Emma, TGS APAC account manager, confirms that TGS has access to STI's corporate website where corporate overviews and quarterly updates from STI are accessible. In spite of this, TGS still prefers to have STI sharing relevant information as part of the mutual updates in periodical business reviews which adds a personalised dimension of trust to the relationship. Standard information sharing is crucial to TGS even on a new product. Depending on product specifications, that type of information can influence TGS's service strategy and SC solutions being offered to STI. Such product related information could potentially represent growth opportunities to TGS. In addition, information such as organisational changes and strategy updates, and challenges in the markets need to be shared in a formal or informal way. Overall the impact of information sharing standards on the relationship still varies between neutral to slightly positive from TGS's point of

view. It is important to mention here that STI has a vested interest in improving the processes of providing information to the vendors either in the form of newsletters targeting vendors and updating on topics falling in between strategic and operational levels or other communications, media, tools, and means. After 2009, the alignment processes improved the level, quality and frequency of information sharing and contributed to the development of information sharing standards as well as progress in bringing information sharing closer to the strategic objectives alignment.

Integrated IT and systems have been the strong aspect of the relationship between TGS and STI APAC as well as other theatres and globally. B2B systems interface provides six streams of two-ways electronic messaging of the various warehousing and distribution processes and operational transactions including both electronic sending of operational inventory planning and delivery instructions and receiving transactional confirmations. TGS provides a standard IT platform to STI by which the vendor has standardisation requirements to facilitate switching on SC operations in new countries as well as across regions and theatres. The IT projects managed and implemented by TGS to standardise and integrate TGS and STI IT systems have positively influenced the relationship between the two organisations and enforced the already strong partnership due to TGS investments in strategic IT projects. TGS efforts on integrated IT and systems achieved are one of STI's main strategic alignment objectives.

During the first quarter of financial year 2010 QBR meeting, TGS provided updates on IT system improvements and reflected the vendor's drive to rise to STI's level of expectations in meeting systems strategic requirements. In the EU Theatre, TGS started the utilisation of one of STI's system tools by which STI customers can access the reverse logistics asset recovery of faulty parts tool and schedule booking of faulty parts collection by STI vendors in a user friendly way, utilising bar-coding, and resulting in hard dollar savings to STI.

Throughout the 2009 financial year and into first quarter of financial year 2010, TGS moved all STI theatres' B2B system interfaces to a new IT gateway dedicated to STI by migrating to a new hardware messaging solution through an integrated implementation approach. This B2B system migration aimed at supporting STI spare parts serialisation project and as part of the continuous improvement of TGS SDS IT system to enhance and support STI business processes. In the EME Theatre, TGS announced the activation of a spare parts management SDS system for FGI transactions with a ten week implementation period across 22 countries. In APAC, TGS announced the SDS System activation for Australian operations DGI system transactions as well as the implementation of the

system part of the spare parts serialisation project for FGI system transactions in China, Taiwan, Korea and Japan.

The collaborative approach to understanding how spare parts Country-of-Origin process (COO) can be managed using a B2B system was another STI APAC activity highlighted by TGS in the first quarter of financial year 2010 QBR meeting. Among other projects, TGS developed, tested and implemented SDS system enhancements in handling export documentation and purged orders of obsolete spare parts. In addition, TGS conducted a holistic review of how advanced technical capabilities such as Radio Frequency identification technology (RFID) can add value within the DGI process.

Other system enhancements included transmission of data and per customer order delivery time-stamps information and warehouse pick list and the system related set up and configuration of new warehouses, as well as the introduction of the FGI RFID functionality to manage order closures on STI systems.

In the EME theatre, TGS ran the user-acceptance tests for the implementation of an improved version of SDS system[7], control tower process, and the dock-to-stock KPI measurement improvements. Around the same time in the EME Theatre, TGS administered a SC analysis workshop to explore areas of improvement between TGS and vendor KUEHNE + NAGEL of STI operations. An important achievement by STI was getting TGS and vendor KUEHNE + NAGEL as two large TPL vendors in EME to work together in a combined workshop to share knowledge and work collaboratively.

The systems enhancements and the introduction of new system solutions as confirmed in the QBR meetings by both TGS and STI are the results of the common objectives to strategically align SC and increase the competitive advantage for STI in the global market. STI's feedback was positive and supportive of what TGS introduced and the way the TGS call centre handled STI queries. Other workshops in APAC in exchanging and sharing TGS knowledge and market and systems experience with STI planned to explore areas where IT systems can be improved and value add recommended and be pursued.

STI's global discipline lead was proactive in asking EME, APAC and Japan STI theatre vendor managers to share best practice of what has been implemented by TGS in the three theatres for

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[7] TGS in-house implemented warehousing and distribution system.

collaborative work and collective improvements of STI global delivery operation performance and requested TGS team in the three theatres and global TGS account managers to assist and support.

TGS provides STI, as one of the top global customers through SC improvement projects, all the flexibility its network can practically provide. These projects can be smart tools, infrastructure optimisation, and centre of gravity analysis and SC mapping, which is geo-mapping of customer end-customer locations relative to the network of depots in the particular geography. This service demonstrates the strategic nature of the relationship between TGS and STI, where TGS provides the know-how and knowledge to determine end-customers' geographical concentration and distribution, and optimum ways to expand, map and deploy the tools, warehousing and transportation solutions into these areas. These projects are usually accompanied by, or part of, the SC cost optimisation projects initiative and productivity optimisation projects.

TGS improved operational performance across the board and in the various theatres and regions and the reflection of the improved delivery performance was positively assessed and translated in higher customer satisfaction scores from STI. STI was also satisfied with TGS's overall successful B2B system interface technology deployment and vendor's willingness to get involved in STI projects.

While DLS, the conservative vendor in committing to new investments in new IT systems or enhancements, has slightly more mature IT systems than TGS, TGS demonstrated the strong commitment to STI IT systems and IT platform requirements across all theatres and SSCD functional areas. This approach should result in mutual returns on investments in IT and systems for STI in operational delivery performance improvements and to TGS in opening new opportunities to attract more STI business and new customers using STI as the reference. TGS has successfully attempted at closing the gap in IT systems with DLS and created their own niche.

TGS as a quality standards certified business has comprehensive SOP to manage STI operations. TGS prefers to have the SOPs as work instructions and continuously improves the operating procedures mapped to the systems, since this arrangement has a good influence on the relationship. Consequently, TGS ensured that SOPs are in place at country level and clearly mapped with the scope of work.

In TGS's first quarter of financial year 2010 QBR meeting, the outcome of "root cause analysis and corrective action" process applied to service failures was reported. In the EME Theatre, 11 delivery failures in meeting target KPIs were recorded in premium orders[8] delivery performance, where eight

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[8] Premium order is a customer order on STI to replace a faulty spare part where the total lead-time from order creation to customer on-site delivery should not exceed two or four hours subject to the contractually agreed service support terms.

transportation failures and three warehouse order pick error failures went through the "root cause analysis and corrective action" process. In the Japan Theatre and during first quarter of FY2010, there were five delivery failures in meeting target KPIs recorded in premium delivery performance, where three of these service failures were attributed to controllable failures of road traffic and two controllable failures attributed to operational procedures not followed by TGS staff. These service failures went through "root cause analysis and corrective action" process resulting in improvements to the SOPs and services quality.

In RFD warehousing dock-to-stock process, 76 failures in November 2009 were reported in Australia and went through root cause analysis finding that failures were due to Helix TGS WMS system performance issues. In addition to adjustments to SOP and operational improvements, root cause analysis and corrective actions taken to rectify these issues indicate the effectiveness of the control systems in place to control the vendor performance and to ensure the realignment of the cross-functional processes and the relationship.

It can be concluded from the interviews with the TGS team that a formal decision making process between TGS and STI is lacking. According to TGS, the relationship between STI and TGS can be described as "mature" especially in Australia where escalation procedures are in place providing basic guidelines for shadow decision making processes. Having Dave, TGS Special Services Director, on the board of TGS Australia helps advance the relationship with STI by expediting the decision making inside TGS. Overall, from an internal TGS perspective, STI's standardised decision making process is vague and that is something APAC TGS managers share. To TGS APAC management the decision making process in STI is not clear to the extent that TGS cannot tell how long it takes STI to decide on commissioning projects, who are the decision makers and stakeholders, who is in charge, and who is the influencer. From TGS's perspective:

> "Standardised processes for decision making is a bit blur to me and I think I've got similar feedback from … my contract manager …, we all think that sometimes the decision making process in STI is not clear to us so for particular business or particular project we embark on sometimes we don't know how long the decision making take and who is actually in charge and who is the influencer…"

On RFPs in particular, TGS usually has a good idea of STI's projects calendar and informal decision making process, but sometimes as TGS develops new service to be proactively promoted to STI, TGS has difficulty in finding the appropriate decision makers to approach, especially after the split of Greater China as a separate theatre from APAC.

4.4.3   Effect of changes on relationship control problems

Recognising the changes in the way STI managed the relationship with TGS, the following section will focus on discussing and analysing the management controls utilised by STI in managing the control problems and challenges. Special attention will be given to TGS's accomplishments and STI's disappointments as well as the key success factors of the relationship. Although the types of formal and informal management controls has not changed before and after the introduction of the strategic alignment process in 2009 as part of the global governance model, this analysis will focus on the way the controls are mobilised in managing the different types of control problems under the influence of the global governance model and specifically the alignment process and alliance portfolio management approach.

4.4.3.1   Challenges and problems in managing the service supply chain and relationship between TGS and STI

Challenges have mainly arisen from STI requirements in the ever competitive IT, telecommunications and networking global and domestic markets and the resulting STI needs for vendors' continuous improvements to the SC operation and ability to meet the revised higher target KPIs in some cases. As target KPIs are more challenging, it's consequently a challenge to maintain performance without investing more resources to achieve and run STI's operations. Dave, TGS Special Services Director, is disappointed at the lack of proper appreciation from STI of TGS's extra effort to drive better performance. STI is always asking TGS, "what's the next thing, what are you improving, and what's the new innovation?", Dave adds. From TGS's perspective, although the challenge is always STI asking TGS to stretch capabilities to the maximum limits, TGS does not believe that such challenges could threaten the relationship.

Another challenge TGS is facing in managing the relationship is in the way STI applies the structural alignment process where STI recently announced Greater China as a new theatre, without enough notice given to TGS to prepare and reconfigure or restructure their systems and team communication channels in APAC to align and accommodate STI's changing needs. TGS has to deal with new theatre management and rebuild relationships not only with the new SSCD team in the Greater China Theatre but also the new matrix of responsibilities in both Greater China and APAC Theatres as well as the change in APAC Theatre management.

After 2009, STI started implementing the strategic alignment initiative and sharing with TGS and other vendors the strategy and vision for the next three to five years, which initiated the strategic

alignment process between STI and TGS and relieved TGS from the efforts of speculating STI strategic planning requirements indicated in TGS regional and global management feedback in the first quarter of financial year 2010 global QBR meeting.

Challenges in managing STI SC to TGS are of a different nature and include in certain cases demands for improvements within short timelines that could create conflict between how quickly TGS can deliver versus how quickly STI wants TGS to deliver, as well as how many resources TGS have got to invest and allocate to the particular customer. Essentially, these challenges of providing solutions depend firstly on the business justification and secondly on the resources available and how big the customer business and operations are, as well as the size of investment required and corresponding returns.

TGS believes that STI's overall approach of vendor performance management lacks mutual feedback, a challenge which might constantly send negative messages about the relationship rather than the reality of the relationship status. Consequently, STI is generally keen to raise complaints to TGS when there is a problem and rarely provides positive feedback on good performance achieved by the vendor. Managing seasonal poor performance is another challenge over particular periods of the year where the operating challenges are high due to weather conditions in some countries for instance but TGS is still required and expected to achieve optimum performance levels.

Other performance related challenges evolved from situations where TGS would meet target KPIs of delivering on-time and as per contractual SLA and despite of that STI still requests TGS to investigate the failures and apply the corrective action process. STI claims that these failures have not impacted the target KPIs, but some key customers might have been impacted. Such failures in key customer accounts have significant impact when failing to deliver end-customer orders of particularly critical parts. When STI demands TGS to deliver new services, some of the arising challenges can be a creeping uncontracted service scope, new demanded service leading into further investment from TGS in the development of the customer account, business growth opportunities, strength of relationship and account profitability, long-term prospects of retaining the business, and the rewards from the partnership.

TGS's accomplishments demonstrate the significant volume and frequency of projects, initiatives and consultancy studies completed and presented to STI within a relatively short period of time compared to that of DLS. This hard work by TGS aimed to gain a competitive position with respect to other TPL vendors not just in the relationship with STI but also in the domestic and global TPL vendors markets.

Financial year 2010 Global QBR meeting between STI and TGS was similar to that of DLS in the overall arrangements, atmosphere, and management as well as the main points of discussion on the agenda. In the EME Theatre, TGS rolled out depots and brought live the operations of 21 countries on the TGS SDS system as per plan. TGS also introduced the RFID scanners in depots in ten different countries in EME. As to EU Theatre, TGS went live on the POWR Tool to manage the pickup and return of faulty spare parts from STI end-customer locations to faulty parts Asset Recovery depots. TGS also organised a dedicated Customer Service team for managing activities of Asset Recovery of faulty spare parts and outbound shipments, as well as simplified and improved the inbound-transportation process.

Among other projects, TGS implemented an exception process for receiving faulty parts return shipments from one of STI's acquired company's customers in APAC. TGS conducted a Next-Flight-Out Service feasibility study in China, Korea, and Taiwan, and implemented the Same-Day-Ship Service level for the delivery of the large screens of STI's "Telepresence" teleconferencing product in Australia. In addition, TGS conducted a service capability validation study in Australia and implemented a faulty inventory pickup call-centre in Korea and Taiwan, and a third-party customer order Proof-of-Delivery (POD) pre-audit process. The Japan Theatre's share of TGS projects was small with the implementation of cross-functional support between STI Asset Recovery and TPL functions during peak hours through cross training efforts.

Corporate Social Responsibility (CSR) projects are another area taken seriously by both TGS and STI globally and in all regions. While TGS management feels proud of such projects and initiatives, STI management contributed to various types of TGS CSR programs that ranged from youth awareness initiatives to general public health awareness initiatives in fighting HIV/AIDS and addressing prevention and cure support, to environmental protection and sustainability policies and activities, where STI and TGS worked jointly. These activities were geographically spread across countries from almost all STI theatres and TGS regions. STI Korea collaborated with TGS Korea in a CSR Program of mentoring Korean high school students. The effectiveness of the CSR projects stems from the mutual interest of STI and TGS in the joint CSR projects as well as participating in each other's programs. TGS invited STI to participate in other CSR programs on public issues awareness campaigns across all theatres such as health care initiatives in fighting HIV/AIDS and addressing prevention and cure support programs with Wellness Centre in South Africa for instance. In terms of environment sustainability, TGS was involved in tree planting activities as part of the World Environment Day in the EME Theatre. In the EU Theatre, TGS replaced business travel to a large extent with video-conferencing and introduced electric powered trucks in the UK and gas powered

vehicles in the Netherlands. In the APAC Theatre, TGS had a few programs in place such as the Green Enterprise Award in China, Change Light Bulbs, and Clean Day. TGS introduced hybrid cars in Japan for commercial use and ran projects for the reduction in use of paper by relying on softcopy alternatives.

While there have been accomplishments in promoting the positive public image of TGS and STI as well as returns from cost savings or cost avoidance, TGS has faced challenges in the relationship with STI, from operational to IT systems-related and contractual reviews challenges.

Another set of operational accomplishments were also addressed in the 2010 financial year global QBR meeting, where TGS launched a project to align international transport performance with the in-transit milestone program in EME. Several projects were initiated to address the excess stock pullback issues in EME, operational alignment of depots in Pakistan, and control-tower process assessment, as well as reviewing the TGS SDS system and the B2B integration requirements with STI systems. In the EU Theatre, projects were focused on meeting the challenges of utilising the POWR Tool to enable measuring customer behaviour. Another project was to increase visibility of inbound faulty spare parts collection performance as well as increasing the aligned international transportation of outbound spare parts performance. The APAC Theatre witnessed the initiation of the warehouse spare parts serialisation project, and the start of utilising the TGS SDS system for faulty parts in Australia as well as the implementation of the POD electronic transmission KPI.

There were also a few disappointments addressed by STI in the global QBR meeting. These ranged from gaps identified in an audit of the Pakistan warehouse management, to corrective action initiated to rectify problems of improving managing warehousing operation within the depot and delays in receiving parts into the depot with associated B2B messaging issues. STI expressed concerns about TGS's insufficient focus on quality and consistency in reports and information in Dock-to-stock reporting accuracy. TGS acknowledged these issues and worked to rectify them with sustainable solutions implemented to show immediate results in the near future.

These disappointments did impact TGS's performance score, resulting in a low BSC score in the way the B2B system messaging project was handled by TGS in APAC. In this case the STI team was forced to get involved in managing the entire project to avoid complete failure and to meet STI IT projects roadmap timeline. STI was also critical of the way TGS IT and Operations communicated updates on the issues which would have avoided few escalations if TGS was more effective and proactive in their communications.

Given the strategic alignment processes implementation in 2009, and in a forward planning initiative, TGS presented their portfolio of future innovative projects planned and scheduled for implementation and execution at the financial year 2010 global QBR meeting. Infrastructure Optimisation is one of the consultancy services TGS provided to STI through the centre of gravity analysis to determine optimised services to support customers in particular geographical clusters. With such solutions come SC cost management and cost savings associated with improved productivity across all theatres of STI by using TGS's IDEA Tool.

TGS has been running innovative projects in the EME Theatre through developing the transportation network and adding new gateways and road networks in the Middle East and East Africa, in addition to utilising the United Arab Emirates (UAE) Free-trade-zone operation services (FTZ) and the secured hub services in South Africa. TGS innovative projects in APAC focused on the Asia Road Network development for STI APAC FGI and DGI shipments, Manufacturing and Asian repair vendors support for Day-Definite Road Transport services among Singapore, Malaysia, Thailand, Laos, Cambodia, Vietnam and China. The network efficiently connects to the sea and air transport services networks and 14 road hubs and three regional hubs in Asia. The Singapore Hub International Transportation Simulation is another project introduced by TGS to APAC STI, which is basically a transportation simulation comparing current modes of transport against switching to different shipping lanes and modes, which TGS can offer through their network by defining these routes, services, shipments consolidation or deconsolidation and direct-ship to reach the optimum transport mode from operational and cost perspectives. TGS has been keen to demonstrate through the project of Material Centre Concept Study how STI India can tackle one of the acquired companies warranty spare parts operational issues by offering a model to resolve the recent SC issues in India. In parallel, TGS has been extensively working on other cost reduction initiatives in Korea, Taiwan, China, Japan and Australia. STI has also shown increasing interest in TGS optimisation efforts provided through offering expansion as well as alternative multi-faceted network potential through a comprehensive air-ocean-road network in the major regions of EU, Asia, Middle East and Africa. Quantifying the cost savings and improved productivity of such projects is crucial for STI in driving these TGS managed projects. STI encouraged TGS to share their expertise and knowledge in running simulation studies to optimise STI's transportation operation and propose optimum transportation solution. TGS claims that these simulation studies are proven as reliable, practical and executable by other customers of TGS.

Outside the circle of STI business, TGS has cooperated with other TPL vendors of STI in APAC and other theatres such as UPS SCS, Expeditors International and Kuehne + Nagel. These business relationships were developed over ten years with UPS and have been taken to advanced levels of

partnership with Expeditors. The successful relationship between TGS and Expeditors was demonstrated in Australia, and outside the STI APAC business relationship, through managing and providing a road-based service ex-Sydney Expeditors warehouse of STI Manufacturing finished-products. The partnership relationship was also demonstrated through the electronic sharing of routing labels and consignment notes data by utilising a web-based link providing visibility for STI, STI end-customers and Expeditors. TGS and Expeditors are starting a new collaborative relationship in Brazil similar to that in Australia.

TGS has been working with Kuehne + Nagel vendor in EU and directly in Australia on carbon emissions reporting by measuring carbon emissions arising from its support of the STI operation and measuring the improvements in that area for international and domestic transportation operations by using both energy efficient trucks and planes. The work in this area is advanced to level at which TGS has created a CO_2 Tool for measuring the emissions with associated roadmap and feasibility studies, where data on carbon emissions are collected from operations sources.

STI values vendor cooperation and the self-initiative TGS has shown in working with competing vendors within the boundaries of the STI relationship. This cooperative relationship is not only demonstrated in operational activities but also on environmental management aspects, where STI expected TGS to drive further the work into the next phase of achieving above and beyond the baseline reduction in carbon emissions. In this context, STI has demanded the standardisation of TGS carbon emission reduction reports across all STI theatres in order to measure improvements across the board and based on total global baseline, which allows for scalable reduction solutions. STI is highly focused on the management and control of carbon emissions, which has already been integrated as part of all STI requests-for-tenders to vendors. While TGS has advanced in this area, there is a considerable space for cooperation and significant potential as well as opportunities to improve on performance based on the roadmap of what TGS planned to offer.

While DLS's accomplishments have been focused on developing and improving the reporting processes, formats and framework, TGS's accomplishments have been spread among reporting improvements, processes development, operational expansion, and new IT systems. On the one hand, this difference in accomplishments focus reflects the differences in vendors' level of infrastructure readiness, scope coverage and overall relationship maturity of DLS compared to TGS, and on the other hand, the difference demonstrates the level of commitment between the two vendors to deliver to STI's expectations in serving the strategic objectives of STI. DLS's accomplishments demonstrate some type of maturity in the areas of operational coverage and IT systems capabilities, where the

vendor feels the level of infrastructure maturity already available to STI is satisfactory in meeting STI's operational and business demands of the SC. TGS's accomplishments reflected its drive to build further on current infrastructure capabilities to meet STI's expectations and eventually develop the relationship and infrastructure maturity and readiness. TGS aims at building on current successes in operational expansion and performance, IT systems improvements, and in meeting STI's objectives to further prove the vendor's capability in delivering to STI objectives on equal grounds with DLS.

So far the challenges and accomplishments in the TGS-STI relationship and in managing the SC have been covered and this leads to discussion of the factors contributing to the success or failure of the TGS-STI relationship and its impact on the SC. From TGS's perspective, STI is recognised as an important global customer and part of TGS global management account structure. Therefore, STI is a very important customer because it gives TGS the platform to grow the Special Services business in APAC which is part of TGS regional strategy and structure. In explaining the extent and reasons behind the positive and successful relationship from TGS's perspective with STI, TGS believes that good service performance underpins its successful relationship and that TGS should be able to build on this success to be rewarded new business in new regions. From a technical transactional angle, TGS has been delivering a high quality service that supports the strategic spares delivery business and the relationship with STI. From another perspective, TGS and STI at each organisational level work well together with a high level of trust which contributes to the success of the relationship. Dave, TGS Director of Special Services, believes that:

> *"although we all have a series of contracts and formal commercial agreements, but the success of the relationship really comes down to the people, how they work together and how much there is trust and how much of supply chain alignment in terms of objectives, where STI wants to go with its supply chain solution and whether TGS is aligned to that direction or different direction where TGS is strongly aligned to STI in APAC and Australia".*

The main factors contributing to the relationship success are performance levels, the partnership, the culture of continuous improvement shared by both organisations, and the desire and drive to be the best in the industry. TGS aims to be number one in the TPL and SC service providing industry where STI reputedly is number one in networking switching and videoing and second in the servers business sector. TGS considers its people inter-relationships open policy the other factor of success, which involves all relevant TGS people interfacing with STI. Those people comes from different functional areas of TGS such as IT, Human Resources, administrative officers, customer service, operations team members, as well as the subject matter experts and the accounts team, where all aim at ensuring

failure-free customer order delivery as per target KPIs. TGS demonstrates a high level of senior management commitment to support the STI account.

4.4.3.2 TGS actions to manage the relationship risks and problems: Enhancing and realising the value provided to STI

Dave, TGS's Special Services Director, describes TGS's approach in facing the challenges and problems arising from the relationship with STI as ""always takes it on the chin and move on"". The vendor has the motto of "Sure we can" driving the organisational culture which essentially focuses on finding the right solution to the customer first. What is helping TGS is that "Store-a-part" is not a standard service and TGS can customise its services aiming to be flexible and innovative in meeting STI's business needs. TGS considers technology as a business enabler, for instance TGS was among the first few TPL vendors in the market to introduce the RFID technology in their warehousing network in most of APAC. This helped in meeting STI's demands for stock accuracy, better inventory management and order fulfilment reporting in real-time, as well as the implementation of lean management processes, which collectively saved STI operational costs. One of TGS's major concerns are STI operational improvement, cost optimisation and change demands arising from STI's continuous benchmarking internally and externally. Essentially, TGS faces the challenges and problems by not only proactively providing value-add enhancing services but realising these services by ensuring the synchronisation of the cost saving, process improvement, and systems integration projects with the aligned strategic objectives of STI.

Dave believes the overall relationship between TGS and STI became stronger and healthier after STI introduced the global governance model and the strategic alignment initiative in 2009. TGS has developed good relationships between its account management teams at country, theatre, and global levels with STI management teams on both operational and commercial sides of the business, including senior management. The issue of TGS access to and understanding of, STI's strategic direction has been addressed since 2009 in different forums and focusing on mutual exchange of strategic objectives and plans for the next three to five years. In this regard, TGS and STI have instituted an annual strategic planning session before or after the annual global QBR meeting. These sessions with the STI global TPL Discipline Leader and global TPL vendor management team have started to result in better understanding of STI's strategic directions, and the allocation of time to discuss and share information and exchange knowledge of importance to both STI and TGS. TGS wants more of these types of meetings, and looks forward to sharing more of its knowledge on country specific customs and regulations or regional economic trends with STI.

The management of the relationship has changed over time, with 2009 marking the introduction of STI's global governance model including the strategic alignment process. "Like any relationship it matures over time", this is how Dave, TGS Special Services Director, perceives the relationship with STI. In 2006, in the early days of the relationship, TGS had a change in management in Australia; this is when Dave was appointed to lead Special Services and started working very closely with STI's SSC management team in APAC, deciding to take a more commercial approach in managing STI's operation. It took some time to build the relationship with STI management on a basis of trust and confidence. The relationship was developed and grown to the extent where STI is an integral part of TGS's business and a key customer not only in APAC but globally. The fact that TGS performance has been recognised and awarded the vendor of the year status, should translate into more business being awarded to TGS. The relationship between STI and TGS has changed over time to the extent that TGS has won greater trust and achieved better alignment with STI's SSC strategic objectives allowing the achievement of greater levels of performance by TGS. TGS has reached the level of understanding of STI culture and quality service requirements in every aspect of the relationship and unlike any other customer through IT improvements and innovations. With the improved performance and better trained people, a trustworthy and confident partnership relationship has been developed. Dave concludes:

> "When we say that we're going to do something then we know how to fix something there is a greater level of trust with STI that we do know".

Over the years, TGS has grown the relationship with STI from Australia and out into Europe, China, Middle East and Latin America. Growing with the relationship over the years, TGS moved from an Australian centric system to a global IT platform and transferred the processes and STI APAC best practices across other geographies of STI. So the relationship moved steadily and confidently from the domestic to the regional then global levels. TGS has seen over the last three to five years a few changes in STI's APAC vendor management including changes with Greater China becoming a new Theatre. TGS tried to adjust the relationship attempting to accommodate the changes in STI APAC after the departure of John, STI APAC Vendor senior manager, aiming to develop a more supportive and cooperative relationship with STI. On the vendor side, TGS believes its management team has been relatively more stable over the same period with fewer changes taking place. The changes in STI's vendor managers' approaches are still manageable by TGS and within the broader frame of the management culture and partnership of TGS and STI. At the same time, TGS has continued to embrace the changes and manage them. With Greater China, TGS will have to deal with more vendor managers of STI and needs to find and understand the matrix of relationship of managing projects that

has regional scope versus those with cross-regional scope. Also, while TGS has one contact point for STI, STI has multiple points of contact vendor managers, with this likely to increase with the Greater China Theatre coming on-board.

To enhance the value-add with the services provided to STI, TGS provided green credentials and carbon foot-print management systems which are high on STI's agenda. TGS is using a large fleet of hybrid vehicles in Australia, as part of its strong commitment to the environment and the commitment in giving back to the community which is another strategic objective of STI. There is a whole series of CSR activities where there is consistency and coordination between the two organisations as to what is important to meet common objectives and what is of value to both organisations. On the technical side, TGS has added significant value by introducing the RFID scanning technology for enabling the serialisation of spare parts within the warehouse functions, bringing on innovations into the transport management and monitoring systems, and implementing TGS reverse logistics solutions which are technologically superior to those of TGS's competitors. There are also smaller scale processes improvements that took place at the warehousing network level. TGS has introduced continual processes improvements to improve business and operational efficiencies. According to Dave, TGS Director Special Services, ""Nothing stands still if you like in the STI relationship"", should that be changes in the invoicing process to reflect a more streamlined approach for STI to manage and in processing invoices, or Asset Recovery call centre outsourcing to Malaysia, or establishing new RFD depots.

TGS enhanced value-add services were realised by STI through a series of projects and initiatives. Although TGS has not previously performed strategic spare parts special services in Australia for any other customers prior to STI and in any sort of large or comprehensive way, TGS has successfully provided this service and continuously improved the processes and service quality year-on-year to STI to the level where TGS was awarded STI Global Vendor of the Year Award. Achieving this level of service standards and recognition can be only realised through constant enhancement of operational performance and partnership across that period and notwithstanding the challenges tackled on the way. TGS's quality support has been one of the important elements that aided STI in gaining some competitive position in Australian market. TGS support was noticeably much stronger compared to DLS from an STI perspective. Given the relatively longer history of the relationship between DLS and STI, TGS was able to accelerate efforts to gain STI confidence and been recognised on equal grounds as capable to supply any of the services as DLS. With STI realising TGS's value, the existence of two equally capable TPL vendors, DLS and TGS, gives STI a better risk management profile and safety net than t having just one supplier or one and a half suppliers on which to rely.

TGS has the propensity to discuss the risks and problems arising from and around the relationship at various organisational and functional levels in the weekly operational review meetings and QBR meetings with STI. There are also the STI-TGS monthly operations review meetings, the periodical meetings between senior managers, the regional account management meetings, and the GAM meetings at senior management levels. Given the mutual trust between STI and TGS, any issues are communicated to TGS to take on board and communicate back to STI the outcome of the issue assessment and the corrective action. Therefore, TGS has developed risk management procedures and disaster recovery plans covering all of STI's major and key operational areas, such as storage and distribution facilities and IT systems which would be covered in the TGS risk management handbook.

4.4.3.3 Extent and effectiveness of STI using formal Management Control Systems in the relationship with TGS

STI has had formal management controls in place to manage vendor relationships for a long time. As STI introduced the global governance model in 2009, the management controls were redefined to include the global standardised dimension. TGS, like DLS, embraced the new meaning of STI formal management controls since the global and standard dimension of the management controls represented the window to the important opportunity to mutually share the strategic objectives and organisational goals with STI. This opportunity covered the potential to strategically plan products, services and business models in advance based on STI's strategic outlook.

Generally, formal processes and performance measurement target KPIs are the yard-stick against which TGS can measure success or failure of delivering the service to STI end-customers. To TGS, the contracts play a small but important role, especially if a major break-down in the relationship happens around recurring failures to meet performance KPIs. Regarding benchmarking, TGS believes it is a complex management control mechanism to implement, but it has to be relevant whenever implemented. STI has to be benchmarked against similar organisations in the industry or a process has to be benchmarked against best practice in an organisation having that particular process operational and in use. So benchmarking is still an opportunity and yet to be captured. Improving performance is always the objective and when there are performance failures an improvement plan must be put in place.

Starting with contracts and according to Dave, TGS Special Services Director, Contracts, agreements, and SOWs are the strongest foundations of how STI manages the relationship with TGS, and are very effective ways of managing the vendor relationship. Contracts are important at the beginning in laying down the foundations of the relationship with STI, and help in putting everybody's intent in some

form of agreement to become a reference point for both parties. Essentially, without contracts TGS would be exposed to different types of risks and liabilities. Although contracts are critical to the vendor-customer relationship, TGS can still deliver to STI's business requirements and expectations with or without them.

> *"I think the contracts and things play a small role but an important role, contracts are really there when a major relationship falls over or the performance is not being delivered".*

Contracts are in place at a global level with value service agreement, TPL services SOW, contracts addendums and attachments. Some country or region specific terms and conditions or SOWs are required and may, in some cases, be a legally non-binding letter of intent document. Contracts are not always used and the need to refer to contracts usually takes place when it is necessary to define aspects of the relationship or in cases of legal dispute resulting from a break-down in the relationship. Compared to other telecom customers of TGS who have a clearer overarching framework agreement with global contract structure in the first level and then local country specific level, followed by project done and executed against an appendix to the contract, where all projects at country level refers to payment terms, liabilities, termination in the frame agreement, this structure is not clear. Emma, TGS APAC account manager concludes that such framework and guidelines are required in STI-TGS relationship.

> *"I think perhaps in STI may be we haven't been on-board for long terms, we haven't embarked on a lot of brand new projects although I mean we have done Japan and in China but may be just on the whole if there is more detailed guidelines on how contracts should be more clear is better".*

TGS is measured against KPIs, which provide the vendor the operational goals at which to aim to and achieve. When goals are exceeded, TGS expects to be rewarded with recognition and preference the form of new business granted by STI. In the current set up, TGS complains about the lack of incentives and proper reward system when the vendor achieves or exceeds the target KPIs. According to TGS, if incentives are linked to mutual financial gains for both parties, that would change the vendor-customer behaviour. TGS agrees that STI does well on performance measurement, which is adequately quantifiable, and TGS's performance is strictly driven by target KPIs and the BSC scoring system which checks quantitative and qualitative measures and provides an aggregate performance measurement. Overall, TGS is pleased with the measurement process, and over the last two years more alignment with the BSC measurement process has been achieved. Currently, TGS is satisfied with the global alignment of QBR meetings and the BSC measurement system across all theatres, and

would also like to see further alignment with STI VSE as well. TGS and STI still have the Asset Recovery alignment with the VSE to be completed in FY2011.

> *"On this one I think STI does well because you try really to performance measurement in very quantifiable way and our performance is strictly driven by KPIs and also balance-scorecard which checks quantitative and qualitative measures and I'm very happy with that and I think towards the second half of last year with John and also with Japan theatre I think the two theatres tried to make more alignment of balanced scorecard. We used different business scorecards, different QBRs and then we started doing joint QBRs and then said why don't we have an aligned VSE. So I think both STI and TGS have put quite a lot of work in doing a regional alignment".*

TGS's Contract Manager reviewed operational performance at the first quarter of financial year 2010 Global QBR meeting. On APAC customer RMA order distribution and delivery performance, results showed over achievement against target KPIs in all types of RMA orders and improvement throughout FY2009 and FY2010. On warehousing, TGS met the target KPIs for Country depots over the period of FY2009 and into the first quarter of FY2010 including dock-to-stock, cycle count accuracy, and system-to-system cycle count results showing stable and good performance against target KPIs.

The TGS Operations Manager presented on RMA orders operational delivery performance. The review covered all three theatres of EME, APAC and Japan. In the EME and APAC Theatres, overall service RMA orders delivery performance met target KPIs, but in Japan target KPIs were slightly missed in the first quarter of FY2010. The overall service RMA orders operational delivery performance significantly improved in all three theatres over FY2009 and into the first quarter of FY2010 especially in EME including growing order volumes and over achievement of target KPIs in APAC. RMA Order volumes increased in APAC while Japan volumes were generally stable for the quarter. The order delivery standard performance showed improvements in EME with growing order volumes while in APAC, performance improved despite the slight growth in order volumes. Reported Japan Theatre RMA order delivery performance was good and target KPIs were met with a slight increase in order volumes in first quarter of FY2010.

Warehouse inbound shipments dock-to-stock performance over FY2009 and until first quarter of FY2010 was improving and achieving target KPIs in EME, APAC and Japan. Warehouses inventory cycle-count accuracy performance in Japan and APAC was steady, stable and over-achieved the target KPIs. In EME, performance improved as TGS implemented a serial number and part number

verification project for stock alignment to quarterly audit control. In the first quarter of FY2010, inventory cycle count accuracy performance was not reported due to depot full "wall-to-wall" scanning cycle count. RFD XML[9] system inventory cycle count accuracy performance is an inventory management system-based warehousing KPI implemented only in APAC and Japan, which for both theatres showed overachievement against target KPIs.

In international transportation, TGS have had a good performance in meeting on-time outbound shipments target KPIs in both EME and EU Theatres. For on-time inbound shipments of asset recovery operation performance, TGS achieved its target KPI, which was met consistently throughout FY2009 and into the first quarter of FY2010 in the EU Theatre. TGS considers this international transportation operation a core service at which they do well in performance and meeting STI's target KPIs. The EME, APAC and Japan Theatres depots global objective BSC score progressively improved throughout FY2009 to achieve a high score according to the reviewed BSC scoring system calculation methodology.

TGS depots global objective BSC score showed a positive trend throughout FY2009 and into the first quarter of FY2010 for EME, APAC and Japan in meeting performance expectations. International transport global objective and subjective BSC scores were high and consistent throughout FY2009 and into the first quarter of FY2010. For subjective and objective global BSC scores total warehousing services, TGS scored high.

John, STI global TPL Discipline Leader, criticised the way TGS normalised the EME BSC score measurement which is different from how the score is measured for APAC and Japan. STI asked TGS management to discuss this issue in more detail and to standardise the measurement process and BSC score across all theatres as agreed with STI. Another issue related to the inconsistency of the XML stock cycle count across all three theatres. While the XML stock cycle count is implemented in APAC and Japan, EME is still lagging behind and TGS is starting to work on this implementation in parallel with the work on the B2B system implementation project in EME.

STI has been criticised by TGS on the incentives topic as one of the management controls that did not receive enough focus and attention. TGS describes STI as always keen to explore volume discounts and penalties rather than rewards, but not that keen to explore the other side of incentives, ""if you do better we'll pay you more"" type of TGS preferred approach. TGS feels this behaviour of STI is

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[9] A metalanguage written in SGML that allows one to design a mark-up language, used to allow for the easy interchange of documents on the World Wide Web.

common across all theatres. TGS in other theatres does not even perform as well as in APAC. According to TGS, incentives need to lead to access to more business opportunities with STI:

> *"You know TGS won the global vendor award. So our question is from that what does that lead to? Does that give TGS enough opportunity in winning more business and in opening more doors or is it just a trophy we put in the office?"*

So, TGS has advanced the relationship by working hard with STI to develop incentives program, which has positively impacted the partnership with STI. This program provides incentives for STI in terms of the dollars quarterly spent with TGS, that is, once STI's spent amount passes a certain threshold, STI will be credited back certain proportional amount.

> *"[TGS and STI] put together a volume rebate kind of thing an incentive program to incentify STI in-terms of your spend with us. So we measure about quarterly once you pass a certain threshold and there is certain amount of money that we can credit back to you. This is new".*

This is a new incentives program which has not yet reached the implementation stage for long-term TGS good performance. Although TGS won global vendor award of STI in the financial year 2010, TGS would like to see STI endorsement of this award in terms of more business opportunities. Given the continuous achievement of performance target KPIs, TGS asks in return for the equivalent monetary rewards in the same way TGS is penalised when under-performing. TGS expects balanced treatment in the reward and penalty program from STI.

While TGS managers individually reflected a sense of dissatisfaction with STI's lack of focus on the incentives programs, in TGS FY2010 Global QBR meeting, the vendor management team showed more highlights of business awarded by STI and achievements demonstrated compared to that of DLS. TGS was awarded the project of setting up Dalian depot in China, and was also awarded the domestic transportation business in China and expanded their premium order delivery coverage to six new cities in Taiwan.

TGS was also given the rights to expand the "Next Business Day" standard[10] order delivery services to more than 400 cities in the APAC region and initiated three international express shipping lanes in New Zealand, Korea and Taiwan. In the Japan Theatre, TGS established ten new service depots to support a major STI customer. STI awarded business to TGS in China has significant implications to

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[10] Under the post-sale service contract, STI offers customers either Premium service of spare part delivery and on-site field engineer support within two or four hours or standard "Next Business Day" spare part delivery and on-site field engineer support.

the vendor because of the great potential for TGS to access the Chinese market. STI positively assessed TGS's improved operational performance across the board and in the various theatres and regions, which was reflected in the improved delivery performance and higher customer satisfaction scores. STI was also satisfied with TGS's successful B2B system integration project deployment and the vendor's willingness to get involved in STI projects too. STI acknowledged TGS's extensive work on faulty spare parts reverse logistics asset recovery operations and the participation in the separate global asset recovery reverse logistics QBR meetings.

TGS received good performance scores for its support on the China domestic transport solution implementation and the improvement and positive cooperation and collaboration with the Greater China STI TPL vendor management team. TGS successfully implemented the POD target KPI project in Australia, an achievement that was acknowledged by STI. STI considers the new business acquisitions and the integration of the associated new products and services into STI operations provides TGS more revenue and expansion opportunities globally.

Both vendors, DLS and TGS, received awards for their performance, but it is obvious from the record of reported accomplishments that TGS has been extensively and successfully trying to meet STI's expectations with more development to infrastructure, better partnership management, and more effort to align with STI's SSC strategic objectives. All these achievements made TGS the eligible candidate to be awarded the business in China.

Discussion now turns to benchmarking. Benchmarking is mainly internal with STI theatres benchmarked against each other, with benchmarking where possible and feasible undertaken externally. TGS believes benchmarking vendors against each other could be increased and visibility among vendors is needed if effective benchmarking is to be conducted. Benchmarking STI against other organisations externally is complex because of differences in KPIs and other areas of difference in the operation and nature of products and services. In expressing TGS position, Dave describes benchmarking as:

> *"In terms of benchmarking, I think benchmarking is not something that's easy to do, it has to be relevant, yet it has to be benchmarked against the like industry or just benchmarking a process that has got to be best practice in an organisation with that particular process. So benchmarking is still an opportunity is there".*

4.4.3.4 Informal MCSs design and effectiveness: Trust and values alignment in TGS-STI relationship

Dave, TGS Director Special Services, in presenting TGS's point of view, considers trust an important element in the relationship and more importantly mutual trust because both vendor and STI need to be able to exchange confidential information and knowledge, and consequently what is really important is common trust to facilitate communications and ensure free flow and exchange of business related reports and information from the two parties.

> "So, trust is important because we need STI to be able to tell us what's really important and they need to tell us why things are important, because the solution that they may be offering might not be the right solution, it may be the symptom and the solution is something else".

The solution that STI is offering might not be the right solution, it might be dealing with the symptoms of the problem where the solution is something else, and consequently openness and transparency is critical for a successful relationship. Also, improvement is not always a one way action, and to improve a process or result often requires both parties to get involved and both parties to make changes to their approaches. If TGS has value to add to STI's business and decides to deliver high levels of performance consistent with STI's values, then the discussion points become easier to address and TGS does not need to act defensively. If TGS has the same objective then this is not about defending a position, it is about working collaboratively to remove road blocks. The KPIs and formal processes are normally part of an organisation's culture, and accordingly having a good relationship does not mean the need for formal controls can be dismissed. Therefore, trust and values alignment is worthwhile but it is not an objective by itself. While trust and values alignment assists in making improvements, Dave believes working in a collaborative fashion is the objective measure of whether those efforts have been successful or not.

> "While I can have a great relationship with John [STI] and tell him that every thing is fine and doing well , and from his perspective he's trusting and he agrees with that, he's still subject to the STI organisational reporting results elsewhere in the organisation and therefore, I don't think organisations will ever consider trust in relationships to be the sole determinant of what's going on so professional organisations will always want to have formal mechanisms in place if they do nothing more than mess-merely confirm that the performance levels are satisfactory or continuously improving. So, I think trust and value alignment is great but it is not objective, and while assists in getting things done and assists in making improvement and assists in

getting results and improving results working in a collaborative fashion, it is the objective measure of whether those efforts have been successful or not".

TGS and STI both have a CSR approach through the reduction of carbon footprint initiatives or social impact and socioeconomic responsibility shared values. Large steps have been taken to measure, report and control carbon emissions through cooperation between TGS and STI. TGS Global Account Management (GAM) has been instrumental in these areas. TGS agrees that trust is important in the relationship, but feels that STI does not return the same level of trust, where for instance if TGS performs badly in a reporting period, STI would be critical. In such a case trust would fail the partnership test but TGS always counts on respect and integrity to restore the relationship, accompanied with restored good performance.

Above all, TGS believes that performance is a prerequisite of trust and TGS managers tend to agree that the relationship cannot continue without the element of trust.

> *"Performance comes always first before trust, that's the bottom-line and that's the basic. You must make sure that you have a very good performance and then the trust just comes after that I think and naturally".*

In summary, although TGS have had challenges and problems in managing the relationship with STI, some of these problems were generally different from those of DLS, which pertained mainly to cost of investment in IT systems and contract renewal with underlying liabilities. TGS problems pertain to the restructuring of STI theatres, including management teams and performance incentive programs. TGS has proactively provided enhanced value-add services and realised these services by synchronising STI demanded projects to the aligned strategic objectives. STI has been able to mobilise combination of packaged formal and informal management controls to tackle and resolve the arising control problems. STI implementation of the global governance model since 2009 gave the management controls more power in influencing the resolution of control problems and improving the performance of TGS performance globally.

4.4.4   Impact of change on performance: Influence of exchange of services and knowledge between TGS and STI on performance

TGS became one of STI's tier-one vendors in 2006. Given TGS's freight and transportation core business background, the vendor has had a steep learning curve to climb in order to get to the satisfactory level of confidence of managing a complex E2E SSC like that of STI. In the first year, the

relationship went through rough times but TGS senior management realised the importance of ensuring the success of the STI account as the gateway to a large global market segment so worked hard at providing STI with all the necessary chances of success. TGS worked hard and was able to get a great return on the investment in the STI account. In 2007, TGS was able to prove its capability and competency to manage the STI account and worked closely with STI management in the APAC Theatre to initiate activities of training the operational team, set up processes, develop SOPs, integrate systems, and steadily deliver to STI target KPIs.

By 2008, STI senior management was able to see the hidden competition developing between DLS and TGS over STI business opportunities. At the same time, TGS was able to stand on solid ground when attending the QBR meetings reviewing and defending the operational performance and relationship. Eventually in 2009, STI introduced the global governance model, which TGS embraced, implementing the strategic alignment process without reluctance. As STI implemented internally the alliance portfolio management approach as the second part of the model, TGS was confidently competing for almost half of STI's SSC business in APAC and wining major parts of STI business in other theatres globally. TGS was also ahead of DLS in winning the vendor of the year award around the same time. TGS can possibly claim major achievements in a complex set up like that of STI's business environment, large operation, and organisational and systems structure that led to world class performance compared to DLS and other TPL vendors of STI. A performance that was not only successful in achieving service delivery target KPIs but also in successfully delivering and exchanging knowledge.

4.4.4.1   Influence of supply chain strategic alignment on performance and knowledge exchange

The overall impact of the global governance model was important in taking TGS performance from the domestic and regional dimension to the global dimension where a different level of performance-based competition was faced by the vendor and where the global definition of performance target KPIs were determined and redefined by the new BSC scoring system. Consequently, the strategic alignment process STI initiated in 2009 allowed TGS to exchange the strategic objectives for the next three to five years with STI, which required TGS to develop the strategic plans to meet STI smart, customised and differentiated services by executing mutually beneficial systems, networks and infrastructure projects. The new set up facilitated the exchange of consulting services TGS provided to STI so that the alignment process is complete and successful in achieving the strategic objectives. One of the major drivers behind the initiation of the strategic alignment process and related aspects is

improving TGS's performance not only in delivering services but also in delivering and exchanging knowledge.

TGS believed that STI, at the beginning of the relationship, took a leap of faith in awarding the contract for STI SSC services in Australia to TGS, including coaching, training and exchanging knowledge with the TGS team. TGS's words in addressing STI, "we can teach you and share knowledge", extend to the possibility that TGS APAC could teach other TGS teams in other STI theatres and train them in what pertains to the relationship with STI. The TGS APAC account team tends to agree that exchanging knowledge with other TPL vendors of STI is rare as they are competitors, and if other vendors ask for help TGS will reluctantly do but will not volunteer. Saying this, TGS uses DLS in international consignments business, so TPL vendors have to be engaged with each other in delivering to STI E2E process requirements. Generally and apart from consultancy studies, exchange of knowledge would be limited to the boundaries of the STI operation, and knowledge exchange of service delivery core competency cannot be exchanged or shared with STI or competitors like DLS. STI account manager from TGS states clearly:

> "There are certain things which we wouldn't tell about how we do it, it is TGS competitive advantage".

On the other hand, TGS prefers that STI plays the middleman facilitating the anonymous exchange of knowledge among the vendors and the development of joint business solutions. TGS believes that this maintains confidentiality and does not expose any of the vendors and will also allow the vendor to arrive at resolving issues in a shorter period of time. Since STI has that "birds-eye" view of the operation and relationships, that can help all vendors and they can solve issues and shorten the learning curve.

It is expected that knowledge exchange and sharing would be indirectly encouraged by vendors primarily through STI under the influence of strategic SC alignment and strategic planning. In the first quarter of FY2010 Global QBR meeting, TGS presented the seven different business, professional, environmental, and quality awards TGS globally achieved in 2009. These awards were the Dow-Jones Sustainability Index, Clinton Global Initiative Corporate Citizenship Award, Dutch Award for Best Annual Report, Henri Sijthoff Prize, Governance Metrics International, and others. TGS successfully promoted and emphasised its image as the equal, from a technical and operational perspective, of DLS. In the QBR meeting, TGS management updated and shared strategy with STI and introduced TGS's future strategic direction over the next three to five years.

In 2006, at the start of the relationship with STI, TGS focused on developing a strong network infrastructure and transforming the foundations to deliver time sensitive services throughout the market of APAC and eventually Europe, the Emerging Countries, and North America with a special focus on Brazil where TGS is growing its business considerably. Dave reflects of the change in performance since 2006:

> "[Performance] it's changed to the extent that I think we've become as a greater trust and alignment but so as that developed with a greater level of performance. So the performance has increased dramatically over that time period as well, the operational processes are more, and the monitoring is more sophisticated, so I think the way we go about the job, i.e. systems have changed RF scanning a whole range of innovations have improved the quality of the service. The organisation has come to terms with the fact that STI requirements are different to the networking in terms of demand, in terms of the precision required. So I think the organisations got used to the requirements of STI, so all that have been part of the improvements in service which mean that if performing on transactional basis it makes it much easier to conduct an effective relationship in terms of other improvements. So I think relationship has changed because performance has improved…"

Over the 2008-2009 period, TGS continued the focus on STI in other parts of the globe where services can be more standardised attracting lower costs by growing and building value. Currently, with "2015 Vision" TGS is building on the achievement of the two phases of transforming the foundations in 2006-2007 and growing and building value in 2008-2009, taking advantage of lessons learned during the GFC.

In 2009, the economic crisis made TGS Express services stronger. While some companies suffered a decrease in express air freight market volumes TGS did not lose even one customer; they stayed on-board due to TGS's broad product portfolio which offered "economic alternatives". TGS also observed some growth in the overall hi-tech market.

During the economic crisis, TGS's focus was on operational cost reductions to adjust for lower volumes. These cost reductions were structural in operations and overhead. Further structural cost savings were expected with the continuation of existing and new cost savings efficiency improvement programs launched to increase coemptive advantage in domestic and cross-border parcel business markets. As a result, TGS started planning and focusing more on road freight in parallel to air freight services. TGS was also looking forward to introducing new products into the market starting in 2011

with inbound Europe freight flows and by moving more to business-to-customer (B2C) high-end services, and rolling out direct express.

TGS "2015 Vision" in the Day-Sensitive Delivery Services strategy under accelerated growth through cost efficiency and customer focus will concentrate on EU parcel direct express business through sustainability of reducing costs and through a growing standard parcel business in Europe. TGS is also planning to grow further a stronger position in Day-Sensitive freight through intercontinental connections with land freight that will drive freight development in Europe and aims at achieving first position in Emerging Markets by establishing alliances with other service providers in certain geographies as well as targeting selected niche markets of special delivery solutions such as the hi-tech market. This strategy is aimed at placing TGS in second position in APAC and first position in Emerging Markets. Ultimately, TGS's objective is an optimal E2E SC service that offers customers lower cost and higher reliability services.

It was obvious to STI management that TGS has not shown any interest in the North American domestic market. TGS explained that the North American market is too competitive to enter with current strong players like FedEx and UPS but it does aim at playing a role in connecting US and EU markets. In the discussions between TGS and STI SC management teams, TGS was clear on the commitment to STI in developing new products and services strategically aligned to STI's strategic objectives and to accommodate STI's customer and business needs and in driving TGS functions and business units to provide cross-functional services. TGS showed genuine interest in presenting to STI a set of strategic services planned to be introduced to the market where TGS is prepared to accommodate STI's requirements in customising where possible to provide the right service.

In the QBR meeting, STI presented the "FY 2010 TPL VSE" (VSE statement), which focused on STI's Vision for the next five years of providing end-customers with innovative delivery solutions exceeding customer needs and presenting STI with world class services. From a strategy perspective, STI shared with TGS the objectives over the next two years of proactive collaboration between world class talent and best-in-class logistics vendors to achieve operational excellence for STI end-customers. This vision and strategy over the next 12-18 months period focuses on transformational solutions, smart operations and personalised experience of end-customers as well as a collaborative business approach.

STI stressed the need to have TGS recognise the VSE document, as sharing this type of information reinforces the strategic nature of TGS and STI SC strategic alignment, strategic partnership, and sharing knowledge and expertise in systems and in best practice as well as ensuring continuous

improvement and benchmarking. The innovation objectives should be well demonstrated through the focus on B2B messaging systems integration project, global BSC tool implementation, carbon emissions measurement and control, and other projects that prove the long journey TGS embarked on to support STI Vision and Strategy.

TGS senior management acknowledged the aligned vision and strategy and the similarities and mutual implicit and explicit collaboration in what both TGS and STI are aiming to achieve through projects and initiatives execution. TGS acknowledged the fact that STI VSE provides the platform for cooperation and a strategic long-term relationship and for even providing TGS the confidence that the relationship is on the right track and to push even further in that direction. TGS's overall feedback endorsed the success of the strategic alignment process in improving the sustainable performance not just through service delivery but also in successfully exchanging and delivering knowledge.

4.4.4.2 TGS performance measurement and share of STI TPL cost spent in Asia Pacific

In the first part of the FY2010 QBR meeting, TGS demonstrated graphically the overall STI spending with TGS which grew globally by 17% for the period 2007-2008 and 10% for the period 2008-2009. STI APAC Theatre was the largest in spending with TGS among all STI theatres by contributing about 60% of total TGS global share in 2009, but with flat growth for the period 2007-2009. The highest spending growth rate among all STI theatres was in EU which scored at 117% for the period 2007-2008 and Middle East and Africa (MEA) where spending grew by 35% for the period 2007-2008 and 67% for the period 2008-2009. TGS believes the growth reflects STI's progressive trust in TGS's performance, especially with the significant growth and new business expansions in MEA and EU as well as China under TGS management.

Overall TGS's portion of STI warehousing cost has increased in all three theatres of EME, APAC and Japan over the period FY2009 through to the first quarter of FY2010. The cost in EME increased due to extending the warehousing network into new countries. In APAC, the cost increase was attributed to the Australian dollar versus US dollar exchange rate fluctuation impact on Australian warehousing cost coupled with an increase in inventory volumes in the first quarter of FY2010 that required more warehouse space. On the other hand, the Japan warehousing cost increase was attributed to the establishment of ten new Rapid Fulfilment Depots.

The domestic distribution cost of premium and standard orders as well as faulty parts pick up distribution cost showed different trends in the EME, APAC and Japan Theatres. In EME, the distribution cost fluctuated in FY2009 and increased towards the fourth quarter of FY2009 to stabilise in the first quarter of FY2010 due to an increase in volume. APAC distribution costs generally increased in the fourth quarter of FY2009 and the first quarter of FY2010 due to new business granted to TGS in domestic delivery and also due to Australian dollar versus US dollar exchange rate fluctuation impact on Australian distribution cost. As to Japan Theatre, distribution cost increased since the second quarter of FY2009 due to progressive increases in volume with the addition of ten new Rapid Fulfilment Depots to Japan Theatre network of depots and the resulting distribution cost from the new depots.

Import duty and VAT tax cost on imported spare parts incurred in EME and APAC by TGS on behalf of STI was large with EME capturing the biggest share. Overall, duty and VAT cost is the biggest cost driver for STI globally and in each of the theatres especially APAC and EME compared to other cost elements which, despite the overall decreasing trend in FY2009, showed an increasing trend in cost in the first quarter of FY2010. In APAC, duty and VAT cost under TGS operation was only incurred in China, which showed a general descending trend throughout FY2009 and into the first quarter of FY2010.

International freight and transportation costs in the EME Theatre have been incurred only for outbound shipments and in the EU for both inbound and outbound shipments. Cost and volume showed a high correlation and sharp increase for EU outbound but slight increase for EU inbound and EME outbound.

STI teams expressed satisfaction with the financial performance of TGS with no concerns raised in the meeting. The financial performance clearly reflects the growth in business granted to TGS in different theatres due to its good performance and trust in the vendor's ability to meet the target KPIs in comparison to DLS. TGS is extensively working on executing other cost reduction initiatives in STI Korea, Taiwan, China, Japan and Australia.

Following the same analytical direction as in section 4.3, the overall picture of TPL cost STI incurred for the period starting first quarter FY2008 to fourth quarter FY2010 and the relationship with performance is examined. For APAC operations, cost spent on TPL vendors represents 22% of total SSCD cost spending including fixed departmental and overhead costs. In APAC, all three vendors rank in the top three spots in sharing the largest percentage of the TPL cost. Out of the total monthly

TPL cost for APAC, the three vendors DLS, TGS and ILS combined capture 86%, and TGS alone captures 36% and comes second after DLS.

TGS APAC, on the other hand as shown in Figure 8, had a slight increase in performance over the FY2008-FY2010 period, while the vendor's share of the total TPL spent cost among the three vendors as demonstrated in Table 7 dropped from 39.5% in the first quarter of FY2008 to 36.5% in the fourth quarter of FY2010 with slight increases over the 40% mark in some quarters. Overall, as shown in Table 7, TGS's share of total STI TPL cost spent among the three vendors in APAC dropped by 3%.
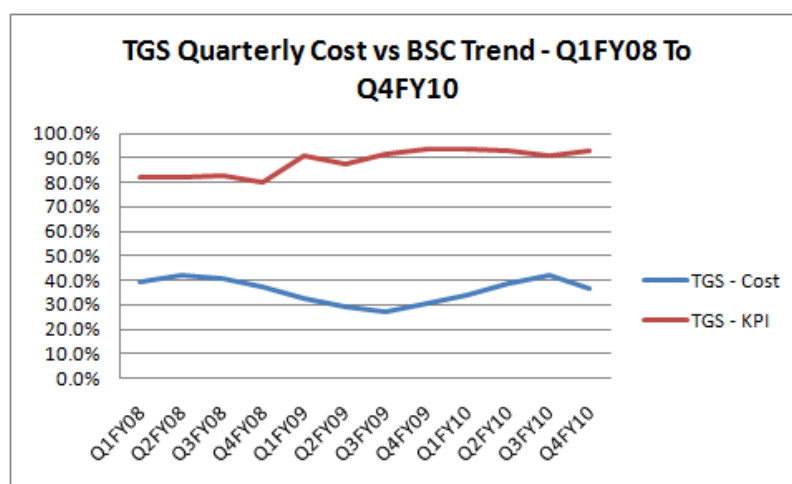

FIGURE 8: TGS QUARTERLY COST SPENT VS. BSC TREND BETWEEN Q1FY2008 AND Q4FY2010

TABLE 7: TGS QUARTERLY COST SPENT VS. BSC TREND FOR THE PERIOD FY2008-FY2010

Vendor	Q1FY08	Q2FY08	Q3FY08	Q4FY08	Q1FY09	Q2FY09	Q3FY09	Q4FY09	Q1FY10	Q2FY10	Q3FY10	Q4FY10
TGS - Cost	39.5%	42.0%	40.5%	37.4%	32.9%	29.2%	26.9%	30.8%	34.0%	38.9%	41.9%	36.5%
TGS - KPI	82.3%	82.3%	82.9%	80.1%	91.2%	87.6%	91.3%	93.4%	93.5%	92.7%	91.1%	92.9%

In summary, TGS's performance and share of STI spending in shape of TPL cost demonstrated a high association of common variability between the two factors.

4.4.5   Case summary: TGS

Special services like "Store-a-part" in TGS are a newly created area for the type of industries that require special handling services and TGS is keen to see this business successful and growing by leveraging its distribution business. TGS's strategic objective is to be number one, or the best service provider, and not necessarily the biggest. Focused on networks, TGS is aiming to expand in the

domestic and international express services market by connecting domestic and global networks. With its own infrastructure, TGS's objective is to expand by leveraging innovative solutions and well skilled and developed professional people.

TGS is customer centric, where the nature and size of customers, and their industry influence the relationship with the customer. Global customers generally enjoy hierarchical account management services from global to domestic levels. Amongst this category of global customers, special attention in relationship management is devoted to brand customers who are leaders in their industry and markets. STI falls into this category. A good customer relationship provides the right grounds to meet customer requests for non-standard service offerings. The relationship with demanding customers like STI is much stronger, due to its complex nature, which provides TGS the opportunity to leverage the right return on investment when strategic and operational alignment is functioning well. Effectively, the size of revenue and resources dedicated by TGS to manage STI's account, dictates that TGS has a close and strong relationship. Available resources allocation to global strategic customers of TGS follows the "80/20" rule when looking at the vendor customer base including global large enterprise and small-medium enterprise.

Even with well managed customer relationships, there are times where even limited failures within the agreed KPIs can cause challenges if these delivery failures are falling in the sensitive areas of the customer business and with some of the key customer's end-customers. STI's relationship to TGS is extremely important as a global customer as well as a benchmarking reference in the industry that allows TGS vast opportunities to grow the business in the special services area as well as in distribution at regional as well as global and country levels.

To TGS, the customer relationship needs to be built on a strong operational performance to be successful. TGS has been able to move the service parts operations management from an operational and tactical level in 2006 to a strategic one in 2009 by continually delivering high quality services and investing in people. It is the people and managers who have been able to deliver the success of the service spare parts business and the relationship.

One of the main success factors of the relationship is the continuous improvement that has driven the operational performance and open policy of people engagement at all levels and functions. TGS's commitment to STI's relationship was proven through engaging business experts to drive innovative SC solutions and to meet STI's demands.

With the implementation of STI's global governance model in 2009 and consequently executing the strategic alignment process by which STI and TGS shared their strategic objectives and organisational goals, TGS provided many support activities and initiated different types of business improvement projects to improve the value of the service to STI. STI's award to TGS as the vendor of the year for continual performance enhancement proves the realisation of the value TGS has provided to STI. This gives STI the confidence that there is also a second good and strong vendor that can be relied on for supporting the STI business and for better risk management.

TGS believes the alignment of the global account together with the matrix-type communication channels open within between the two organisations, when combined with the effective escalation process, ensures the mitigation of relationship risks and proper handling of challenges and issues to resolution in a timely and effective manner.

In controlling relationship challenges and problems, TGS has a specific view for each of the formal controls. TGS perceives the performance KPIs as the most important among the formal controls as the basis of measuring the performance, and therefore a relationship based on measurable and achievable performance measures is the successful one. On the other hand, TGS believes that contracts exist only in cases of disputes between the customer and supplier. TGS believes that benchmarking is a sensitive type of formal control, where internal benchmarking can be the most feasible to use, and external benchmarking can be complex and debatable.

Alignment of TGS and STI values is important from TGS's perspective since the misalignment of values reflects a lack of understanding of STI priorities and consequently a potential risk of failure in meeting STI's business objectives. Saying this, trust is a prerequisite in the relationship for STI to be able to openly and confidently communicate these business priorities and objectives to TGS. To TGS management, lack of trust in the relationship prevents the transparency and free communication of information and consequently TGS is always making assumptions in deciding STI's business requirements with consequent major misalignment between STI and TGS. Hence, trust and values alignment allow the alignment between both organisations' objectives.

TGS believes that there could be some balanced association and connection between formal controls on one side and trust on the other, but ultimately formal controls reflect the fact that the TGS-STI relationship is not personal and that is why formal controls exist. Trust on the other hand is a combination of the personal level relationship and the team related element but good relationships cannot exclusively generate trust if it is not associated with good performance.

TGS believes that the relationship with STI has reached the maturity stage. This maturity was reached after rough times through which TGS learned the lessons and worked very hard to improve its performance to reach the advanced performance levels they are at now. TGS considers STI "an integral part of the business".

TGS, like DLS, has achieved good levels of SC alignment by aligning STI and TGS strategic objectives since 2009. TGS is more open and transparent in admitting that STI started sharing the SSC strategic objectives with TGS, which in turn is incorporated and aligned to TGS's strategic objectives in aiming at meeting STI's requirements. What makes the difference here is the fact that STI is an important account to TGS both in APAC and globally and from a market-verticals perspective in the hi-tech industry as a telco customer. TGS grew with STI's expansions through acquisitions and new consumer markets. In parallel, STI expansions triggered TGS to focus on integrating STI IT systems and B2B technology requirements into their strategic plans at both APAC and global levels and by introducing a new IT platform. The alignment between TGS and STI has been demonstrated through formal and informal communications at all levels of management, globally and in theatres. Communication channels have had a noticeable positive influence on the relationship with STI. Information sharing standards are in place in the relationship with STI, and apart from standard operational reports, TGS publishes quarterly newsletter to a predetermined list of STI managers and decision makers and has suggested to STI to publish a newsletter to the vendors on topics of common interest to all partners.

On integrated IT and systems, TGS went through a drastic global upgrading process of the entire IT and systems platform to meet STI's strategic objectives in implementing a B2B messaging technology solution and utilising TGS WMS system. This exponential growth in TGS IT capabilities boosted the relationship and positively reflected on the partnership. Operating procedures have also been developed by TGS to a satisfactory level, and although not to the same level as DLS SOP, it did have a good influence on the relationship with STI by meeting the SOP documentation standards. Lastly, it can be openly stated, that a formal decision making process is lacking between STI and TGS.

On the relationship management side, and despite the fact that existing challenges are not fundamentally relationship stability threatening, TGS feels STI does not appropriately value the significant work TGS is achieving but can only ask for more. One of the other challenges is the way STI restructures the theatres and regions with the split of Greater China as a new theatre and how TGS will restructure the account team to meet the dynamic structure of STI across APAC. Worth mentioning here is that STI's vendor manager also complained of frequent changes in TGS and DLS

account teams. This issue by itself is not relationship threatening but does signal a change in the relationship approach away from the old personalised domestic and regional relationship style between 2006 and 2008 to a formal global one. Since 2009 and the start of the strategic alignment process, the APAC STI vendor management team occasionally asked TGS to cross-share information between vendors, which has been considered a request associated with risks since it could expose TGS's confidential information to industry competitors and jeopardise TGS's integrity towards other customers. Another challenge pertains to TGS demanding to understand STI's strategic direction, which has been addressed where TGS and STI have strategic planning sessions as part of the global annual QBR meeting. These sessions with John, STI global TPL Discipline Leader and APAC vendor senior manager, started in 2009 with the implementation of the strategic alignment process and resulted in better understanding of STI's strategic direction, trust in exchanging knowledge and allocating special time to discuss and share information of importance to both STI and TGS.

On the formal control mechanisms, STI has in place a set of controls of which TGS admires STI's focus on the portfolio of vendor contracts as a guiding element of the operation. Although TGS believes that STI can do better in structuring their contracts portfolio using a framework agreement, such structure is not clear in STI. TGS agrees that contracts are critical but business can still operate without them. Indeed, STI believes that contracts have little influence on running the daily activities of the operation but the current negotiations of contracts renewal with TGS and even more so with DLS is not encouraging. Similar to the situation with DLS, the performance measurement in place with TGS has had a good influence in guiding and protecting TGS's performance. This performance is strictly driven by target KPIs and the BSC score, which measures quantitative and qualitative measures. Regarding the incentives control mechanism, TGS managed to come ahead of DLS by agreeing with STI on a volume discount incentive program. STI plans to reach such agreement on an incentives program with DLS, but DLS is being uncooperative on this aspect of the relationship controls, a position STI wants to avoid. On benchmarking, not much difference exists between from the position with DLS and both STI and TGS have a lot of work to do in this space but both agree on the complexity associated with benchmarking. With STI introducing the global governance model in 2009, the formal management controls took a global dimension and performance measurement processes became standard to a certain extent using the BSC scoring system. Consequently, STI can compare TGS performance across theatres and against other TPL vendors.

Regarding informal control mechanisms, STI and TGS both endorse the fact that the relationship between the two teams and organisations is guided by the set of shared values of trust, respect, integrity, openness and transparency. Although TGS feels that STI does not exchange the same level

of trust, STI, as a global and regional corporate citizen runs many of the common socio-corporate responsibility projects of "give back to society" together with TGS and both agree that the relationship has exponentially moved from strength to strength. TGS agrees that trust, cooperation, collaboration and openness are the main factors that contribute to the success of the relationship with STI. After 2009 and the implementation of the strategic alignment process as part of the global governance model, trust took a more and much bigger role in managing the relationship. Obviously, the trust element came from both STI and TGS sharing strategic objectives and information pertaining to both organisations' strategic plans.

In relation to knowledge exchange with other vendors of STI, TGS is sensitive on this topic and would try their best to ensure that any knowledge exchanged stays channelled through STI and limited to operational type information if passed on to other vendors. With discussion going outside this strict circle of knowledge exchange definition, TGS tends to be very conservative and does not simply agree to share or exchange knowledge that can be of a competitive advantage nature or strictly classified as intellectual property to TGS. On the other side of the equation, it is clear that TGS would cooperate with STI on the knowledge exchange aspect of the relationship within predefined parameters. Essentially, since 2009 TGS has had a leaner position on knowledge exchange provided that the exchange of knowledge is anonymous among the vendors by channelling each of the vendors' knowledge to the rest through STI'.

4.5   Case 3: ILS

4.5.1   STI-ILS Relationship prior to the change

Before 2009, the relationship between ILS and STI was protected by the strong relationship between STI and ILS corporate management in North America. Until ILS committed the ultimate mistake of violating the tight relationship and broke one of the most important golden business rules of STI, that is full compliance to international and domestic trade and customs disclosure regulations, ILS was one of the first tier-two SC vendors of STI. Under the umbrella of the good corporate relationship between the two organisations, ILS managed to invest little and sometimes STI would incur the cost of investing in running process improvement projects at virtually no cost to ILS. The main area in which ILS managed to avoid investing and which subsequently created a major obstacle to ILS was its level of IT platforms and systems unsophistication. Despite the fact that ILS is a tier-two vendor and mainly involved in STI freight and transportation services of the SC and occasionally warehousing

and distribution activities in certain countries, ILS did not proactively drive the relationship with STI into the next level of support and performance. STI always wanted ILS to prove eligibility to be a well-qualified and preferred tier-two vendor and to demonstrate motivation to influence STI's SSC with smart and differentiated business solutions.

Eventually, it was extremely difficult for ILS to close the gap of systems deficiency and its unsophisticated SSC infrastructure compared unfavourably with that of well-developed SSCs systems and infrastructure, in particular those of DLS and TGS. From an organisational perspective, ILS went through difficult organisational takeovers and structural changes that negatively impacted the overall coherence of its strategy and execution, as well as the soundness of the global and regional account team managing STI operations in APAC and other theatres.

In addition to the non-compliance issue ILS created in North America, the GFC and the subsequently declining performance of ILS, meant that STI was unable to carry the burden of ILS's incompetency in running the SSC and decided to terminate the relationship without resorting to legal measures. STI decision not to resort to legal measures was in respect of the long term relationship with ILS.

As ILS realised the consequences of the issues and challenges faced in the relationship with STI, the vendor management team started to work to salvage what was still sound in the relationship and rescue and rebuild what was left from the relationship in APAC and specifically in Australia. Peter, ILS Freight Management Director of South Pacific, believes ILS tends to "adore STI in Australia, I think it is a thing of nostalgia". The relationship between ILS and STI is old and geographically spread and despite some difficult times where performance dipped a couple of years ago, account managers worked hard to restore the performance and the relationship. He continues explaining that from ILS's perspective:

> *"There is a lot of history, and also I think because we were punished in North America about 18 months ago though some customs issues we got dumped by STI USA, we are only hanging on now to the export business from Australia and a little bit of import, but we are the last remanent of a ILS-STI cooperation here, but from this remanent we hope we can build a global acquaintance with STI".*

Although virtually the same ILS account management team has delivered against STI's target KPIs over the life of the relationship in the past with trust and transparency, ILS did not cause tensions when DLS was bidding against new STI business offerings, mainly because ILS was not yet ready to compete. Later on, when ILS was approached to design, create and run the "control tower" concept,

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ILS considered the request from STI a sign of reciprocation of the trust ILS always believed to have existed.

ILS has been always keen on attending all STI meetings and specifically QBR meetings in APAC and North America until two years ago when the relationship was terminated by STI corporate. ILS always aimed at maintaining a good account management relationship associated with effective attendance at all QBR meetings. ILS has always been keen on openness, transparency, continuity, diligence to measuring performance in accordance with STI target KPIs, and responsiveness to STI projects including non-standard international inventory movement projects. Another practice ILS attempted to ensure was that all their senior management, delegations, and SMEs visiting APAC met STI management in Australia as a priority.

Overall, ILS met the target KPIs but the performance was generally average compared to DLS and TGS, making it difficult for ILS despite of the trust that existed with STI to rescue the relationship. Another major consequence of these challenges faced by ILS was that it did not subscribe to STI's global governance model and, in particular, failed to become part of STI's strategic alignment initiative, resulting in the loss of all the advantages of STI's SC strategic objectives after 2009.

4.5.2   Effect of changes on alignment

In 2009, STI introduced the global governance model that was mentioned in earlier sections of this chapter. With the new model implementation, STI instigated significant changes to the relationship with the TPL vendors. Of particular impact was the strategic alignment process, which STI aimed at redefining the management controls within a global context of managing the TPL vendors and consequently influencing the type of solutions to control issues and challenges in the relationship. Vendors' understanding and adoption of the strategic alignment process meant not only aligning to STI's SC strategic objectives but also adopting STI's strategy of knowledge exchange and sharing. An important but subtle condition of vendor eligibility to the alignment process is not only abiding by and executing against the management controls but most important is respecting these controls and having full integrity in the relationship.

ILS had acted negligently, with non-compliance in disclosing the right shipping information to the customs authorities in Canada, violating the informal management controls of trust and integrity. This came at a time when ILS performance was under average and struggling to meet the target KPIs, in addition to issues associated with the GFC the severe competitive freight forwarding market.

This section has a different analytical flow of data analysis from the previous sections because ILS, unlike DLS and TGS, did not enrol in the strategic alignment process and consequently missed the changes that took place after the implementation of the global governance model.

4.5.2.1 STI global governance model and ILS-STI relationship: ILS lost opportunity for strategic alignment

ILS can be described as the special case vendor STI left outside the global governance model and consequently it did not undergo the strategic alignment process which was initiated in 2009 and eventually was not invited by STI for a global QBR meeting in FY2010 to enrol in the alignment process. Just before that time, ILS was placed by STI on the embargo list for a combination of recurring operational delivery failures influenced by the GFC on ILS freight operational capabilities and serious professional negligence in failing to follow customs disclosure rules and regulations on behalf of STI in North America. These issues led to STI facing customs penalties and damage to its public image; moreover there was serious deterioration in ILS's performance globally and a deep loss of STI confidence and trust in ILS. Ray, STI account customer Relationship Manager from ILS, blamed STI for lack of alignment and for having a fragmented SC:

> "There's no way in the world you can do business between two supply chains without alignment of supply chains. And that's why when we talk about these questions at the beginning, when we talk about alignment; we talk about the strategic objectives between STI and ILS. ... Yeah, because you've got... I know there's been tying some alignment in the States, but we do see STI as a fragmented organisation – service parts, finished goods, and it still seems separate entities".

Although Ray blamed STI for lack of strategic alignment, Peter, ILS South Pacific Director Freight Management and sponsor of technology portfolio of ILS clients, was open in discussing the reason why STI excluded ILS from the alignment process:

> "The opportunity is there but I think because we were almost black listed in North America for some customs issues in Canada two years ago we are on the informal embargo list of STI right now..."

Michelle, STI Account Manager from ILS, endorsed Peter's statement but both seem to have strong confidence in ILS's ability to revive the relationship with STI as Peter perceives the future:

"I think it is continuity, I think for the most part ILS has delivered very successfully over a very long period of time with the same people, and so there is trust, transparency in the relationship".

In concluding this discussion, ILS lost the important opportunity of joining STI's strategic alignment process which resulted in the already deteriorating relationship and performance gap becoming bigger and deeper. Therefore, while STI's introduction of the global governance model in 2009 assisted well performing vendors DLS and TGS to enter the new phase of strategic, operational and structural alignment of the relationship with STI, ILS was already a non-performing vendor there seemed little future in the relationship. The STI global governance model was, in some respects, an eligibility test to the vendors to qualify for entry into the new era of the relationship with STI.

4.5.2.2   Influence of organisational goals and strategic objectives on ILS-STI relationship

According to Peter from ILS's account management team, the organisational vision of ILS is:

"... To become the most admired company in the supply chain arena, not necessarily the largest but the most admired".

ILS feels that this vision can be achieved through innovative solutions, and operational excellence. Ultimately, ILS believes in:

"... Creating supply chain company that is more reliable, performs better, has a customised approach as to how it designs its controls and its performance matrix so we are happy to bend and flex".

Consequently, ILS is ready to customise services, but bound by the ability to execute, where execution and continuous improvement is the differentiator. With ILS's higher retention rates on customers and a strong organic growth, ILS built a diversified market portfolio. Therefore, "by reputation alone we become the premier brand in supply chain", Peter added. ILS believes the GFC did not change the customer relationship strategies and the vendor is intimately connected to customers, a situation different to other competitors. ILS is focused on customers of the "Century 100" client account program as part of its retention strategy. Commercially, the GFC caused a lot of shrinkages within some of ILS's customer-base sectors and market segments like the automotive industry. According to ILS, there has been no significant customer volumes departing from the

company. In some ways, ILS's organisational strategy and goals are close to that of TGS and DLS in aiming to be one of the market leaders or in the top ranks of performing TPL vendors.

ILS has a client centric expansion program, an industry sector specific growth program and product and solution based growth programs as well that define the role of customer relationship in organisational strategies and goals. According to Peter, the number one area for growth is "the Century 100 cliental program" customers. Where ILS has significant cooperative and collaborative relationships with major multinational customers, this is not the case with STI. ILS leverages good customer relationships in a particular geography into other geographies as one of the most efficient means of growing the business. Probably, from a growth point of view, customer relationship plays a big part in defining ILS's strategies and goals. In building customer show case operations, ILS is on a development plan to build such sites around some of the key customers. To ILS, customer relationships mean growth, retention, cash management, building innovative solutions, sharing best practice, and cross-selling ILS's business wherever there is an opportunity. Peter sums it all in his statement that, "Customer relationship is everything for us".

Analysing the influence of organisational strategic objectives on relationship, the feedback and responses from ILS managers provide conflicting messages about their views of the relationship with STI. Ray, the customer relationship manager, considers STI's IT platform and strategy as unsophisticated:

> "Yeah, we find that most companies are fairly unsophisticated when it comes to any [IT systems]… they all want it – they can't do it. ... Yeah. Yep. Either they won't pay for it, or they just… their business focus is on other areas of their… like forecasting demand management, things like that. We see… in linking in with other forwarders, they're fairly unsophisticated. ... Well, I don't know how they'd [STI] … they haven't got that platform. I mean we deal with some companies, like Apple, who are very sophisticated in their IT interfaces".

On the other hand, Michelle, the account manager, blames ILS for poor IT strategy and systems.

> "Every company has different types of requirements and systems. It's how well we can achieve the same sort of things together so we can build that relationship. ... Obviously there are times when you can't and you don't have the same sort of requirements. The systems for example, we may not be able to interface with your system or we may have issues with not being able to achieve your goals, but we would certainly just look and sit with you and try and work out what it is that you need for us to work with you. ... That's probably one of the things that we

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probably haven't done well. I think ILS hasn't done a great job with information technology and systems. I think it is something they are looking at with the new company. Obviously with ILS now joining forces with TGS, they had different types of information systems in place and I do know that the company is now looking at that for future".

STI is one of the top 100 companies and fits in the Telco market vertical of ILS. Until recently, STI played an important role in this space but business with STI has diminished. Ray's main responsibility is to provide STI with the services ILS is providing and in meeting the agreed and contracted target KPIs. ILS perceives STI's IT strategy as unsophisticated and lacks a platform strategy. Ray based his judgement on comparing STI to Apple, which he believes is much more sophisticated in its IT systems, and interfaces with vendors with which they have a good relationship. Ray also draws his judgement and conclusions from comparing STI IT systems and platform to that of Dell, which has sophisticated IT systems, IT interface and tracking technology in place. ILS's negative feedback on STI's IT systems contradicts that of STI, where STI has been complaining about ILS's poor system interfaces and tracking capabilities. This point is confirmed by Michelle when she explained how ILS's IT system did not meet the IT systems strategy and business requirements of STI. According to Ray, STI would come to ILS to work out a partnership depending on business STI wants. For example, in freight forwarding, STI would help ILS to achieve its shipping volume targets. STI would help ILS to buy space on airlines, so the more volume ILS customers request, the more space ILS can buy and the more negotiating power ILS will have in pricing and service with the shippers, which eventually the cost savings can be passed on in the shape of cheaper service prices to customers. So, to ILS it is important to have the strategic alignment with STI's strategic objectives and the strategic direction of STI business, and to be able to play to STI's requirements in a flexible way rather than having a uniform one level service that suits some customers and not the rest. ILS then will sit down with STI to understand what the customer is planning to provide to end-customers and ILS will work out the customised solution to an extent to meet STI's end-customers' needs within the five days lead-time target KPI agreed on with STI. Therefore, it is important to balance the strategic objectives of STI to support customers, with that of ILS, given the performance to achieve in an optimum way to retain the business. With IT strategy alignment and growing customers' partnerships, balancing business requirements of different ILS customers is required to achieve optimised investment. Successful strategic alignment requires ILS to understand STI's strategic objectives of smart, innovative, customised and differentiated services in order to formulate the corresponding strategic systems requirements and what and how to achieve the goals at the right pricing.

When Ray was asked about the "strategic objectives of STI", he answered by returning the question, "What are STI's strategic objectives?". In a contradictory way, Ray next discusses STI's strategic objectives in relation to B2B system interfaces, claiming that STI seems to have had decisions made but have not chosen the partner yet. Actually, STI already started the B2B solution implementation in 2006 and concluded the major strategy implementation milestones in 2009. Ray believes that this is an area in which STI has not workshopped enough or discussed further so it is something ILS sees STI wanting to do "but they don't seem to know how to do it, or who to choose to do it with". Michelle, the account manager, on the other hand, explains that ILS tried to align with STI's strategic objectives by working from the very top and at the corporate level. According to Michelle, the way it works is that ILS executive sponsors build the relationship with STI's Chief Executive Officer (CEO) at a corporate level and the relationship cascades to the regional and theatre levels by understanding STI's requirements at the lower levels and building the relationship around STI's strategic objectives as planned in this top-down approach.

> *"Well obviously STI as a global company, the way that we try to align with STI is that we work from the very top. We have executive sponsors who build the relationships with maybe the CEO's, the people at the top and then we work down to regional level and then to country level, so, we need to understand from the very top, right through how we can work with you. I guess, depending on how STI want to work with us is basically how we would achieve that objective I guess".*

This approach caused major issues to ILS especially around the time the corporate management was going through some major changes, which distracted the GAM and caused the focus at the ILS regional and theatre level to be absent for a while.

4.5.2.3   Influence of supply chain strategy tools and techniques on relationship

Regardless of whether the strategic alignment process existed or not, ILS, like DLS and TGS, played the same role in maintaining the relationship between the vendor and STI. Since 2009, STI started utilising SSC strategy tools and techniques in light of the global governance model, which resulted in more effective and globally standardised role and influence of communications, standard information sharing, integrated IT and systems, SOPs, and standardised decision-making processes.

ILS has formal and informal communications in place with STI. Informal communications are executed through the relationship of ILS's account management team with STI, which is part of the normal and long established occasional invitations to social gatherings, casual visits of management

team members, telephone calls, emails, and incident-based updates on business relationship activities. The formal side of communications with STI depends primarily on the QBR meetings in the first place as well as fortnightly operations review meetings, electronic newsletters, project-based review meetings, and escalation related communications. Formal communications also cover ILS reports provided to STI on a quarterly, monthly, weekly and daily basis covering operational issues and updates. It is important to mention here that although QBR meetings are considered the main formal communication means between ILS and STI, STI did not call for a global QBR meeting with ILS for the years, 2009 and 2010. This was a STI corporate decision due to ILS's poor performance in North America. Regarding formal and informal communications, ILS did not enjoy any of the improved and redefined communications under STI's global governance model.

ILS considers agreed standards of information sharing to be in place through the monthly reports provided to STI. These reports are requested by STI and cover the performance measurement results against the target KPIs and root-cause analysis of failures and subsequent corrective actions. The other casual forms of information sharing ILS provides are through some of their subject matter experts, where ILS occasionally arranges to meet STI managers and feed knowledge on topics of relevance to STI from and about the Telco market. ILS has tracking systems where STI can access ILS's global network and access standard reports and information on products and transit times of a shipment. Standard information is available on these systems and can be freely shared with customers including STI, and ultimately, ILS is open to share information with STI. While Ray of ILS mentioned the performance target KPIs standard reports, Michelle did not mention these same reports.

Ray, customer relationship manager, explains that ILS has a good IT systems platform in North America. The only other system automated access is the billing system, to which STI North America has access and works well. In APAC, the billing process is still manual and has not met STI's APAC strategic requirements of operational efficiency and process automation. Michelle, STI account manager from ILS, admits that ILS has probably not done well on IT planning and development, and systems integration, and expects that with ILS, the new company, joining forces with TGS in the new joint entity, will grant the vendor access to different types of information systems to utilise, improve and automate the exchange of information with STI. Historically ILS's systems have not been superior and now Michelle hopes that this issue can be addressed more effectively and closely with the newly appointed global account manager. Effectively, it can be claimed that ILS went through turbulent organisational changes over the last few years and impacted stability and productivity of the company as well as relationships with STI.

According to ILS, SOPs have been in place and work well between STI and ILS for smoothly managing STI daily operational activities. For the length of the relationship with STI, it is common practice at ILS to have SOPs in place and expect to have a good influence on the relationship with STI. For each of ILS's customers, SOPs would include an overview of the customer mission, products, STI contacts, and more with the SOPs, by which any SOP user can find who to contact for what. So ILS does have SOPs for STI's account.

The standardised process for decision making, although informal, seems to work well between ILS and STI. ILS knows who to contact if they have questions or queries. ILS has contacts with STI at different levels of management and in return STI knows that they can reach out to Ray or Michelle, STI account managers. Within ILS, there is an account management structure that is mapped from country to theatre and global levels. ILS's account managers agree that their decision making is offshore, so many of the decisions are made by ILS US and country or theatre decision making is done in light of the global decision. Internally, customer issues are generally discussed within the ILS account management structure at theatre and regional level first.

In summary, ILS acknowledgement the effectiveness of STI's SSC strategy tools and techniques; overall these have not fundamentally impacted the relationship with STI since these tools and techniques needed the relationship to be under the global governance model from 2009 in order to observe their influence.

4.5.3   Effect of changes on relationship control problems

In this section, ILS's main control challenges and problems faced in the relationship are discussed to analyse the measures taken by ILS and STI to resolve these issues and challenges. The main factors contributing to the success or failure of the relationship after STI's introduction of the global governance model receives special attention. In this discussion, special emphasis is given to the use and utilisation of the formal and informal management controls, individually or as a package, analysing their effectiveness and the influence on the design of these controls.

4.5.3.1   Challenges and problems in managing the service supply chain and relationship between ILS and STI

ILS's relationship with STI in APAC and Japan has not been facing the same challenges like those faced in the North American region where not much SSC business has been transacted. ILS does have some business with the STI Manufacturing Division. Ray, STI customer relationship manager from

ILS, explains ILS's determination to restore the relationship with STI North America, where a new global account manager has been recently appointed to repair and lead the relationship. The main problem between ILS and STI started in Canada with ILS failing to protect STI's interests and to demonstrate due diligence of declaring the right spare parts imports commercial value for duty assessment purposes when clearing spare parts shipments to the customs authorities. Although this issue originated in North America, because STI has implemented the new global governance model, the impact was felt on all STI's relationships with ILS, including APAC. Further ILS's competitive position is weak relative to aggressive pricing from other TPL vendors competing for STI business. In the TPL market, as ILS business with STI diminishes due to pricing issues and loss of business, it becomes more challenging for ILS to offer discounts on rates due to the erosion of economies of scale capability. The complexities of these issues have weakened ILS's position in North America, but on the other hand ILS was able to retain STI business in APAC and Japan. Other issues were linked to the general global and regional economic conditions, such as the increase in market prices that placed more pressure on ILS's and other TPL vendors' services margins making it difficult for ILS to offer volume discounts. While ILS does not have the same portfolio of services, other competitors have the luxury of cross-subsidising the transportation services with their larger business units' sales revenue. From the customers' perspective, pressure was also mounting on TPL vendors to offer more competitive pricing through cost reductions. Pricing and service levels are interrelated and in tough economic situations, it is difficult to keep providing a premium service at lower costs where airlines are prepared to sell services to the highest bidder. Michelle articulated the problem by saying:

> "I think probably the main challenges have been pricing I think and service levels. I think we have probably had challenges that companies are now looking at cost reductions. Sometimes when you have to go to a customer and reduce costs, it does affect your service levels, for example, with STI remember we were moving cargo direct services into Sydney and Australia, we were doing cost reductions and of course, when you're going to the airlines to try and move cargo, the cargo that they move are the people that pay the highest rate, so I think we had some challenges there".

Apart from pricing, lack of proper IT systems support has been the other challenge facing ILS in the relationship with STI, and consequently when STI compares ILS's IT systems capabilities to that of other vendors, ILS is not competitive.

The most difficult period for ILS in managing STI SSC has been the post-GFC business environment. ILS customers have increasingly demanded cost reductions and corresponding productivity

improvements without reciprocating with more freight and transportation business, to consequently increase the demand for freight volumes or increase in business scope. It becomes a one-way relationship where even the most successful customer relationship falls under pressure due to the uneven distribution of adverse market forces. ILS's position on such customer requests would either result in having the account manager go through the process improvement efforts and service enhancements delivered to achieve customer satisfaction, or decline customer requests and take the issue up with ILS senior management. This avenue is generally chosen when the customer is looking at new dimensions to drive the relationship into more global collaboration and the vendor chooses to keep the customer account at a higher price to the business. ILS is prepared to reduce services rate provided the vendor is given the opportunity of wider access to the Australian STI SC business, which represents a bridge to other regions and can help to build a stronger global relationship with STI.

Peter, ILS Freight Management Director of South Pacific, is hopeful that Regional APAC and new global account managers from ILS can effectively work together to restore the relationship by approaching the old contacts in ILS North America to reopen STI doors. Peter further demonstrates the importance of STI relationship to ILS:

> "We are prepared to hang in there as our strategy and then start to reproach the manufacturing group committee in North America and start to reintroduce us as a first tier supplier again hopefully". The opportunity is there but I think because we were almost "black-listed" in North America for some customs issues in Canada two years ago we are on the informal embargo list of STI right now but I think that will relinquish at some point with the help from John and STI APAC SSCD management Team in Asia Pacific at certain point in time soon. We treat it from a sore back point of view it is very much a dearly loved customer and STI is one of our top customers any way".

ILS has been most adversely impacted among the TPL vendors by STI's global governance model. ILS has failed to join the movement of strategic changes initiated by STI or even to understand the winds of change.

4.5.3.2 ILS actions to manage the relationship risks and problems: Enhancing and realising value provided to STI

The response from ILS to the challenges and problems arising from the relationship with STI tends to primarily focus on the problems faced in the market around freight capacity and rates. STI received similar feedback from other vendors on the market prices and pressures on TPL vendors. Saying this,

ILS does not seem to have enough room on rates to move with the diminishing business volumes, which means more pressure on ILS to keep rates at profitable levels. This caused in turn the loss of business with other customers under pressure from other TPL vendors. Despite the fact that STI appreciates the position of ILS, the competitive pressures on both vendors and customers leave STI with one sound business option, that is granting the business to the vendor offering the most competitive rates. Ray dismisses any other problems impacting the relationship such as the IT systems issues mentioned earlier, considered minor from ILS's perspective. Ray also claims that target KPIs have been met and indicate good performance by ILS in APAC, and that ILS understands the strategic decision STI recently took to consolidate STI's SSC TPL services in fewer TPL vendors. Other problems and challenges in addition to the above were raised by STI in different meetings at theatre and global levels, and the need for proper responses and resolutions discussed, but ILS has repeatedly failed to meet STI's demands in all of the above areas of concern.

ILS believes the relationship with STI APAC improved over time especially with the concentration of the regional APAC operations management control in Sydney. ILS worked to align STI into their telecom group of customers so that STI APAC management team has better access to ILS's telecom group of global subject matter experts. In addition, ILS has telecom SMEs in Asia who possess tremendous experience with customers like Nokia, the closest customer resembling STI's portfolio of core networking industry products and solutions. Hence, ILS has structured their SME groups to ensure the optimum level of skilled resources and effort configured to develop relationships in the telecommunications space that can be established with STI and other customers of ILS.

Ray believes that the relationship overall with STI has not changed over time in APAC but that the ILS issues stem from North America. However Ray did not explain ILS GAM's lack of structural alignment or its failure to keep up with the changing nature of customs regulations in North America. Almost a year ago, ILS's global account manager was replaced and since then, STI has been looking forward to rebuilding the relationship by initiating dialogue with ILS at strategic level to promote better understanding of STI's future direction so ILS can be more effective in driving the relationship. ILS's regional account teams' decisions were centrally driven from corporate management in North America, but recently this weak point was rectified by allowing more alignment between ILS and STI Theatre management teams. ILS's account managers hope this development will result in more alignment inside ILS and between APAC and corporate, which will allow ILS APAC more flexibility in approaching business opportunities arising in STI APAC. Ray was keen to draw the line between ILS APAC and corporate in an attempt to protect ILS's APAC relationship with STI APAC from the influences of customs regulations non-compliance issues in Canada. ILS is not doing much work for

STI now, and the drop in business volumes was not just due to the deterioration in operational performance, but also due to the pricing issue, cost savings issues, IT systems issues, and target KPIs that were not met. Michelle believes the people relationship is still strong. While the deterioration in the relationship offshore did reflect on the relationship in APAC, she hopes that because of the longstanding relationship with STI in Australia and APAC, the relationship can be revived.

Peter explained ILS's role as:

> *"[ILS] put awful lot of work into on-time [delivery] performance and I think that was always a key milestone metric for STI in the international side. We have always been open and reactive to non-compliance reports and incidents of service failure".*

ILS provided maximum operational flexibility to support STI even on weekends to pick up, dispatch and deliver shipments. As described by Peter, ILS claims they have always been open to STI offering concepts and ideas:

> *"Here some concepts and some ideas of where we can take you to, some ideas of what we do for some other technology companies today. So, I think we are sharing best practice and we are responding as and when we need to and we are showing our appetite to do more".*

STI believes that ILS talked a lot but demonstrated very little either in implementation of these ideas or in adopting best practice with their other IT customers through into STI operations. There seems to be a disconnection between ILS and STI management teams at the different levels. However, ILS APAC account team still believes that the escalation process between ILS and STI works well. This proves the state of disconnection not just between ILS and STI, but also between ILS senior management and the account management team managing STI's account.

Peter believes:

> *"I am sure STI is held to price reductions and price adjustments. I would imagine that our team is ongoing reviewing pricing at transactional level reducing rates where we can so there will be value through that".*

Peter added:

> *"[ILS did] prepare and design a [faulty spare parts] returns hub for you [STI] in Hong Kong when we were looking at a regional spare parts returns hub. I don't think the idea got off the*

ground, but we concept-design something priced something up and we were ready to take that on. Not sure why but STI changed the direction after that".

Peter admits,

"I am struggling on some of these [topics] because they are more transactional, Ray probably can answer the "a, b and c" better than I could".

ILS believes that they have undertaken actions to manage the problems and challenges discussed earlier. When ILS account or operations managers implement a project or monitor a change in process, the manager would keep open communication channels with STI on a weekly basis to review the details, and to manage and mitigate the risks arising. From a strategic point of view, ILS have never been asked to benchmark, but uses benchmarking as a tool to find risks and gaps in the processes and the relationship with customers. No formal benchmarking process has been required but ILS is ready to undertake benchmarking itself or recommend a third-party to undertake it on its behalf, which is ILS's preference. ILS refrains in such cases from disclosing other clients' performance data or operations details for fear of breaching confidentiality, and would have a third-party consultant performing the benchmarking. ILS has relationships with very large organisations, such as with one of Australia's biggest telecommunications service providers. ILS would sponsor the external benchmark company to undertake benchmarking, adding an element of independent professional opinion to demonstrate where the gaps are and how to operate and resolve them.

4.5.3.3   Extent and effectiveness of STI using formal management control systems in the relationship with ILS

ILS was not part of the strategic alignment process under the global governance model STI implemented since 2009. As was mentioned earlier, ILS was not included to penalise it for its negligence in performing the contractual responsibilities of abiding by the rules and regulations of customs clearance processes in North America when declaring the importation of spare parts on behalf of STI. Consequently, in addition to the effects of the GFC, the challenges that resulted from ILS's lack of structural, operational and strategic alignment with STI were enough to deteriorate and damage the relationship beyond 2009. The situation was made more difficult by ILS being embargoed by STI, so that ILS was unable to take advantage of the enhancements in STI management controls and the opportunity to resolve problems in the adaptation of the management controls under STI global governance model.

At this stage of the analysis focus shifts to the MCS STI implemented in managing the relationship with ILS and how these controls were utilised after 2009 with the implementation of the global governance model. The analysis will also cover how STI mobilised these formal management controls in response to the challenges and problems discussed in the relationship with ILS.

ILS believes there are not enough formal controls at the moment. It believes that "contracts do not pay much, but certainly performance measurement does", due to the fact that the vendor has to report on all aspects of performance measurement and no reporting on contracts is required. In the current status of the relationship, ILS is aiming to reach better levels of customer awareness and customer experience in order to support efforts for its own standardised reporting matrices. Consequently, where ILS is pursuing process redesign, process improvement initiatives, and value enhancement initiatives in its relationship with STI, the vendor can report, analyse, compare and contrast the outcome and performance of these activities for better returns to all stakeholders. ILS claims that most of the time STI is not forthcoming in recognising improvements, and the reported accuracy of output initiatives and drivers. It is still hopeful of being invited to participate in Global QBR meetings.

According to Ray, ILS perceives contracts as a legal document setting out the KPIs, and what is contractually expected from the vendor, but once contracts are set in place, there is no need to refer back to these contracts.

> "I guess the contract sets out the KPIs and what's expected, but once that's set in place, then it's… no-one really needs to fall back to the contract".

Contracts will also stipulate the fuel surcharge and the mechanism of setting the surcharge, for instance. During the life of the relationship with STI, Ray, ILS customer relationship manager, confirms that neither ILS nor STI faced the need to refer to contracts out and things seem to be working well.

> "… neither party have had any reason to pull the contract out and say well, you're not… you know, you're not abiding by the contract. So it seems to work pretty well. It's everyone understands the contract".

On the adverse side, the deteriorating state of the ILS-STI relationship has consequently prevented ILS the opportunity of reviewing and signing a revised set of contracts subject to the new contractual framework under the STI global governance model.

ILS believes that STI is not only strong on contracts but also at performance measurement and they use that tool to their advantage to ensure that the vendor is doing the job as per the contractual terms and conditions. The challenge to ILS is when STI raises the bar to a level where new higher goals are demanded, which obviously raises new challenges to ILS in meeting or reaching these goals. The subtle link between contracts and performance target KPIs was expressed by Michelle:

> "I think STI are very strong in their contracts and performance measurements. I think that they use that tool to their advantage to ensure that their supplier is actually doing the work that they're meant to do. The effect that it has on us is that we try and then raise the bar to a level where you want us to be. Obviously there are challenges to reach some of the goals, but if you don't have something to measure to, then you'll never get to that level. Obviously with KPI's that are set in place, we try and work towards those KPI's and it does help someone like ILS work to get to that excellence. I think STI; obviously I've seen contracts in place and have obliviously worked with STI on performance measurements. They're brought up every month or every quarterly business review to see what percentage we're at and where we need to work towards and if we didn't have that measurement, then we wouldn't be able to raise the bar to get to that point".

Performance measurement and target KPIs are linked to contracts but operationally performance reports are in place and directly interlocked with root cause analysis and corrective action process reports. ILS is disappointed that have not been included in the BSC performance scoring system design and utilisation discussion and the global and quarterly QBR meetings since 2009. According to ILS, STI did not provide any reason for this.

It is important for the continuity of the relationship for the pre-set target KPIs to be achieved by ILS. Michelle, STI account manager from ILS, has seen STI contracts and performance measurement brought up in each of the QBR meetings in the past to see where ILS met the KPIs and why and where any were missed, and how to get back to the required level of performance.

With the deterioration in ILS performance and failure to achieve the target KPIs, STI increased the pressure on ILS to improve performance, initiated more of the operational cost reduction projects and conducted transport services pricing reviews. With STI mobilising performance measurement target KPIs and service pricing management controls, and with ILS becoming less flexible to move on service pricing reduction and the associated difficulties in meeting the agreed delivery lead-times, ILS lost more of their STI business that defaulted to DLS. Peter further explains that some of the ILS

freight business with STI defaulted to DLS because of STI's strategic alignment with DLS and other TPL vendors:

> *"But, and also STI's strategy I guess has been to use less providers – just put more business with a fewer providers – which makes sense. So EI and DLS have been the main providers there. So ILS's not carrying as much, and it seems to be more in that strategic alignment of STI, I guess they're putting more volume, more business through fewer partners".*

However, Peter believes that the issue is more about pricing and severe competition with other TPL vendors:

> *"... well we have described to the management of STI some of the problems we face in the market with capacity and rates. That's been well received, and it seems to be in line with what other providers have told them, but it gets back to the fact that as our business has diminished, we've had more pressure on us to keep those rates profitable, which has meant we've lost some of that business. ... So I think STI understand why, they understand what's happening in the market, but at the end they'll take the cheapest price. So that's what's happened".*

ILS believes that STI has no established incentives program. Ray, ILS customer relationship manager, draws on an example of another customer where, when approached for a rate increase, the customer linked the increase to meeting quantitative and qualitative target KPIs. Ray believes this kind of incentives program is acceptable to ILS. On granting new business as an incentive, ILS believes that STI has, in the past, discussed new business opportunities with the vendor and other preferred TPL service suppliers. More recently, other preferred suppliers working for STI seems to be well positioned to win such opportunities. ILS agrees that a performing vendor consistently achieving target KPIs must be eligible to win more business. In the past, when ILS's performance was perceived to be good, it was identified as one of the candidates to grow business with STI. This is no longer the case.

STI finds it important in managing the relationship with ILS to mobilise more than one formal management control at the same time. While the incentives program is directly linked to ILS improving performance that was directly influenced by ILS meeting the major target KPI of delivery lead-time, it was also indirectly linked to ILS's ability to guarantee enough business volume to secure bargaining power with freight companies, which is also subject to ILS offering STI the reduced service pricing. This challenge was well articulated by Michelle when she described the interlock among the management controls of performance measurement, incentives, and pricing:

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"I remember when we first starting doing the ILS business that the KPI was set five business days and we really struggled to do it and I remember that there were times when we would benchmark to that KPI and we were quite successful, but then we found that when things changed as far as carriers changed, we weren't reaching the KPI, it was difficult for us to then go to ILS and say 'well this physically impossible now. We need to try and change the KPI', but, from ILS's point of view it was 'no, you have to stick to this KPI', you know, 'if you can't do it, we'll find somebody to do it'. .... I think with ILS, that's probably been a challenge. They haven't really accepted the change; they've wanted to keep the KPI in place. That's my opinion. As far as incentives are concerned, I guess if you do the job well, your incentive is to grow the business with the company and I know that in the past we've done things well and we've gained more business. I know that it's dropped off a bit now".

ILS's failure to meet contractual obligations of abiding by customs clearance and trade rules and regulations and in also meeting the target KPIs in addition to other pricing challenges, has resulted in falling ILS behind in joining the transformational change STI initiated in 2009. ILS's failure to initiate structural alignment of the account management team has impacted the vendor's ability to join STI's initiative of strategic alignment under the global governance model. The combination of weak account management, lack of communications, and structural and organisational changes inside ILS, and the difficulty in balancing the vendor's internal business priorities and developing new smart solutions that can address STI's strategic objectives resulted in failure to perform and made it hard for ILS to retain STI's business.

ILS believes that benchmarking is hard to apply as a formal management control and that is one of the reasons why its implementation at STI was not pursued. According to Peter, there are different types of benchmarking, such as internal and external, and some customers of ILS are not interested in knowing about other companies. ILS understands benchmarking in one way as the basis to confirm the feasibility of the target KPI and whether it is achievable or not. In this instance, the benchmarking is done by STI. While ILS was able, at the beginning of the relationship, to achieve five days shipping lead-time for STI, economic changes have created a situation in the airfreight carriers industry where even the five days lead-time is now unachievable. ILS was unable to withdraw from this commitment and convince STI to accept a review of the shipping lead-time KPI. STI's stance was that it must stand by the agreement since ILS was the vendor which completed the benchmarking and agreed to the five days, otherwise STI advised ILS that it continue to deliver to the agreed target KPIs or be replaced with another vendor. ILS's challenge was that defaulting on the five days shipping lead-time KPI meant failing to deliver on the contractually binding agreement and facing contractual penalties.

4.5.3.4 Informal MCS design and effectiveness: Trust and values alignment in the ILS-STI relationship

Peter, ILS South Pacific Freight Management Director, explains that trust is:

> *"the only thing that holds us together today really, because we have never formally done a match up exercise on these. I think it is more something exhibited and demonstrated over time to be a core complement between our two companies in Sydney at least and I think that is why we are still in business today despite the manufacturing group at STI decided they don't want to do business with ILS. In this part of the world the relationship is so aligned and so healthy, so strong and so transparent that we were kept in as a second tier provider on the basis that the manufacturing group will eventually turn a corner and let us back in again. So I think that is everything to the relationship right now ... it is the fact that we are culturally aligned very well. I think this is really very important and much more important than the performance matrix".*

Informal management controls like the formal management controls existed between ILS and STI since the beginning of the relationship. With STI implementing the global governance model in 2009, the informal management controls of trust and shared values of transparency, dignity, respect, and openness started to take on a different global meaning in the relationship with the TPL vendors. In the case of ILS, these informal management controls were negatively impacted and trust deteriorated due to the failure of ILS to abide by the contractual terms of disclosure to national customs in North America and in meeting the performance target KPIs and other challenges that accompanied performance failures.

ILS has been counting on what is left of the shared values to rebuild the relationship with STI globally. ILS believes that STI is good at promoting shared values between the two organisations, and encourages all levels of management in APAC to appreciate, meet, understand, and discuss things openly with ILS's account team. ILS believes that this approach is working quite well. Ray sounded confident that the relationship has been built on trust in APAC and Japan at least.

> *"Yeah, on those sort of values, but I think in Asia Pac, and Japan, and that, yes, I think there is that trust there, and understanding".*

Ray believes that the relationship between ILS and STI is based on shared values of trust, integrity, openness and respect and comes from same corporate organisational culture. A relationship built on these aspects of shared values focusing on customer service, ILS is confident that these shared values can help in rebuilding some aspects of the relationship.

> *"Yeah, if you've got that trust and integrity, you can work to rebuild it. If you're working well, and you haven't got that trust and integrity, then you've… you're always vulnerable".*

Ray confidently believes that the relationship would be vulnerable to risks in a situation in which performance measurement and indicators are in place and performance is good but no trust exists. Therefore according to ILS, trust and integrity can help rebuild damaged relationship, but if these values are not there, regardless of performance, the relationship is at risk. According to Ray:

> *"No-one's going to put up with poor performance. But I think if you've got that trust and integrity, you should be able to rebuild it and work around it. But without that trust and integrity you most probably won't be able to rebuild it, and there's usually things from, or actions required from both sides when the performance is poor, to fix it. So both parties have got to work together to fix it. But as I say, even if that's there, and it's still not… there's still a problem and the performance continues to be bad, well obviously then it's gonna fail. The relationship's gonna fail".*

Ultimately, there should be a balance between formal and informal controls, and ILS is convinced that shared values are very important in the partnership to protect it. Shared values are the way to achieve service excellence in delivering to STI's expectations, and Ray believes it is shared values that "make our relationship with STI very good". Michelle, STI account manager from ILS, confesses that ILS can informally bring bad news to STI and were good at doing that, and STI has always been good in understanding the issues and working with ILS on their common challenges. Since ILS and STI share the same values and respect each other, Michelle thinks this is very important in restoring integrity, openness and transparency in the relationship. These values are what ILS is building on now to restore the partnership with STI. ILS believes that these values would allow STI to invite ILS in the future to participate in bidding for business, but if respect was completely lost between STI and ILS then there is no future in the relationship. Communications, conversations and sharing industry information via emails between ILS and STI is ongoing.

It is obvious that trust and shared values between ILS and STI have been deeply impacted by the deteriorating performance and the lack of integrity and openness after the negligence issues in North America. While STI's global governance model was overall a good opportunity for ILS to revive the relationship if it chose that avenue, the deepening of the rift in the relationship was already taking place.

4.5.4 Impact of change on performance: Influence of exchange of services and knowledge between ILS and STI on performance

Given the challenges and problems mentioned in earlier sections, ILS has become trapped in a three dimensioned failure situation: from one side comes ILS internal organisational changes that have resulted in structural misalignment of the account management team communications with that of STI; from another comes the GFC and market competitive forces resulting in pressures on freight service pricing and service availability to STI, and last comes the resulting failures in meeting delivery lead-times target KPIs and deteriorating performance.

With this situation, ILS performance has been the primary concern to STI and ILS has been unable to find a solution to this deadlock. This situation was exacerbated by the North American negligence issues. With these issues close to STI Corporate senior management attention in North America, and given the financial and public relations issues ILS created for STI, the ILS relationship was informally and internally terminated from the perspective of STI's SSC teams globally.

4.5.4.1 Influence of supply chain strategic alignment on performance and knowledge exchange

 After 2009, ILS was in many aspects conservative in exchanging knowledge with the business partners supporting STI's SSC operations but lacked a strategy on knowledge sharing. ILS's input and feedback was very limited on the exchange and sharing of knowledge with other vendors both through STI and outside STI operations boundaries. Ray says that ILS has shared their smart solutions like faulty spare parts "Smart Returns" with STI but does not have any idea about other vendors and the extent of knowledge sharing with them. Michelle confirms that ILS has not been asked by STI to share knowledge with other vendors, nor have other vendors attempted at sharing knowledge with ILS. ILS believes there is knowledge exchange between STI and vendors but not directly among vendors, but sees other vendors as competitors and that is probably the reason for ILS not to share much knowledge with other vendors.

> *"I think there's more of knowledge across the customer and the vendor, not so much with each vendor. I guess we look at each other as a competitor, so, we're probably not sharing as much knowledge in that respect. I think… we don't have meetings and we don't sit down with our competitors, even though they have a relationship with you and they're doing certain parts of your business that we still have a relationship sort of thing. We don't normally have an exchange with those particular".*

Michelle believes that ILS will have no knowledge exchange meetings with vendors but is prepared to share and exchange within the limits of running STI's business. ILS would not jeopardise STI's business by not communicating to other vendors if necessary but will always try to look after STI's interests and any meeting with other vendors would be mainly about meeting customer requirements and not to exchange knowledge. According to Peter:

> *"At no stage would we jeopardise the customer to ensure that their competitor made mistakes or at no point do we... you don't think like that, you think the main thing is we've got to try and get the customer the service, but, at the same time, we may meet with the supplier and talk about the processes, but I don't think we really exchange knowledge".*

Overall, ILS's views are close to those of DLS and TGS on knowledge exchange and sharing and in perceiving other TPL vendors of STI as competitors. In summary, ILS exchange and sharing of knowledge pertaining to consulting services, market research, white papers or SSC operational innovation were significantly behind that of DLS and TGS and could have been impacted by the poor performance in exchange of services as well.

4.5.4.2   ILS performance measurement and share of STI TPL cost spent in Asia Pacific

ILS's performance, as demonstrated in Figure 9 in APAC was stable until the fourth quarter of FY2009, after which started to deteriorate, along with ILS's performance deterioration globally and in APAC.
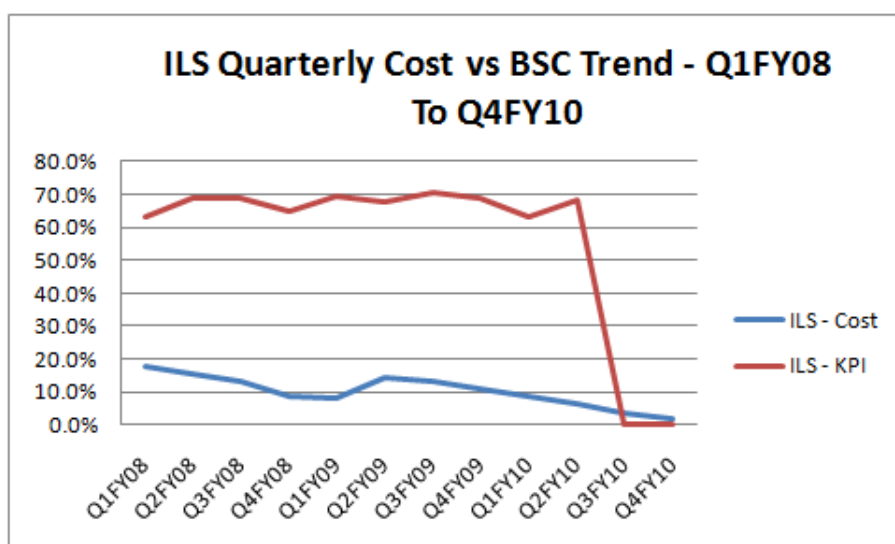

FIGURE 9: ILS QUARTERLY COST SPENT VS. BSC TREND BETWEEN Q1FY2008 AND Q4FY2010

The overall TPL cost spending STI incurred for the period starting first quarter FY2008 to fourth quarter FY2010 exhibits the positive correlation in relationship of cost and performance. As was mentioned in previous sections, monthly spending in TPL operational cost earned by TPL vendors represented a considerable part of the overall global and theatre SSCD monthly cost budget. In APAC operations, cost spent on TPL vendors represents 22% of total SSCD cost spending including fixed departmental and overhead costs. In APAC, among the three vendors who combined capture 86% of total TPL cost STI incurred, ILS captured 10%.

The volumes of TPL cost spent in APAC in percentage terms by ILS out of total DLS, TGS and ILS cost spent by STI as demonstrated in Table 8 was also reduced from 17.8% in the first quarter of FY2008 to as low as 1.7% in the fourth quarter of FY2010. ILS's share of the TPL cost spent by STI among the three vendors dropped by 16.2% which is significant signals ILS's loss of the STI business in STI APAC Theatre.

TABLE 8: ILS QUARTERLY COST SPENT VS. BSC TREND FOR THE PERIOD FY2008 – FY2010

Vendor	Q1FY08	Q2FY08	Q3FY08	Q4FY08	Q1FY09	Q2FY09	Q3FY09	Q4FY09	Q1FY10	Q2FY10	Q3FY10	Q4FY10
ILS - Cost	17.8%	15.7%	13.2%	8.8%	8.1%	14.5%	13.4%	10.7%	8.6%	6.3%	3.4%	1.7%
ILS - KPI	63.4%	68.6%	68.8%	64.9%	69.7%	68.0%	70.5%	68.6%	63.3%	68.3%	0.0%	0.0%

Although ILS's performance in APAC reflected in Table 8 was not severely affected by the globally deteriorating performance especially in North America, the fact that ILS's share of STI TPL cost spent was diminishing speaks for STI' global SSC senior management's decision to informally terminate the relationship with ILS. In addition, ILS's performance in APAC was not sufficiently competitive to stand the quality of service and level of sound performance from DLS and TGS.

In summary, the deterioration in the relationship between STI and ILS resulting from ILS's non-compliance issues in North America and the decline in ILS's global performance levels were clearly demonstrated in the shrinking levels of STI cost spending on the TPL services of ILS.

4.5.5   Case summary: ILS

In summary, ILS did not take part in STI's global governance model implementation due to the trade compliance issues with Canadian customs authorities in clearing STI spare parts shipments that led to major complications and severely impacted the relationship. ILS was impacted as well by the deteriorating performance resulting from the GFC. Internal organisational changes and account team misalignment with STI's team combined with the impact of the GFC, resulted in ILS missing a major

opportunity to enrol in STI's strategic alignment implementation. As a consequence of all these issues, ILS became a burden to STI rather than a SC partner vendor.

Apart from above mentioned challenges and problems, ILS's strategy is meeting customer requirements through customising flexible services while adhering to the vision of becoming "the most admired company in the SC arena, not necessarily the largest but the most admired". Although the GFC has impacted ILS their strategy in managing customer relationship has not been affected.

All ILS expansion programs, strategies and goals are customer centric with a special focus on global customers such as the "Century 100" client program, which did not include STI's global account. According to ILS, this decision was a direct consequence of the relationship failure in North America and other STI regions. ILS showed a willingness to cooperate as a flexible vendor in meeting customer requirements even outside the standard suite of services as long as the requested service is strategic and can be leveraged by ILS through deployment into other customer accounts in different geographies.

ILS finds the pressure for cost reduction requested by STI, especially during the GFC, a major challenge. The SC of most of ILS's customers are managed by a procurement management mentality and cost reduction is the main objective. Such situation produces a one-way street or a non-collaborative customer-supplier relationship.

Peter uses the term "battle plans" in addressing the way to face customer relationship challenges. On the other hand, he hopes that ILS's relationship managers are mature enough to handle challenges when arising, especially where the relationship is going through continuous performance issues and improvements. The STI-ILS relationship has gone through tough times before and from time to time certain performance issues upset the relationship. Peter acknowledges that in recent times the relationship has been severely damaged, but is still hopeful of rebuilding the relationship globally.

Peter's 'description of the challenges in the relationship between STI and ILS is negative. In other parts of the interview he describes ILS's position in the relationship with STI as being "black listed in North America for some customs issues in Canada two years ago we are on the informal embargo list of STI right now". However, Peter contradicts this by saying:

> *"ILS has delivered very successfully over a very long period of time with the same people, and so there is trust, transparency in the relationship".*

This raises questions as to ILS's leadership capabilities and whether any serious actions have been taken to restore the relationship after its blacklisting.

ILS admits that "we have never formally done a match up exercise on value alignment" and avoids talking about the trust element in the relationship. Apart from the classification of ILS as a tier-two SC vendor, the relationship suffered at the very strategic level. The feedback and responses from ILS managers provided conflicting messages, suggesting that ILS senior management and account managers are disconnected and lack a unified strategy, policy and view of managing the STI account and relationship. While Ray, the customer relationship manager, considers STI's IT platform and IT strategy as unsophisticated, Michelle, the account manager takes the blame for ILS's poor IT strategy and systems. Ray believed that the IT strategy and platforms of STI are "unsophisticated" when compared to other customers' IT strategy and platforms of ILS like Dell and Apple. The negative feedback from ILS about STI's IT systems was not shared or indicated by DLS and TGS; STI has complained at length about ILS's poor system interfaces and lack of automated systems tracking. Michelle confirmed that ILS's IT systems are not yet at the level of meeting STI expectations. ILS seems to have an understanding of STI strategic objectives and organisational goals, with Ray responding, "What are STI's strategic objectives?" In summary, ILS has ignored STI's IT platform and systems integration strategy. Michelle was open in further elaborating on ILS's issues when she explained how ILS tried to align with STI's strategic objectives by working in a top-down fashion and from the corporate level. Contradictions in the statements of ILS's managers in relation to its customer's strategic objectives raises questions as to the level of strategic alignment between ILS and STI SC especially given that the global account team has been trying for almost a year to restore the deteriorating relationship with STI.

In terms of alignment and influence on the ILS-STI relationship, ILS has had formal and informal communications in place with STI. Despite that, ILS has not had global QBR meetings with STI APAC or global management for the last two years. On standards of information sharing, ILS confirms standard reports are in place and are shared on a quarterly and monthly basis with STI. While Ray mentioned the operational performance standard reports, Michelle, account manager, did not mention these same reports although they are claimed to be standardised reports for operational information sharing. Discussing integrated IT and systems, Michelle agreed that ILS has not done well on integrated IT and systems. Effectively, ILS went through turbulent organisational changes over the last few years, which have impacted the stability and productivity of the company as well as its relationship with STI. In the area of SC alignment, SOPs are always in place and work well. It is common for ILS to have SOPs in place, which is a good influence on the relationship. Although the

standardised process for decision making is informal it seems to work well. A lot of ILS decisions are made offshore, so many of the decisions are made by ILS USA and consequently country or theatre decision making flows from these global decisions.

On the ILS-STI relationship challenges and problems, although the relationship in APAC and Japan seems to be going well, in North America not much business is transacted due to the customs compliance issues which started in Canada and impacted APAC relationship. In addition, the problem of aggressive pricing against ILS's proposed service rates from other TPL competitors has caused ILS the loss of some STI business opportunities. While market prices increased, the economic conditions made it even more difficult for ILS to offer discounts given that some competitors cross-subsidise their freight and shipping business from other larger and profitable businesses. Pricing has been one of the main issues under current economic conditions where companies tend to request more cost reduction initiatives from vendors. Pricing and service levels are interrelated and in difficult economic situations it is difficult to keep providing a premium service at lower costs where airlines sell services to the highest bidder. The other challenge in the ILS-STI relationship is the IT systems integration mentioned earlier and the fact that when STI compares ILS's IT capabilities to other vendors', ILS ranks low. Facing these challenges, ILS does not have much room on rates to move because of diminishing business volumes, which means more pressure on ILS to keep rates at profitable levels. So despite the fact that STI understands the position of ILS, they go with the vendor offering the lowest rates. Taking into consideration STI's strategic decision and SC strategic alignment initiative, STI would be better off allocating more volume with fewer partners. The consequences of ILS's global account management approach, which is built on the long and good relationship with STI in Australia and APAC, means that the best strategy for ILS is to go back to basics and hope to rebuild the STI relationship globally.

Looking into formal control mechanisms and their impact on the relationship between ILS and STI, ILS perceives contracts as the main aim to define target KPIs, and what is contractually expected from the contracting parties. However, once the contracts have been agreed there is no need to refer back to them. ILS confirms that neither ILS nor STI found the need to refer back to the contracts at any point during the relationship. Reports on performance measurement against target KPIs are in place with root cause analysis and corrective action processes and reports. ILS was disappointed that they have not been requested to participate in the BSC scoring system and global QBR meeting. Regarding incentives, ILS believes there is no incentives program offered by STI. ILS believes that STI always allowed all preferred suppliers the chance to bid for new business opportunities, a policy which seems to be changing. In terms of benchmarking, ILS, like DLS and TGS, considers benchmarking a

complex process hard to implement and ILS has not done that with STI yet. As was mentioned earlier, STI ended mobilising more than one formal management control to tackle interrelated control problems. A process sometimes proved to be complex and difficult given that ILS did not participate in the global governance model and underlying strategic alignment process implementation in 2009.

Regarding knowledge exchange and sharing as part of the service delivery operation, ILS seems to be generally too conservative in this aspect of the relationship, similar to other vendors outside and even inside STI's operations boundaries. ILS confirms that it has not been asked by STI to share knowledge with other vendors, nor do other vendors share knowledge with ILS. ILS believes there is knowledge exchange between STI and vendors but not among vendors themselves. On the other hand, ILS considers other vendors as competitors and will not share knowledge with competing vendors.

Facing the challenges above, ILS is counting on its long relationship history and informal control mechanism of the shared values of trust, respect, integrity, openness and transparency to restore the relationship with STI. ILS believes that these values will allow STI to invite ILS in the future to participate in bidding for new business. This hope seems present a major challenge to ILS, whose respect and trust are lost with STI under the impact of deteriorating performance.

4.6   Three vendors cross-case discussion and analysis

This section provides high level cross-case discussion and analysis by looking at the main points of comparison across the three vendors by topic and sub-topics. The conclusions of this data analysis and the chapter's findings are outlined in the next sections and chapter summary; this this section also provides a cross-case tabular reference to each of the vendors by topic and sub-topics.

4.6.1   The pursuit of alignment

The alignment analysis is based on the strategic, operational and structural dimensions model, which is the integration of the strategic and operational dimensions in Fawcett and Magnan's (2001) model and the structural dimension in Defee and Stank's (2005) model. The three dimensional model is broadly applied to each of the three vendors, DLS, TGS and ILS. In applying the strategic, operational and structural alignment model, the approach differed among the three vendors due to the nature and the specifics characterising each of the relationships. The analysis presents three extensions to the new combined model in this study represented in: introducing the uncertainty factor of the global economic and financial crisis and its impact on the SC partnership alignment; the complexity of

achieving structural and operational alignment in STI as a global organisation; and the challenges in concurrently achieving alignment with three vendor partners with different challenges faced.

The formal implementation of the strategic, operational and structural alignment process in 2009 under the global governance model has influenced the relationship between STI and the three vendors. Until 2009, the three vendors' strategic objectives and planning process unilaterally influenced at varying degrees the relationship with STI. In 2009, STI introduced the strategic, operational and structural alignment process where more of STI's strategic objectives were formally shared with the vendors and influenced the vendors' strategic planning.

TGS has adapted quickly and is a contender for the position of top vendor with STI. TGS has successfully aligned to STI's strategic, operational and structural objectives, and adopted the changes established in the common annual strategic planning workshops between STI and DLS and TGS. This adoption of strategic, operational and structural alignment change resulted in delivering good performance and ensuring fewer disagreements with STI on areas of conflicting interests, especially contracts renewal negotiations, incentives program, and cost reduction initiatives (Table 9).

TABLE 9: CROSS-CASEANALYSIS OF STRATEGIC, OPERATIONAL & STRUCTURAL ALIGNMENT

Cross-case analysis: Strategic, operational and structural Alignment			
Alignment dimension	**DLS**	**TGS**	**ILS**
Strategic alignment			
Main organisational strategies and goals	Strong, common, and shared with STI	Strong, common, and shared with STI	Weak, common, and shared with STI
Shared vision and mission among SC partners	Shared vision and mission statement through annual strategic planning workshops	Shared vision and mission statements through annual strategic planning workshops	Unshared vision and mission statements and no strategic planning workshops took place
Role of customer-vendor relationship in organisational strategies and goals	Central and strong driver	Central and strong driver	Central and strong driver
Role STI-vendor relationship played in mutually achieving organisational goals and objectives	Positive role and mutual recognition of goals and objectives Mutually high influence after 2009	Positive role and mutual recognition of goals and objectives Mutually very high influence after 2009	Poor role and lack of recognition of goals and objectives Poor influence from vendor due to non-compliance issues

Strategy alignment after 2009	Active participating and contributing into global QBR meetings; review of SSC design to strategically align at regional and global levels; improvement in exchanging and sharing knowledge; improved consistent performance; better recognition of STI strategic objectives and end-customer needs	Strong participation and contribution into global QBR meetings; strong adoption of STI strategic objectives; reconfiguring regional networks infrastructures to accommodate STI strategic plans; active involvement in operational improvement projects and cost savings initiatives; encouraged exchanging and sharing knowledge; focus on performance improvement	Exclusion from strategic alignment process due to non-compliance to international trade rules and regulations; exclusion from global QBR meetings; ILS internal organisational restructuring issues over-shadowing focus on STI drive for alignment; unbalanced attention and focus on pricing issues and competition with DLS; deteriorating performance and disjoint account management team
Operational alignment			
Influence of common operating procedure on STI-vendor relationship	Very high, and positive influence with detailed documentations	High and positive influence at high level	Moderate and at high level
Alignment of operational processes	Short-term operational processes alignment before 2009; Developing optimised processes improvement based operational alignment after 2009;	Incidental problem-fix operational processes alignment before 2009; Strong, optimised operational processes alignment after 2009	Misalignment prevailed before 2009; Lack of optimisation-driven operational processes alignment
Structural alignment			
Influence of STI-vendor communications on the relationship	Very high and positive influence, good formal and informal communications	Developing positive influence, good formal and informal communications	Poor and low influence, average formal and informal communications
Influence of standard information sharing on STI-vendor relationship	Very high, coordinated and positive influence	High and positive influence	Low, incidental and ineffective influence
Influence of integrated technology and systems on STI-vendor relationship	Very high, mature and positive influence	Very high progressively developing and positive influence	Very low and negative influence
Influence of standardised decision-making processes	Moderate and informal	High on vendor side and	Low and informal in

on STI vendor relationship	in between organisations	informal in between organisations	between organisations
Overall relationship			
Extent relationship is positive and successful from both vendor and STI organisations	Partially positive and successful	Positive and successful	Negative and unsuccessful
Main factors contributing to success or failure of STI-vendor relationship	Sound account management, good performance and effective communications	Good performance, continuous improvement and committed account management	Poor performance, ineffective account management, instable vendor organisation, and lack of business driver
Challenges vendors and STI facing in managing SSC	Strong and controlled	Moderate and controlled	Strong and uncontrolled

At the other end of the scale, ILS's poor account management resulted in missing the chances of structural alignment, specifically in relation to IT systems, technology integration and communications with STI and consequently led to poor performance and operational misalignment. This contributed to the deterioration in the relationship with STI and the loss of strategic alignment opportunities (Table 9).

Based on collected observations of the differences among vendors from the operational and structural alignment dimensions perspectives presented in Table 9, it was noticed that TGS infrastructure and transportation network is mainly owned by the vendor while DLS relies on sub-contractors, creating certain operational and commercial flexibility constraints in the way DLS develops customer services and solutions and in the design and management of STI's relationship. Hence, for DLS, while sub-contracting provides better geographical reach, it leaves the vendor with a risk of limited room to manoeuvre and compete in the market compared to TGS where the vendor enjoys more agility in terms of price negotiations flexibility, services and customer solutions development opportunities, and the potential to compete. TGS's tight control of infrastructure can be considered one of the major factors that allowed TGS to move fast and utilise the current position in the relationship with STI given its short relationship history with STI.

While both DLS and TGS adjusted their customer account management structure after the GFC, ILS did not acknowledge the risks and was slow to adjust its account handling approach in accordance with the new arising realities of the global, regional and domestic economies and markets. Its recent appointment of a global account manager for STI might have come too late.

ILS tried to build show cases among customers and set up the "Century 100" client program but failed to salvage the relationship with STI and failed to leverage the maintained performance in other parts of the world to reinstate ILS's position as a vendor who can still provide the right service to STI. ILS's senior management did not approach the situation with a sufficient sense of urgency to resolve issues and restore its business position.

ILS's management demonstrated a fundamental and very basic misunderstanding of the nature of the issues that caused STI to drop ILS as a TPL vendor. The relationship has been effectively discontinued since March 2010, however, ILS offers no proper explanation or attempt to analyse the root causes of the major deterioration in the relationship. On the contrary, ILS continues to operate as if no issues exist with STI. Even ILS account manager and customer relationship manager have had significant conflict of statements and understanding of the relationship with STI.

STI has always complained that ILS tends to come late and not well equipped to meet STI's requirements. While all three vendors have had an escalation and review processes in place with STI, leadership, transparency, communications and knowledge exchange have not been evident at ILS. ILS was seen by STI as lacking the drive and determination to lift the level of performance and capitalise on the relationship history in looking forward to take the relationship into the strategic alignment process.

Since 2009, STI's major efforts with the three TPL vendors, has been focused on promoting the relationship strategic, operational and structural alignment initiatives. Vendors' organisational strategies and goals, both in the external environment of competitive markets, or internally in developing the infrastructure, innovative products and customer solutions, influenced, and were influenced by, STI organisational strategies and goals. The STI-vendor relationships played an important role in structuring STI's SSC globally and regionally, defined the interfaces between the partner organisations, shaped the growth programs, and have had a major influence on vendors' development of innovative and customised products and services. STI-vendor relationships even restructured the vendors' networks and influencing STI's smart solutions development to end-customer.

An extension to the three dimensional alignment model applied is the introduction of the uncertainty factor generated by the external environment when analysing the GFC's impact on STI's alignment initiatives with the three vendors' SC partnership.

Typical as in any relationship and from different dimensions, challenges were created by the GFC to both customer and supplier, which were translated in STI's demands to vendors to reduce service rates and to run cost reduction projects. Vendors, on the other hand, were demanding reasonable returns on investments in new solutions and infrastructure expansions demanded by STI. Problems were also caused by ILS's poor performance, which resulted in its blacklisting by STI and reduced ILS share of STI business. Problems also resulted from STI's demands of more contributions by the vendors in IT systems integration investments and standardising of systems platform.

Further challenges have risen from STI requesting vendors to run continuous improvement projects and sometimes STI has raised the bar on current target KPIs to maintain competitiveness in the markets, which occasionally meant creeping uncontracted service scope from STI onto vendors. A major challenge to vendors is maintaining a balance between STI's demands for higher levels of investments, good performance, and business growth, without jeopardising the relationship with STI, on the one hand and the cost of investing in these changes to the vendors' network infrastructure.

Contracts renewal negotiations with vendors has been one of the major challenges to STI which has already impacted the relationship with DLS and delayed the introduction of incentives programs, as well as the progress in STI implementing the global governance model. Other challenges were positively taken approached by both DLS and TGS in conjunction with STI, in the areas of green initiatives and CSR projects.

Despite the challenges, DLS relied on the history of the relationship in light of the recent alignment efforts and good overall performance to keep a leading role in influencing the relationship and managing STI operations globally. Consequently (see Table 9), while DLS showed conservative support to the alignment initiative by STI due to the maturity of the relationship and well established position inside STI and in the market, TGS was more open and positive due to the need to prove its capability in handling STI's account and grow roots in the special services SC market. ILS, on the other side of the alignment continuum, was completely absent due to STI's exclusion decision after ILS negligence in the North American market and the ineffectiveness of ILS's global and regional account teams.

STI, on the other hand, has had its own kind of challenges and problems in dealing with the vendors. Such challenges were represented in the shape of exposures to non-compliant ILS to customs authorities export and import rules and regulations, which put STI at risk of large financial penalties in addition to negative publicity and damaged public image. Lack of comprehensive and proper communication channels, weak account management and discouragement of vendors exchanging and

sharing information except that strictly limited to STI operational requirements, were all challenges in the relationship between STI and vendors. Furthermore, some of the challenges and problems were interrelated by nature and influenced each other which also influenced STI's reaction. Obviously, during the relationship, vendors have had accomplishments and successes to be recognised.

Another extension of the strategic, operational and structural dimensions alignment model is the complexity of achieving structural and operational alignment in STI as a global organisation. STI operations have a global and regional reach and a geographically dispersed customer base that makes the alignment process extremely complex, especially when taking into consideration the complex nature of the business and multi-vendor relationship. At the same time, STI vendor partners are increasingly required to support customised, differentiated and smart solutions, complex products and services, and growing demand to satisfy STI end-customers.

The importance of STI's relationship to the vendors' businesses as a major global customer was one of the common themes in vendors' feedbacks. The importance of STI to the vendors stems from its global geographic spread and presence and the global opportunities STI can provide to the vendors in global and regional markets. STI represents an important industry partner in developing new services, products and solutions and a good business reference for other IT customers in the hi-tech telco and networking industries. Mutually, vendors provide STI the global reach and opportunity to benchmark services against other industry customers serviced by the same vendors. Worth mentioning here is the wealth of knowledge the vendors represent to STI in the different areas of the business from freight to warehousing and distribution and most importantly in import and export compliance, product certification and customs regulations, which are of extreme value to STI. Since 2010, DLS and TGS started competing over STI's needs for sophisticated business simulations, case studies, market and industry research studies, and domestic operational information, and indicating the influence of the global governance model and underlying alignment initiative in steering the knowledge exchange and sharing among partners.

Although the relationship between STI and vendors has its challenges and problems, the relationship has been positive and successful in many of the facets and areas of mutual interest to both vendors and STI. The overall atmosphere of cooperation and coordination between vendors and STI, and the generally well-structured hierarchical account management, as well as the successful operational performance, in the global and regional environment, generated enough energy to keep the relationship running. Of great importance to the successful and positive relationship have been the

ongoing strategic and operational alignment work, matured engagement models and mutual understanding between DLS, TGS and STI in addition to improved information sharing activities.

Few factors can be identified as contributing to the success or failure of the relationship between vendors and STI. Among success factors are the geographically multi-hierarchical account management model, the cross-functional subject-matter-expert teams developing products and customer solutions, the vendors' global executive management sponsorship programs, effective and efficient communications, continuous improvement culture, willingness to support outside standard processes when needed, increasing focus on STI end-customer demands, trained professional teams, dynamic and agile relationship, and wealth of knowledge available in the relationships especially with DLS and TGS in the first place and ILS in some limited areas. Major failures in the relationship are mainly in ILS's non-compliance to customs rules and regulations, poor account management, lack of collaboration on starting projects, and lack of due diligence and appreciation of STI's strictness on following and adhering by the law.

Given these factors, the relationship between vendors and STI not only influenced the definition of the organisational goals and SC strategic objectives, but also mutually impacted their achievement. The relationship with STI has been crucial to TGS's "Store-a-part" Special Service success as a newly created service. The relationship with DLS was critical for STI in establishing customer level strategy and plans by leveraging the vendor's customer-centric knowledge. Vendors overall contributed to the achievement of STI's operational objectives and goals through continuous improvement activities and projects.

Having STI on the list of top global customers for each of the three vendors is considered by itself a major achievement due to the high profile status of STI and the global reach to other customers in other geographies. Consequently, STI represents an important source of profitability and revenue protection to the vendors and a critical element in the accomplishment of vendors' business growth strategies.

Mutually, the strategic, operational and structural alignment between vendors and STI after 2009 contributed to improved performance, development of flexible and efficient operation with mutual returns, higher productivity, customer satisfaction, and mitigation of common economic risks. While most of the IT systems enhancements were driven by STI in line with the standard systems integration platform strategy, TGS adopted this strategic objective and worked closely with STI to achieve the goals and drove the implementation of a comprehensive IT systems integration strategy. Another incident, in which both vendor and STI were able to achieve common structural alignment goals, was

the collaborative establishment of cooperative grounds to ease the economic crisis pressure on both parties. Despite the economic pressure on both parties, vendors and STI were able to work on the operational alignment goals of service rates and cost optimisation projects and initiatives, except in the case of ILS where the vendor failed to achieve similar goals due to internal issues and loss of competitiveness in the freight forwarding market. After all, vendors are not only the delivery arm of STI but also their public face, meeting STI's end-customers and an important element in STI's end-customer satisfaction strategy through quality service.

The organisational strategic objectives have a major influence on the STI-vendor relationship. Vendor investment strategies are influenced by STI's strategic alignment goals of product and customer solutions development as well as STI's acquisition strategy of businesses that fit the product and services portfolio strategy and indirectly impact vendors. STI's acquisition strategy has a major impact on vendors as it represents one of the sources of business growth opportunities to the vendors. From the same perspective, when STI aims at executing the strategic objectives of smart innovative differentiated and customised end-customer solutions, the failure or success of the strategy execution will be dependent to a large extent on vendors' capabilities to deliver and satisfy STI's end-customer needs.

Consequently, if a vendor fails to deliver to these strategies and achieve these strategic alignment objectives, the STI-vendor relationship will be negatively impacted and, subject to the extent of performance failure, could lead to significant deterioration in the relationship. From a structural alignment dimension, looking into the IT systems strategy and the strategic objectives of integrating vendor and STI systems through B2B messaging technology as well as the standardised systems platform strategic objective, failure to cooperate in the execution to these strategic objectives by the vendor and STI's failure to achieve these objectives will lead into inefficiencies in what should be optimum delivery IT tools and deterioration in performance, eventually reflecting negatively on the relationship with the vendor.

On the other side of the relationship, vendors' business growth strategies are fundamentally reliant on major customers like of STI and its strategic objectives of business operations expansion, which lead vendors' strategic objectives of shipping and distribution network development, warehousing network expansion, call centres enhancements and overall business expansion. Bottom-line, the strategic alignment between vendors and STI has positively influenced the STI-vendors' relationships and to a large extent their mutual success and growth especially during the uncertain economic downturn.

In summarising this discussion, STI and the vendors DLS and TGS were able to successfully pursue and ensure the achievement of the strategic, operational and structural alignment goals by controlling challenges and resolving issues, ensuring the continual success of the relationship. In this regard, communications as a critical structural alignment factor between vendors and STI have had a definite influence on the alignment process and relationship and both vendors and STI agree about its effectiveness and influence on the relationship.

Both vendors and STI have had standard information sharing processes in place, with vendors agreeing as to the positive influence of these standards on the effectiveness and success of the alignment process and relationship. Integrated IT and systems is one of the major strategic management areas which has proved its effectiveness in positively influencing the alignment process and the relationship with DLS and TGS while with ILS the influence was negative due to vendor misalignment with STI's strategic objectives and IT systems integration.

All three vendors confirmed the lack of standardised decision-making processes to facilitate decision making between STI and vendors, which is an area requiring more effort. At the same time, a common informal type of process does exist to varying degrees between STI and each of the vendors. Some of the vendors do have internal decision-making process implemented.

On the operational alignment dimension, all three vendors have common operating procedures documented and implemented to assist in aligning and controlling the operation and the relationship with STI. DLS has had more sophisticated SOPs than the other vendors while TGS has a mix of detailed documented SOPs in certain areas of the operation; ILS's SOPs tend to be a high level document with main guidelines to the user to guarantee flexibility of change of processes and procedures.

It is an essential success factor in any relationship between two organisations to genuinely ensure strategic, operational and structural alignment among the SC partners. The other essential part of any relationship between vendor and customer is the collaborative effort of the two organisations to cooperate and coordinate activities to manage, control and eliminate all problems and challenges that would arise and prevent the full alignment between the two organisations. This is one of the major avenues STI and vendors pursue in order to have a successful relationship developing into a partnership.

The successful implementation of the strategic, operational and structural alignment initiatives between DLS and TGS and the unsuccessful implementation in the case of vendor ILS have proven

the fundamental influence of the strategic alignment on the structural alignment and how the aligned SC strategic objectives between STI, DLS and TGS have contributed to the alignment of the IT systems and technology integration strategy, as well as the alignment of the standardisation efforts between STI and vendors and the communications among the partners. Consequently, the strategy-structure alignment was instrumental in maintaining healthy levels of performance by the vendors.

4.6.2   MCS, control problems and effects

In this section, control problems are analysed in light of the MCS framework to explain how these controls were used to tackle control problems. Special attention is devoted to understand how management controls are used in the case of interrelated control problems and the subsequent impact and effect on performance and exchange of knowledge. Table 10 provides a comparison and data analysis of what control problems were faced by the three vendors in managing the partnership and the formal and informal management controls utilised to tackle the control problems individually and concurrently. It is found that STI utilises a problem-based approach when mobilising MCS in packages rather than individual MCS to manage the control problems that might be interrelated and need to be concurrently managed and resolved. The analysis, as summarised in Table 10, also covers the effect on utilising the problem-based packaged MCS approach on the three vendors' SDP and knowledge exchange.

TABLE 10: STI MANAGEMENT CONTROL SYSTEMS

Management Control Systems utilised for relationships control problems			
Area/Vendor	DLS	TGS	ILS
Challenges and control problems in managing the SSC partnership			
Appropriation concerns	Control problem of averting contractual risks indemnities and liabilities preventing DLS from accepting contract renewal agreement; Problems on increasing performance measurement target KPIs; Opposition to STI projects especially IT systems involving cost of	Control problem of averting contractual risks indemnities and liabilities preventing TGS from contract renewal agreement; Lack of STI recognition of TGS good performance and creeping uncontracted service scope;	Challenges and problems in ILS poor performance and STI pressuring ILS to accept revised service pricing and short lead-times; Short-term services pricing strategies and decaying competitive market position; Poor process improvement,;

	investments to DLS;		
Coordination concerns	Lack of incentives programs in recognition of DLS achievements; Problems associated with changes to account management team without proper prior notice of changes to account management team;		Problems of poor account management with no proper prior notice of changes to account management team; Control problem in ILS non-compliance to international trade rules and regulations and leaving STI uninformed of the issue and consequences; Lack of ILS senior management focus on STI account and lack of understanding and poor coordination and communication; Lack of ILS overall account management at both global and regional account management levels;
Dependence concerns	STI concerns of reliance on DLS SC IT systems and pressing with system platform standardisation and modularity;	Challenges and problems on customer order delivery process improvement; STI concerns of reliance on TGS SC IT systems and pressing with system platform standardisation and modularity;	STI concerns of reliance on ILS SC IT systems and pressing with system platform standardisation modularity;

Extent and effectiveness of STI using formal and informal management control systems in the relationship with vendors

Contracts	Used by both parties as reference in disputes to effectively control risks; Define rights, liabilities and deliverables; DLS having difficulty accepting contracts renewal due to risks indemnities and liabilities;	Contracts effective foundation to relationship and mitigates risk of exposure; Provide effective framework for relationship; Effective when accompanied with trust element;	Used as a reference in disputes; Define target KPIs; Define rates change mechanisms; Provide framework to relationship;
Performance measurement	Very strong focus on ensuring delivery to target KPIs; Very detailed and defined in E2E processes; Provides essential visibility into	Defines target KPIs and defines operational goals; Effective measure of overachievement; Feeds into BSC tool; Strongly serves alignment	Defines poor performance causes; Critically used to re-establish performance; Important to sustain and protect

	relationship;	efforts;	relationship; Effectively used to redefine relationship;
Incentives	Incentives programs and policies important in relationship but lacking; Performance-based incentives lacking; Focus on balanced commercial-operational role of account managers to mitigate lack of incentives; Lack of incentives program caused unbalanced BSC focus on failures	Lack of incentives program result in imbalanced relationship; Good performance essential for incentives program; Positive recognition essential for incentives program; Penalties and rewards important as part of incentives program;	Incentives program lacking; Critical to link incentives program to performance and rate change; Important to tender new business as part of incentives program;
Benchmarking	Underlying policies and processes missing; Limited internal industry benchmarking; Benchmarking a complex formal management control; Uniqueness of customer processes and operations complicate benchmarking application; Benchmarking requires model to fit subject company;	Benchmarking across vendors requires visibility; Benchmarking externally complex due to customer uniqueness;	Benchmarking hard to conduct and implement; Benchmarking confirms feasibility of KPIs; Could aid in resolving disagreements on shipping lead-times;
Role trust and values alignment play in STI-vendors' relationship	Trust and values important in STI-vendor relationship; Values alignment crucial in mitigating relationship risks; Important for success of partnership; Essential for sustainable relationship in good or tough times;	Critical for knowledge exchange ; Key for open communications and transparency ; Important for efficient reporting and free flow of information; Important for STI-vendor collaboration; Very important strategic alignment factor; Important for effectiveness of formal controls;	Unique core complementary factor of partnership; Important for restabilising the deteriorating relationship; Weigh more importance than formal controls;
Reliance of STI relationship with vendors on shared values and perspectives: Informal MCSs design and effectiveness	Achieving target KPIs overtake shared values effectiveness as account managers change; DLS strongly maintained values over relationship life; CSR produced faith in relationship; Informal controls facilitated information and knowledge exchange; Without shared values minor issues could damage relationship;	Values enforced with common green initiatives; Informal controls built throughout all levels of management; Informal controls crucial to strategic alignment; Account management positively influenced vendor internal decision making; Trust and shared values must be mutually considered; Informal controls crucial in restoring relationships	Trust and shared values are crucial to review and restore relationship globally; Trust and shared values should be effectively promoted; Informal controls aligned with organisational cultures of STI and vendor; Informal controls must correlate with formal controls; Informal controls necessary to achieve performance and service excellence;

STI and vendors use of controls to manage the relationship control problems and the effects

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| TI and vendors use of formal controls and effects on challenges and problems | Negotiations and sharing knowledge and industry information facilitating problem resolution; Recognising mutual concerns and strategic objectives to compromise and reach commonly agreed solutions;

Continual review of risks and problems and recommending solutions; Strict adherence to processes and achievement of target KPIs; Escalation process mapped to hierarchical responsibility tree;

After 2009 relationship more strategic, global, knowledge driven, benchmarked and long-term planned;

Initiation and implementation of: Control tower E2E SC visibility to track orders; IT systems integration; Green and carbon emission initiatives and reporting; Knowledge sharing; Applied the new flexible and hierarchical account management matrix; Customised solutions introduced to STI and other customers to recover investment cost and achieve returns on investments; | Giving priority to provide customer solution first then negotiate sharing cost of solution; Strong account management team coordination and cooperation; Sharing knowledge and alignment of strategic objectives to account for STI plans in TGS budget and planning;

Developed risk management procedure; Escalation process and disaster recovery plans; Effective account management;

Initiation and implementation of: Control tower E2E SC visibility; IT systems integration ; Green and carbon emission initiatives and reporting; RFID technology serial number scanning; Asset recovery processes and tools enhancements; Billing process streamlining; Building on the success and grew the "store-a-part" special services becoming established service in respective markets; Expansion into global STI due to good performance in Asia Pac; Better competitive position in the regional and global market | Open communications channels; Attempts to benchmark to find risks and gaps in processes and apply corrective actions;

Initiation and implementation of: Extended shipments pick up and dispatch over weekends; Sharing industry best practices; Concept-designed and cost estimated service spare parts hub in Singapore; |
| STI and vendors use of informal controls and effects on challenges and problems | Evolving, professional, flexible, robust, mature, trustful and solid relationship; | Developing, learning and flexible relationship; After 2009, more mature trustful, crucial, strategically aligned and integrated relationship; Progressive, understanding, stable and Global experience; | ILS ineffective use of the element of trust to rectify the relationship with STI |

Performance effects: Influence of exchange of services and knowledge between vendors and STI on performance

Area/Vendor	DLS	TGS	ILS
Effects of MCS			
Effects of MCS on performance	Through global QBR meetings strategic alignment STI and DLS	In global QBR meetings TGS and STI strongly and openly shared	ILS exclusion from global QBR meetings and strategic alignment

and knowledge exchange	exchanged strategic objectives; DLS thoughtfully and STI openly shared 3-5 years strategic plans; Strategic planning provided higher sense of trust and an environment for knowledge exchange and sharing; Reflected in improved SDP; Created strong Knowledge repository for STI;	strategic objectives; In strategic planning workshops TGS exchanged plans for distribution networks expansion and further projects; Trust prevailed and TGS exchanged knowledge; Active knowledge acquisition and exchange positively influenced SDP;	initiative limited vendor participation in strategic planning; Poor performance and non-compliance prevented STI sharing strategic objectives with ILS; ILS suffered weak knowledge acquisition and lacked knowledge sharing which contributed to further poor SDP;
Effects on share of STI spent cost	First major vendor in STI cost spending scheme; Slow growth of STI business share influenced by challenges on stalled negotiations of contracts renewal; STI cost spending on DLS SC services positively correlated with performance.	Second major vendor in STI cost spending scheme; Progressively seized growing share of STI business; Driven by good performance and more flexibility in contracts renewal negotiations; STI cost spending on TGS SC services positively correlated with performance.	Third major vendor in STI cost spending scheme; Fast diminishing share of STI business and losing business; Influenced by poor performance, poor alignment, and lack of efficient account management; In STI APAC cost spent by STI on ILS SC services correlated with declining performance; Performance in Asia Pac under average but deteriorated globally.

Control problems of coordination, appropriation and dependence were faced by STI and vendors. Appropriation concerns of undefined contracted scope of work and loose SOPs are some of the challenges in the relationship between STI and vendors. Additionally of concern is the undefined contracted scope of work, resulting in disputes between STI and vendors on out-of-scope works and subsequent disagreement on the sharing of the cost incurred by vendors. These appropriation concerns are interrelated with dependence concerns where STI tries always to maintain a balanced position between increasing dependency on vendors by outsourcing more of the SC management tasks and responsibilities, and the risks of vendors taking advantage of this increasing reliance on their capabilities to dictate the terms of the relationship.

While some of the financial disagreements are of low impact on the relationship, some others are relationship impacting, such as sharing the burden of cost of investments STI requires from vendors in IT systems integration and standardised systems platform projects, the lack of which could directly impact the operational efficiency of the SC delivery capability and the strategic and operational alignment efforts. In addition to the above asset specificity concerns, appropriation concerns arising from DLS and TGS refusing to accept the legal liabilities in contracts renewal negotiations have been

causing a serious threat to the relationship up to the point where the vendor relationship could terminated if renewed contracts expose STI to major risks and become a threat to relationship stability and continuity. In reaction, STI delayed the negotiations of incentives programs with vendors and used the policy of granting vendors contracts to establish operations in new countries as the "carrot" to motivate vendors to accept the liabilities clauses. The three control problems are critically interrelated and while STI wants to push vendors to take more of the investments and related cost, this will increase the reliance on vendors, which is exposing STI to serious risks if the contracts negotiations end in deadlock and termination of contract is STI's only course of action.

Coordination concerns were raised by STI due to organisational changes to the account managing teams of STI on both sides of the relationship, which could potentially create a state of instability and it could take a few months of delays to the current projects execution timeline before the new account manager of the vendor can understand the organisations, people, the configuration of responsibilities, processes, organisational culture, operation and nature of products, and services. In order to minimise the impact of these issues and the dependence on vendors managing STI's SC to the point of jeopardising the continuity and success of the operation and achieving target KPIs would need to intervene and take over the responsibility of managing these projects from the vendor to keep the operation running. Impact of STI organisational reconfiguration of theatres generated organisational challenges as well that pertained to the redistribution and assembly of STI geographies in different organisational forms and shapes, which led to more effort required to manage STI's new emerging theatres.

Some of the control problems are interrelated to form a combination of issues that could lead into other forms of problems and challenges, such as the coordination problem of ILS's account management lack of accountability which resulted in the risk to STI's business in North America. This problem in ILS's relationship with STI resulted in poor performance due to the vendors' inability to reinstate its position. In other words, the external economic pressure on both STI and vendors and aggressive competition in the markets that reduced ILS's bargaining power with freight carriers, left ILS with no room to move in negotiating any cost reduction with STI. Eventually, ILS was unable to compete against DLS, which offered better lead-times on freight services at acceptable prices to STI. At the high cost of servicing STI's SC and tight delivery lead-times, ILS can neither increase the service quality, which must be at a premium, nor meet the tight lead-time and consequently faced a gradual deterioration in performance and continually missing achieving on-time delivery target KPIs.

Another example of interrelation among control problems was that between appropriation and dependence concerns, where the delays in DLS and TGS contracts renewal negotiations caused to the development of incentives programs. The disagreement on cost sharing of new process improvement projects and IT systems standardisation and integration projects has resulted in delays to the implementation of these projects and consequently influenced the timely execution of the alignment initiative. The interrelation and interaction among the different types of challenges and problems cascaded directly and indirectly and resulted in negative impact on vendors' performance and overall relationship performance.

Vendors' and STI's response to these control problems and challenges varied according to each organisation's specific strategic objectives, operational and professional capabilities, business policies and rules, risk mitigation plans and the cost of investment to the business and was characterised by one or a combination of management controls and measures to individually or concurrently mitigate these problems. STI's response mainly emphasised the utilisation of management controls with vendors and ultimately the aim to improve overall relationship performance. Some of the vendors faced the problems and challenges through communications and workshops at different levels of management and by raising STI's awareness of the associated risks and consequences of the arising challenges to the relationship. In these workshops, vendors stressed the mutual benefits of discussing the problems and negotiating possible mutually accepted solution scenarios that result in mutual returns to both vendor and STI. Raising awareness can be through sharing competitive information, industry studies and white papers and business knowledge to develop common understanding of these challenges and problems. By partners mutually considering and aligning their strategic objectives, any of the agreed resolutions should not result in a disadvantageous situation to the other party, on the contrary, this adherence to aligned strategic objectives, should lead to a positive outcome for the vendor and STI.

Another scenario of problem-based utilisation of the management controls and associated effects occurs where STI has more than one SC, post-sale SSC (investigated in this research) and manufacturing SC which is focused on product sale. Some vendors have separate outsourcing contracts with STI SC and service and support both SC at the same time. Given the long-term strategic nature of STI's relationship with vendors, that dual relationship influences the way the relationship is managed and consequently the approach in discussing STI's coordination and dependence concerns when the relationship is facing termination by STI's SSC senior management. ILS is one of those vendors which falls into this category and supports both STI's SC. Even though ILS's issues of non-compliance to customs rules and regulations caused significant financial and

public image damage to STI in North America, STI refrained from going to the extreme of exercising any contractual rights of indemnification or direct termination of the contract, but took ILS's support of the manufacturing SC into consideration and also respected the long-term relationship and chose to gradually reduce the volume of exchanged business with ILS after blacklisting the vendor for bidding on new business in the near future. Essentially, STI was avoiding termination of contract and chose to terminate the relationship without taking legal action against ILS by gradually reducing the business volumes exchanged with ILS. Despite of the negative impact on SC performance, this scenario not only reflects STI's respect of the history of the relationship with ILS, but also acknowledges the element of trust, openness and integrity that governed the relationship all the way.

As the STI-vendor relationship becomes deeper and stronger, the increasing complexity of STI's business is reflected in more complex operations and corresponding solutions to end-customers results in more dependence on vendors, and the increasing business volumes serviced by the vendors, necessitates developing the relationship into a partnership. From STI's perspective, the way the partnership was managed over time contributed to the successful implementation in 2009 of the global governance model, where terminating and selecting new vendors became achievable, flexible and efficient with limited impact to the business. Accordingly, since 2009, the overall relationship between vendors and STI can be described as proactively strategic rather than reactively transactional.

Vendors undertook a series of actions to enhance the value provided to STI, among which are projects and initiatives undertaken, performance and related target KPIs reviewed and improved. Some projects undertaken were directly stemming from the SC structural and strategic objectives alignment, such as the IT systems integration and development of innovative customised and differentiated customer solutions; others were operational, such as the control tower projects, RFID parts serial number scanning technology deployment in TGS's warehouses, asset recovery reverse logistics process improvement by DLS and TGS, warehousing tools and processes enhancement by TGS, business reporting improvement projects, depot shipments pick-pack and dispatch on weekends by ILS, and process and performance improvement initiatives by all three vendors. Some other projects and initiatives were in the investment optimisation area, such as cost optimisation projects and billing processes streamlining by all three vendors. Since the alignment initiatives implementation in 2009, STI and vendors increased the utilisation of problem-based sets of management controls and consequently embarked on CSR initiatives, such as targeting carbon emission reduction goals and establishing reporting systems to measure success of the initiatives in meeting the pre-set emission reduction targets.

Some vendors were able not only to cooperate with STI in utilising problem-based management controls, such as benchmarking, but also managed to extend the service to the rest of their customer-base and ensure an increase in their share of STI spent TPL cost and to further realise the value from the improved performance due to better calibration of performance measurement target KPIs. For instance, DLS was able to develop the control tower service into an adaptive service and offer the business solution to other customers. The services of developed and extended shipping and distribution networks infrastructure of both TGS and DLS in Asia and Europe soon started to get returns on investment by being promoted to other customers of the two vendors in addition to STI as the primary customer, which took advantage of these services. It is important to mention that STI was one of the very early customers of TGS's "Store-a-part" special service, which was developed and enhanced through joint work with STI, and eventually TGS was able to recognise the value of this service by having other large pharmaceutical and fashion customers bidding for this special service. In addition, vendors realised the value of the actions undertaken as part of the relationship with STI by means of an improved competitive position in the domestic and global market.

STI and vendors aimed at managing the control problems arising from the relationship by continually improving processes to eliminate risk of failures, following strict performance measurement KPIs, mapping practical escalation processes, establishing disaster recovery plans and policies, open communications channels, and proactively benchmarking to identify gaps in services quality and processes.

Above all, STI learned to mobilise sets of formal management controls to manage and control relationship control problems. Contracts would rarely be used or referred to as part of the day-to-day operational activities. Despite that, some vendors, such as TGS, indicated that a better overall comprehensive and systematic contractual global framework would help in keeping the contract a more lively document that assists in not only controlling the relationship but in also guiding the partners throughout the life of the relationship.

Performance measurement, when reflecting successful achievement against target KPIs, tends to incentivise vendors to improve performance but at the same time feeds into the effectiveness of other management controls, focused on improving the vendors' performance. Performance measurement as a formal management control became even more important since it is considered the cornerstone of STI's BSC scoring system to measure vendor performance throughout the entire relationship and not just the operational aspect. The BSC scoring system allowed STI to measure vendors' performance against one standard performance measurement system. Vendors endorsed the level of detailed

sophistication in reporting and utilised the operational performance measurement, especially in comparing vendors' performance against each other and for internal benchmarking purposes. After 2009, and apart from effects on the development of the BSC scoring system as the new global performance measurement mechanism, the entire performance measurement control mechanism became globally standardised and provided the necessary and effective input into the incentives program to reward vendors. The mechanism became an important input factor into the benchmarking process to compare vendors' performance against each other's.

The incentive program as a control mechanism is a sensitive formal management control process to all three vendors since the program influences the vendors' chances of bidding for a bigger share in STI's business and consequently achieving more of STI spent cost. Generally all vendors and STI agreed that policies and incentives programs are required as part of the relationship. Although STI and TGS recently reached an agreement to establish an incentives program between the two organisations, more effort is required across the board with the other vendors on performance-based bonuses and incentives programs. With incentives programs gradually moving into the spotlight of STI-vendor discussions, DLS has started to equip all the operations and commercial account managers through training with capabilities, skills and responsibilities to understand and take proper decisions in what relates to linkages between the financial and operational aspects of any STI demands to revise target KPIs, especially where the revision results in cost incurred by DLS. DLS was vocal in its concerns about the unbalanced approach between subjective and objective measures of the BSC tool and the way the performance achievements get buried under the overall process of performance measurement using the BSC tool. With STI penalising vendors for underperformance, TGS demanded a reward program as the basis in tendering and granting new business opportunities to the vendors. Overall, performance measurement can be considered as one of the powerful controls in managing the delivery process and controlling relationship problems and challenges.

STI and all three vendors expressed a genuine interest in benchmarking as a formal management control process but at the same time they endorsed the complexities of utilising this control and differentiated between external and internal types of benchmarking. Vendors agreed that while external benchmarking is complex and consequently risky to adopt, most of the vendors would still use it but very cautiously and with lots of definitions and constraints to mitigate risks of misuse. To mitigate the risk of misuse of the benchmarking management control, the benchmarked organisation and the benchmarking business model have to be compatible to a large degree and both need to belong to the same industry and deliver very close products and services. Benchmarking as a management control was increasingly demanded and of interest to STI after 2009.

There was an indirect consensus among the vendors and STI that formal management controls cannot be effective and used in a balanced way without the informal management controls of trust, integrity, openness, and transparency. Vendors and STI share a common view that it is key in the relationship to have complete trust and value alignment which would protect the relationship and mitigate risks of poor performance on STI and vendors' relationship. TGS considered mutual trust a critical factor in facilitating the sharing and exchanging of knowledge among vendors and with STI. Consequently, trust and values build an avenue for communications and free flow of operational information, flexible reporting and knowledge exchange and sharing. Trust and values alignment when used with formal management controls, not only facilitated the exchange of knowledge but also ensured the successful effectiveness and operability of STI's global governance model and the overall success of the relationship. While all vendors and STI agreed that combinations of formal and informal management controls were crucial to manage the control problems, some like STI requested more of the formal controls regardless of the existence of trust and values in the relationship. Some managers believed that the more formal controls might negatively impact trust in the relationship, but all three vendors believe that good performance is a prerequisite of trust.

STI relies heavily on trust and shared values which can be recognised from the way STI design and utilises informal management controls. While balanced utilisation of formal and informal management controls must be maintained through the design of management controls in managing STI-vendors relationship, a decline in trust and shared values would trigger STI to rely more on formal management controls. This attitude would increasingly drive a rigid approach to managing the relationships. This would negatively impact the strategic alignment process by discouraging vendors from exchanging knowledge and damage the opportunities of improving the exchange and sharing of knowledge among vendors and with STI. The balanced design of management controls and reliance on informal management controls of trust and shared values in managing the relationship would play an important role in stabilising not only the STI-vendors relationship, but also would minimise the need to terminate vendors' relationship and select new vendors.

 STI's reliance on trust and shared values and promoting these informal management controls in the relationship with the vendors was successful to the point where TGS account managers would become STI's voice inside TGS senior management meetings. As a result, TGS account managers believe that STI needs to exchange with TGS the same level of trust to ensure a balanced approach to the relationship.

Vendors consider a well-defined effective informal management control as one of the main factors that influences the success of the STI-vendors relationship. The strength of the informal networks that DLS has built over the years with STI global and regional senior and middle management have positively influenced the relationship with STI. Having a successful relationship with aligned strategic objectives between vendors and STI develops a strong partnership, which allows the exchange and sharing of knowledge. Open communication and collaboration between STI and vendors, and sharing information in annual strategic planning workshops and QBR meetings with DLS and TGS helps in resolving issues and contributing to an environment of cooperation and coordination and leading to good performance.

The timing and phased approach in using the different combinations of formal and informal management controls is a skill STI global and regional managers have started to utilise. The mobilisation of these packages of management controls and the synchronisation of the appropriate management control packages to address and resolve more than one interrelated control challenge and problem proves the positive and appropriate influence of STI's global governance model on STI-vendors relationship and performance. The global governance model and the strategic alignment efforts between STI and vendors make the synchronised mobilisation of the different types of management controls even more effective.

Ensuring knowledge input into the different areas and functions of the operation, such as customs regulations, means the strategic dimension of knowledge exchange becomes crucial for end-customer service and solution design, operational processes improvement, developing industry and markets risk mitigation plans, and the overall wellbeing of the STI-vendor relationship. Vendors managed to maximise the returns from knowledge shared by STI with vendors regarding strategic services, market offerings and new acquisitions to develop customised services for STI and to strategically improve and develop their IT systems improvement plans, cost optimisation initiatives, and networks.

There is a mutual relationship between knowledge exchange and sharing on one hand, and trust and shared values on the other, which helped in lifting the level of trust and facilitating the sharing of information and improving the communications and understanding between vendors and STI. Knowledge exchange and sharing have had a direct and indirect impact on not only assisting resolving issues and overcoming challenges between STI and vendors but also influencing the design of formal and informal MCS, especially under the influence of the global governance model and strategic alignment initiative.

Knowledge exchange allowed vendors to better synchronise their efforts in not only supporting STI's operation but also indirectly helping STI in implementing the new governance model and the underlying alliance portfolio management approach and strategy, configuring the vendors capabilities and maximising the returns to both STI and vendors.

4.7   Chapter summary

In Chapter Four, data collected from each of the individual three vendor cases was analysed separately and followed by cross-case analysis. Each of the cases was investigated separately by looking into the impact of strategic, operational and structural alignment on vendors as part of STI's global governance model implementation in 2009, the challenges faced, the implementation approach and the impact on STI-vendor relationship. In light of the global governance model implementation, control problems of coordination, appropriation and dependence concerns were faced, coupled with uncertainty resulting from the GFC. Formal and informal MCS were redefined to address these problems. The analysis revealed an STI problem-based approach in utilising and mobilising packages of MCS to manage the arising control problems individually and concurrently. Consequently, the approach influenced the vendors' SDP and knowledge exchange.

The analysis provided an extension to the framework by investigating the joint implementation of the strategic, operational and structural alignment dimensions at the same time. The findings presented another extension to the framework where the three dimensions of alignment were tested in a global enterprise SC environment and found that, unlike the strategic alignment dimension which is standard at the global level, the operational and structural alignment dimensions do have variations in the implementation process and results, based on regional needs.

In testing the framework of STI use of MCS to manage control problems, the research found that the approach is problem-based where STI would utilise and mobilise packages of MCS to manage and resolve the control problems that might be faced and resolved individually or concurrently and in many of the cases found the control problems to be interrelated, which justified the packaged approach of MCS mobilisation.

5. CHAPTER FIVE: DATA ANALYSIS — ALLIANCE PORTFOLIO MANAGEMENT AND STI GLOBAL APPROACH

5.1 Introduction

This chapter is introduced in Section 5.1, followed, in Section 5.2 by discussion of STI's introduction of the alliance portfolio management approach in managing the three vendors' relationships. Section 5.3 covers cooperation and coordination among vendors in managing STI's operations. In Section 5.4 discussion is focused on STI's attempts to influence vendors to cooperate and coordinate as individual standalone buyer-supplier relationships or as a portfolio of alliances. In Section 5.5, the focus shifts to understanding how STI utilised the tools of the alliance portfolio management approach, after which the analysis, in Section 6.6, covers the impact of the approach on STI-vendors relationship. In Section 5.7 a case discussion and analysis is conducted and the chapter closes with a summary in Section 5.8.

5.2 STI introduces the alliance portfolio management approach in managing vendors' relationships

This section follows as a logical extension to the STI case discussion, by focusing on the alliance portfolio management data analysis and its influence on the relationship with vendors from STI's perspective. As was mentioned in Chapter Four, the alliance portfolio management approach was introduced by STI to manage and control the vendors' relationship as the second block of the global governance model, after the implementation of the alignment process. While vendors were informed and took an integral part in the strategic alignment process implementation, the alliance portfolio management approach was internally introduced and implemented by STI without informing the vendors. The alliance portfolio management approach is the internal part of STI's global governance model, which complements the external part, that is the alignment process, delivering a complete

solution to STI. This complete solution aimed at tackling control issues and challenges and to provide STI with a comprehensive framework to develop and implement globally and regionally effective management controls.

The data analysis in this section discusses the influence of the alliance portfolio management approach as part of the global governance model on the relationship between STI and vendors and the change in definition and use of the MCS. In addition, analysis covers the interactive relationship of the alliance portfolio management approach with the strategic alignment process as well as the subsequent combined effectiveness of the global governance model on the vendors' behaviour and performance, and in exchanging and sharing knowledge among vendors and STI.

The alliance portfolio management approach allowed STI to collectively manage the vendors through a dynamic mechanism that accommodates STI's regional management needs but not at the expense of the global management guidelines and policies. At the same time it provides a new global definition of the management controls set to address the control problems as part of the overall model. Since the initial implementation in 2009, the alliance portfolio management approach has allowed STI to always have the steering power of the relationship with vendors, which lessens the chance of vendors to influence and re-design the relationship to a certain extent. That is strategic requirements of STI take precedence over those of the requirements of the strategic alignment between STI and vendors. Through the alliance portfolio management approach, STI is well equipped to take the vendors' relationship to the global partnership level by driving the strategic, operational and structural alignment with the vendors in the best interests of the partnership and consequently prompting the vendors in return to share not only their strategy for the next five years but also to mutually exchange and share knowledge with STI and to a certain extent other vendors.

In implementing the alliance portfolio management approach for managing the relationship with the vendors, STI can more effectively and efficiently manage the vendors' collective capabilities by applying the alliance portfolio capabilities and competencies configuration perspective and taking into consideration the business volumes. This approach allows STI more freedom and flexibility than before in directly terminating the contract of non-performing vendors and selecting and installing new vendors that fit the portfolio capabilities configuration and STI's strategic objectives. Vendor termination or selection was not practically achievable in the past, not just because of the operational change over risks but primarily due to the extensive strategic planning requirements to be considered. Among other operational constraints that would impact the effectiveness and efficiency of vendor termination or selection has been IT systems change and integration. Although STI has reached some

level of system modularity, the transition of business operations from terminated to selected vendors still brings time, cost and technical difficulties. Collectively, the IT strategy of STI is to eventually get to an advanced level of modularity where the B2B systems messaging solution integration together with the utilisation of the vendors' WMS systems, and using vendors' call centres for control tower operation, all considered with a suite of smart IT systems STI is working on now, which will allow better systems integration and make the transition between vendors a practical and feasible exercise.

As part of the formal implementation of the alliance portfolio management approach, STI analysed the capabilities and competencies of the current vendors against the configuration of capabilities STI ultimately is aiming to acquire. It was crucially important for STI to warrant the successful implementation and operation of the alliance portfolio management approach to align current vendors capabilities and competencies to those required as part of STI's strategic planning needs to meet the strategic alignment goals. The set of vendors' competencies and the required knowledge exchange from the tier-one and tier-two vendors was taken into account as STI was adopting the global governance model.

Sharing the strategic objectives and plans in the strategic planning workshops between vendors and STI since 2009 was primarily to ensure vendors' knowledge of STI SSC strategic direction as reflected in the shared VSE document allowing vendors to take STI's strategic objectives into their respective strategic plans for the next planning period. Eventually, STI had synergies across different areas of the alliance portfolio and soon results should start to appear from the combination of understanding STI's culture and the knowledge gained from the strategic planning sessions. An important element of the alliance portfolio management approach is the evolving strategy component, where STI APAC is the closest to implement and experience the development of the portfolio strategy. The alliance portfolio management system should tie into the alliance portfolio strategy and evolve as well. One of the strategic objectives to achieve in managing the alliance portfolio is the knowledge sharing network among STI and vendors. STI is expecting to improve levels of trust and develop the relationship further as partnerships and to further improve the performance of vendors with the BSC scoring tool to be used as the means to configure the alliance portfolio of vendors to fit STI's strategic objectives.

Best practice and operational excellence are two major factors that could influence the alliance portfolio configuration. Ultimately, subsequent changes to the alliance portfolio configuration could be influenced by other factors such as innovation, alignment of alliance portfolio to STI culture, systems and processes, continuous improvement, cost reduction initiatives and green initiatives. The

alliance portfolio management approach is expected to optimise the performance of the individual vendors since the vendor's performance will be controlled individually and collectively through the portfolio processes and tools globally and across STI regions. In the past, the management of the one vendor relationship operating in different theatres with STI was fragmented with no one standard and unified approach. That created risks of inconsistencies in managing operations and other aspects of the relationship. With the alliance portfolio management approach, the common STI strategic objectives shared by the vendors should result in mitigating operational and strategic risks in the relationship.

5.3   Cooperation and coordination among vendors in managing STI operations

Understanding the nature of the relationship among STI TPL vendors, especially before 2009, is a prerequisite to understand the type of change STI is aiming to introduce and the results it is likely to achieve from implementing the alliance portfolio management approach to manage relationships with vendors. DLS describes the relationship with other vendors as infrequent and limited at times but always within the boundaries of maintaining STI's operational performance and relationship. TGS shares DLS's perspective in limiting the relationship with the other TPL vendors of STI to the operational needs of STI, particularly when TGS has to deal in some form of relationship with the other vendors to run STI's E2E customer order delivery process. From a best practice perspective, some other hi-tech customers of TGS run annual suppliers conferences where all TPL service suppliers participate to share their global strategies and re-emphasise the alignment with the customer's global strategies. Emma, TGS APAC account manager, feels this helps STI to build relationships among its vendors, and this approach also tends to allow STI to connect the TPL vendors with the up-stream and down-stream vendors, such as domestic distribution vendors and APAC repair vendors, to create relationships and share knowledge. TGS does not have a relationship with other TPL vendors of STI except with Expeditors International (EI) in India. Emma describes TGS's perspective by saying:

> *"I think obviously sometimes if we don't do the end-to-end then we got to have interaction with your other vendors like DLS to do pick up or hand over or whatever, so there are situation where we have to work with each other ... and that's more operationally driven. I know some of our other hi-tech customers in the manufacturing side they have annual supplier meeting or conference and they have all their suppliers whether from manufacturing or whether from*

*logistics sit together in two days meeting at their HQ or whatever where you'll share your
global strategy with that and may be have all the suppliers aware of where you're heading then
we've got round table and stuff like that where may be the same service providores within the
same industry would also get to mingle and chit-chat whatever, because sometimes we've got
up-stream and down-stream parties which will meet with and I think like for example your
repair vendors …, if STI can pull us together, because we all play part in your supply chain and
there can be some sort of events where we can also talk to share, that can also be helpful
[sharing knowledge]".*

ILS does deal with other TPL vendors of STI and that type of relationship would be perceived by ILS
as an STI business delivery transaction and within the boundaries of the operational requirements of
managing STI's business. ILS account managers are even prepared to deal with other vendors, such as
DLS and TGS, but only within the larger circle of STI operational requirements. If ILS has any
difficulty in dealing with any of the other vendors in managing and executing any of the business
processes, the matter would be referred to STI vendor management to own and resolve while ILS will
support, collaborate and cooperate with ideas and execution.

Therefore, for DLS, TGS and ILS, the relationship with each other and other TPL vendors tends to be
more of an operational relationship and engagement within STI's operation. This type of relationship
among vendors limits the opportunities to grow STI's business through exchanging knowledge, and
sharing experiences and best practice to improve processes, run joint projects and increase operational
efficiencies.

Vendors believe that cooperation among vendors can be more effective if initiated and facilitated by
STI. For instance, DLS's relationship with other vendors has always been channelled through STI or
at STI's request.

DLS confidently believes that their relationship with STI is not affected by the relationship of STI
with the other TPL vendors and feels a sense of disloyalty when STI tells it that if you cannot do it
other vendors can. Anthony, DLS account manager, elaborates:

*"Yeah, I think that the more cooperative we can be with the other vendors, then it makes it
easier dealing with STI, I guess. So, especially for the Control Tower pieces, I mean, we're
dealing with all the vendors there, so where STI can either facilitate with the other vendors, or
we're given the go-ahead by STI, "OK, you can work with these guys, get your updates, correct
the inventory, or report discrepancies" that type of thing, then... then if STI's trusting those*

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vendors and says, "Work with DLS" then, that helps build us a stronger relationship, I guess,
with STI as well". ... But, yeah, we'd normally look to STI to bring on the right people. We
wouldn't... we probably wouldn't proactively reach out to the other TPL Managers. It's often a
bit... I don't know, it tends to be just a little bit... everyone's a little bit cautious about doing
that, mainly because cartels, type of thing, you know, you don't want to..".

By the same token, TGS confirms that its relationship with STI is definitely not influenced by other
TPL vendors' relationships since TGS trusts STI to manage the other vendors in the same way TGS is
being managed. If TGS plans to take an action that would adversely impact the other vendors, STI
will tell TGS of the impact and request TGS not to proceed. STI owns all the relationships with all
vendors and TGS trusts STI to have all these relationships in mind. On the other hand, when a service
price is quoted to STI, TGS would take into consideration any offers made available by other vendors
and try to do better. Emma explains TGS position on the relationship with other STI vendors by
saying:

> *"I think obviously sometimes if we don't do the end-to-end then we got to have interaction with*
> *your other vendors like DLS to do pick up or hand over or whatever, so there are situation*
> *where we have to work with each other ... and that's more operationally driven. Like I said*
> *mostly, it comes to more operational communication and especially when it comes to business*
> *transfer like maybe we talk over DLS business in China where there is a hand over meetings*
> *but I think STI plays quite a strong role in being the middleman in that relationship and meet*
> *both sides. We're all sensible people and we'll work for the benefit of STI. ... I think is*
> *something which I mentioned earlier, if STI can be that middleman that tells us this is what ILS*
> *has done well, DLS done well, ... without mentioning names, this is what you TGS can think*
> *along that path instead of "this is the issue TGS you go and figure out solution", which might*
> *take longer time and we have to go through different path and takes long time and might be less*
> *effective".*

Although ILS does not believe that STI's relationship with its other TPL vendors has influenced the
relationship with ILS at all, Ray, ILS customer relationship manager, is perhaps contradictory when
indicating that STI's relationship with other vendors on pricing has influenced the relationship with
ILS. Overall, ILS considers its strategic relationship with STI should not be affected by how STI
deals with other vendors. Ray further elaborates:

> *"Well we know it... yeah, if we had difficulty in dealing with a STI transaction with one of the*
> *other Vendors, we would refer that back to Sarah or David [STI vendor managers]. ... In the*

market… we've lost some business with STI, and part of the problem is being as your business diminishes, it's hard to sometimes offer the discounts on the rates. So we've suffered that a little bit. So now we see, I guess in Asia Pacific, Japan is the main activity of business. … And then also we've been under attack, obviously aggressive pricing attack from some of our competitors, so we've lost some business due to some pricing issues as well".

Cooperation and coordination among STI vendors in managing STI operations has been proven by all vendors to be mainly transactional at operational level, and not known to have exceeded that level. A particular vendor may collaborate or cooperate with other vendors on a particular project at STI's request to ensure achieving project objectives or to serve as part of an E2E customer delivery process, but this is unlikely to result in meetings or sharing information without involving one of STI's vendor managers. When cooperating with other TPL vendors, vendor relationship is limited, but one exception applies to the relationship of DLS with STI repair vendors. This relationship is wider on complex projects solutions. DLS, TGS and ILS never proactively reach out or contact each other or other TPL vendors of STI since they are essentially competitors.

Cooperation and coordination with other TPL vendors of STI is limited to the standard operational aspects of managing STI operations. So far, STI has been successfully playing the middleman role and facilitates the relationship among the vendors to ensure the smooth running of STI's operation. For operational reasons, STI can demand any of the vendors to work collaboratively with another vendor on a particular process. Tom, STI account program manager from TGS, explains that only upon STI's request and within the boundaries of the operation, TGS would establish dialogue with DLS, for instance, and within the limits of what is being requested. TGS would never approach other vendors in its own capacity without STI knowing. In certain parts of the SC an E2E customer order delivery process vendor will inevitably have to work with other vendors, such as in the handling of STI international freight shipments and deliveries, where TGS is dependent on other TPL vendors' services either after shipment clearing customs or at the distribution points, or at the warehouse receipting or dispatching of shipments. TGS also cooperates and coordinates with other vendors in the asset recovery operation across 23 countries. TGS is crucially dependent on the cooperation of other vendors to deliver what they have been tasked to deliver through working closely with other vendors of STI.

ILS does not have any problems in dealing, cooperating and coordinating with other TPL vendors of STI. ILS deals with other TPL vendors of STI by considering those other vendors as representatives of STI. Ray, ILS customer relationship manager, confirmed that ILS would most unlikely share any

knowledge or information with other vendors even on a reciprocal basis. He added that if ILS possesses certain competitive advantage, such as knowledge for instance, "why would they share it with other competing vendors?", since ILS's strategic objective is to improve its own business with STI, ILS would unlikely share such knowledge with the other competing vendors but only with STI. Ray further elaborated:

> *"It is ultimately to improve our relationship with our clients such as STI. Although we spend millions of dollars with those other vendors like DLS and TGS but that's still from business-to-business service providing relationship perspective".*

Regardless of the fact that other vendors are competitors of ILS, ILS would continue to cooperate and coordinate to work towards its primary goal of satisfying STI's needs.

In summary, STI vendors are unlikely to cooperate and coordinate activities or share information and knowledge outside of STI's operational needs and to support the E2E customer delivery process. The vendors perceive each other as competitors competing for STI business and would only cooperate in situations where STI demand cooperation among them.

5.4   STI's influence on vendors to cooperate and coordinate: Standalone or portfolio approach in managing TPL vendors

Vendor performance is one of the core areas of focus in STI's global governance model. In addition to the strategic alignment initiative, the alliance portfolio management approach represented the second corner stone of the model. The approach was initiated by STI with the aim of influencing the vendors' performance, where the implementation covered the development of the portfolio performance measurement BSC scoring system tool and the execution according to the alliance portfolio strategy. The strategy defines the configuration of vendors who can guarantee the respective capabilities and competencies required to achieve the SC and subsequently the governance model's objectives and goals at global and regional levels.

One of the advantages of implementing the alliance portfolio approach is allowing STI the opportunity to manage the specific vendor on a basis but at the same time taking into consideration the configuration of all tier-one and tier-two vendors' performance, capabilities and competencies in the particular region or theatre and at global level as well. Looking from an alliance portfolio perspective, STI definitely started taking into consideration the other vendors' relationships when managing a particular vendor. To be on top, each of the vendors needs to have knowledge of industry

best practice and what the competitors are offering to STI. Effectively, STI is following a dual process by managing each of the vendors on a standalone relationship basis, but maintaining at the same time the alliance portfolio approach that considers the collective impact on the portfolio. In managing the alliance portfolio, STI vendor managers would be utilising MCS packages in a synchronised way to manage and improve vendors' performance. Accordingly, STI encourages vendors to cooperate to ensure the smooth running of the collective performance in executing against the E2E delivery process by all involved vendors and the success of STI's operation in achieving the target KPIs.

Vendor contract termination and vendor selection processes are of significant importance to the success of the alliance portfolio configuration. Terminating the existing vendor relationship and selecting new vendors involves tremendous amount of transition activities, training, and administrative work, which comes at a cost to STI. In addition, the processes of vendor contract termination and vendor selection require the set up and integration of IT systems through the B2B technology, through which vendors utilise their own WMS and transmit the B2B messaging about stock movements of STI spare parts order transactions and stock counts to STI systems in real-time.

STI tends to agree that the BSC tool is an effective measure of portfolio performance but further development to improve the effectiveness of the tool is required. Currently, measuring the subjective elements of the BSC scoring system is affecting the overall BSC tool reliability as a mutually accepted performance measure. Despite the complexity of the BSC scoring tool, STI has the responsibility of tool improvement in the subjective and objective scoring areas. STI utilises the BSC scoring tool to measure vendor performance and scores vendor account management performance. Both are complex to quantify given different stakeholders are involved. The scoring is subjective and could be influenced by STI managers' experience and level of understanding. The BSC tool is being progressively developed and improved with feedback from STI and vendors at global and regional levels. The BSC is gradually developing into an effective global tool measuring alliance portfolio performance. The BSC scoring tool development is ongoing and undertaken in partnership with vendors so that allows comparison of vendors' performance at theatre and global levels and on equal grounds.

Until 2009, STI faced the issue of vendors' lack of cooperation and coordination, which significantly limited opportunities for ensuring successful strategic and operational alignment at the SC level and hindered the exchange and sharing or knowledge and best practice. The fact that the vendors compete within the same industry means that STI is unable to address the issue beyond the boundaries of STI's operation and the E2E customer delivery process. The dilemma becomes even more complex when

the global relationship with the vendors interlocks with STI's need to manage vendors' performance and the relationship at the regional and global levels. Eventually, STI found that managing the vendors' relationships has to be based on a combination of regional-global dimension and individual-portfolio vendors' relationship matrix.

DLS endorsed STI's potential to influence the vendors in the way they cooperate and coordinate with each other and with STI. DLS believes that since APAC covers different countries with different types of economies and economic complexities, markets and regulations, STI needs to change the relationship approach to be structured around similarities among these countries and not segregate them based on in-country operating vendor structure. DLS further suggests that STI could manage vendors as a combination of country-vendor based operations relationship. Currently, DLS would work with other TPL vendors if asked by STI to do so and this is demonstrated in how DLS is cooperating with TGS and ILS in managing the operation from the "control tower" perspective. In Anthony's words:

> *"Because, like, Juana [STI vendor manager] managing TGS was sort of strange; she'd do Australia, then Korea, Taiwan, China. It wasn't around similar economies, or similar complexities; it was typically, it was just by what the vendor was. So, that tends to segregate, but now, I guess, STI's changing as well, to be more... you know, with China edging off, then that's a big chunk of that one; you probably need to look at how it's managed, to say "Is that the right way to still manage it, or should it be structured around Country, or should it be around region, or should it be around complexity, or customs issue, or whatever?"*

From a TGS account management perspective, sharing and exchanging knowledge and strategic content type of information with other TPL vendors would be like exposing competitive strengths to other industry competitors, and unless STI formally defines such policy and requests all vendors to take such an approach, vendors would refrain from volunteering. TGS does not interact with other vendors, possibly due to a fine line between what TGS can and cannot tell other vendors. For instance TGS's 2015 long-term strategic direction cannot be shared with other vendors nor can its intellectual property in terms of operational solutions, ideas and initiatives. Despite this, vendors reserve the right to decide how to respond and cooperate. Reflecting TGS's perspective, TGS's contracts manager feels that STI sometimes separates vendors in theatres as part of a strategy, and it is rare to find STI allowing more than one vendor in a country, for example, DLS in Singapore and TGS in Australia. Japan is unique where three TPL vendors operate together, and China was the same but the operation is gradually moving to TGS.

"Yeah, I, I think so. You know, sometimes I feel STI has a strategy of separating theatres to avoid this. You know, if I'm just thinking of our fulfilment side of the TPL piece. You know, DLS will do Singapore, for instance, and STI, and TGS would do nothing there. We wouldn't do even some of the transport there, unless something bad happened, same with Australia, same with New Zealand. So I think STI's deliberately separated the vendors. Japan probably an exception, where there's three vendors working together… Other than where one vendor cannot do everything and you haven't contracted one vendor, you wouldn't really encourage it, I don't think. But if you're dependent on it, then you would. So, it's a difficult one to answer".

Overall, TGS believes that STI has good processes to manage multiple vendors in a particular theatre, and without these processes, it is too complex and difficult for STI to depend on TPL vendors to talk to each other and co-manage the SC E2E process.

ILS works with the other TPL vendors of STI; this happens automatically as part of executing against the common operational processes. So as part of the STI operation, DLS or TGS would book shipments for ILS to move or to receive and that too works automatically and as per the predefined process. To a certain extent STI John, STI APAC Vendor Senior Manager, does share with ILS, his plans of vendors' relationships configuration and the type of services TGS and DLS are offering STI. As per Ray, John also likes to include ILS as part of the preferred suppliers list for any business opportunities. ILS confirms that they have not been asked by STI to work with other TPL vendors. ILS does have their own relationship with some of the vendors, whose services are utilised, but it does not actually affect STI and it is not part of STI's business and relationship. Obviously, ILS will need to work with their competitors for the one common goal of servicing STI.

In summary, while vendors' capabilities and performance influence STI and the way STI manages each TPL vendor relationship, STI has significant influence on the vendors' performance and business. In some aspects, STI tends to benchmark vendors against each other. Sarah adds:

"We have same standards for all of STI vendors, so when STI deals with one vendor, others' capabilities and performance is taken into consideration. So even if a vendor claims that they can perform what's being asked from him and we know that this vendor has the capabilities, we drive this vendor to take on, perform and deliver".

David, STI APAC vendor manager, agrees that the approach applied by STI during the DLS contracts renewal negotiations is a good example where STI used the nominal progress on TGS contracts renewal to encourage DLS to agree to renew contracts.

Juana, STI APAC TPL vendor manager, agrees and confirms that she follows this same tactic frequently with DLS and TGS. For instance, every time she meets DLS, Juana talks about some of TGS's achievements. Effectively, Juana is attempting to leverage TGS's capabilities to influence positively the relationship and performance of DLS, by which STI's objectives are served. Sometimes Juana did have the capabilities of TGS in the back of her mind during negotiations with DLS and that guided her discussions with DLS.

STI understands the fact that apart from the mutual relationship between STI and vendors, STI has significant influence on the vendors' performance individually and collectively and in instigating cooperation and coordination among them. Sarah firmly believes that STI takes into consideration other vendors relationships when managing another vendor relationship. Sarah elaborates:

> "To be on the top of the game, you got to know what is the best practice in the industry the others and STI competitors have, as fed through to STI by each of the vendors".

In addition, STI's policy of benchmarking vendors' capabilities against each other and using one vendor's achievements to motivate the rest to perform, proves that STI follows not only a standalone vendor relationship management approach but a portfolio approach coupled with an among-vendors relationship management approach which has some level of influence on how STI relationship with the particular vendor is formulated and executed. This map of STI-vendors relationship was also impacted by STI's strategic alignment process implementation, which lifted the relationship with the vendors from a regional to a regional-global level.

David and Juana confirmed that, since 2009, STI started implementing the alliance portfolio management approach in managing relationships with vendors and dealing with the vendors' account management. John was clear in confirming STI adopting the new approach saying:

> "All the time STI now takes the portfolio approach in managing TPL vendors and the relationship with them in all aspects of the operation. So we are making the comparison between vendors all the time as part of the portfolio approach. It's like dynamic benchmarking all the time between the vendors".

5.5   Alliance portfolio management: STI utilisation of tools

STI's global SSC management has had to undergo significant changes in tools, approaches and strategies when applying the alliance portfolio management approach in managing the vendors'

relationships. These changes not only have been dictated by the nature of utilising the alliance portfolio management approach but also to ensure the full extent of effectiveness of the entire global governance model and to allow the strategic, operational and structural alignment processes to become fully effective. In other words, the success of the global governance model is dependent on the synergy between the full implementation of the alliance portfolio management approach and the adoption and full execution of the alignment process between vendors and STI.

STI's determination to ensure the success of the model and the underlying approach was reflected by John, in his response:

> "In managing the portfolio I use the BSC, QBR review session's outcomes and performance reports. Performance KPIs, financial results, as well as feedback from global STI peers on performance globally and in other theatres, also sharing knowledge as to how the vendors are performing in other theatres overall".

David and Juana agree to John's statement as to the tools mentioned, which are utilised as part of the portfolio approach in managing STI's TPL vendors. Juana uses performance measurement and vendors' reports in managing the portfolio.

As was mentioned in the previous section on performance measurement, STI's SSC management invested considerable effort in developing the BSC scoring system to become the tool that enables STI to measure portfolio performance. Sarah agrees that the BSC tool is effective in measuring the portfolio performance but more development work is required for an effective and well balanced tool. Sarah suggests reviewing and rectifying the subjective elements of the BSC scoring system, which adversely affects the overall vendor BSC score result. Saying this, improvements to the BSC tool can be in both areas of subjective and objective scoring sections. The BSC is a complex tool, with STI scoring vendors account managers' performance and project managers' performance, which are both difficult and complex areas to quantify. The complexity stems from the number of people at each vendor involved in the relationship with STI with different perceptions, experiences and level of understanding. STI has been progressively developing and improving the BSC tool with feedback from different theatres, internal STI and TPL management, corporate TPL senior management, and vendors' senior management teams. The BSC tool is gradually developing into a global tool for measuring the performance of portfolio vendors. Eventually, vendors at theatre and global levels can be compared on common grounds.

Despite the need to further develop the BSC Tool, David considers it a key element in driving vendors' performance at global and theatre levels. It is a tool that can be used to monitor vendor relationship health as well as the vendor's level of understanding of STI strategy and planning as delivered in the strategic planning sessions. There is definitely potential to develop the BSC Tool into a more effective portfolio performance measurement tool.

> *"Yeah, definitely, it's just probably one of the most key tools that we have in terms of driving the vendor and yeah, seeing that health check in terms of what they understood of our strategy sessions, to see if they're..".*

5.6   Impact of alliance portfolio management on STI-vendors relationship

The impact of the alliance portfolio management approach on STI's relationship with the vendors reflected the developing strategy of the alliance portfolio approach in not only managing the relationship with vendors but also globalising and streamlining the selection and termination of vendors' contracts policy and process, standardising STI-vendors IT systems integration strategy and advance knowledge exchange and management strategy. The BSC scoring tool, and the effect of the alliance portfolio strategy on MCS was also starting to take shape through the global vendor contract negotiations and the changes introduced by STI's global SSC management to the performance measurement control system, in addition to starting the implementation of certain aspects of the incentives programs, such as the annual global vendor of the year award system and business volume discount incentives.

The effectiveness of STI's alliance portfolio management approach was demonstrated through encouraging TPL vendors to work collaboratively with each other and with STI but at a lower level of involvement than before. Sarah explains how it was unlikely for vendors to volunteer to work together unless STI requested them to do so, they might for instance execute on a standard process such as passing a document from freight forwarder to broker, but if issues arise STI has to step in and ask vendors to follow up, work together, change their mindset and perform.

Although an elementary level of cooperation existed among the vendors in servicing STI's E2E customer order delivery process, the influence of the global governance model and underlying strategic alignment and alliance portfolio management approach implementation increased vendors'

awareness of the positive impact of their synchronised efforts of cooperation and collaboration on STI's overall operational performance and mutual relationship as described by Sarah:

> *"[Vendors] work together because they do share the operational execution of E2E processes. For instance while DLS or TGS would be responsible for warehousing in some countries, ILS would be the freight vendor looking after shipping into and out of the warehouse. So encouraging vendors to work together ensures the smooth running of the collective performance on the E2E process by all involved vendors. After all, vendors have been working well together as requested by STI".*

David uses the successful implementation of the "control tower project", where TGS approached and worked with DLS to manage the project plan execution and achieved the goals of the project, as a demonstration of the developing collaboration and cooperation between DLS and TGS with almost no involvement from STI. Given the positive outcome from the "control tower project", STI considers this success a signal of starting the realisation of the alliance portfolio strategy. Consequently, STI expects vendors in the future to work together even beyond STI's operation, where until recently, vendors would work together only because STI asked them to do so. David adds:

> *"Overall STI expects vendors to work together when there is common STI process involved and they need to talk to each other to deliver to the KPIs. As happened in China when STI business with DLS migrated to TGS, STI expected DLS to work with TGS on that".*

STI noticed that "The less problems both vendors have between each other, the less they would come to STI Managers" asking to facilitate communications. Juana explained and gave an example where TGS, who were managing the Asset Recovery process needed to deal with the DLS team managing the depot in Singapore. Vendors had been in conflict about the production, maintenance and distribution of a new Asset Recovery performance report. Juana explained how she suggested to both vendors that "we are all working to achieve the same goal which is meting STI customer requirements", and directed vendors to focus, which resulted in vendors working together without STI involvement to resolve the conflict and get the task completed. Ultimately, STI would see it as a positive move if any proactive attempt is taken by the vendors to communicate and work together. This is an early signal of possible developments in the alliance portfolio strategy.

One of the major goals of implementing the alliance portfolio management approach is developing a globally and streamlined vendor selection and termination contracts policy and process in order to achieve the highest degrees of flexibility and operational feasibility when terminating vendor

relationships or selecting a new vendor. STI vendor managers tend to collectively agree that terminating existing vendor relationships and selecting new vendors is definitely not a simple process. Apart from the requirement of selecting against predefined selection criteria, a lot of process transition, vendor personnel training, systems work and administrative duties are involved in setting up the new vendor and at a cost to STI. In addition there are administrative and process related difficulties and associated complexities with vendor selection, and operational difficulties that represent challenges to STI when terminating an existing vendor relationship and selecting new vendor. The early days in the relationship of any newly selected vendor in operating in the STI SSC is a major issue STI always takes into account. From STI's perspective, such decisions would be taken only if the benefits of selecting a new vendor significantly outweigh the cost and associated operational issues being faced. Sarah adds, "It is an option we only exercise in rare cases". It is important to mention that Sarah did not include the IT systems integration issues involved in selecting new vendors, which was a major issue until recently when STI implemented full B2B messaging system integration. STI was also successful in convincing and persuading the vendors to use their own systems of WMS and B2B messaging to manage STI stock movements, order delivery transactions and inventory position electronic feed to STI systems in real-time.

Contractually, STI initiates the contract terms and conditions of terminating non-performing TPL vendor relationships after three months of failure to meet performance target KPIs. Consequently, STI vendor senior managers, in consultation with Global SSCD senior management and theatre SSCD Director, have the right to take the decision of terminating the vendor's contract. With the decision to terminate the vendor contract, the process of terminating the non-performing vendor relationship and selecting a new vendor starts by concurrently initiating the necessary contractual notice of contract termination and the tendering process to select the new vendor. The selection process starts with tendering followed by short-listing then selecting the TPL vendor from among the top three short listed capable vendors. It is important to mention here the tough contract negotiations as part of the selection process, as well as the post contracting activities of:

- training, coaching and orientation of the new vendor's operational and account managers crew covering different areas of knowledge on processes and systems, products and services, and relevant STI policies;
- establishing systems and processes of performance measurement and management controls reporting;
- introducing and engaging the new vendor with the complexities of applicable domestic customs rules and regulations and the geographical spread of operations;

- ensuring vendor senior management understand and adoption relevant business strategies and strategic objectives alignment requirements;

- transferring the outsourced STI SSC systems from departing vendor to selected vendor including systems set up and process mapping, integration of STI and vendor WMS systems through B2B technology;

These activities take place while vendor performance is being monitored to ensure the vendor's capability to absorb knowledge, learn and improve to reach the required standard level of performance STI agreed on with the vendor.

Juana believes that terminating a vendor relationship and selecting a new vendor is not operationally practical. There are many complications and challenges involved in the process of transitioning from departing vendor to newly selected vendor. As the decisions of vendor contract termination and selection of new vendor progress through the one-way transition process, STI can only expedite the transition to move into the commencement of vendor services phase regardless of the resources involved and the systems transition requirements. Juana concludes that while this process might sound simple, it is operationally not too practical or flexible:

> *"I don't think it's actually operationally practical enough, it sounds easy, even though you have contracts that allow us the ability to terminate or start a new relationship with somebody for a service or whatever, but operationally practical never ends up being as easy as being that, there's a lot more complications involved behind it. ... And you don't realise that to the point, you only realise that when you're in the process of doing it and there's no turning around, you kind of can't move forward, you can't move backwards, the only choice is to continue to move forward so that's why it's not operationally practical, it's not flexible".*

After 2009 and the implementation of the alliance portfolio management approach, STI started to sense the change in the practicality of the vendor termination and selection decision-making processes. The approach formed a safety net for STI due to global support and the developing alliance portfolio strategy that reduced the risks of process execution complexities through standardisation of processes and modularisation of IT integrated systems transition and implementation. According to John, "It is very practical to terminate the contract". Essentially, vendor contract termination and new vendor selection policies with tier-one vendors are a straight "chop and change" process. John draws the comparison between past and present where STI:

"... couldn't do that in the past due to the amount of business used to be with one vendor. We can transition in a very quick timeframe, which is within one to three months period depending on what we are changing. This transition period can be as short as one day for transportation vendors, and STI can "chop and change" vendors in one day and it have been done in fact with ILS".

The final and advanced stages of the B2B messaging technology and systems integration project for all good and faulty inventory management and warehousing allowed STI to further improve on operational capabilities at all country levels. With such improvements, STI's system flexibility and SC processes agility allowed the flexible and feasible operational processes mapping together with the implementation of systems change over from the terminated contract vendor to the new selected vendor. This system design is strategically based on contingency rules and the ability of STI to mitigate the risks of dependence on a specific TPL vendor. John explains that STI has reached the point of working together with vendors as strategic alliances, and consequently if the performance of one vendor dips in one month and STI is able to work collaboratively on the vendor's controllable and non-controllable aspects of the operational process failures and understand that from a partnership perspective, then STI do not have to penalise the vendor. Effectively, what STI aims at accomplishing is operational and systems flexibility and adaptability to mitigate risk of dependency on one vendor, as John describes:

"So today we have reached the point where we are trying hard to work as a strategic alliance together. So if there happens to be a one-off performance issue in one month, and we're able to work together on the controllable and uncontrollable aspects of it, and understand it from a partnership perspective, then we don't go penalising that TPL vendor. But again, what we've been able to do is be flexible, adaptable, and be able to chop and change if we need to with our tier one vendors to mitigate any risk of our performance to our customers, and be dependent on one vendor. That's been our whole strategy with the way that we've formulated what we've done in APAC with all the TPL vendors".

STI APAC was an early adopter of the alliance portfolio management approach, which proved to have changed the selection process for new TPL vendor, based on how the vendor under consideration fits the alliance portfolio. Currently in APAC, the alliance portfolio configuration consists of two tier-one vendors and another two tier-two vendors and unless something dramatic happens, this will be the case for some time.

One of STI's goals in implementing the alliance portfolio management approach is achieving the optimum mix of knowledge that the current configuration of vendors can transfer and share within the partnership, where the current mix of tier-one and tier-two vendors can be considered optimum from a knowledge management and vendors' capabilities mix perspective. Therefore, the influence of the alliance portfolio management approach on vendor contract termination and selection of a new vendor is strategic on STI's optimum mix of knowledge. Consequently, the changed partnership could take some considerable time to stabilise, and bringing a tier-two vendor into the tier-one portfolio configuration or a new tier-one vendor would require significant changes to STI. These changes range from IT systems integration and standardised platforms, operational processes and procedures, tools and new vendor staff training, and business cultural alignment. As was mentioned earlier, the fact that the alliance portfolio management approach was implemented as part of STI's global governance model where optimum knowledge mix among partners is one of the main goals of the approach, this goal can be mainly achieved by ensuring the global sharing of best practice among STI theatres. John articulated this:

> *"The mix of knowledge is crucial, but again these days it would take a dramatic change in some aspect of the environment with a tier one vendor to terminate them. Managing them as a partner, as an alliance is what we're doing today. And again proven successfully both at STI and externally that we have the strongest performing relationship across the globe with tier one partners. And to start a new vendor from scratch would take a long period of time. If we had to bring up a tier two to a tier one, or a completely new vendor, between the systems, the processes, the tools, the operations, the people, the culture, it would take months, literally months. And it would take a huge change with our tier ones to do that".*

The importance of the current configuration of alliance portfolio of vendors and associated capabilities, as well as the right mix of knowledge when synchronised with the several strategic planning sessions between STI and tier-one vendors sharing strategic objectives, means that critical synergies can result. Consequently, the alliance portfolio strategy and approach is not disclosed to the vendors but synchronised with the strategic alignment process which STI shares with the vendors for reaching the optimum configuration and vendor relationship performance. Vendors should gain more synergy flowing from the combination of understanding STI culture and the knowledge gained from STI strategic planning sessions in the current alliance portfolio configuration. John reflects on these points:

"What we do, and you experienced this actually as well in the global QBR, we have various sessions with our tier one vendors. In the global QBR you would have heard references to our strategy meeting. In that session we talk about all this. So we make sure that our partner knows the direction we're heading, understands our VSE, understands our culture, understands our new plans for FY11, and then the synergy starts to come from that. And you heard again, it was multiple synergies; common customers, common deliveries, and this will be part of an ongoing improvement and evolution. But you experienced many of those examples first hand in that QBR, which I was really proud of them referencing that in the meeting, actually".

Realising the returns from implementing the alliance portfolio management approach and in managing the relationship with the vendors, STI took into consideration the set of competences of all the vendors in the alliance portfolio. Currently in APAC, STI has two tier-one vendors DLS and TGS and no plans to change this mix. DLS and TGS are global vendors and their performance is monitored from a global and theatre perspective, and the feedback so far is positive in the way APAC is handling two global vendors and balancing their competencies as part of the alliance portfolio management approach in APAC.

Although the alliance portfolio strategy is still evolving, STI APAC could be the closest among STI theatres to effective adoption. Eventually, the alliance portfolio management approach is the second major part of the global governance model through which vendors' relationships are controlled and monitored and through which vendors' performances can be improved. One of the strategic objectives STI aimed to achieve by implementing the alliance portfolio management approach is fundamental operational excellence, which will be tied to the new VSE, and aligned to the objectives of meeting STI end-customer's' customised and differentiated smart solutions and business requirements.

While earlier in this section the influence of the alliance portfolio management approach on management controls and, in particular, contract and performance measurement was explained, trust as an informal management control mechanism and coupled with the BSC scoring system provided vendors the platform for operational excellence and performance improvement. Knowledge exchange and sharing under the global governance model and strategic alignment would not have happened without vendors becoming more trusting of the relationship with STI, which is evolving into a long term solution for both STI and vendors. The re-established trust under the influence of the global governance model and the alliance portfolio management approach formed a safety net for the vendors and provides enough risk mitigation of knowledge leakage to facilitate effective knowledge exchange and sharing among vendors and STI.

As the alliance portfolio management approach is evolving, best practice is one of the major factors that could influence the development of the alliance portfolio configuration in addition to the operational excellence factor that influence the alliance portfolio configuration. Ultimately, subsequent changes could be influenced by other factors, such as innovation, alignment to STI culture, systems and processes, continuous improvement, cost reduction initiatives and green initiatives.

In summary, since 2009, STI's relationship with the vendors has become more efficient and effective under the global governance model and with the implementation of the strategic alignment process through sharing the SSC strategic objectives as well as the internal portfolio alliance approach, which endorsed the effectiveness of the vendors' alliance portfolio strategic configuration. The new approach influenced the individual and collective, as well as the theatre and global vendor performance and assisted in formulating solutions to improve on the knowledge exchange and sharing among all partners. With the alliance portfolio management approach, the shared common strategic objectives of STI and vendors should assist to a high degree in mitigating controllable operational and strategic risks.

5.7   Case discussion and analysis

While all STI strategic alignment process goals and objectives were recognised through the implementation of the initiative and with cooperation and collaboration from the vendors, change remains the ever permanent feature of business in the information age and information economy. For the strategic alignment process to work effectively, it is important to develop and change in response to the internal organisational changes and external financial and economic climate regionally and globally. The alliance portfolio management approach represents the guiding framework to formulate the strategies, tools and techniques to ensure the strategic alignment process and the global governance model are progressively updated and developed to successfully manage the relationship with the vendors.

After implementing the strategic alignment process with the vendors, STI moved to internally launching the alliance portfolio management approach and started developing the strategies, tools and techniques to accompany the changes resulting from the strategic alignment process. One of the most immediate outcomes of the alliance portfolio management approach was the standard global policy of TPL vendor termination and selection as well as the global strategies on IT systems and platforms not

to mention the standard global management controls new definition and use, such as the global BSC scoring system.

The alliance portfolio management approach indirectly created an atmosphere of cooperation and coordination among the vendors and with STI through the exchange of knowledge. Although the level of exchange is still limited to the SC operational level of explicit knowledge, further knowledge exchange can be expected. STI can even see reasonable improvements in the sharing and exchanging of services as a result of the exchange of knowledge. The change instigated by the implementation of the alliance portfolio management approach, which resulted in some improvements to the exchange of knowledge among the partners coupled with the cooperation among the vendors, all contributed to the improvement in vendors' performance.

The alliance portfolio management approach endorsed an important dimension of managing the vendors' relationship where the need to implement and manage the relationship with each of the vendors as a standalone relationship was recognised, but at the same time the need to manage the vendors at the collective level of the portfolio was realised.

The positive impact of the STI governance model with its two pillars of strategic alignment and alliance portfolio management was observed in the improvements to the relationship management between STI on the one hand and DLS and TGS on the other and the stronger SSC performance. On the other hand, ILS's relationship with STI deteriorated even further as described previously and consequently resulted in poorer performance overall.

5.8   Chapter summary

Implementing the alliance portfolio management approach as part of STI's global governance model to manage the SC partnership represents an extension to the framework. The approach not only reshaped STI's management of the SC by utilising its strategy and policies but also fundamentally redefined the use of the MCS and assisted in maximising the returns and benefits of knowledge exchange and sharing among the SC partners. STI's internal implementation of the alliance portfolio approach provided the appropriate mechanism to formulate the strategy and policies to link the SC partnership strategic objectives alignment process to STI's organisational vision, mission and strategy on the one hand, and to provide an overarching vendor relationship life-cycle management process on the other.

The alliance portfolio strategy assisted STI in defining the vendor selection and outsourcing contract termination processes, procedures and policies, which helped in modularising and standardising the processes to minimise the duration taken for STI to transfer the business between the departing vendor and incoming new vendor. The strategy was also critical in determining the right configuration of tier-one and tier-two portfolio of vendors based on the appropriate configuration of capabilities and competencies to achieve STI SC strategic goals and objectives. In further developing the BSC scoring system, measuring the portfolio performance became more effective where vendors' performance can be compared on equal grounds and benchmarked against each other.

By utilising the BSC scoring system and comparing and benchmarking the vendors' performance against each other, the alliance portfolio management approach indirectly contributed to the established environment of coordination and cooperation among the partners and positively influenced and improved the overall collective performance of the vendors on the service delivery front as well as on the exchange and sharing of knowledge.

6. CHAPTER SIX: RESEARCH FINDINGS CONCLUSIONS AND IMPLICATIONS

6.1 Introduction

The objective of this chapter is to tie together the previous chapters by presenting the research findings in relation to answering the three research questions and present conclusions for the overall research, implications for theory, implications for practice, and implications for future research as well as research limitations.

The chapter begins with an introduction in Section 6.1, followed by Section 6.2 which provides an overview of the overall thesis. Section 6.3 attempts to answer the first research question on how alignment is pursued in the SC and what are the effects of achieving alignment and the challenges faced. Section 6.4 is focused on addressing the second research question on how the different types of management controls are mobilised in response to control problems by buyers and suppliers and the performance effects comprising the exchange of services and exchange of knowledge. This section aims at covering the main points pertaining to the interrelated nature of the SC control problems and consequently the need to utilise packaged management controls to address these problems. This section covers the performance effects as well as comprising the exchange of services and exchange of knowledge.

Section 6.5 covers the third research question on what role does alliance portfolio management play in the management of individual alliances and how does this change the way management controls are utilised. This section looks closely at the influence of the alliance portfolio management approach on the vendor selection process and portfolio fit, its influence on vendor's sharing and exchanging of knowledge, and the influence on individual alliance performance and the utilisation of management controls.

Section 6.6 provides overall research conclusions, followed by section 6.7 on implications for theory and section 6.8 on implications for practice. Section 6.9 aims at addressing research limitations and

implications for further research and lastly section 6.10 provides an overall research summary and conclusion.

6.2 Thesis Overview

In Chapter One, the research background and justification was discussed and the research problem presented, in addition to the research methodology. In Chapter Two, a literature review was conducted, attempting to understand previous research contributions and the identification of the research gaps and opportunities for this study. Consequently, three research questions were developed in Chapter Two, in an attempt to explain the framework constructs relationships among the main areas of the literature: SC alignment, MCS and management control problems, and alliance portfolio management. Chapter Three aimed at developing the research design and methodology by explaining its design and scope, and the research instruments development and case selection. The research instruments included data gathering techniques of interviews, documentation and archival data, and participant observations. Both vendors and customer details were also presented in Chapter Three. Chapters Four and Five were focused on data analysis.

In Chapter Four, the influence of strategic, operational and structural alignment of SC in STI's relationship with vendors was observed and analysed and found to have a direct impact on performance through the effects on MCS design, utilisation and mobilisation. At the same time, the alignment process was found to have an influence on SC control problems and on the resolution of STI-vendor relationship management controls. In this space, STI implementation of the alignment process was found to be part of the global governance model introduced in 2009, which internally included the alliance portfolio management approach.

In addition, in Chapter Four, SCM was found to have utilised synchronised packages of formal and informal management controls and mobilised in response to customer-vendor relationship coordination, appropriation and dependence concerns as control problems with the aim to impact the vendor performance in the service delivery and knowledge exchange areas of the operation. Control problems were found to have interrelationships and a mutual impact on each other where packaged management controls proved to be an effective approach in addressing more than one control problem at a time within the one vendor relationship or more.

In Chapters Four and Five, the data analysis established the need for an extension of the theory on customer-supplier relationship in the framework of strategic, operational and structural SC objectives

alignment. Management controls impact on relationship control problems and management control system design and use were not only influenced by the alignment process but also by STI's internal implementation of the alliance portfolio management approach. The extension between the theory and role alliance portfolio management played in successfully influencing the customer-vendor relationship has improved vendor performance and enhanced the exchange and sharing of knowledge in a comprehensive framework.

The alignment process, together with the alliance portfolio management approach, provided the global dimension to the design, utilisation and mobilisation of the packaged management controls and overall management of STI-vendors' relationship, but most importantly it assisted in reducing the impact of STI's SSC transaction characteristics and business complexity on the MCS.

6.3   Research Question One

Based on the overall literature review and the works of Defee and Stank (2005) and Fawcett and Magnan (2001), SC alignment can be seen to comprise strategic, operational and structural dimensions or types of alignment. While strategic alignment tends to imply the alignment of the strategic objectives of the SC partners as well as sharing common vision and mission, operational alignment tends to imply SC partners' alignment of processes and the adoption of common operating procedures. Structural alignment tends to mean the common SC design reflected in the critical structural characteristics, including technology integration, communication, standardisation, decision-making location, and reward and compensation programs.

Defee and Stank's (2005) theoretical framework on the application of the Strategy-Structure-Performance in practical SC partnership case remains untested and Fawcett and Magnan (2001) fall short of investigating how the structural alignment dimension in their research jointly applied with Defee and Stank's strategic and operational alignment dimensions, and how all three dimensions of alignment, that is, strategic, operational and structural are pursued and applied in SC partnerships. In conclusion, the literature on SC alignment, and in addition to Defee and Stank's (2005) and Fawcett and Magnan's (2001) studies, point to insufficient empirical research on how the three dimensions of alignment are pursued and their effect on the SC. This identified gap in the literature represents an opportunity to investigate and understand how strategic, operational and structural alignment together is pursued in SC and the challenges and effects of their implementation on performance. Hence the first research question:

Research Question One:

RQ1: How is alignment pursued in supply chains and what are the effects?

In light of the above identified gap in prior research and the critical analysis of STI-vendors SC strategic, operational and structural alignment process implementation pointed to the emergence of the first research question: how the three dimensions of alignment pursued, the challenges faced and the effects on the SC performance. The alignment question became more persistent after STI initiated the alignment process in 2009 under the global governance model. Subsequently, the strategic, operational and structural alignment processes had influenced STI management controls definition, development, design, utilisation, mobilisation and synchronisation in packages and subsequently on the performance of vendors and the outcome of the relationship.

The findings of this study pertaining to the first research question were manifested in the way the three TPL vendors managed to engage in STI SC strategic, operational and structural alignment processes implementation. These findings apply to each of DLS, TGS and ILS vendors differently but in the case of DLS and TGS both vendors were actively involved in the strategic alignment efforts of STI, unlike ILS which did not get involved in the process with its account managers eventually unable to engage in the process, failing to consider STI's strategic objectives in their own strategic plans development.

In 2009, STI implemented the strategic, operational and structural alignment initiative with the vendors and although some of the objectives were achieved, some emerging challenges were observed. In the following subsections, the analysis attempts at answering how the alignment processes implementation was pursued, what challenges were faced, and the effects of the three alignment dimensions on the SC performance.

6.3.1   How alignment pursued

At the strategic alignment level, STI and vendors' organisational strategies and SC objectives were externally focused on improving market competitiveness, and internally were aiming at developing the SC logistics infrastructure, innovative products and customer solutions to realise the goals of the strategic objectives alignment of vendors and STI. STI and vendors cooperatively structured the relationship globally and regionally, defined the inter-organisational interfaces and shaped the growth programs. In addition, STI and vendors have had major collaborative influence on the development of innovative and customised products and logistics services and restructuring the vendors' networks and

influenced STI smart solutions to end-customer in aligning the common operational goals and objectives of vendors and STI.

In further exploring the alignment process, vendors were motivated by the strategic alignment process implementation discussed and planned in the annual strategic planning workshops and moved, after 2009, to translate the SC strategic objectives alignment into the operational alignment dimension. At this stage, STI, DLS and TGS vendors worked closely on jointly initiating operational processes improvement projects and enhanced the SOPs documents accompanied with internal STI audits of DLS and TGS execution and implementation of the SOPs work instructions. In order to close the loop of the operational alignment processes, standardised decision-making processes were mapped and taken to the next level. DLS and TGS successfully started driving not only well mapped hierarchical account management teams to STI global and regional TPL vendor management teams, but managed to drive internal cross functional teams to design, develop and simulate business solutions for STI in support of the strategic alignment plans. Although DLS has had the most established hierarchical account management team, the organisational changes within DLS, and at a later stage at STI, resulted in short-term destabilisation of the account management relationship.

Strategic alignment processes implementation can be effectively executed only if the structural alignment processes are initiated and implemented concurrently and at the same time as the operational alignment processes implementation. The structural alignment processes were accordingly modified and subsequently the SC was redesigned through the structural changes in technology integration, communication, standardisation, decision-making location, and reward and compensation programs. STI's structural alignment process collaboratively influenced the role of DLS and TGS in the SC and consequently they were able to see the value-add resulting from having the strategic and structural alignment processes linking STI and vendors' strategic objectives and structural changes. The changes were reflected in major improvements to the SC logistical network infrastructure and systems enhancements and integration projects of DLS and TGS. TGS's structural alignment involvement was gradually developing despite STI's organisational changes in a new theatre and regional structure to adapt to the changes in the emerging global economy. Accordingly, the structural alignment between STI and TGS teams was successful. In proving the importance of the three levels of strategic, operational and structural alignment, ILS not only missed STI's strategic and operational alignment initiatives but also neglected joining the structural alignment process implementation at the global and regional levels when account management wasted the opportunities of developing and integrating the IT systems and improving on the communications in particular.

A different approach demonstrating vendor involvement in the creation of SC strategic, operational and structural alignment and which can impact its achievement and benefits are considered an extension to the framework. DLS agreed to align to STI's strategic objectives in developing innovative, smart, customised and differentiated services and business solutions in the areas of IT systems integration, freight and distribution networks expansion, SC control towers, and environmentally green initiatives, policies and strategies. DLS disagreed on the cost sharing underlying the investment in these projects and the indemnities and liabilities associated with contractually accepted risks. TGS behaved to a large extent in a similar way agreeing to STI's same strategic objectives. TGS, aiming to become one of STI's top preferred tier-one vendors, was more lenient in negotiating the cost of investments and the indemnities and liabilities associated with contractually accepted risks. The case of vendor ILS was significantly different from that of DLS and TGS where ILS was not involved in the strategic alignment process and eventually was "blacklisted" by STI as an embargoed vendor and the vendor share in STI business was significantly reduced. Consequently, ILS's failure to subscribe to STI's strategy on IT systems integration and investment in the standardisation of its systems platform resulted in structural misalignment between ILS and STI. Saying this, ILS lost on the market competitiveness front, facing deteriorating performance and lack of competitive pricing to offer STI and these challenges collectively resulted in further operational misalignment with STI. It is important to remember in this context the root-cause problem of ILS's non-compliance with customs trade rules and regulations and the negative impact on STI in financial penalties and negative market image, which contributed to ILS's strategic misalignment.

Empirical support is found for the theoretical argument that misalignment between STI and vendors could be the result of disagreement on the strategic objectives and vendor's failure to recognise the customer's SC strategic objectives in the SC strategic planning process. Consequently, misalignment between STI's and ILS's SC strategic planning and strategic objectives is an important source of control problems. Overall, the findings of this research acknowledged the research findings of Defee and Stank (2005) on the strategic and operational alignment dimensions and Fawcett and Magnan (2001) on the structural alignment dimension, as well as the extension to the combined framework of both research works.

In the case of the relationship between STI and the three vendors, integrated IT and systems is one of the major strategic management areas which has proved its effectiveness in positively influencing the structural alignment process and the relationship with DLS and TGS. In the case of ILS the influence was negative due to vendor misalignment with STI's SSC strategic objectives including IT systems integration. Communications, formal and informal, between vendors and STI have had a definite

influence on the alignment process and relationship. The three vendors and STI agreed on the positive impact of standard information sharing processes and the influence of these standards on the effectiveness and success of the alignment process and relationship. Vendors have had common operating procedures documented and implemented in the effort of STI aligning and controlling the operation and the relationship. The level of detail and sophistication of the vendors' SOPs varied where some included work instructions, like DLS, and some have had a mix of detailed documented SOPs in certain areas of the operation like TGS; for ILS the SOP was a high level guidelines to the user. Standardised decision-making processes between STI and vendors were generally missing, which is an area that requires attention and development of documented standardised processes to ensure the alignment between vendors and STI. On the other hand, vendors and STI management teams have built informal decision-making processes, which in the case of some of the vendors complements their internal formal and standardised decision-making processes and closely associated with the escalation processes of STI and vendors.

The overall success of the alignment initiative led STI to conclude that its vendors' SC are an extension of its SSC, which endorses the intent and objectives of the alignment process between STI and vendors. A result that verified the findings of Defee and Stank's (2005, p. 28) research implying that "firm supply chain strategy should be complementary with that of the supply chain partners", and the need to "know your supply chain partners and do their strategic mesh either as consistent or complimentary to your own firm's supply chain strategy". Defee and Stank (2005, p. 28) consider "strategic alignment is a necessary precursor to deployment of an effective supply chain structure". In the same sense, Rodrigues et al. (2004, p. 65) and Stank, Keller and and Daugherty (2001, p. 29) found that cost effective and hard to replicate customised and differentiated services and logistical capabilities involve a high degree of operational integration within the firm to link the logistical cross-functional E2E delivery processes to end-user, where global firms expand their integrative concept through collaborative planning and operations with selected customers and suppliers to the extent of effective control of the organisation. Defee and Stank (2005) found that a company's SC strategy is complementary with that of the SC partners, and internal vendors and customer strategy and SC structure have significant impact on performance measurement. Synchronised strategies across the SC allow the development of shared goals and objectives and the utilising of SC capabilities as a "competitive differentiator". Saying this, not all alignment efforts turn to be fully successful or without challenges and control problems.

Consistent with findings of prior research work on strategic, operational and structural alignment of organisational goals and SC objectives between vendors and customer, this research provides

evidence of a positive influence of the alignment efforts on vendors' SC. The findings are consistent with Defee and Stank (2005) and Rodrigues et al. (2004), implying that a company's SC is complementary with that of SC partners and disjointed strategies across the SC prevent firms from the development of shared goals and the utilisation of SC capabilities as a competitive differentiator. Researchers believed that conflicting SC strategies and strategic objectives across partners limit overall SC performance, where continuous performance monitoring is necessary to identify problems in the early stages to be easily corrected. Partner's performance must be tracked over time to identify underperformance instances due to misalignment and incompatibility or changes in the SC strategy. Researchers propose relating the nature of the relationship between quest of SC strategy and critical structural characteristics, including technology integration, communication, standardisation, and decision-making location. It is proposed that SC strategy implementation requires investment in computer systems to support coordination and flexibility among SC partners and customer, the creation of formal and informal communication to facilitate exchange of information, standardisation of information reporting and processes, and centralised planning decision making with decentralised implementation of plans.

So far, the empirical findings of the study represent an extension to the theory and research work of Defee and Stank (2005) and Fawcett and Magnan (2001) frameworks when jointly addressed. The empirical research addressed the research gap on how the three dimensions of alignment collectively and concurrently are pursued and their effect on the SC.

6.3.2   Effects of alignment

In the preceding section, the way alignment was pursued had been covered, and this leads into further discussing the effect of alignment on SC performance in service delivery and knowledge exchange and the challenges faced in the process of implementing STI alignment initiatives. From a theory perspective, the hypothesis of strategic priorities at the customer functional level and need to align with and support business level strategies was explored and the positive outcome was confirmed. Researchers found that alignment of priorities contributes to enhanced organisational performance, just as misalignment is expected to undermine performance and consequently the alignment–performance relationship was verified (Joshi et al., 2003; Tarigan, 2005).

When investigating the impact of strategic alignment on SC performance, the alignment process was found to act as a catalyst for the innovative development of the SC operations (McAdam & Brown, 2001). Other researchers investigated the alignment between SC strategy and environmental

uncertainty and found this alignment process to be positively associated with SC performance. Hence, it is not enough to form a SC strategy for improving SC performance without considering the alignment between SC strategies and environmental uncertainties (Sun et al., 2009b).

The empirical findings of this research revealed that operational alignment of processes and SOPs resulted in operational excellence efforts between STI and vendors, which mutually influenced organisational strategies and goals through the continuous improvement of the service delivery operational processes. As was mentioned before and until 2009, vendors were following an adaptive approach to STI organisational goals and strategic objectives where the SSC strategy played an important role in maintaining the relationship by means of a set of fragmented SC structural alignment processes. After 2009 and the alignment initiative implementation, the structural alignment processes were accordingly modified and streamlined and subsequently influenced the operations management side of STI-vendors relationship. Consequently, communications processes, standard information sharing, integrated IT and systems, common operating procedures, and standardised decision-making processes all enforced STI's operational alignment initiative.

While DLS and TGS were able to successfully engage with STI in the strategic alignment process and subsequently moved gradually into the operational and structural alignment dimensions and improve or maintain performance, lack of participation in the strategic alignment process resulted in poor operational performance of ILS and proved that failing to align to the common strategic objectives of STI reflected on the vendor's ability to deliver to the customer's operational objectives and target KPIs.

In this thesis, it was observed that STI-vendors strategic, operational and structural dimensions of SC alignment have positively influenced the SDP and the exchange and sharing of knowledge. This confirms Defee and Stank's (2005) research framework which focused on investigating, confirming and bringing to light the relationship between logistics and SC performance, structure and strategic alignment and in empirically bridging the gap between strategy, structure and performance.

Stank and Traichal (1998) tested a conceptual framework regarding the relationships between a firm's logistics strategy, the organisational design dimensions used to implement the strategy, and the performance outcome experienced as a result of managers for manufacturing firms. The research results confirmed a relationship between organisational design used to implement the logistics strategy and performance. The research also confirmed the intermediary effects of integration on this relationship.

Stank et al. (1999) found that SC management extends a firm's capabilities by coordinating operations to incorporate procurement, production, and distribution cross-functional processes in collaboration with channel partners and suppliers. Coordination of procurement, production, and logistical activities associated with inter-firm cooperation engendered in a SC perspective shifts channel arrangements from loosely linked groups of businesses to coordinated enterprises focused on efficiency improvement and increased competitiveness through lead-time reduction. The new organisation is capable of rapidly responding to market by eliminating redundant activities and reducing response time through seamless flows of information, supply materials, and finished goods. Coordinated SC operations enable higher levels of service provision and reduced overall cost, two goals that are mutually exclusive in traditional operating systems.

Stank, Keller and Closs (2001) researched the relationships between performance and SC logistics integration and found that logistics competencies and performance showed that improved SC logistics integration relates to better operating performance. The results demonstrated the overall scale as well as the relative importance of specific competencies to competitively superior performance. The analyses proved that customer and internal integration are the most significant differentiators of overall firm performance. Consequently, the analysis linked high levels of SC logistics integration and perceived operating performance, where the primary target for improving SC performance is simultaneous attainment of lower cost and improved customer service.

Stank, Keller and Daugherty (2001) built on the theoretical dimension of SC management that considers the achievement of maximised service to customers of choice at the lowest total cost needs a strong commitment to close relationships among trading partners of the SC. Accordingly, a movement away from arms-length buyer-suppliers arrangements toward longer term, partnership-type relationships to create highly competitive SC is required. Consequently, researchers found that increased collaboration among SC participants leads to lower total cost and enhanced service performance. Essentially, collaboration starts with customers and extends back through the firm from finished goods distribution to manufacturing and raw material procurement, as well as to material and service suppliers. Researchers concluded that integration is needed both internally (intra-organisationally) and externally (inter-organisationally).

The research of Defee and Stank (2005, p. 28) and Fawcett and Magnan (2001) attributed achieving the alignment process goals and objectives to the critical structural factors that impact the relationship performance and the SC strategy alignment.

- Technology integration: requires investment in computer systems technology to support coordination and flexibility among SC member firms. In addition to integration, part of STI strategy is the standardisation and modularisation of systems with the vendors.

- Communication: creation of formal and informal modes of communication to facilitate the dynamic sharing of information and business plans.

- Standardisation of information and processes.

- Decision-making location: centralised planning decision making supporting decentralised implementation of plans.

Defee and Stank's (2005) theoretical framework implies that a company's SC strategy should be complementary with that of SC partners. Disjointed strategies across the SC prevent firms from developing shared goals and utilising SC capabilities as a competitive differentiator. It follows from previous literature suggests that misaligned strategies will result in the firm's goal to achieve high quality delivery of customised products being most likely missed and may not find the results it seeks by utilising SC partners focused on a low cost strategy. The framework suggests as well that a SC structure is required to support the SC strategy implementation.

The research propositions presented relate the nature of the relationship between pursuit of SC strategy and critical structural characteristics including technology integration, communication, standardisation, decision-making location, and reward and compensation programs. Furthermore, the framework proposed specifies that SC strategy implementation requires investment in computer systems technology that supports coordination and flexibility among SC entities, creation of formal and informal modes of communication to facilitate the rapid sharing of information and business plans, standardisation of information and processes, centralised planning decision making supporting decentralised implementation of plans, and integrated individual and organisational reward structures that target overall SC goals.

This qualitative research is extending the application of Defee and Stank's (2005) theoretical framework of Strategy-Structure-Performance Theory (SSP) beyond the firm to the complex SC environment proving that SSP is a robust paradigm. This research found that STI's introduction of the strategic, operational and structural alignment initiative under the global governance model post-2009 helped the SC partners in developing common SC strategic goals and in allowing the vendors access into more tacit type of knowledge to develop customised and smart business services solutions to suit STI's changing business requirements in an uncertain financial and economic global and regional

environment. On the other hand, the research found that the alignment initiative resulted in better investments utilisation in the areas of SC infrastructure, communications, integrated IT systems, reward and compensation programs and, most important, an approach to cost of investments sharing. Another extension to Defee and Stank's theoretical framework is the utilisation of the BSC tool concept instead of the Economic Value Add (EVA) technique as the way to measure the alignment performance, and which proved to serve the purposes of the SC and STI needs.

Another important finding of this research that verifies Defee and Stank's (2005) theoretical framework is that the alignment initiative under the global governance model was instrumental in stabilising the relationship with the performing vendors in an uncertain financial and economic environment. The alignment initiative served as the mechanism for the vendors to sound their concerns which led to boosting the trust factor in the relationship among partners and sharing some of their tacit and, to a certain extent, some of their strategically competitive knowledge, which they had previously been reluctant to do. Ultimately, the initiative led to improved operational alignment and increased vendors' performance.

Major challenges that prevent the successful achievement of strategic, operational and structural alignment initiatives among the SC partners could coexist with control problems of cooperation, coordination and misappropriation concerns.

Defee and Stank (2005) call for all SC partners to be in line with the buyer firm's SC goals. Strategic alignment is a necessary foundation to the deployment of an effective multi-member SC structure. Therefore, SC professionals should ensure strategic alignment exists when considering bringing a new member into the SC. Ongoing strategic alignment can be checked through routine review of properly developed performance measures. Lack of cooperation and coordination among the SC partners and the concerns of misappropriation would make any alignment efforts fruitless and present serious challenge to achieving strategic alignment among the SC partners.

Before further discussing the emerging challenges associated with the strategic, operational and structural alignment process, it is important to analyse the complex nature of STI's global SSC and the wide geographic coverage of STI operations and business as one of the major factors contributing to relationship control problems. The complexity stems from STI's SSC sophisticated STI-vendors' integrated systems and processes and STI-vendors' hierarchical regional and global management teams structure. Additional complexity comes from STI's highly advanced technological networking and IT products, services and end-customer solutions. These interdependencies become even more complex when vendors' inter-organisational relationships are added into the picture and especially for

common vendors operating under more than two STI SC independently. These complexities make the alignment processes extremely important to both STI and vendors to successfully operate and achieve the performance target KPIs.

In managing the relationship and driving the alignment process to achieve the common objectives and goals, vendors and STI faced challenges which were influenced by the GFC that impacted vendors and STI and posed challenges to both sides of the relationship. In some instances, these challenges indirectly translated into control problems due to the influence on the cost of investment of projects required by STI and service cost reductions and cost of risks implied in the indemnities and liabilities associated with contract renewal. As for the vendors, the challenges were manifested in demanding returns on investments in new business solutions and infrastructure from STI.

Some kind of agreement on strategic alignment could make operational alignment much more achievable, especially when the operational processes represent the underlying derivatives of the strategic objectives. Operational alignment mainly springs from STI's requests of continuous processes improvement and occasionally raising current target KPIs to maintain competitiveness in the markets, which meant creeping uncontracted service scope from STI. A major challenge to the vendors was maintaining a balance between STI demands for more investments in infrastructure, good performance, and business growth, on the one hand and the cost of these investments, better performance and cost of growth on the other.

Contracts renewal negotiations with vendors has been one of the major challenges to STI, which has already impacted the relationship with one of the vendors and delayed the introduction of incentives programs, as well as the progress in STI implementing the global governance model, including the alliance portfolio management approach. Placing the strategic alignment between STI on the one hand and DLS and TGS on the other on the right track allowed the two vendors to reach some kind of agreement on most of the problems associated with the operational alignment mentioned above. In the case of ILS, operational alignment was lacking due to the nonexistence of strategic alignment with STI.

In concluding this discussion, STI would at best get an incidental and occasional operational and structural alignment with the vendors if alignment processes do not start at the strategic level to align organisational goals and strategic objectives. Incidental and occasional operational and structural alignment did exist between STI and the vendors until 2009 when STI realised the risks of missing the important level of strategic alignment and implemented under the global governance model. This strategic alignment was rolled out in cooperation with the vendors; internally STI implemented the

alliance portfolio approach to manage the relationships with the vendors at the global and regional levels. Inevitably, in a complex SSC operation like that of STI and in an alignment effort at the strategic level between large vendors such as DLS, TGS and ILS, control problems will arise. STI took the precaution of making sure the alignment process was clearly defined under the global governance model to ensure it was adequate to resolve control problems. Impacted by the complexity of STI operations and the sophisticated nature of STI products and services, relationship interdependencies among vendors created further challenges to the alignment processes.

6.4   Research Question Two

The literature review uncovered a gap in current research in relation to the problem-oriented approach of utilising and mobilising integrated MCS packages in response to control problems. Hence, examining control problems requires an integrated examination of MCS (Malmi & Brown, 2008). In particular, this research addresses the packaged MCS approach utilisation and mobilisation in response to control problems by taking the view of problem-oriented MCS packages; control problems being considered are control problems of coordination, appropriation and dependence concerns in IORs.

Regarding the impact of MCS on SC performance, a gap was identified in the prior literature reviewed which did not link integrated packages of MCS to knowledge transfer (Choy et al., 2008; He et al., 2007), in addressing the impact of MCSs on performance comprising the exchange of services and exchange of knowledge. Prior research looked at fit rather than effects (Chenhall, 2003) and on this basis, the second research question developed is:

Research Question Two:

RQ2: How are management controls mobilised in response to control problems by buyers and suppliers? What are the performance effects, comprising the exchange of services and exchange of knowledge?

Based on Malmi and Brown (2008, p. 287), apart from accounting-based controls which are typically focused on formal systems, there is still limited understanding of the influence of other types of controls, such as administrative and cultural and whether/how these controls complement or substitute each other in different contexts. A view shared by Sandelin (2008, p. 324) suggests that "there is little prior theory on the linkages between formal and informal control elements". Sandelin (2008, p. 324) further argued that "the functionality of a control package depends on internal consistency and

specifically on the reciprocal linkages of design and use between a primary mode of control and other control elements … control package variety is driven by the way in which management responds to functional demands". Malmi and Brown (2008) suggest that achieving a broader understanding of MCS as a package may assist in the development of better theory of how to design a range of controls to support organisational objectives, control activities and drive organisational performance. Although studies have considered control systems individually and occasionally as a combination, the challenge is still in understanding how all the systems in an MCS package operate as an inter-related whole. Abernethy and Brownell (1997, p. 233) believed that "it is clear that organisations rely on combinations of control mechanisms in any given setting, yet virtually nothing is known about how the effects of any one control are governed by the level of simultaneous reliance on other forms".

Malmi and Brown (2008, p. 291) state that "the term 'package' is employed because in most contemporary organisations there are number of MCSs. If all those were designed and coordinated intentionally, the whole system might be called an MCS. However, the concept of a package points to the fact that different systems are often introduced by different interest groups at different times, so the controls in their entirety should not be defined holistically as a single system, but instead as a package of systems".

Given Malmi and Brown's (2008, p. 295) assertion of "the fact that little empirical research has addressed the issue of MCS as a package of controls", this research represents an opportunity to look into how market controls, bureaucratic controls, accounting controls and trust mobilised in response to control problems by buyers and suppliers from a package perspective.

Taking an exploratory approach in looking at how STI and vendors mobilised the different management controls for a particular control problem, (Sandelin, 2008) and Malmi and Brown's (2008) broad definition of the MCS package can be used to understand the mobilisation process, how the mobilisation process works, the interaction among the different types of controls, and impact on performance. The approach looks at how the MCS package mobilisation applies to one control problem at a time, but there is a need at times, and depending on the nature and type of problem, to look at more than one control problem in the same context.

The research findings that there are challenges and problems to be faced in achieving alignment between STI and vendors and the need to apply the necessary management controls to ensure the achievement of the alignment process goals and objectives, enforce the findings of Caglio and Ditillo (2008, p. 865), and Dekker (2004, p. 27; 2008, p. 915) on control problems. Challenges lie in the task interdependence of two or more vendors requiring mutual adaptation and coordination to ensure

working together through the SC from service spare parts shipping and customs clearance, to warehousing and inventory management, and ending in order management and successful end-customer order service delivery execution. Such complex E2E delivery process requires significant coordination and joint actions that need to be aligned across the organisational boundaries so as to guarantee a match between partners' interfaces.

The nature of STI networking, unified communications, data centre and other technology products and solutions, and the size and complexity of post-sale SSC support, when added to the size of the business, the global geographic spread and complex automated performance tracking and reporting requirements, reflect the need for high level of customisation in the SC support services STI demands from partners and associated reporting requirements. Consequently, the complexity of STI's unique demands in assets and people will always trigger vendors' appropriation concerns that translate into assets specificity created by the volume of investment vendors have to contribute in business solutions, extended distribution networks, SC "control towers", additional technologically enabled warehouses, standardised IT systems and platform, deployment of B2B electronic real-time messaging technology, installation of RFID technology in warehouses and recruitment of professional experts to meet such customer requirements.

Vendors, under such circumstances, have their own concerns and tend to aim at safeguarding themselves against STI's risk of opportunism which correlates with the rising risk of asset specificity, uncertainty of the relationship especially under organisational changes, contract renewal issues, and frequency of exchanges. The relationship between STI and vendors was subject to a serious state of uncertainty as both suffered from the GFC and the serious impact on markets. Part of ILS's relationship issues was due to the vendor's loss of competitiveness in the shipping service pricing and ability to meet STI's demands of cost reductions. DLS and TGS were also subject to the shipping market competitive pricing issues but were able to survive the market pressure by subsidising their freight and shipping business from the rest of their profitable business units.

Another area of uncertainty is the technological demands of STI from the vendors, where one of STI's strategic objectives is continually developing its standardised and integrated IT systems capabilities with the vendors ensuring that vendors' IT systems and operational warehousing and tracking systems represent the state of the art in order for STI to maintain its competitiveness in the markets. Some of the vendors expressed concern at the need always to be on the alert for unforeseeable changes that STI demands, which, according to Dekker (2008), leads to information asymmetry between vendors and STI and consequently contributes to appropriation concerns.

These types of control problems proved to impact vendor performance and created concerns for STI, generating the need for governance arrangements to monitor and prevent exploitation. It was observed that vendor behaviour changes during uncertainty periods by rejecting any tightening of performance KPIs, especially when STI is concerned about impact to performance. This was evident in the negotiation of contract renewals, in which vendors raised obstacles, for example, TGS and to a larger extent DLS.

Vendors always demanded STI share the cost burden of investment in systems, transportation and distribution networks, warehouses, customised business solutions, people and operational continuous improvement projects when these were instigated by STI. STI showed some level of cooperation in sharing the cost of investments incurred in particular areas and which contributed to the success of the relationship to ensure that the value of the joint output recognised by the vendors was fairly distributed and the exchanged resources are not misappropriated by STI and vendors.

The existence of appropriation concerns and coordination requirements has impacted the design of STI's governance model and management controls. Transaction complexity, size of transactions and size of STI business, and task interdependence among vendors required STI to design complex management controls of performance measurement KPIs and well nested portfolio of contracts to allow effective monitoring of the vendors' performance. In addition, STI found greater need for management controls given the greater dependence on the vendors' capabilities to deliver services to STI end-customers. This dependence could translate into customer dissatisfaction in case vendor quality of delivery service deteriorates. From this perspective, the uncertainty of markets under the GFC has increased STI's appropriation risk concerns and the need to ensure the renewal of more developed contractual terms to protect STI against changing import and export rules and regulations, resisted by DLS and TGS.

According to TCE theory and agency theory, customers cannot be sure that vendors are operating in the best interests of the cooperative venture, thus the cooperation problem and concerns that autonomous partners or vendors may have an incentive to cheat in order to attain their specific goals at the expense of the objectives of the collective undertaking. While TCE and agency theory tend to assume diverging interests of vendors and customer, organisational contingency theory tends to assume converging interests of partners or vendors and customer (Caglio & Ditillo, 2008; Chua & Mahama, 2007). On the other hand, resource-based theory tends to indicate that inter-organisational relationships are undertaken because firms do not own all the resources and capabilities required to

receive sustainable returns, and partners cannot develop the required capabilities in a timely manner and with an affordable cost (Caglio & Ditillo, 2008).

Consequently, partners and customer need to share their resources with better endowed and more knowledgeable counterparts and sometimes have common investments to pursue mutually beneficial goals. Hence, alignment of objectives has been suggested to overcome these cooperation problems (Caglio & Ditillo, 2008). Both vendors and STI have had cooperation problems, which on the one hand relate to the dependence of STI on vendors and the associated power differentials between exchanging vendors, and on the other to the economic relationship that involves current and future transactions.

While STI was demanding more contributions from vendors in the shape of investments into the relationship, vendors were concerned at STI's efforts to modularise the integrated IT systems and standardise the systems platform, which reduces the dependence of STI on a particular vendor and eventually STI IT systems strategy increases STI capabilities to flexibly terminate and select new vendors who can offer the same or compatible experiences and capabilities at competitive prices. Consequently, vendors are more cautious than before in cooperating with STI in meeting demands for new investments in customised business solutions, expanded networks, new warehouses, and integrated IT systems under market uncertainties and ineffective power differentials.

STI successfully implemented the global governance model and the underlying strategic alignment initiative which in one sense assisted STI to overcome the issues of business size and complexities and associated control problems interdependencies, but created new type of challenges. These challenges were represented by the need to utilise and mobilise management controls in packages to address interdependencies among the vendors and resulting control problems and the introduction of the alliance portfolio management approach to ensure a holistic strategy in not only reactively but proactively controlling the regional and global levels of vendors' relationship.

Given the influence of the alignment process, STI's development of balanced and structured management controls, has contributed to vendors' confidence to cooperate with STI. The structured management controls in the relationship that have been established over a long period of time with trust between vendors and customer, indicate that the vendor selection process is the first safety net for the relationship and helps in providing the right cooperative environment. Overall, a dependence of STI on vendors, especially in the knowledge intensive areas of the operation and given the compliance issues ILS caused to STI in North America, meant that STI moved towards a more extensive contractual governance structure and tighter management controls. This also led STI to

demand vendors exchange and share more of the compliance and international trade regulations and rules periodically with STI to ensure proper controls were in place to mitigate the risks of dependence on vendors' knowledge capabilities.

STI can mitigate the risks of control problems by terminating vendors' contractual relationships and selecting the appropriate vendor for the configuration and mix of vendors as part of STI's alliance portfolio management approach. Since the vendor selection process is critical to the success of the relationship, the appropriateness of the vendor to STI would mainly be based on the vendor's preparedness to align to strategic objectives and organisational goals (Dekker, 2004, 2008). STI's decision to terminate ILS's relationship was the outcome of the vendor's failure to successfully align to STI's strategic objective and consequently its failure to improve on poor performance. STI SSCD management was clear on the need to select the vendor that possesses capabilities but also strategically aligns to STI's SC strategic objectives and conform to the global governance model at both global and regional levels. This unprecedented critical utilisation of the alliance portfolio management approach by STI mitigated an important risk where vendors used their global level relationship in redefining the basis of the relationship with STI at a regional level.

6.4.1   Interrelated control problems and management controls as a package

From a practitioners' point of view, the interrelationship between control problems and management controls can be demonstrated using four scenarios: one management control is applied to one control problem; one management control is applied to many control problems; a package of management controls is applied to one control problem; a package of management controls is applied to many control problems. The point here is that the dynamic nature of management controls dictates the need for packaged management controls to be used in a synchronised way and mobilised based on the dynamic of business needs. For instance, in some cases the SC practitioner would face a situation where the complexity of the business results in more than one control problem simultaneously or concurrently faced and which requires the mobilisation of more than one management control in a synchronised or packaged way. In what follows, examples are drawn from the research, which illustrate the application of MCS packages.

Although contracts as formal management controls have not been used by STI or vendors in any reported disputes, a subtle and indirect influence of contracts controls exists, as can be seen in the lengthy time taken for STI, DLS and TGS to negotiate contracts renewals and in particular, the indemnities and liabilities contractual clauses relating to risks of vendor non-compliance to trade rules

and regulations. While both DLS and TGS exercised their power to force STI to accept lighter contractual obligations and no liabilities relating to non-compliance clauses, in response STI mobilised the rewards and penalties incentive program control. The incentives program control is aimed at rewarding vendors like TGS for accepting the proposed trade compliance contractual terms. Under this scheme TGS was given performance-based incentives and won vendor of the year. On the other hand, STI penalised DLS by exercising the power to not grant the vendor any new business globally and specifically in APAC unless agreement was reached on contracts renewal. The impact of controls mobilised against DLS was not much reflected in performance of exchanged services but more in the speed and volumes of exchanged strategic planning knowledge compared to that of TGS. Consequently, TGS was able to move faster than DLS to utilise STI's provided strategic knowledge about objectives and plans in products, services and solutions in areas STI needed and more specifically in warehousing automation, faulty parts return process improvement, freight and distribution network expansion, control tower services, and maintaining good operational performance.

ILS non-compliance to customs regulations is another example where, despite the financial penalties, negative public image and impact on market share caused by ILS, STI did not mobilise contract control. Rather STI exercised informal rewards and penalties control to place an internal and informal embargo on ILS. ILS's non-compliance was indirectly a consequence of the organisational changes the vendor was going through and loss of account managers that resulted in lack of communications and coordination issues among ILS global and regional account management teams and with STI SC global and regional management teams. STI mobilised trust control, or lack of trust, to signal to ILS the need to overcome and resolve the issues of non-compliance, communication deficiencies, and coordination issues. STI did not resort to contract control because of the long-term relationship and trust between STI and ILS and the mutual expectations that the relationship could be restored in the future.   STI mobilised social control, instructing all regional SSC management teams to cease any regional or global QBR meetings or strategic planning workshops with ILS as well as the exchange of strategic business knowledge. Furthermore, STI mobilised the bureaucratic control of performance measurement by preventing the production and publishing of the quarterly BSC score.

ILS's non-compliance and lack of communications and coordination partially contributed to poor operational performance issues, which included missing on-time delivery target KPIs for more than three months. When explaining the root-cause underlying the recurring failure in meeting this critical target KPI, ILS pointed to the loss of competitive edge in securing enough freight volumes to gain

bargaining power to negotiate with shippers for more competitive shipping service prices and securing competitive shipping lanes to meet STI on-time delivery target KPI and reduced service prices.

ILS indirectly blamed STI for the loss of competitive edge and bargaining power and its subsequent decision to grant more freight business to DLS and less to ILS. In the context of vendor eligibility to win business from STI, the GFC has placed tremendous pressure on both STI and vendors to reduce cost and increase operational efficiency. In this competitive environment, ILS attempted to influence STI's policy of preferred service supplier and consequently the decision to grant business to the vendor providing the more competitive freight service pricing. STI, in response, utilised the bureaucratic control of performance measurement to demand ILS to restore performance levels and meet target KPIs. Obviously, the relationship between STI and ILS suffered and the use of controls has caused significant performance impact on services exchanged by limiting the deterioration in delivery performance through restrictive exchange of service. ILS was unable to provide STI the type of services it demanded and STI's confidence in ILS's ability to deliver was at its lowest levels. Accordingly, STI penalised ILS when refrained from exchanging strategic planning knowledge with ILS or run global QBR meetings.

In this example, vendors considered STI's demands for implementation of continuous improvement projects a threat of creeping uncontracted out-of-scope business. STI requested these continuous improvement projects as part of the bundle of bureaucratic controls and specifically the performance measurement control, where the operational review of processes, SOPs, and KPIs uncover opportunities for operational performance improvements and, in some cases opportunities for cost reduction projects through increasing efficiencies. One of the main underlying drivers for continuous improvement is STI complex products and services, large size of business with vast geographic spread of operations and customer base, and the complexity of associated service delivery processes. Without continuous improvement, these complex delivery processes tend to gradually result in erosion of STI's competitive edge to other market competitors and eventually causing loss of market share. Vendors have different ways of dealing with STI's continuous improvement demands, but they all tend to exercise a combination of control measures depending on the particular vendor and the associated circumstances. TGS, for instance, tends to resort to trust and shared values, demonstrating willingness to cooperate in accepting process improvement projects as an inevitable STI-TGS relationship competitive priority. In the context of shared values, TGS approached STI at a later stage demanding rewards for the cooperative approach and requesting a review of contracted scope of work and service pricing. DLS follows a different approach, preferring to exercise market controls from the start by demanding contract scope review and service price review as the basis of any agreement. On

the other hand, STI demands of process improvement from ILS tend to be very limited, especially after 2009. STI's response differs based on the vendor's position, approach and control used. In response to TGS's utilisation of shared values, STI has successfully mobilised social control of rewards and compensation through recognition of TGS as the vendor of the year and granting TGS preferential bidding rights for business opportunities, in a move to extinguish TGS's efforts to mobilise market control of contract scope and service price reviews. In the case of DLS, STI would mobilise market controls of contract scope and service price reviews as the first response and most of the time this leads to tough negotiations to review and change rates and resources rather than contracted scope of work.

Business processes continuous improvement projects have a major impact on STI's SC services quality and efficiency of SDP. Consequently, TGS's approach of utilising shared values controls, followed by market controls of contract scope and service price reviews proved to have a far more positive impact on SDP and exchange of services due to the cooperative approach of TGS in managing STI's operations. This relationship environment allows the exchange of knowledge from STI to TGS in areas where these processes improvements intersect with STI's strategic services and customer solutions development and business planning. DLS tends to maintain position and improves service delivery and service exchange only upon agreement with STI. Generally, DLS's approach fails to capture the exchange of knowledge and if STI exchanges any critical or strategic knowledge, such knowledge tends to miss the optimum opportunity timing factor and DLS tends to be deprived from the opportunity of optimising returns compared to TGS.

In another example, the IT systems strategy of STI has been influenced by the vendor selection decision-making process and STI's efforts to increase the flexibility of the vendor selection process by reducing the time and resources required to terminate non-performing vendors and select a new vendor. One of the major factors that has always made the selection decision process time consuming and resource demanding is the need to grant vendor access to STI's IT systems and the associated security risks involved in granting access to the vendor's remote users across the warehousing network. In addition, training and access-rights administration of a vendor's users into STI's IT systems require the STI SSCD vendor management team to spend a considerable amount of time at the vendor system set up stage and on an ongoing basis to ensure STI's IT systems are available to the vendor's staff. The associated cost, resources and efforts that STI SSCD management team has to invest in the changeover process from the terminated relationship vendor to the new selected vendor mean the decision is difficult and only be taken in extreme situations. To overcome this dilemma, STI's new IT systems strategy for FY2009-2011 has been focused on standardising IT systems

platform, modularising the systems set up, and implementing STI-vendors B2B IT systems integration technology. The strategy of IT systems standardisation, modularisation, and integration between STI and vendors was part of STI's strategic alignment and planning workshops where STI explained the necessary systems changes and corresponding investments required to achieve the strategic objectives. Vendors started to realise the risks stemming from STI systems strategic alignment process, which will allow STI the flexibility to change vendors with lower set up cost and fewer resources.

Consequently, vendors were unable to refuse to align with STI's strategic objectives, but instead focused on refusing to even share the cost of investing in such systems changes given the fact that such alignment should not necessarily benefit other customers of the vendors apart from STI. With these appropriation concerns of asset specificity raised specifically by DLS and TGS, STI mobilised social controls of trust and shared values of transparency, openness, integrity and respect, assuring vendors of the positive intent to continually improve STI strategic competitiveness by developing the IT systems to meet STI end-customer expectations. STI's intentions were documented and shared as part of the strategic objectives alignment efforts with vendors.

In addition, STI responded to the vendors' cost of investment concerns by mobilising bureaucratic controls calling on vendors to share the cost of investing in IT systems by allocating special internal budget for these expenditures. STI was able to demonstrate to DLS and TGS that sharing the cost in such investments would allow vendors an opportunity to compete in the market with competitive IT systems that can be potentially offered as part of the customised services package and differentiated business solutions to their other customers in the IT industry or adjacent industries. The impact of mobilising these controls to resolve the control problems was strategic and important to the exchange of services by significantly improving the quality of STI end-customer order delivery and reducing delivery failures resulting from the old poor systems connectivity.

At the same time, there was significant impact on the exchange of accurate and sophisticated operational information in real-time and the exchange of smart reports that assisted STI and vendors DLS and TGS to avoid delivery failures and maintain good performance. In addition, the mobilisation of the bureaucratic and informal social controls impacted the exchange of knowledge directly through the planning workshops and implementing the new systems strategy, and indirectly by facilitating the exchange of compliance and markets-related information helping STI overcome some of the customs issues and sometimes before they even occur. ILS was excluded by STI from these discussions due to its non-compliance and poor performance issues.

The above examples indicate that STI need to build the global governance model based on the complex interdependent priorities, objectives and needs of the business and the dynamic nature of the arising control problems in the course of managing the relationship with the vendors and in response to the concurrent use of more than one management control in a packaged way to ensure efficiency, flexibility and speed in resolving management controls.

On the inter-organisational relationship governance structure and management controls, this research provides evidence that control problems of appropriation, coordination and dependence requirements influence the design of governance structures. The inter-organisational relationship governance structure and management controls are impacted to a large extent by the severity and type of control problems STI and vendors are facing in managing and controlling the relationship.

In an extension to the framework, the empirical examples indicate that MCS cannot be studied individually due to the interrelationships among the control problems that require a problem-based utilisation of MCS packages. These findings extend prior literature that takes a singular focus of MCS utilisation to manage control problems (Dekker, 2004).

The research findings are consistent with those of Caglio and Ditillo (2008) and Dekker (2008). The research findings depart from Dekker (2008) where he found no significant effect of uncertainty on governance extensiveness. This difference can be attributed to the size of the business risks to which STI has been exposed and its inability to absorb such risks compared to other customers in Dekker's research. In this research, it was found that uncertainty resulting from the GFC and the cost reduction pressure cascading from the markets onto STI and consequently on the vendors was one of the main factors that motivated STI to introduce the global governance model and initiate the SC strategic, operational and structural alignment processes.

This research finding in regard to vendor experience and familiarity with STI operations and management endorsed the lesser need for extensive formal management controls and more reliance on the element of trust which is, in part, consistent with that of Dekker (2008) where the long-term relationship between STI and vendors associated with the element of trust have caused STI not to rely completely on, or develop more extensive formal management controls. In contrast, STI relied more on benchmarking vendors' performance against each other to maintain an environment of competition among them.

STI's selection process for new vendors can be characterised as slightly sophisticated and complementary to the extensiveness of the contractual part of the governance structure, but not

sophisticated enough to mitigate control problems and concerns. After 2009 and with STI introduction of the alliance portfolio management approach under the global governance model, the vendor selection process became more reliable in selecting the partner that not only fits the contractual and operational requirements but also fits the alliance portfolio strategy, configuration mix of vendors and capabilities, fitness to the global SC strategic objectives, and capable of exchanging knowledge of the right mix. The research findings depart from Dekker (2008) in this particular area of alliance portfolio management approach to vendor selection process, which has proven to be effective in the current process of selecting a replacement vendor for ILS, in addition to the effectiveness of the new approach in managing DLS and TGS.

6.4.2 *Performance effects comprising the exchange of services and exchange of knowledge between vendors and STI*

Post STI implementation of the global governance model in 2009 and the overall changes to the nature of the relationship, exchange and sharing of knowledge throughout the SC partnership started to become gradually more dynamic and positively influence the quality of service and relationship performance. Accordingly, STI-vendors relationship performance became not only impacted by the exchange of services or successful customer order delivery but also the exchange and sharing of knowledge among the partners and with STI. Consequently, the impact of control problems on STI-vendors relationship performance became more critical to the success of the global governance model pillars, alignment initiative, the alliance portfolio management approach, and the overall success of the partnership.

The following are some of the major control problems in the relationship between STI and vendors:

- STI demand for uncontracted out-of-scope work from vendors either through operational process continuous improvement and cost reduction projects or STI raising the bar on some target KPIs to maintain competitiveness in the market – appropriation concerns, transaction complexity;
- refusal of vendors to renew contracts that involve accepting spare parts import/export customs and product certification non-compliance indemnities and liabilities risks – appropriation concerns;
- vendors' aversion to the cost of investments demanded by STI in IT systems, new depots, freight and distribution networks expansion and other major business improvement requests – appropriation concerns asset specificity;

- vendors' demands of STI granting new business to the successfully bidding vendor based on performance and lack of rewards and incentives program for performing vendor meeting and exceeding target KPIs – cooperation issues;
- frequent organisational and structural changes of STI and vendors including vendor account management team members, and associated risks to vendor performance and STI, and impact on relationship – coordination issues;
- competitive environment, financial and economic crisis, market impact and service prices – appropriation concerns.

As was discussed, one of the main results of STI implementing the strategic alignment process and alliance portfolio management approach through the introduction of the global governance model was the redefinition of the formal management controls, mainly the contracts and performance target KPIs. Informal management controls of trust and common values were indirectly redefined as well, based on the changes introduced by the model —vendors started to feel more confident that trust and common values after 2009 were based on the more solid ground of performance measurement and contractual terms rather than primarily on personal relationships.

To this point, STI's global governance model and the changes to the performance measurement system of utilising the BSC scoring system caused a change in the service delivery model to a standardised dual regional-global one. Vendors started to recognise a combination of competitive pressures coming from within STI's SSC relationship and subsequently they recalculated the risk of knowledge sharing. Vendors started to gradually accept sharing some of their tacit knowledge.

In a kind of cause-and-effect relationship, vendors started sharing cautiously through the exchange of simulation studies on transportation and warehousing networks optimised utilisation, industry related white papers, SC best practice, international trade and national customs regulations impact analysis, studies of establishing new SSC operations in new domestic markets, and other types knowledge which STI otherwise could not easily source independently. While STI's new BSC performance measurement scoring system and new contracts framework created an atmosphere of confidence and trust in STI from the vendors, sharing of vendors' tacit knowledge resulted in reinforcing the improved performance of exchanged services.

This type of knowledge exchange and sharing has had an important impact on the exchange of vendors' services and the improvement of the overall relationship performance. Similarly, He et al. (2007) concludes in a research paper on knowledge transfer in SC partnerships that factors of trust,

commitment, interdependence, shared meaning, and balanced power, are more likely to affect the effectiveness of knowledge transfer.

The improvement in DLS and TGS performance was not just a result of STI implementing the new global governance model or the utilisation of the redefined formal and informal management controls, but to a large extent because of the utilisation and mobilisation of management controls in synchronised packages to address the different scenarios of the dynamic and concurrent existence of the control problems.

After STI introduced the global governance model in 2009, vendors DLS and TGS, who were qualified to subscribe to STI's strategic alignment process, became confident of launching long-term planning to optimise returns from this opportunity. Exchanging knowledge even beyond the explicit has been the critical prerequisite required from vendors to be able to achieve the goals of alignment and reach the optimum level of performance. It was found that the strategic alignment process between STI and vendors improved the exchange of knowledge through the improved exchange of SC services and consequently improved vendor performance. The strong relationship and positive correlation between achieving the strategic alignment goals and direct effect on knowledge exchange became associated with STI's exchange of services as the vendors' relationship with STI came under the global governance model control. The model subsequently changed the definition of formal and informal management controls and its influence on the control problems, but ultimately influenced the performance of the vendors by improving the efficiencies of services and knowledge exchange.

The findings of this case study represent an extension to the framework where the effects of the utilisation of packaged MCS in concurrently managing arising control problems revealed the influence of the approach not only on the SSC delivery performance but also influenced the exchange and sharing of knowledge due to the impact of the element of trust on the exchange process (He et al., 2007).

6.5   Research Question Three

The prior alliance portfolio management literature reviewed in Chapter Two did not examine the role of the alliance portfolio in SSC and presents a research gap to be investigated in this study. This research gap represents an opportunity to address the utilisation and role of alliance portfolio management in SSC set up and the influence on individual alliances. Hence, the third research question raised is:

Research Question Three:

RQ3: What role does alliance portfolio management play in the management of individual alliances and how does this change the way management controls are utilised?

After 2009, the alliance portfolio management approach played an influential role in the management of the individual alliances and in the utilisation of the management controls. In addition, it reshaped the sharing and exchange of knowledge across vendors.

These points are discussed in the next section.

6.5.1 *Alliance portfolios and service supply chain management*

The application of alliance portfolio management theory by STI SSC management fundamentally changed the way individual alliances of STI were managed. Before FY2009, the selection criteria for new TPL vendors was mainly based on the vendor's ability to abide by the contractual terms and fulfil the functional and operational needs of the service delivery process, as well as achieving the performance measurement KPIs. Post selection, the vendor's performance is mainly driven by the pre-set target KPIs and any coordination and cooperation required with other vendors of STI. Such relationship among vendors would be limited to the boundaries of STI's operation and the common objective of successfully making the service delivery to end-customer by as much as the E2E service delivery process requires. The relationship among the vendors was detrimentally competitive to the point that DLS considered STI's decision to grant new business to other TPL vendors an act of "disloyalty" due to the long-term relationship between STI and DLS.

Starting in FY2009, part of the new global governance model STI implemented was the use of the alliance portfolio management approach to manage STI-vendors relationship at the individual alliance level and the entire SC including all vendors. The vendor selection process became subject to the portfolio fit. The selection criteria for new vendors were mainly limited to the vendor's ability to meet the functional, operational and contractual obligations of the SC. With the introduction of the alliance portfolio management approach, the selection criteria additionally included the need for the new vendor's capabilities and competencies to fit within the overall portfolio of other STI vendors' mix of capabilities, competencies and knowledge. This mix of capabilities, competencies and knowledge is determined by STI's overall portfolio strategy that determines the right configuration of capabilities, competencies and resources required to align to STI's organisational goals and SC objectives.

Therefore, selecting new vendors required investigating beyond the vendor's ability to abide by STI's contractual terms and fulfil the functional and operational needs of the service delivery process criteria to fit the portfolio configuration and strategy as well as the configuration of competencies the STI SSC model requires and the exchange and sharing of knowledge in a network setting among vendors and STI at both regional and global levels.

During the time this research was conducted, STI was in the process of selecting a tier-two vendor for ILS's replacement. Apart from the standard contractual, functional and operational fitness criteria of the new vendor, the selection of the new vendor was discussed and agreed at a global STI SSC level. Accordingly, the new vendor selected has to fit to the alliances portfolio and the configuration of competencies. The new approach to selecting a vendor has been influenced by the alliance portfolio management approach, which pre-emptively aims to avoid the lack of coordination and cooperation issues which prevailed in STI-vendors relationship.

STI IT systems strategy, which evolved around standardisation, integration and modularisation at global, regional and domestic levels of STI SSC operation and the associated processes mapping, has allowed STI the flexibility and agility to respond to changes with the least possible interruption to its operations. While the systems design was strategically based on contingency and the ability of STI to mitigate risks of dependency on any one particular vendor, which could jeopardise STI's business continuity, it allowed STI the opportunity to successfully introduce the alliance portfolio management concept. While this experience stems from the utilisation of alliance portfolio management theory it is still in the very early stages and the outcome is yet to be seen. However, STI expects this approach to improve efficiency, and reduce the extensiveness and frequency of management controls use. Hence, the alliance portfolio management approach has changed vendor focus on failure-prevention and relationship termination to a joint focus on collaborative work with STI to investigate failure causes and jointly apply corrective action.

6.5.2 Influence of alliance portfolio management on the utilisation of management controls

STI's internal implementation of the alliance portfolio management approach has shifted STI's focus from just managing individual vendors' alliances as standalone relationships to managing alliances as a portfolio. For instance, as STI manages the relationship with one of the three vendors, STI will be always comparing and contrasting the performance of that particular vendor with that of the other two in what STI SSC management described as vendor-on-vendor dynamic benchmarking. Since 2009,

the vendors indirectly recognised the change in STI's approach in managing the alliances, and in specific ILS. STI was open in informing the vendors of the dynamic benchmarking approach particularly in the service pricing area, such as negotiating ILS shipping service prices and at the same time running parallel comparisons to the pricing proposed by DLS. Similarly, when STI compared the performance of tier-one vendors, DLS and TGS, as part of the contracts renewal negotiation process, vendors realised that STI was dynamically and openly providing feedback regarding the internal comparison of their bidding pricing for shipping services and associated their performance. In both cases, STI demonstrated how in managing the relationship of any of the alliances, the relationship with the other alliances is monitored based on the management guidelines and tasks of alliance portfolio management. The consequences of STI's change in approach in managing the alliances were obvious when STI started to get the vendors to deal with each other. Despite the previous resistance of the three vendors to engage with each other in activities that would extend beyond the direct service of E2E service delivery operational process requirements, STI called upon DLS, TGS and ILS to collaborate in establishing a successful SSC "control tower" process, in which the collaboration tasks exceeded operational limits. In addition to collaboration activities that involved operational information, the vendors found it inevitable to exchange and share preliminary knowledge on the particular country and end-customer in order to ensure fulfilling the requirements of successful performance and achieving the target KPIs. At the beginning, vendors expressed concerns STI's new approach but eventually realised the need to cooperate and coordinate to achieve STI's organisational goals and SC objectives as well as the added-value to DLS and TGS in the form of reduction of business complexities and improvements to performance.

The example of DLS and TGS alliances collaboration in establishing and operating the "control tower" process not only reduced complexities and improved performance conditions, but the vendors became more willing to exchange knowledge and to refer any issues representing hurdles against achieving common process objectives to STI to intervene. Significant returns to STI were recognised, vendors' knowledge mix resulted in higher efficiency in resolving issues pertaining to operations management in Malaysia and Indonesia utilising the combined knowledge and efforts of DLS and TGS in the areas of customs regulations and product compliance. STI, as the principal firm in the global SC, was not only leading but also managing based on the portfolio alliance strategy and mix, vendors' configuration, competencies and knowledge mix.

DLS and TGS believed that their relationship with STI was influenced by STI's relationship with the rest of the vendors. For ILS, the strategic nature of the relationship with STI is not determined by STI's relationship with the rest of the vendors. DLS and TGS understood that STI owns the role of

monitoring the alliance portfolio and ensuring that any actions from a particular vendor do not have adverse effects on the rest of the vendors and in case detrimental effect existed, STI will interfere to prevent such actions. STI SSC management played an important role in balancing the relationship with the vendors as a standalone or portfolio of alliances; the balancing process was essentially based on the accurate execution of the alignment processes externally with the vendors and internally through the alliance portfolio management approach.

Synchronising the mix of DLS, TGS and ILS alliances' competencies globally and regionally maximised STI's rate of utilisation of the vendors' shipping, warehousing and distribution networks, and integrated IT systems capabilities. The synchronisation was particularly evident in the way vendors managed STI's spare parts shipments between different vendors' depots through vendors' shipping forwarders and the ultimate order delivery between depots through the distribution network of different vendors to end-customer. STI's alliance portfolio management approach indirectly instigated healthy competition among vendors in supporting STI's operations and exploited synergies among alliances that avoided conflicts across the entire portfolio. Excluding ILS poor performance issues, the performance synergy arising from DLS and TGS completion to support STI had contributed to the overall alliance portfolio performance. STI's alliances cooperation and coordination and subsequent alliance portfolio performance measurement stability were tested during FY2009, FY2010 and FY2011 with STI integrating four large acquired businesses. During this period, the vendors demonstrated overall good performance.

STI SSC management admits that alliance portfolio management processes and tools are still in the development stage, but that significant work has been achieved in establishing rules of knowledge exchange and sharing, alliances best practice sharing, founding global partner of the year awards and global partners' rewards compensation and penalties programs, and planning the establishment of the alliance portfolio database. Although improvements were requested by the vendors, the alliance individual and portfolio BSC scoring tool could be the most advanced performance measurement tool that has been developed by STI.

In managing alliance portfolio performance STI used an in-house developed BSC tool which encompassed both objective and subjective performance criteria scores of vendors. The objective scores included operational service delivery target KPIs and financial performance KPIs relating to on-time billing and billing accuracy, while subjective scores included STI stakeholders' rating of vendor performance in relation to project management, escalations handling, root-cause analysis, effective communications and continuous improvement efforts. The weighted average score of all

these factors reflects the particular vendor performance according to the BSC. STI has managed to develop a standard BSC scoring system that allows comparison vendors performance against each other at the global and regional levels. The tool also allows STI to compare the alliance portfolio at regional and global levels, which is becoming one of the main topics at the global QBR meetings for each of DLS and TGS.

The alliance portfolio management approach has influenced the mobilisation of the already packaged management controls when mobilised to deal with management control problems. The role of the informal social controls of trust, culture and shared values in the package of MCS was enforced by the exchange and sharing of simple non-core knowledge among vendors and complex core knowledge with STI. Social controls communications and interaction aspects in particular were left at the regional level in the current frequency and state to be managed by STI regional management teams, but the QBR meetings were standardised and restructured to become global at the vendor level with the establishment of annual strategic planning sessions to reinforce the strategic, operational and structural alignment of organisational goals and SC objectives. STI global SSC management team established a global vendor recognition forum to reward performing partners. Market and bureaucratic controls received a special focus from STI attempting at reviewing the entire portfolio of vendors' contracts to renew and rebuild based on a globally standard contractual framework to govern the contracting process. This overall contracts framework discussion was raised by the TGS account management team during the interviews. STI devoted a great deal of work at the global TPL vendor management level to review and standardise the operational and financial target KPIs.

While the management controls were mobilised as a package of controls, the BSC score represented the tool that integrated these controls in one performance measurement tool. Consequently, the alliance portfolio management approach influenced STI's utilisation of the management control package. This influence was observed through reviewing and rebuilding global and standard management controls, providing the basis of a regional and global dashboard to mobilise the controls based on the alliance portfolio strategy and objectives and providing STI the ability to monitor, control, compare and manage the individual alliances and the alliance portfolio. STI's IT systems, which evolved around standardisation, integration and modularisation at global, regional and domestic levels of STI's SSC operation with processes mapping, allowed STI the flexibility to utilise systems tool to implement the alliance portfolio management changes with minimal interruption to the operation.

Studying STI's progress in the implementation of the alliance portfolio management approach as part of the global governance model shows that significant work has been achieved on monitoring and coordinating the alliance portfolio and in developing the alliance portfolio strategy, but more work is still required to develop an established alliance portfolio management system. STI succeeded in launching the alliance portfolio as the platform to establish the knowledge mix and knowledge sharing platform of both explicit operation related and tacit knowledge among the partners. This improvement will be even more effective when the STI SSC management team reaches a more fundamental strategy alignment with STI's Manufacturing Operations SC strategy, as it signals the start of developing the portfolio into a source of competitive advantage to all partners and STI at the organisational level.

Our research provides new evidence for Wassmer's (2010) alliance portfolio management research findings and answers some of the questions and gaps raised in his research on alliance portfolio management tasks. This research found evidence supporting Ozcan and Eisenhardt's (2009) findings that senior management is more likely to adopt the alliance portfolio management approach when visualising the portfolio in the context of the industry or entire network as opposed to a series of single ties and when firms simultaneously form ties with multiple partners. Ozcan and Eisenhardt found that senior management has a holistic understanding of possible interdependencies among types of firms, the locations of unconnected firms, and the presence of industry uncertainties. It also provides a range of strategic alternatives from which management can choose.

6.5.3 Alliance portfolio management influence on vendors' sharing and exchanging knowledge

In their responses and feedback, vendors were opposed before 2009 to exchanging and sharing knowledge both with each other and, in some instances, with STI. In articulating their position, all three vendors expressed willingness to share STI operation related knowledge among each other and obviously with STI but within the boundaries of STI's operation and in what is required to successfully meet STI E2E service delivery process requirements. The vendors have found it more difficult when the expectation of knowledge to be exchanged and shared is more complex, and of tacit and core nature and directly related to the vendors' competitive advantage.

After STI internally introduced the alliance portfolio management approach the exchange and sharing of knowledge was approached differently by the vendors and from different perspectives. Consequently, vendors expressed more openness and willingness to selectively approach the

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exchange and sharing of knowledge among them and with STI provided STI takes more of a guardianship role in the overall partnership structure. It was obvious from vendors' responses, and in particular that of TGS and to a certain extent DLS and ILS, that STI expected, and has the capacity to influence, vendors' decision to cooperate and coordinate in managing operational performance. STI also influenced vendors' decision to share and exchange knowledge, but they conversely have had the capabilities to influence STI's approach of managing the relationship with and among them. From STI's perspective, the alliance portfolio management approach became internally impactful in the way the relationship with vendors was managed. It became even more important that vendors believe in STI's new relationship management approach and understand the importance of engaging in the new state of partnership.

Based on the alliance portfolio management approach, STI's vendor management team was always and openly comparing vendors' performance and level of cooperation, coordination and willingness to engage with each other and this comparison was openly shared with the vendors. DLS expressed its readiness to engage in knowledge exchange and sharing, so long as STI ensured any risk of knowledge leakage was mitigated through arrangements to protect all vendors and STI. TGS expressed willingness to participate in an internal forum run by STI where vendors can anonymously share and exchange knowledge.

The type of knowledge vendors were willing to share was not only STI operational knowledge but that related to strategic solution development to support STI's competitiveness, industry related knowledge, and knowledge which relates to the vendors' global and regional experiences in sourcing and utilising trade compliance information and by-country market regulatory and business requirements to ensure efficient and effective management of STI's operations. While the type of knowledge vendors were willing to exchange and share was to a certain extent of the same complex nature as STI's business operations, services and products, the knowledge can be also classified as tacit.

It is important to mention here that some vendors refused in a subtle way to share core knowledge. ILS openly refused to share and exchange core competitive knowledge because it would be contrary to ILS's interests.

Our research findings suggest that SC alliances inter-organisational relationships can provide opportunities for exchanging and sharing of knowledge as a source of competitive advantage, which are conducive to alliance formation. The exchange and sharing of such types of knowledge in alliances can be achieved provided that a well-managed portfolio alliance is applied with the right

alliance portfolio configuration and knowledge mix. These findings provide some answers to Khamseh and Jolly (2008, p. 37) and He et al. (2007) and empirical evidence for their frameworks.

Our research findings support He et al.'s (2007) exploratory research where the alliance portfolio management approach could provide the necessary guarantees to mitigate knowledge spill over risks throughout the network of partners where all vendors have a shared stake to lose in the partnership if spill-over exists. This research also finds that knowledge transfer and sharing is better understood as a multi-staged phenomenon rather than a "black box".

6.6   Overall Conclusions

The current literature has been missing a holistic framework for the analysis of the constructs of:

- strategic, operational and structural alignment of vendors-customer SC goals and objectives;
- control problems and MCS design and use;
- knowledge exchange and SDP of complex services transaction characteristics and subsequent STI business volumes held by each of the vendors;
- the influence of alliance portfolio management on management controls, control problems and the overall performance of vendors-customer relationship.

The constructs presented as part of Chapter Three's research framework are interconnected through the alliance portfolio management approach introduced by STI and influenced the vendor-customer relationship. Most of the traditional studies of the vendor-customer relationship considered one or more of the aspects of the relationship environment of: dyad or triad relationship, regional or global organisation, one- or two- way relationship, and reciprocal or mutual, but this study is the first to link the constructs through the alliance portfolio management approach as part of a global organisational SC governance model determining the mix of vendors, configuration of service geographic coverage, capabilities, competencies, knowledge and operational performance as part of one coherent alliance portfolio strategy.

The main objective of this research is to provide a business model framework for explaining the influence of partners-customer SC strategic, operational and structural alignment in a complex transaction environment on emergence of control problems and management controls design. The model aims at explaining the mobilisation of the different types of management controls in response to the control problems and the influence of these controls on the overall vendor-customer performance in exchange of services and knowledge. The business model aims at explaining the

influence of alliance portfolio management on individual alliances as well as a portfolio of alliances and how this changes the way management controls are utilised.

The main research problem of this thesis is how vendor-customer relationship performance when exchanging services and knowledge is impacted by the strategic, operational and structural alignment of organisational goals and SC objectives in a complex transaction environment. It explores the influence of the design of MCS and the arising control problems, and what role alliance portfolio management can play in managing individual alliances and how that changes the utilisation of management controls as packages.

The overall research findings endorsed the benefits of utilising the packaged approach of management controls when used in a synchronised way and mobilised based on the dynamics of the business needs to individually or concurrently tackle the arising relationship control problems. Consequently, the major benefits of utilising the packaged approach of formal and informal management controls can be only achieved if the package itself is dynamically well balanced from within (Malmi and Brown, 2008; Sandelin, 2008). In such a case, the package approach could subsequently result in a balanced influence on the management of the STI-vendors partnership on one hand, and the enablement of the smooth and effective implementation of the alliance portfolio management concept on the other.

The balanced management controls package approach represented an opportunity to STI to facilitate the implementation and execution of the alliance portfolio comprehensive strategy in selecting and collectively or individually managing the vendors in what conforms to the overall STI business and service supply chain strategies. It also facilitated the exchange of knowledge among the partners. By the same token, there are risks and associated costs of misalignment and mismanagement, and consequently multiplying control problems to the partnership in not utilising a balanced approach of formal and informal management controls packages that could lead STI to major failure not only to the service supply chain delivery capabilities but could eventually adversely affect the business.

6.7   Contributions to knowledge

The main contribution of this research is in bringing together perspectives on SC alignment, MCS design, control problems, alliance portfolio management, and overall SC management.

This research contributes to further in-depth understanding of SC theory development and provides empirical support of Defee & Stank (2005) strategy-structure-performance theory (SSP) through a better understanding of the alignment process of organisational goals and SC objectives across SC

partners and how theory translates into vendors' performance improvements. It is important to mention that the SSP Theory provides the theoretical basis for distinguishing the primary concept that strategy and structural elements should be aligned to promote organisational performance improvements across the SC and consequently goal alignment across the SC firms and commitment to the SC as a competitive differentiator. The competitive differentiator has been identified as a critical strategic element of the SC with a special focus on the IT systems strategic alignment elements of integration, standardisation, communication and decision-making centralisation and decentralisation (Defee & Stank, 2005; Rodrigues et al., 2004).

A major contribution of this research is to inter-organisational relationship management theory and, in particular, its attempt to explain the impact from the perspective of the recently emerging alliance portfolio management research on the vendor-customer inter-organisational relationship. The findings of the influence of alliance portfolio management research in inter-organisational theory can be claimed to be unique since it is investigated under the influence of strategic alignment and MCS package configuration and controls design aimed at resolving inter-organisational control problems.

The resource-based view of the firm presents another view of the firm's engagement in strategic planning and considers a firm's competitive advantage to be in its internal capabilities and resources rather than its products or services output (Barney, 1991; Stank et al., 2005). Accordingly, firms allocate internal resources to develop appropriate capabilities that lead to performance improvement with the least expenditure. Stank et al.(2005, p. 29) conceptualised resources as "any strength or weakness of the firm and consists of tangible or intangible assets that are tied semi-permanently to a firm". Capabilities are sets of processes that reflect the way resources have been coordinated and competencies are aggregates of numerous specific capabilities potentially spanning lines of business, organisational boundaries, groups, and individuals that a firm performs better than other firms within a similar environment. Accordingly, the findings of this research bridge a gap between the resource-based view of the firm or resource-based theory and SSP theory in a complementary way and in explaining how strategic, operational and structural alignment of organisational goals and SC objectives can create a sustainable competitive edge to the inter-organisational relationship or network of partners and improve SC performance using the SC partners mix of competencies and capabilities as configured under the alliance portfolio management strategy and theory.

This research has attempted to address one of the common concerns of Caglio and Ditillo (2008) where several researchers analysed management control mechanisms, specified individually rather than as part of comprehensive control archetypes. Their works have focused neither on a specific type

nor on a subset of management control mechanisms used in inter-firm relationships, and have not attempted to define archetypal models that link these mechanisms to other forms of control.

Realising the theoretical dimension of Caglio and Ditillo's (2008) concern, in parallel to their work and given the little empirical research in this area, this research attempted at addressing the issue of MCS as a package of controls given Malmi and Brown's (2008, p. 295) assertion of "the fact that little empirical research has addressed the issue of MCS as a package of controls". Caglio and Ditillo (2008), Sandelin (2008) and Malmi and Brown (2008) have similar views of the need to examine control mechanisms from an archetypal or package perspective. This research represented an opportunity to examine how market controls, bureaucratic controls, accounting controls and trust are mobilised in response to control problems by buyers and suppliers from a package perspective. Similarity was found in part between the findings of this study and those of Sandelin (2008) where STI's organisational and operational complexity increased the need to adopt more formal controls but balanced with informal controls due to the implementation of the global governance model and alliance portfolio management approach. The controls were less influenced by the functional dynamics of STI and contributed more towards a balanced package configuration. This research tends to agree in part with Sandelin (2008) that the control package is evaluated against the overall goal attainment of service delivery and knowledge exchange and sharing instead of functional performance.

Our research findings are also unique in introducing the alliance portfolio management dimension in looking not only at the mobilisation process but also at the impact on the MCS package configuration and management controls design.

To a certain extent, the contingency organisational theory and resource-based theories were discussed as part of attempting to look into the analysis of control problems of dependence, appropriation, coordination and cooperation concerns from a holistic perspective. As Caglio and Ditillo (2008) argued, incorporating these theoretical perspectives in focusing on control problems allows better understanding of what could be the complete picture of researching control problems and integrating with the utilisation of the appropriate management controls package. The findings of this research are consistent with prior studies of inter-firm governance structure choices where evidence points to the same variables causing the control problems of appropriation, coordination and cooperation concerns, influencing the design of governance structures for inter-firm transactions (Dekker, 2004, 2008; Gulati et al., 2005).

Different from prior research (Dekker, 2008), this research found uncertainty to have a significant influence on the governance structure and triggered a full review of vendors' contracts and re-establishment of a new comprehensive contractual framework to guide current contracts renewal and new contracts to cover risks of vendors' trade and customs non-compliance issues. This difference could be attributed to the influence of the alliance portfolio management approach introduced by the customer.

The research findings agree with those of Anderson and Dekker (2005), where despite the fact that contracts are incomplete, evidence was found of a relation between contracts extensiveness and transaction hazards due to transaction size, asset specificity and complexity. Transaction size was also found to be linked to the mobilisation of all controls, where customers like STI exposed to vendor possible failure, as in asset specificity, tend to depend more on contracts and with more transaction complexity, customers tend to rely more on rights assignment and contractual terms. This research finds further evidence that supports Anderson and Dekker (2005) that with increased competition in the TPL service providing markets, more effort shifted to define and specify product, service and prices. By the same token, when the vendor is in a position of power relative to that of the buyer, greater efforts are taken to stipulate legal recourse in the event of transaction problems. Given DLS's contract renewal negotiation issues and the related contract cost of non-compliance liabilities and indemnities clauses, a positive relationship exists between contract cost, contract extensiveness and transaction hazards and complexity, and vendors' competition tend to mitigate control problems. Last, the research findings agree with Anderson and Dekker (2005) that alignment between transaction complexity and management control extensiveness and structure tends to reduce the number and severity of control problems and results in less and fewer problems.

TCE theory is considered a lead into resource-based theory. Following from the findings pertaining to buyer decisions in managing the vendor relationship, such decisions will depend on companies' drive to increase their market competitive edge by focusing on their core competencies and outsourcing non-core activities to external or third-party vendors to perform such organisational operations and fundamentally reduce transaction cost. TCE states that a firm's ownership decision is based on minimising the sum of its transaction and production costs (Williamson, 1985). Accordingly, TCE is considered an acceptable foundation for understanding STI's decisions in managing the service pricing reviews with the vendors (Hobbs, 1996). Buyers, as in the case of STI, under market and economic pressures attempt to prevent vendors' from shifting service cost increases onto their books. In effect, TPL service vendors aimed to shift the transaction costs onto STI while STI on the other hand tried all the times to shift as much as possible of process and network infrastructure

improvement project costs on to the vendors'. Our research findings are supported by TCE theory explanation of both STI and vendors' behaviours.

This research contributes to the linkages between the knowledge-based view of the firm, the resource-based view of the firm and SC theory by considering knowledge development as part of the process of inter-organisational knowledge transfer theory. Enhancements to the SC members through the better utilisation of resources, where knowledge has been used as a source of cooperation among partners and in the improvement of the exchange of services and the overall performance of the SC in the inter-organisational relationship environment, are part of this process. Furthermore, better understanding of the relationship between partnership and inter-firm knowledge transfer in an alliance set up has been contributed to by the findings of this research through the utilisation of alliance portfolio management and the influence on the exchange and sharing of knowledge in reducing the severity of control problems by enhancing trust among partners. With the introduction of the alliance portfolio management concept, the knowledge mix became an important element, not only as part of managing vendors' relationships, but also in the vendor selection process by which vendor willingness for knowledge exchange and sharing became part of the initial selection criteria. An important aspect of this research is the investigation and findings of the influence of alliance portfolio management on knowledge transfer theory and the accumulation of alliance portfolio knowledge mix and portfolio capabilities through the alliance portfolio configuration and mix.

Our research is one of the very few that studies alliance portfolio management, inter-organisational relationship research and inter-organisational theory, and the influence on management controls design and controls package configuration as well as impact on control problems in an environment of outsourced global SC services to TPL service providers.

6.8   Implications for Practice

To managers and SC practitioners this research demonstrates the impact of strategic, operational and structural alignment of organisational goals and SC objectives on the improvement of the overall SC performance and the vendors-customer relationship in an outsourced SC services to TPL service providers environment. This research highlights the influence the alignment process has on the design of management controls as well as the impact on control problems resolution when mobilising the management controls as a preconfigured package.

The research adds the importance of the IT systems strategy of standardisation, integration and modularisation to the alignment and management control process not only in monitoring, controlling and resolving control problems but also in the process of SC objectives realignment across the partners.

This research provides managers and SC practitioners with suggested guidelines for systems, people, and infrastructure resources efficient allocation and use in a global setting to ensure strategic, operational and structural alignment of SC objectives optimised in a vendor-customer partnership setting.

Given the little empirical research into the operation, configuration and dynamics of MCS packages some insights have been added into the management controls packaging process. This study attempts to explain the utilisation of packaged management controls in STI as a large multi-layered organisational hierarchy multi-national IT organisation implementing alliance portfolio management. This research provided some level of initial explanation of linkages between formal and informal controls as part of the package configuration. Alliance portfolio management has been found to have influenced management controls design and mobilisation as controls package configuration as well as the portfolio approach to control problems resolution.

In relation to management controls, this research found uncertainty caused by the GFC to have increased vendors' concerns of liabilities and indemnities arising from potential trade and customs rules and regulation non-compliance risks, which triggered extensive review and development of tighter contracts and contractual framework by STI. The framework indicated STI's global emphasis on contracts development and negotiations and represented STI's change in better utilisation and linkage of the contracts as part of the management control package.

An important finding of this research has been the influence of the alliance portfolio management under STI global governance model on the vendor selection process, which reduced the potential risks of coordination and cooperation control problems at the selection process. The reduction in potential risks was achieved by ensuring compliance of the selected vendor to the portfolio configuration and mix of knowledge and capabilities, in addition to the standard selection criteria of functional, professional and contractual competencies relating to transaction size and asset specificity at the selection stage. Evidence of this research indicates that global firms engaging in inter-organisational relationships use the partner selection process and advanced global governance structures with alliance portfolio management to manage and resolve control problems.

This research illustrates how a firm can implement alliance portfolio management in a SSC environment and the benefits of utilising the approach. The alliance portfolio management approach assisted in rebuilding the formal and informal management controls as a package and as part of the global governance model, which allowed STI the opportunity to synchronise the mobilisation of the appropriate configuration of controls package suitable for the achievement of the service exchange, and delivery and exchange and sharing of knowledge.

Informal trust and shared values social and cultural controls independently or as part of the management controls package became more effective in managing and resolving the control problems, especially after introducing the alliance portfolio management concept. Similarly, contracts started to gain a more effective role as a management control mechanism and part of the controls package as the relationship developed into a more strategic alignment dimension.

While knowledge exchange and sharing processes shaped and influenced SC outcomes, the alliance portfolio provides opportunities for knowledge transfer, knowledge access and learning. Knowledge is one of the major sustainable competitive advantages to firms, and the transfer of knowledge is critical to allow firms access to knowledge otherwise not accessible. The alliance portfolio management approach influenced the development of the alliance portfolio mix of knowledge.

Overall, the research provides managers and practitioners, particularly those in multi-national corporations, a framework for the design and utilisation of formal and informal management controls as packages based on global as well as regional SC strategic alignment objectives and organisational goals, and long-term business requirements in managing relationships as a portfolio of alliances using the alliance portfolio management approach for ultimately resolving control problems and challenges.

6.9   Research Limitations and Implications for Further Research

The proposed research framework was based on a relatively small sample which limits generalisation to the wider population. Availability of a larger sample would allow the use of quantitative research methods in addition to qualitative methods. Another limitation of this research which could help in further developing the framework is the limited number and size of case study organisation vendors.

Alliance portfolio management research is an emerging but promising area of research into SC management under the influence of strategic alignment management. Further research in this area is still required. This research presents opportunities for research into areas of inter-organisational relationships and MCS governing these relationships. In particular, a focus in this research area on SC

management, alliance portfolio management and strategic alignment management should focus on MCS package configuration and the system within the package linking and mobilising the controls. Further research is needed to examine the relationship between configuration of the MCS package and SC strategic objectives alignment relevant to the different stakeholders. In other words, what is the package of controls which is likely to be the most effective in a particular type of relationships and settings?

Other relevant areas of research could focus on understanding how controls within the package relate to each other and whether the effectiveness of each control system is dependent on the existing configuration of the package. What are the dynamics that influence the decision-making process of mobilising the controls and controls package? For instance, is it the misalignment between performance measures and the organisational structure used to group activities and tasks, or between the incentive systems and the performance measures, that results in ineffective control?

Knowledge exchange and sharing is another research area, with particular relevance in the current information economy ' Consequently, further research focusing on knowledge exchange and sharing, and the knowledge mix in measuring and managing as one of the important management tools of alliance portfolio management is required to explain the SC opportunities of enhancing performance and improving inter-organisational relationships.

Future research is required to expand and test the framework into other different SC management settings, such as in manufacturing, and by including important elements that influence inter-organisational relationships, such as power games between vendors and customer.

6.10 Summary and Conclusion

The framework presents a comprehensive model for global enterprise companies in developing an overarching global governance model that incorporates a strategic, operational and structural alignment initiative for the external relationship with the vendors or TPL service providers and internally the alliance portfolio management approach for the customer or buyer to develop the right portfolio strategy that determines the selection process of new vendors and their portfolio fit to the firm's portfolio configuration of competencies, capabilities and knowledge. The portfolio strategy and consequently the portfolio configuration are determined by the SC's strategic objectives that are aligned to those of the partners' and the firm's overall organisational goals. The framework provides one of the most important aspects of dynamic linkages of the partners' strategic objectives not only to

the firm's SC strategic objectives but also to the overall firm's organisational goals. From the external side of the relationship, the framework provides the firm the necessary flexible solution to address the environmental, financial and economic uncertainties by increasing the efficiencies of the dynamic interlocks between the vendors and customer to collaboratively address the external risks. The outcome of this dynamic linkage ensures the vigorous and live mutual feed between the SC vendors and the customer which contributes to ensuring that vendors are positively responding to the customer needs of continuously developing the customised, smart and differentiated services and solutions that meets the customer's SC strategic objectives and organisational goals. The framework provides a solution to the exchange of services and exchange of knowledge among the SC partners as the major underlying factor to continuously improve vendors' performance and the optimum level of shared investments and cost of investments in SC infrastructure and IT systems.

The framework addresses the issue of controlling the complex relationship between vendors and customer stemming from the nature of the business, complex systems, geographic spread and sophisticated services. In such a case, and in addition to the support the alignment initiatives provide in facing the challenges of the relationship control problems of cooperation, coordination and misappropriation, it helps in developing the right set of packaged management controls. Packaged management controls may deal with the practical nature of control problems that can arise and concurrently coexist. These packages of management controls were not only reengineered by the new framework but also represented in a balanced way in terms of the right combination of formal and informal management controls to address the control problems.

The qualitative multi-case study approach utilised in conducting this research has positive implications for the SCM theory and practice as well as limitations that can be addressed by further research. It is believed that this research has contributed to the body of knowledge mainly in the areas of SC management, strategic alignment, MCS and alliance portfolio management.

7. APPENDICES

APPENDIX A: FIRST INTERVIEW QUESTIONS

Interview Questions – 1st wave interview questions

Background

1. Please describe your role in the organisation and how long you have been in it?
2. Could you provide some brief background as to your experience prior to your current role?
3. How would you define the main strategies and goals of your organisation?

The Importance of the Supply Chain/Customer Relationships

4. What role do customer relationships play in your organisation's strategies and goals?
5. What challenges does your organisation face in managing customers?
6. Reflecting on the relationship with STI, how would you describe:
    a. Its specific importance to your organisation?
    b. The extent to which the relationship is positive or successful from your organisation's perspective and why?
    c. The main factors that have contributed to the relationship's success or lack thereof?

Supply Chain Management

7. What actions have your organisation and STI have undertaken to:
    a. Enhance the value provided to STI
    b. Enhance the value realised from the relationship with STI
    c. Manage the risks and problems that have arisen?
8. What role do formal management processes such as contracts, performance measurement, incentives and benchmarking play in the relationship with STI?
9. What role does trust and values alignment play in the relationship with STI?
10. To what extent has the way your organisation manages the relationship with STI changed over time and why?

Interview Questions – 2nd wave interview questions

Background

11. Please describe your role in the organisation and how long you have been in it?
12. Could you provide some brief background as to your experience prior to your current role?
13. How can you explain your organisation's main partnership management guidelines in managing buyer-supplier SC relationship?

The Importance of the Supply Chain/Customer Relationships

14. What role does the supply chain operation play in achieving your organisation's goals and objectives? [for STI]
15. What role commonly agreed operational goals and objectives underlying the SC relationship, plays in creating SC alignment and successful relationship? [insert STI, DLS, TGS or ILS as appropriate]
16. Does your organisation have commonly accepted standard operating procedures and processes with SC partners/customers, and do you believe such procedures are essential to the success of the relationship in meeting performance targets? [insert STI, DLS, TGS or ILS as appropriate]
17. What challenges does your organisation face in managing the supply chain? [for STI]
    What challenges does your organisation face in managing customers and are there mechanisms such as escalations process, review meetings and account management to manage customers? [for DLS, TGS or ILS]
18. Reflecting on the relationship with [insert STI, DLS, TGS or ILS as appropriate], how would you describe:
    a. Its specific importance to your organisation?
    b. The extent to which the relationship is positive or successful from your organisation's perspective and why?
    c. The main factors that have contributed to the relationship's success or lack thereof?

Supply Chain Management

19. What actions have your organisation and/or [insert STI, DLS, TGS or ILS as appropriate] undertaken to:
    a. Enhance the IT systems and B2B linkages to facilitate information and knowledge exchange and sharing [insert STI, DLS, TGS or ILS as appropriate]
    b. Enhance the openness, transparency and trust realised from the common operational workshops, process development, training and collaborative teams-work meetings [insert STI, DLS, TGS or ILS as appropriate]
    c. Manage the risks and problems that have arisen where performance deteriorates or targets unmet?

20. What role do formal management processes such as contracts, performance measurement, incentives and benchmarking play in the relationship with [insert STI, DLS, TGS or ILS as appropriate]?

21. Does your organisation believe that trust is the outcome of achieving performance KPIs, overcoming challenges, and sharing risks and rewards? [insert STI, DLS, TGS or ILS as appropriate]

22. What role do trust and values alignment play in the relationship with [insert STI, DLS, TGS or ILS as appropriate]?

23. To what extent has the way your organisation manages the relationship with [insert STI, DLS, TGS or ILS as appropriate] changed over time and why?

Questions on STI utilising alliance portfolio management to manage vendor relationships

Relationship modularity:

1. How operationally practical and feasible to acquire or terminate and change TPL vendors?
2. Do you manage the relationship of any of the TPL vendors entirely on its own merits as a standalone transaction or as part of managing the portfolio of alliances or relationships of all TPL vendors?
3. Based on performance KPIs, STI is entitled to exercise certain contractual rights of terminating relationships with non-performing vendor and starting new relationships with new vendors. Given the all the processes and systems set ups and interfaces requirements, do you believe this process is feasible and operationally practical enough to be exercised and why?
4. Do you believe that the flexibility to terminating TPL vendors' relationships and contracting new ones helps in mitigating risk of dependence on individual vendors especially as part of the portfolio of vendors?
5. Do you manage the relationships with STI TPL vendors as an alliance of individual relationships or alliance portfolio?

Alliance portfolio management:

1. Selecting new TPL vendors is based on how they fit the portfolio of alliances. Do you agree and why?
2. In terminating current vendor's relationship and starting new vendor relationship, do you consider the mix of knowledge that can be leveraged across the portfolio of alliances?
3. In managing the TPL vendors' relationships, do you consider the mix of knowledge that can be leveraged across the portfolio of alliances?
4. In managing the TPL vendors' relationships, do you consider the set of competences across the portfolio of alliances?
5. In managing the relationships among TPL vendors, how do you balance the utilisation of synergies of knowledge sharing and the operational service delivery across vendors' portfolio of alliances (*Resource Dependency, service quality, knowledge sharing, and different levels of resource endowment among vendors*)?
6. What's your portfolio strategy and alliance strategy in managing TPL vendors' relationships and how do you monitor and coordinate the vendors' relationships?
7. Is there an alliance management system and how do you measure the success of your alliance portfolio strategy (*At 3 levels: individual alliance level thru operational KPIs, at portfolio level thru department's all vendors consolidated service delivery performance KPI and financial performance, and at corporate level thru achieving the corporate service delivery objective-industry competitiveness position/vendors strategic importance to STI and reputation*)?

8. In managing the alliance portfolio as a knowledge-sharing network among STI and the TPL vendors, do you aim at a particular strategic objective to achieve (e.g. competitive advantage)?

9. How do you establish trust among the TPL vendors as part of managing the alliance?

10. What tools does STI employ to configure the alliance portfolio of TPL vendors to fit the strategic objectives (such as knowledge management: sharing of alliance best practices and related knowledge)?

11. What determines the configuration of the alliance portfolio (*factors such as the number of vendors, the type of vendors, expertise of vendors, knowledge resources, and reputation*)?

12. What triggers a change in the configuration of the alliance portfolio?

13. How does the alliance portfolio approach of managing TPL vendors relationships influence the performance of individual vendors?

14. How do you manage the alliance portfolio size-performance-cost-benefit equation for optimum outcome of the portfolio?

15. How important the alliance portfolio approach of managing TPL vendors' relationships in mitigating operational and strategic risks?

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18 January 2010

Mr A Charafeddine
PO Box 977
Rockdale NSW 2216

Reference: Charafeddine_R00003

Dear Ali

RE: FINAL APPROVAL

Title of project: "Influence of supply chain alignment and management control systems on supply chain performance: Examining product/service and knowledge exchanges"

Thank you for your recent correspondence. Your response has addressed the issues raised by the Ethics Review Committee (Business & Economics) and you may now commence your research.
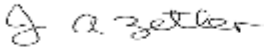
Please note the following standard requirements of approval:

1. Approval will be for period of twelve (12) months. At the end of this period, if the project has been completed, abandoned, discontinued or not commenced for any reason, you are required to submit a Final Report on the project. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. The Final Report is available at: http://www.research.mq.edu.au/researchers/ethics/human_ethics/forms

2. However, at the end of the 12 month period if the project is still current you should instead submit an application for renewal of the approval if the project has run for less than five (5) years. This form is available at http://www.research.mq.edu.au/researchers/ethics/human_ethics/forms. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report (see Point 1 above) and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

3. Please remember the Committee must be notified of any alteration to the project.

4. You must notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that might affect continued ethical acceptability of the project.

5. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University
http://www.research.mq.edu.au/researchers/ethics/human_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide Macquarie University's Research Grants Officer with a copy of this letter as soon as possible. The Research Grants Officer will not inform external funding agencies that you have final approval for your project and funds will not be released until the Research Grants Officer has received a copy of this final approval letter.

Yours sincerely

Julie Zetler
Chair, Ethics Review Committee
(Business & Economics)

APPENDIX E: LIST OF DOCUMENTS USED IN THE STUDY

Document Title	Document Type	Period/Date
STI Cost Report	Internal Financial Report	FY2008
STI Cost Report	Internal Financial Report	FY2009
STI Cost Report	Internal Financial Report	FY2010
STI Balanced Scorecard Report	Management Report	FY 2008
STI Balanced Scorecard Report	Management Report	FY 2009
STI Balanced Scorecard Report	Management Report	FY 2010
Vendor Selection Process and Policy	Controlled Policy Document	Review Date April 2010
DLS Quarterly Business Review Meeting Presentation	Partner Overall Performance Presentation	FY 2010
TGS Quarterly Business Review Meeting Presentation	Partner Overall Performance Presentation	FY 2010
STI Vision, Strategy and Execution Statement	Management Report	FY 2010

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