The contribution of intangible resources to the post strategic co-operation success of container lines:

Perspectives of senior managers in agencies and regional offices

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ABSTRACT

Container lines have been the main transport mode linking most markets engaged in global trade. To cater for the growing customer demands, container lines have adopted various approaches such as forming strategic co-operations to achieve rapid growth and providing efficient services through the integration of resources. The spectrum of strategic co-operations among container lines varies from loose-knitted slot charters, liner conferences, shipping alliances, joint services and consortia, through to mergers and acquisitions (M&As). However, these forms of strategic co-operations have not always been able to achieve the intended synergetic growth resulting from the integration of resources.

The Resource Based View (RBV) suggests that integrating intangible resources, which are valuable, rare, inimitable and non-substitutable (VRIN), can make a significant contribution to the performance of post strategic co-operations. The objective of this thesis is to investigate the contribution of intangible resources to the post strategic co-operation success of container lines. Therefore, the thesis focuses on the following primary research question (PRQ):

PRQ: Does the integration of intangible resources contribute to the post strategic co-operation success of container lines?

To further examine PRQ two subsidiary research questions (SRQ1 and SRQ2) are explored.

SRQ1: Which intangible resources provide the greatest contribution to the market success of container lines?

SRQ2: Do container lines adopt processes to ensure the successful integration of intangible resources when strategic co-operations are being developed?

The design used for this study is a two stage methodology enabling both quantative and qualitative research approaches. The two stage approach helps to identify firstly the senior managers' view of the importance of intangible resources and secondly how intangible resources are integrated during strategic co-operations among container lines. The sample consists of 84 senior managers (with a response rate of 51 per cent and thus 47 usable questionnaires) attached to regional offices of leading global container lines and their agents in Colombo, the capital of Sri Lanka. The first stage was conducted via an exploratory mail survey with the objective of investigating senior managers' understanding of intangible resources, importantly, the findings of stage one enabled more probing questions to be developed and identified suitable respondents for the second stage of the research. Due to the need for more qualitative responses, stage two was conducted as in-person interviews, with a greater, focus on (i) the extent that intangible resources were being integrated, (ii) the processes adopted to integrate intangible resources, and (iii) the organisation and economic performance of container lines during post-strategic co-operation. The in-depth in-person interviews achieved 100 per cent response rate with participation of 36 senior managers.

The findings of stage one, which addressed SRQ1, revealed that respondents attach a higher importance to intangible resource items such as the reputation of the company,

and organisational processes and capabilities. These intangible resources provide major benefits to container lines such as attracting customers and enabling internal functions of container lines including the closely related functions of marketing the services of the container lines.

During the stage two in-person interviews, differences were found in how intangible resources were integrated among Limited integrated strategic co-operations (LISCs) (shipping alliances, joint services and consortia) and acquisitions. In LISCs, due to their loosely integrated structure and antitrust laws, sailing schedules have become the only closely integrated intangible resource. Other intangible resources such as organisational processes, capabilities and organisational culture are kept away from the strategic co-operations to gain competitive edge for the individual container lines. The integration of sailing schedules in LISCs has helped the container lines to increase the frequency of services, enter into new trade routes by reducing cost.

In acquisitions, apart from sailing schedules intangible resources such as the capabilities and organisational processes of the acquirer container line are adopted by the new entity. The container lines adopted different processes such as organising staff meetings, mixed project teams, joint training sessions, and appointing task teams to integrate these intangible resources in acquisitions. However, colonising of the acquired container line with intangible resources of the acquirer container line and neglecting the important intangible resources of the acquired line has hindered the integration of acquired container line staff to the new entity. Hence, high staff turnover among senior managers was evident in all the acquisitions during the post-acquisition period. This top

management turnover, especially in the marketing functions has adversely affected the intended synergetic growth of market share of these acquisitions.

Thus, the two stage study helped address both PRQ and SRQ2 by revealing that intangible resources are important to the market success of container lines, and container lines are advised to identify these intangible resources and adopt processes to integrate them when strategic co-operations are being formed.

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LIST OF ACRONYMS

ANZDL	Australia New Zealand Direct Lines
APL	American Presidents Line
CEO	Chief executive officer
CKYH	COSCO Line, K-LINE, Yangmin Line, Hyundai Line
CMA-CGM	Compagnie Maritime d'Affrètement- Compagnie Générale Maritime
EC	European Commission
EDI	Electronic data interchange
EU	European Union
GDP	Gross domestic product
HR	Human resources
IMF	International Monitory Fund
IT	Information technology
KMO	Keiser Meyer Olkin (test)
LISC	Limited integrated strategic co-operation
M&As	Mergers and acquisitions
MOL	Mitsui OSK Lines
NOL	Neptune Orient Lines
NYK	Nippon Yusen Kaisha Line
OECD	The Organisation for Economic Cooperation and Development
OOCL	Orient Overseas Container Line
PRQ	Primary research question
RBV	Resource based view
SRQ1	Subsidiary research question 1
SRQ2	Subsidiary research question 2
TAA	The Trans-Atlantic Agreement
TEU	Twenty foot Equivalent Unit
UK	United Kingdom

UNCTAD	United Nations Conference on Trade and Development
USA	United State of America
VRIN	Valuable rare inimitable and non-substitutable
VRS	Voluntary redundancy scheme
WTO	World Trade Organization

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

The growth in global trade during past two decade has exerted pressure on container lines to grow rapidly. The growth in container lines has occurred in the form of, more routes, increased number of port calls, and a higher frequency of services (Das 2011). However, the organic growth through the purchase of ships and entering into new routes is considered too slow by most container lines. Thus, container lines have adopted strategic co-operations to expand service coverage and increase freight revenue. The spectrum of strategic co-operations among container lines varies from loose knitted slot charters, liner conferences, shipping alliances, joint services, consortia and mergers and acquisitions (M&As). Conferences, shipping alliances and M&As among global container lines have increased during the last two decades as an alternative to internally generated corporate growth.

However, success of the strategic co-operations among container lines is a factor to be concerned, as most strategic co-operations such as consortia, conferences, shipping alliances and M&As did not survive the intended period or achieve the synergetic growth by integrating the resources of partnering container lines (Midoro and Pitto 2000). Thus, several researches have focused their studies on identifying factors, which contribute to the success and motives for forming strategic co-operations among container lines (Ryoo and Thanopoulou 1999). The study by Lu, Cheng and Lee (2006), for example focused on identifying factors, which contributed to the formation of the COSCO K-Line Yangmin Hyundai (CKYH) alliance.

The Resource Based View (RBV) identifies strategic co-operations as a window of opportunity to access the partners' key capabilities and resources (Hamel, Doz and Prahalad 1989). In contrast to the transaction cost logic (Hennart 1988; Williamson 1985), which emphasizes cost minimisation, the RBV emphasises value maximisation of a firm through integrating valuable resources of partnering firms (Das and Teng 2000). Therefore, the integration of resources through strategic co-operations improves the strategic position of a firm by enabling them to be competitive by providing resources from other firms to share costs and risks. Further such resources give firms a cushion to weather business down times and other setbacks and ensure predictable resource flows. Hence, the RBV theory suggests that the competitive advantage of strategic co-operation is based on the effective integration of the firms' valuable resources. The critical feature in terms of RBV is whether there is a resource alignment among firms (Seabright, Levinthal and Fichman 1992).

Research studies in other industries have revealed that decisions and negotiations of strategic co-operations still centre on financial and legal issues, and rarely involve the personnel function. Further, according to Cartwright and Cooper (1995, p. 32)

> In a survey carried out by London Business School on 40 British acquisitions, all 40 companies conducted a detailed financial and legal audit of the company they intended to acquire. Although 30% of the companies considered the financial implications of employee pension arrangements, not one made any attempt to carry out any audit of the company's human resources to assess the indigenous of they were acquiring.

With the growth of the service industry the importance of intangible resources and their contribution to competitive advantage of firms have grown (Buono and Bowditch 1989; Chatterjee et al.1992) According to Fahy (2002), in terms of major contributors to global economic growth, service industries have achieved the highest percentage of

gross domestic product (GDP) (Hufbauer and Warrant 1999). Thus fundamental resources or factors of production and source of competitive advantage in many service industries are intangible resources, rather than the more traditional financial and physical resources of manufacturing industries (OECD 2001), because valuable, rare, inimitable and non-substitutable (VRIN) intangible resources are the basis of service differentiation among competing firms (Fahy 2002). As these VRIN resources are mainly people-dependent and are closly attached to firms, although acquiring firms may be confident that they have acquired some of acquirers' intangible resources (such as patents), they cannot be confident as to the retention these resources (such as know-how, culture or networks) as staff may walk away from the new entity (Dieriks and Collis 1989).

As a strategy of effective integration of these intangible resources, the process perspective of the integration of intangible resources in strategic co-operations proposes a five stage process model that includes selecting the mode of operation, locating partners, negotiating, and setting up the alliance, operations, evaluation and modification in a process. More specifically in M&As where there is close interaction of the human element, the processes to integrate intangible resources can be broadly categorised into two sub processes (Birkinshaw et al. 2000), them being task integration and human integration. Task integration focuses on the value creation of M&As by integrating intangible resources such as capabilities, intellectual property, reputational and organisation processes. Human integration is concerned primarily with generating employee satisfaction, and ultimately a shared identity, among the employees from both firms mainly by integrating the cultures of the partnering firms (Birkinshaw et al. 2000). According to Blake and Moutan (1985), although task integration and human

integration sub-processes are conceptually distinct, they are not independent of one another. This is because aspects of human integration, such as enhanced employee satisfaction, are likely to make capability transfer and other intangible resources sharing easier; and task integration, in turn, is likely to enhance the employee satisfaction and shared identity (Blake and Moutan 1985).

Task integration and human integration require predominantly different management actions (combining and eliminating operations versus building an atmosphere of mutual respect and trust), and focus on different objectives (operational synergies versus employee satisfaction) (Jemison and Sitkin 1986). However it is identified that one sub process cannot be executed with relatively little concern for the other (Birkinshaw, et al. 2000). Therefore, the individuals responsible for the management of the entire merger or acquisition are expected to reconcile the management of the two sub processes (Birkinshaw et al. 2000).

However, among container line research not many studies have been conducted on identifying resources that contribute to the market success of container lines and more specifically, on the contribution of integration of intangible resources to success of strategic co-operation performance.

1.2 Purpose of this research

This thesis argues that in the present competitive global context, the effective management of intangible resources is an essential factor for container lines to successfully provide a reliable, punctual, safe, customised service with increasing frequency. Further, this thesis asserts that the successful integration of intangible

resources is an important consideration for the performance and growth of container lines involved in strategic co-operations.

Accordingly the purpose of the current research study is to explore firstly, the recognition of intangible resources by senior managers and their perceived importance to the success of a container line's business. Further, the survey explores how intangible resources are being valued by container lines and their agents and the potential benefits of managing these resources successfully.

Thus, the primary research question (PRQ) for this study is

PRQ: Does the integration of intangible resources contribute to the post strategic co-operation success of container lines?

To further examine PRQ, two subsidiary research questions (SRQ1 and SRQ2) are explored. In order for the container lines to manage their resources during strategic co-operations the container lines need to identify the intangible resources that contribute to their market success Therefore, the first subsidiary research question (SRQ1) explores whether container lines have an understanding of their intangible resources with relevance to which intangible resources contribute to their market success.

Thus, the first subsidiary research question (SRQ1) is

SRQ1: Which intangible resources provide the greatest contribution to the market success of container lines?

For the container lines to be successful in strategic co-operations, they have to adopt processes to integrate intangible resources. If not, incompatibilities arising in integrating

intangible resources can result in the loss of intangible resources from them. This would result in the deterioration of service performance. Accordingly, the second subsidiary research question explores the processes that container lines adopt to integrate these intangible resources when strategic co-operations are being developed.

SRQ2: Do container lines adopt processes to ensure the successful integration of intangible resources when strategic co-operations are being developed?

1.3 Proposed contribution of the research

The primary contribution of this research is to identify the contribution of integration of intangible resources to the success of strategic co-operations. In addition the current study will identify valuable intangible resources which contribute to market success of container lines. Another significant contribution of the study will be to gain an understanding of senior managers extent of knowledge about intangible resources. Furthermore, the processes the container lines have to adopt to integrate these intangible resources will be identified. A suitability of a two stage methodology to investigate integration of intangible resources will be focused. Application of RBV perspective on strategic co-operation to analyse the resource integration in strategic co-operation among container lines will be another contribution.

1.4 Overview of the thesis

Chapter One is the introduction to this thesis. It begins with the general background related to this research and explains the research questions, the structure of this thesis, and the potential contribution of this research to the management literature and practices.

Chapter Two begins with examining the development of containerisation and its contribution towards global trade growth. The chapter then explains the range of strategic co-operations among container lines and concludes by identifying factors that affect the success of strategic co-operations.

Chapter Three begins by studying in-depth the development of RBV. An analysis of the resources is then presented by classifying them according to their characteristics. The chapter then discusses the relationship between the formation of strategic co-operation and resources in firms.

Chapter Four provides the rationale for the development and implementation of a two stage data gathering process. The chapter continues by identifying the sample selection of the respondents and design and administering of the questionnaires for both methods of data gathering.

Chapter Five discusses the findings of the stage one mail survey. The chapter begins by identifying the profiles of respondents and the regional offices and the agencies which represent the global container lines. The major part of this chapter focuses on the perceptions of respondents on the contribution of intangible and tangible resources to the market success of the container lines.

Chapter Six focuses on the findings of the second stage of the research, which was conducted as in-person interviews. The interviews were focused on the integration of intangible resources in strategic co-operations among container lines. Strategic co-operations among container lines are categorised into two groups based on the level of integration as limited integrated strategic co-operations (LISC) and closely integrated

strategic co-operations (acquisitions). Accordingly the chapter begins by discussing the integration of intangible resources in LISCs (shipping alliances, joint services and consortia) and then on the closely integrated acquisitions.

Chapter Seven highlights the most important findings of the research within the study's limitations and provides an evaluation of its achievement in relation to answering the research questions. Directions for future research are also addressed.

CHAPTER TWO

STRATEGIC CO-OPERATIONS AMONG CONTAINER LINES

2.1 Introduction

This chapter examines the development of containerisation and its contribution towards global trade growth in order to identify the changing role of container lines in the global supply chain. The chapter then introduces how strategic co-operations among container lines have been formed with the objective of meeting the challenges of the global environment. The main features of strategic co-operations are then explained along with the motives for their formation. The chapter concludes by identifying the importance of integrating intangible resources to post strategic co-operation success.

2.2 Development of container services

The origin of containers can be traced back to World War I. During the war, containers were used by the United States to transport ammunition to Europe (Fossey 2007). Since 1928, the European railways have increased the efficiency of exchanges between train and road transport by using containers (Fossey 2007). For example, Van Gend and Loos, a Dutch door-to-door forwarding company, used wooden and then metal containers to transport goods from the train with the intention of minimising delays between interfaces (Fossey 2007).

In the mid 20th century Malcolm McLean, the American road transporter, encountered problems in transporting goods due to the many incompatibilities that existed within the transportation industry in the US (Fossey 2007; Midoro, Musso and Parola 2005; Slack and Fremont 2009). This prompted him to develop a method to minimise delays between the differing modes of transport. As a result, in 1956 he introduced containers to a service from Newark to Houston (Texas) using a converted tanker, the ‘Ideal X’

(Fossey 2007), which became the world's first known containerised transportation of cargo by sea. This movement of cargo between different modes of transport (land and sea) has become one of the main technical features that revolutionized the liner industry. Previously the liner industry transported cargo as break bulk (Stopford 2008). With this innovation more types of cargo were attracted to be transported using container lines (Stopford 2008). McLean then went on to establish Sea-Land Container Lines, (Fossey 2007) the first Trans-Atlantic container service to open up long-distance containerised trade (Slack and Fremont 2009). The maiden voyage of Sea-Land Container Lines occurred in 1966.

In 1968 the Orient Overseas Container Line (OOCL) was established in Hong Kong. By 1970 the OOCL line started operating the first fixed-day container service in the Trans-Pacific (Slack and Fremont 2009), which was another landmark in the container liner service development. A fixed-day service provided continuation for the service, thereby enabling customers to plan their product movement accurately. Although regular services had been provided by liner services previously, these services were not able to operate with punctuality due to problems in cargo handling. The year 1968 also saw the commencement of operation of a few other container lines such as Evergreen and Neptune Orient Lines that later became global leaders (Rimmer 1998). These container lines, along with Korea's Cho Yang, Hanjin Shipping and Korean Shipping Company were all leading players in container shipping by the mid-1970s. A few years later in 1973, the present market leader, Denmark's Maersk Line, commenced container operations (Rimmer 1998).

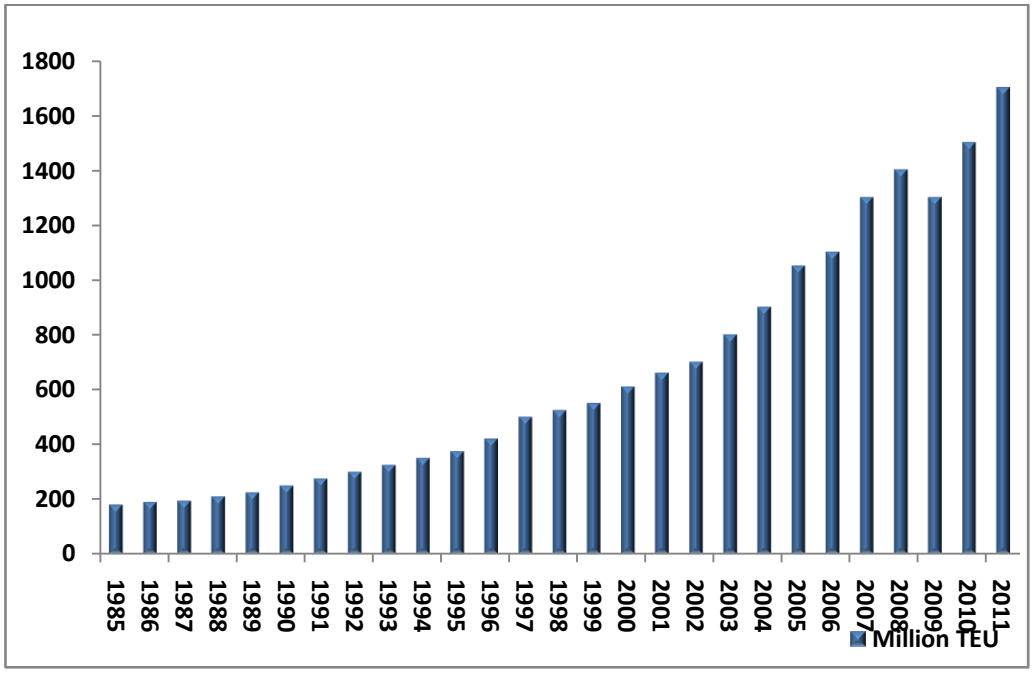
The containerisation that took place in the liner industry, along with other macroeconomic policy changes such as the liberalisation and deregulation of markets and the removal of trade barriers by international trade organisations (such as WTO and UNCTAD) further facilitated the growth of containerised cargo volumes globally (Midoro, Musso and Parola 2005; Midoro and Pitto 2005; Notteboom 2004; Notteboom and Rodrigue 2009). These changes allowed industrialised nations around the world to source the semi-finished industrial products or raw material needed for their industries from other regions of the world (Notteboom 2004). This view is further strengthened by Rodrigue and Notteboom (2009, p.1) by their comment that

> Low transport costs help make it economically sensible for a factory in China to produce Barbie dolls with Japanese hair, Taiwanese plastics and American colorants, and ship them off to eager girls all over the world.

Therefore, today's containerised transport is much more than a container; it is a system of production and distribution (Rodrigue and Notteboom 2009). Without the important role played by container lines, it is unlikely that Japan would have risen to take its place among the ranks of the world's wealthiest nations, and the speed with which China grew in the 21st century is also attributable to containerisation (McLellan 2006). While initial container trade mostly involved finished goods and semi finished goods, today containerisation also concerns commodities. Apart from the high-value time-sensitive cargoes**,** seasonal consumer goods such as garments and perishable goods such as fruits and other food commodities are now exported to Europe and US markets from Asia, Africa and South America using container lines (International Monetary Fund Secretariat 2007). As Figure 2.1 indicates, during the last two decades, global trade has grown by one billion tons (UNCTAD Secretariat 2011). Further the growth in container cargo volumes in all major trade routes is an example of the impact of containerisation

on global trade development, for example in 2010 the Pacific trade route, which links the Far East to the USA, reached 18.5 million TEUs (UNCTAD Secretariat 2011). In the same period other major trade routes such as the Asia-Europe trade route reached 18.3 million TEUs. The Trans-Atlantic route linking Europe with North America also has increased (but at a lesser pace compared to Asian sectors) to reach 6.2 million TEUs by the year 2010 (UNCTAD Secretariat 2011). It is evident that container lines have been the main transport mode linking most global markets (UNCTAD Secretariat 2007).

Figure 2.1: Global containerised trade growth TEU 1985–2011



Source: developed from Review of Maritime Transport (2011, p. 20)

To cater to this global demand for maritime transport, all the container lines operating globally have set up their own network of agents and regional offices (McCalla, Slack and Comtois 2004). These agencies and regional offices are the life lines of these container lines (Frémont 2009). They are responsible for the marketing of container

services, handling shipping documents and vessel operations (when vessels reach the ports) (McCalla, Slack and Comtois 2004). Furthermore, some of these container lines provide logistical services and freight forwarding to attract more customers to their container line (Frémont 2009). Thus offices are directly engaged with the customers and their conduct has an impact on the services offered by container lines (Frémont 2009). Maersk Line for example, has established more than 250 offices and has close to 10,000 employees in over 70 countries to serve more than 80,000 customers across the globe. Similarly American President Line (APL) has in excess of 200 offices worldwide, and their motto is “always ready to move the business forward and help you expand” (APL 2011).

With over 650 shipping agencies all over the world, Compagnie Maritime d'Affrètement-Compagnie Générale Maritime Line (CMA-CGM) Line promotes their services to customers by declaring “There will always be a CMA-CGM agency or office to make it easy for you, and a vessel to take your containers to your destination”(CMA-CGM 2011). Evergreen Line serves over 240 locations around the world in Asia, America, Europe, the Middle East, Australia and Africa (Evergreen 2011). Further as a multi-national, multi-lingual, service-driven container line Mitsui Osaka Line (MOL) offers customer focused professionals with the experience to evaluate and develop strategic service packages (MOL 2011). Hapag-Lloyd Line states that their global sales network has 300 offices in 114 countries. The Hapag Lloyd agency network is shown as an example to indicate the widespread of agency and regional office network of the container line (see Figure 2.2) (Hapag-Lloyd 2011). These offices play an important role in generating business in different parts of the world by representing the container line.

The examples cited above demonstrate that, along with the growth of container lines, global agency and regional office networks have also undergone rapid expansion. These networks are focused on providing customised services to their clients. No longer are the container lines merely transporting a container from point to point, they are providing a transport solution (Slack and Fremont 2009). Therefore, the contribution of these regional offices and agencies has been crucial to the market growth of container lines.

Figure 2.2: Hapag-Lloyd Line's agency and regional offices network

Source : Adapted from Hapag-Lloyd Line (2011)

2.3 Strategies of container lines to meet global demand

To cater to the growing customer demand, container lines have enhanced the quality of services by increasing service frequency, punctuality, reliability and safety, while ensuring wider geographical coverage (Evangelista and Morvillo 2000; Rodrigue and Notteboom 2009; Notteboom and Winkelmans 2009). For example, a weekly service requires as many as seven or eight ships on the Asia-Europe routes (Sato 2002) and five or six such ships for the North America routes. In addition, these services have to be supported by a wide spread of branch networks and office staff (Das 2011; McCalla, Slack and Comtois 2004; Rimmer 1998). Further, to support the service the container lines have had to develop their own customer base, thereby generating cargo volumes to sustain these services (Das 2011).

However, the high fixed costs involved in the container liner industry, difficulty in accessing valuable resources from the market and low freight rates takes a long time to achieve the target growth organically (Das 2011; Heaver 2002; Song and Panayides 2002). Thus, container lines have adopted horizontal co-operations such as alliances, partnerships and M&As to access the resources needed to expand their services (Brooks, Bluden and Bigood 1993; Brooks and Ritchie 2006; Merikas, Polemis and Gounopoulos 2010; Notteboom 2004; Pierre 2000). In the literature, horizontal co-operations among container lines are identified with different labels such as strategic alliances (Das 2011; Ryoo and Thanopoulou 1999), strategic co-operations (Ryoo and Thanopoulou 1999) and horizontal co-operations and partnerships (Cruijssen et al. 2007). However, in the current study all horizontal co-operations are identified as being

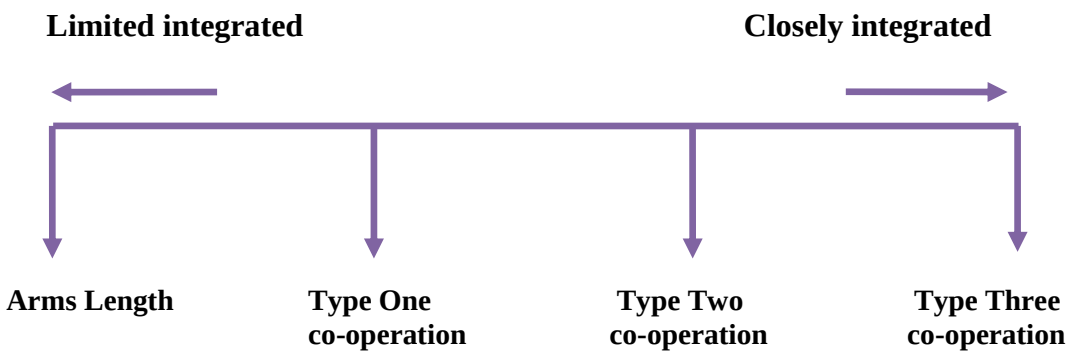
strategic co-operations. The next section explains the types of strategic co-operations that prevail among firms generally and, more specifically, among container lines.

2.4 Strategic co-operations

Simatupang and Sridharan (2001) define horizontal co-operations (strategic co-operations in the current study) as a combination of vertical and horizontal co-operations. This combination, through merging and sharing capabilities in both horizontal and vertical contexts increases flexibility Lamber et al. (1999) and Cruijssen et al. (2007) identify four types of strategic co-operations among firms which differ depending on the level of integration (see Figure 2.3). In an arm's length strategic co-operation, communication is limited and, although firms may co-operate over a prolonged period, usually interactions are also limited in number, because there is no strong sense of commitment or joint operations (Cruijssen et al. 2007; Lambert, Emmelhainz and Gardner 1999). Firms in a Type One strategic co-operation (as per Figure 2.3) differ in that there is co-ordination of activities and planning, although they tend to be limited in terms of time-span, extent, strength and closeness. The co-operation usually involves a single activity of the firm (Lambert, Emmelhainz and Gardner 1999). The Type Two strategic co-operation is more than just on co-ordination of activities, but involves a longer-term integration of each firm's business planning involving multiple divisions or functions. With regard to the most closely integrated strategic co-operations, Type Three firms have integrated their operations to a level where they regard each other as an extension of itself (Cruijssen et al. 2007). This type of strategic co-operation is often recognised by researchers as an M&A. The varying

level of integration as shown in Figure 2.3 can also be observed within the strategic co-operations of container lines.

Figure 2.3: Categorisation of strategic co-operations

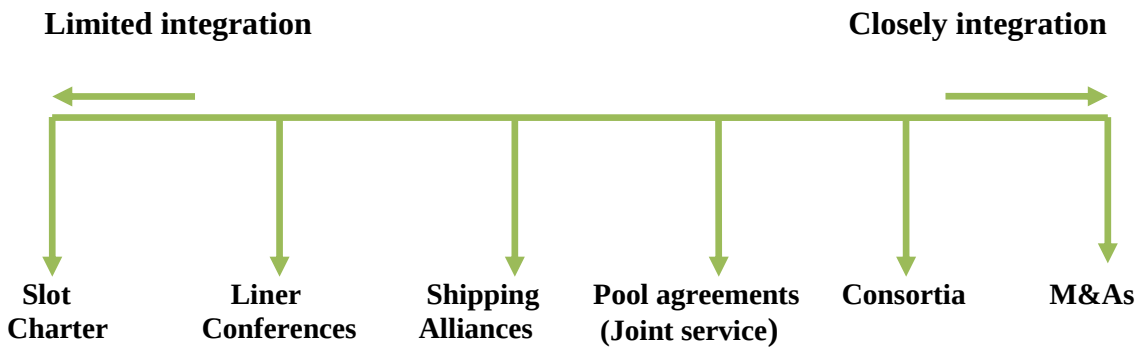


Source: Adapted from Cruijssen et al. (2007, p. 25)

2.4.1 Types of strategic co-operations among container lines

The spectrum of strategic co-operations among container lines varies from loose-knitted slot charters, liner conferences and shipping alliances through to M&As (see Figure 2.4).

Figure 2.4: Strategic co-operations among container lines



Source: Adapted from Sigera, Cahoon and Fei (2010)[1]

According to Notteboom (2004) and (Koay 1994), strategic co-operations among container lines can be categorised into three groups depending on their scope and level of integration - (i) trade agreements (liner conferences), (ii) operating agreements (for example slot chartering agreements, pooling agreements (joint service), shipping alliances and consortia) and, (iii) M&As. The level of integration of intangible resources and the scope of activities of container liner strategic co-operations vary depending on the motives for forming the strategic co-operations, the regulations, and the nature of the strategic co-operation. The main objectives for container lines forming strategic co-operations were identified by Song and Panayides (2002), Notteboom (2004) and Lu et al. (2006) as reduced costs, increased freight revenue, expanding service coverage, achieving economies of scale, gaining instant access to new markets, and increased freight revenue. To gain further understanding of the range and diversity of strategic co operations in container lines, each of the categories shown in Figure 2.4 are discussed in the following sections.

2.4.1.1 ***Slot charters***

A slot charter is a contractual agreement among partners that allows for the exchange of available space on board vessels that they operate (Ryoo and Thanopoulou 1999). Slot charters represent the simplest form of strategic co-operation, where two groups of container lines rely on minimal operational integration (Brooks, Bluden and Bigood

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[1] Three reseach papers were published based on the findings of the current study:

1) Sigera, I., Cahoon, S. and Fei, J. 2010, 'The Contribution of intangible resources to the competitive performance of container lines: Perspectives of senior managers in Sri Lanka ', *Proceedings of the International Association of Maritime Economists Conference*, Lisbon, Portugal, 17-19 July.
2) Sigera, I., Cahoon, S. and Fei, J. 2010, 'Integrating intangible resources in strategic co-operations of container lines: Ship agents' perspective ', *Proceedings of the Asian Logistics Round Table*, 2-3 December 2010, Antwerp, Belgium.
3) Sigera, I. and Cahoon, S. 2011, 'Processes adopted to integrate intangible resources in global acquisitions among container lines: Perceptions of acquirers and the acquired', *Proceedings of the The International Association of Maritime Economists Conference,*, 25-28 October, Santiago Chile

1993; Koay 1994). The first group comprises the container lines not represented in a trade route, but have the need to serve a trade route without investing in any infrastructure. In order to achieve this, the container lines purchase slots from container lines currently operating in the trade route. The second group comprises container lines that are already operating liner services in a particular trade route and have the need to increase their service frequency and space capacity (Koay 1994). Such container lines will choose to enter into a slot charter agreement with another or a few other container lines. However, the container line which sells space in the vessel continues to retain full marketing and operational independence, while the slot purchaser retains its marketing independence but forfeits any influence on the design and operations of the liner service (Koay 1994). It enables carriers to retain their individual marketing identities and compete vigorously in the market place while they gain the advantage of sharing costs (Brooks, Bluden and Bigood 1993). As this form of partnership involves minimal integration between the partners, termination conditions for such agreements are usually more flexible compared to other forms of strategic co-operations (Ryoo and Thanopoulou 1999). Therefore, there only tends to be an operational integration between the members.

2.4.1.2 ***Liner conferences***

Conferences are the earliest form of strategic co-operation among container lines, the origins of which dates back to the Calcutta Conference of 1875. This was initiated among break bulk liner service partners. That came to an agreement regarding a uniform tariff and allotted sailings to each vessel (Acciaro 2010; Heaver 2002; Rimmer 1998).

As defined by Tupper (2008, p. 5), a liner conference is :

> A group of two or more vessel-operating carriers, which provide international liner services for the carriage of cargo on a particular route or routes that operate under uniform or common freight rates.

From the perspective of the integration of resources, liner conferences also depict a limited integration. The integration is specific to price integration (freight integration). Brooks (1993) explains that the aim of a liner conference is to limit rate-based, and in some cases capacity-based competition (Heaver et al. 2000). Therefore, the main objective of setting up conferences was to minimise destructive competition among container lines by integrating pricing. According to Sjostrom (2004), a conference can be either open or closed. The concept of open conferences was introduced to the maritime industry by the USA Shipping Act 1916 (Koay 1994). Unlike closed conferences, open conferences differ from closed conferences in that they are, in principle, obliged to accept new members (Sjostrom 2004). However, the rules about open conferences can be vague, for example some open conferences deter new members by imposing an entry fee and by questioning the entrant's ability to provide common carrier services (Acciaro 2010).

Conferences impose integrated pricing mechanisms in various manners (Acciaro 2010; Sjostrom 2004). The most common complaint regarding conferences is predatory pricing, involving the use of a 'fighting ship' approach (Yamey 1972). The conference would, in response to an entrant, lower the rates on one of its vessels to compete with the entrant until the entrant lost revenue and left the trade route (Sjostrom 2004). Yamey (1972) cites the operation of Mogul Steamship Co. as the best known example of fighting ship in liner shipping. Other methods through which conferences impose

integrated price mechanisms are loyalty contracts such as the dual rate contract (sometimes called contract rates) and the deferred rebates (Sjostrom 2004). The dual rate system involves the shipper signing an agreement to deal exclusively with the conference. In exchange the shipper receives a discount on the freight rate. Should the shipper use a non-conference carrier, the conference imposes a fine. Thus, a number of studies (for example, Bennathan and Walters 1969; Fox 1992; Podolony and Morton 1999) argue that conferences could act as cartels due to the substantial scale of economies they possess. The Trans-Atlantic Agreement (TAA) which became active in 1993 was a typical price cartel (Heaver et al. 2000). However, in the initial stages of the liner industry, this integration of pricing among the members of the conference was accepted by the market regulators because it provided stability and protection for the container lines from unnecessary price undercutting (Acciaro 2010; Heaver 1973; Jansson and Shneerson 1987).

A liner industry with very high fixed costs will not survive in the market (Jansson and Shneerson 1987). Therefore, legislation was introduced only to minimise the damaging effects of conference systems, but the main concept of price or freight integration (price integration) among the members was retained (Koay 1994). The Shipping Act of 1916 in the United States was the first such legislation brought forward to minimise the monopolistic behaviour of conferences (Koay 1994). The 1916 Act specifically forbade the use of ‘fighting ships’ and differed rebates (Koay 1994). It also disallowed ocean carriers from making unfair or unjustly discriminatory contract with any shipper based on the volume of freight offered (Koay 1994). Even in 1963, the European Commission adopted a ministers’ resolution that recognised the liner conference system as being indispensable to providing shippers with efficient service at stable rates (Sjostrom

2004). This recognises that undue price undercutting between container lines will affect the stability of high fixed cost involved in the container liner industry. The resolution also recognised the concerns of shippers over a possible abuse of conference powers, and requested conferences to provide the means for ensuring fair practices and an avenue for shippers to discuss any grievance against the conference system (Koay 1994). The European Commission Regulation No: 4056/861, which was established in 1983, restricts the application of critical 81(1) EC antitrust regulations on liner conferences (Tupper 2008) and allows price integration, the co-ordination of shipping timetables, sailing dates, or dates of calls. The European Commission legislators justify the exemption of price integration and supply regulations between competing container lines on the assumption that it would lead to the stability of rates.

However, on 25 September 2006, Regulation 1419/2006 was published in Europe. It implemented the changes recommended by the review process and it was enforced on 18 October 2006 (Tupper 2008). The key changes introduced by this regulation were cancellation of block exemption, price integration and regulating of capacity with immunity (Tupper 2008). The European Commission anticipates that repealing the liner conference block exemption will bring about considerable benefits to the European Union industry and consumers by reduced transport prices for liner shipping services and improved service reliability on deep sea and short sea trades. The Commission recognises the container liner industry has developed with sufficient market power to operate without price integrations (Tupper 2008). As a result of these changes in the past decade, there has been a significant decline in the number of conferences registered with the US Federal Maritime Commission (restricted to those in US trades). The number of conferences was 99 in 1982, and then dropped from 35 in 1990 to only 19 in

2001 (Sjostrom 2004). This was mainly due to regulations and growth of antitrust laws enforced by the US, European Union and other countries. Therefore at present no any conferences operating globally.

2.4.1.3 ***Shipping alliances***

A shipping alliance is a general term used to describe operational integration between two or more container lines in a global context, including for example schedule/sailing arrangements (these are arrangements under which schedules are integrated with a view to limiting transit time) (Slack, Comtois and McCalla 2002). This is an arrangement whereby container lines agree to use each other's vessels on certain routes to enable increased efficiency and cost savings (Midoro, Musso and Parola 2005). Consequently, operational synergies are the main attraction for container lines to join shipping alliances (Ryoo and Thanopoulou 1999).

The shipping alliances have facilitated expansion of services without needing to increase the number of vessels for each container line (Slack, Comtois and McCalla 2002). It is worth noting that such integration of services has also enabled container lines to utilise large-capacity ships for the alliance services. The Grand, New World and United Alliances services are provided by ships that are larger than average size of the fleets of the individual carriers (Slack and Fremont 2009). Alliance members have made their largest vessels available to alliance services (Slack, Comtois and McCalla 2002). Membership of the alliance has provided carriers with the opportunity to add more ports of call and has also helped the lines to increase frequency (Slack, Comtois and McCalla 2002). According to Lu, Cheng and Lee (2006) the motives for forming shipping alliances are to extend service coverage, provide more frequent sailing services, faster

entry to new trade routes, share the risk of providing new liner services and maximise operational synergy.

Initially, when global alliances were formed in late 1995 and 1996, they focused only on the Trans-Pacific and Asia-Europe trades (Damas 2001). The first global strategic alliance was set up in 1996 by the container lines of APL, OOCL, MOL and Nedlloyd and its objective was to establish an integrated Europe-Far East service (Alix, Slack and Comtois 1999; Damas 2001 Heaver et al. 2000). In the same period, the Grand Alliance was formed by Hapag-Lloyd, P&O, NYK and NOL. However, during 1996–1998, two separate mergers occurred between APL and NOL, and P&O and Nedlloyd. After the merger, the new container line P&O Nedlloyd joined the Grand Alliance, resulting in the disintegration of the Global Alliance due to a lack of partners (Damas 2001). The remaining partners of Global Alliance, APL and MOL invited Hyundai to form a new global alliance, the New World Alliance (Damas 2001). The Grand Alliance also became larger with the integration of MISC Line (Rimmer 1998). With P&O Nedlloyd's acquisition by Maersk in 2005, the market share of the Grand Alliance reduced. Meanwhile the three Asia-based container lines Yang Ming Line, K-Line and COSCO Line formed CKY Alliance, which in 2003 became the CKYH Alliance with the joining of Hanjin (Lu Cheng and Lee 2006). As indicated in Table 2.1, CKYH Alliance currently has the largest market share and it is also the latest alliance to be formed. Members of the CKYH Alliance are all Asian based with similar backgrounds in managing culture. The members of CKYH Alliance have not changed over time. Thus, it indicates that this alliance is more stable (Lu, Cheng and Lee 2006). However, the market share variation indicates that while there has not been a large growth in

market share of these alliances over the period apart from that there have been many changes in the membership (see Table 2.1) (Lu, Cheng and Lee 2006).

Table 2.1: The growth of TEU capacity of main global alliances

Year	Shipping alliance	TEU	%
1997	Grand Alliance	547,000	12.45
	CKY Alliance	382,000	11.50
	New World Alliance	294,000	9.50
2000	Grand Alliance	692,551	13.45
	CKY Alliance	649,709	12.62
	New World Alliance	446,381	8.67
2005	CKYH Alliance	1,067,198	11.68
	Grand Alliance	989,241	10.83
	New World Alliance	720,708	7.89
2010	CKYH Alliance	1,264,640	11.93
	Grand Alliance	1,251,016	11.80
	New World Alliance	791,453	7.46

Source: Adapted from Notteboom (2004)

2.4.1.4 *Pool agreements (joint services)*

In pool agreements, the partnering container lines pool their vessels and operate a joint service (Ducruet et al. 2010). In a situation where the joint service consists of more than one service (multiple subservice-service alliance), vessels are utilised in the respective subservices based on the characteristics of the vessels (Koay 1994). Therefore, vessel pooling allows ships of similar sizes and speed capabilities to be joined together by integrating sailing schedules and operating joint services. In most instances these pools

require no equity involvement and each container line markets the service separately (Ryoo and Thanopoulou 1999). However, there are closer integrated vessel pools, as indicated by Pierre (2000), where income and expenditure are shared between the members in proportion to their contribution and pool accounts are produced on an annual basis.

According to Tupper (2008, p. 39):

> A pool is a collection of similar type of vessels; under various ownerships; placed under the care of an administration, which; markets the vessel as a single cohesive unit; and collects the earning; which are distributed to individual owners under a pre-arranged weighting system by which each entered vessel receives its fair share.

At present the integration of revenue and marketing pool agreements have to adhere to the EU anti-competitive clause 81, which explains the limitation of market share for cases where a common marketing strategy and revenue pooling is occurring (Tupper 2008). In 1965, OOCL line was established as a tonnage pool and joint marketing entity by British Commonwealth Shipping, Furness-Withy, Ocean Transport and Trading and the P&O group to cover their operations linking the United Kingdom (UK) and Europe with the Far East, Australia and South Africa (Fossey 2007). The present pool agreements are mostly integrated through sailing schedules (Brooks, Bluden and Bigood 1993). This enables each container line to retain its own marketing identity. Slack, Comtois and McCalla (2002) observe the growth in joint services since the late 1980s. For example, in the North Atlantic trades, Sea-Land Line had a joint service with Nedlloyd and P&O Lines whereby efficiency is enhanced through vessel sharing (Brooks, Bluden and Bigood 1993). In 1990, Sea-Land and P&O expanded their alliances to include Maersk Line for a vessel sharing joint service on the route between

Europe and the USA. In 1988, Sea-Land entered into a joint service with Norasia to form an Asia–Middle East–Europe (AME) service. Sea-Land reports that prior to the vessel-sharing agreement, the cost of operating the Sea-Land fleet accounted for 27 per cent of its total costs; by 1990 that had dropped to 12 per cent (Brooks, Bluden and Bigood 1993).

2.4.1.5 ***Consortia***

A consortium is an agreement between two or more vessel-operating container line carriers to rationalise their operations by means of technical, operational and/or commercial integration with the exception of price fixing (McLellan 2006). After mergers and acquisitions, consortia are the closely integrated forms of strategic co-operations, involving the integration of technical and commercial operations (Ryoo and Thanopoulou 1999). In closed consortia, apart from the integration of technical and commercial operations, equity involvement is also present. However, in open consortia, no form of equity participation is found (Ryoo and Thanopoulou 1999). When conferences are in operation, the large consortia had operated within them (McLellan 2006). The main motives for forming consortia were to access capital requirements, to minimise risk when expanding into new services, and scale of economies (Ryoo and Thanopoulou 1999).

The European Commission consider consortia as a strategic co-operation that generally helps to improve the productivity and quality of container liner services by integrating the container services (Tupper 2008). Therefore, the European Commission has extended the consortia block exemption (see Article 81 (3) EC 2015) to continue benefits. However, the market share held by any given consortium is limited to a

maximum of 35 per cent on each market in which the consortium operates. Furthermore, consortia must not engage in any kind of fixing of freight rates and must allow price competition between members (Tupper 2008).

Types of consortia allowed setting up under European Union regulations:

- Co-ordination and/or joint fixing of sailing timetables and the determination of ports of call.
- The exchange, sale or cross-chartering of space or slots on vessels.
- The pooling of vessels and/or port installations; the use of one or more joint operations offices.
- The exchange of computerised data exchange system and/or joint documentation system.
- The joint operation or use of port terminals and related services (such as lighterage or stevedoring services). The participation in one or more of the following pools: cargo, revenue or net revenue.
- A joint marketing structure and/or issue of a joint bill of lading, joint exercise of voting rights held by the consortium in the conference within which its members operate.

Therefore, under the umbrella of consortia, different forms of integration can operate. According to McLellan (2006), in the early days of containerisation, the consortia were tightly bonded based on cost and revenue pooling and corporate union. For example, British lines such as P&O and Cunard, decided to set up a consortium in order to enter the container trades, the consortium being a separate business unit established by individual lines who pool resources and each provide a specific share of the capital or

physical resources. Similarly, OOCL was a closed consortium, which was set up by equity pooling of four UK businesses Alfred Holt, Furness-Withy, British Commonwealth Shipping and P&O, and Cunard. The ACT consortium was set up by Ben Line, Blue Star, Ellerman and Cunard was a participant in the ACL consortium with Wallenius, CGM and others, in the Gulf Container Line (Slack and Fremont 2009).

However, many of the closely integrated consortia became inefficient in the late 1980s because of the different objectives and commitment of participating container lines (Ryoo and Thanopoulou 1999). The delays in decision-making processes further curtailed the progress of the consortium concept (Ryoo and Thanopoulou 1999). This slow response to the rapidly changing needs of the marketplace has been the other main reason for the demise of closely bonded consortia (Brooks, Bluden and Bigood 1993), such as Scan Dutch and Trio consortia (Brooks, Bluden and Bigood 1993), which are major players in the European–Far East route. Furthermore, in 1990, the five members of Trio announced that their consortium would be dissolved and replaced with two new ones. The two British carriers decided to form their own alliance, while Hapag-Lloyd opted to join the two Japanese members (Brooks, Bluden and Bigood 1993; Slack and Fremont 2009). Five lines planned to continue close co-operation with each other in such matters as shared terminal facilities and EDI systems (Brooks, Bluden and Bigood 1993; Slack and Fremont 2009).

This break up of consortia subsequently paved the way for more flexible shipping alliances, where members have more flexibility to operate within the strategic co-operation (McLellan 2006). Their need to establish a separate identity was one of the prime reasons in their three-year effort to withdraw from the ACL consortium. In spite

of CGM's sale of its shares in ACL consortium, Claude Abraham, chairman of CGM, indicated in a *Journal of Commerce* interview that there was still a future for shipping consortia (Fossey 2007). He reported that a growing number of ship owners were opting out of strategic marketing alliances in favour of going it alone. However, those consortia with marketing alliances that still prevail have a role to play in the light trade routes, such as those running north to south, where a single line does not have the ability to offer the required frequency. In October 1989, CGM sold its share in one consortium (ACL) and in June 1990, it joined Italia di Navigazione SpA, Costa Container Lines and Evergreen Marine Corporation to provide weekly services between North America and the Mediterranean. In the new consortium (known as MED-Atlantic), all the lines maintained their own marketing identity (Slack and Fremont 2009). Thus the development of consortia has been in several stages. While early consortia bought shares in the consortia and used a common name apart from sharing other resources, in more recent consortia shared resources and the container lines maintained their own identity. Therefore integration was relatively less among recent consortia.

2.4.1.6 ***Mergers and acquisitions***

M&As are closely integrated strategic co-operations (Cruijssen, Dullaert and Fleuren 2007). Midoro and Pitto (2000) recognise that, although costly, M&As are the most direct way to build an effective organisation, led by a management that is of one mind. There has been a global increase in M&As among container lines in the past 20 years (Brooks and Ritchie 2006). The peculiar nature of high fixed-to-variable cost of the container industry increases the number of M&As (Fusillo 2006), as M&As offer

efficiency gains such as improved technical progress, economies of scale and the potential for more efficient management (Fusillo 2006).

Most of the carriers acquired have been second or third-tier operators. However, some significant carriers, including APL Line and DSR-Senator Line, were taken over by NOL and Hanjin lines respectively (Fossey 2007). P&O Containers and Nedlloyd Lines merged in 1997 to create P&O Nedlloyd Line, which subsequently took over Blue Star and Tasman Express Line these events have created the largest single operator with a capacity of over 252,000 TEUs and a fleet of 100 vessels by 1997 (Rimmer 1998). Evergreen became the second largest carrier in the world, in terms of TEU slots under its control through the takeover of Lloyd Triestion in 1998. In 1999, Maersk Line acquired the international shipping operations of Sea-Land. This was a merger between the largest carrier with the sixth largest (Fossey 2007). Maersk Line acquisition of Sea-Land container line service in 1999 further strengthened its position in the main East-West trade route. With the objective of expanding its coverage in Africa, it decided to buy Safe Marine Lines in the same year (Notteboom 2004). Therefore, all these mergers and acquisitions were motivated by possession of tangible resources. After a decrease in M&As in the early 2000s (see Table 2.2) a renewed interest was led by a US$ 2.8 billion takeover of P&O Nedlloyd by AP Moeller to reach a fleet capacity of approximately 1.8 million TEU (Fossey 2007).

This integration of resources through M&As could be seen in other European countries, with Norddeutsche-Lloyd and Hamburg America Lines merging in 1970 to create Hapag–Lloyd (Heaver et al. 2000). Furthermore, this trend was spreading to other parts of the world. In Japan the five leading container liner groups of the 1970s and early

1980s were reduced to three (Heaver et al. 2000). Hence Showa Lines was acquired by NYK lines in 1985. Nippon Liner System, which was originally created in 1988 by the merger of Japan lines and YS lines, was acquired by NYK in 1991 (Fossey 2007). The OOCL line was taken over by several operators during a short period. In 1986 it became a wholly owned subsidiary of the P&O Group (Fossey 2007).

Table 2.2: Details of some important M&As

Date	Container lines involved	Details
1996-Jan	P&O Containers and Nedlloyd Lines	**Merger**: Creation of P&O Nedlloyd Container Line. The new venture has a combined revenue of US$ 4 billion, a shipping fleet of 112 ships (224,000 TEU) and box inventory of more than 540,000 TEU (owned and leased). The total value of **Acquisition is US$ 175 million**
1996-Jan	Australia-New Zealand Direct Lines and Union Shipping of NZ	**Merger**: A cross-shareholding deal in which Bollore (owner of ANZDL) acquired 50 per cent in Union Shipping and Brierley investments (owner of Union) purchased 50 per cent of ANZDL management of services. The total value of **Acquisition US$ 33.5million.**
1996-Nov	CMA-CGM	**Acquisition**: CMA acquired the container assets and services of the state-run company of CGM. The total value of **Acquisition US$ 3.8 million**
1997-Feb	Hanjin Shipping Co. and DSR-Senator Line	**Acquisition**: Combining its container fleet with Hanjin's made Hanjin-Senator the seventh largest container shipping line in the world. Senator called on 250 ports in 64 countries all over the world, with a fleet of 113 container vessels. The total value of **Acquisition US$ 75million**
1997-Jul	CP Ships and Lykes lines	**Acquisition**: The sale to CP ships involved all operating assets (ships and containers), service brand, route network, vendor contracts, plus assumption of liabilities. Approx. US$ 200 million committed for investment over the next two years. The total value of **Acquisitions US$ 34 million.**
1997-Nov	NOL and APL	**Acquisition**: The purchase by Singapore national flag carrier of NOL line the US's second largest international liner and intermodal business. Creation of a group generating annual revenue of US$ 4.5 billion and controlling containership fleet of more than 75 vessels. The value of **Acquisition US$ 825million**

Table 2.2: Details of some important M&As (cont).

1998	P&O-Nedlloyd-Bluestar Line	**Acquisitions**: The company finally was disposed of in 1998 to P&O Nedlloyd, complete with its name and ship's livery including the famous funnel. While most of the container vessels including those formally operating as ACT vessels were also sold to P&O Nedlloyd, most of the refrigerated liner ships were retained in the Vestey organisation under the ownership of Albion Reefers. These were operated by Star Reefers formed by the merging of the conventional reefer fleets of Hamburg Sud and Albion Reefers.
1999	Maersk-Safemarine	**Merger** At the time of acquisition, Safemarine Container Lines operated approximately 50 liner vessels and a fleet of about 80,000 containers. It covered a total of ten trade routes. Safemarine Container Lines joined the A.P. Moller Group as an independent unit with its own liner activities marketed under the existing names Safemarine, SCL, CMBT and Safbank. It is still represented by its own agency network. Since the acquisition, Maersk Line and Safemarine Container Lines have co-ordinated their respective liner network to offer customers optimised geographical coverage and transit.
2000	Maersk–Sea-Land	**Acquisition**: Sea-Land announced that A.P. Moller-Maersk Line was to acquire Sea-Land Service Inc.'s international liner business including vessels, containers, and related container terminals. to form a container line controlling 9.2 per cent of the world container shipping fleet.and led to its establishment as truly global carrier with almost 11 per cent of the TEU capacity worldwide and over 19 per cent the capacity on order The total value of **the acquisitions US$ 34 million.**
2000	CSAV-Norasia	The year Norasia Container Lines was acquired by CSAV Group, the largest Latin American shipping company and a market leader on the North-South trades. CSAV Group – including Norasia – is one of the top 20 global carriers with more than 90 vessels handling. The total value of **the acquisitions 1.4million**.
2005	P&O Nedlloyd-Maersk Line	**Acquisitions**: In May 2005 Maersk announced plans to purchase P&O Nedlloyd for 2.3 billion euros. At the time of the acquisition, P&O Nedlloyd had 6% of the global industry market share, and Maersk-Sealand had 12%. The combined company would be by far the largest shipping company in the world with about 18% of world market share. At the time of acquisition , it owned and chartered a fleet of over 160 vessels. and a TEU capacity of 635,000 (TEU). P&O Nedlloyd line had 13,000 employees in 146 countries. The total value of **the acquisitions 1.4million**.

2007	CMA-CGM-US Lines	**Acquisition**: 100,000 TEU per year, USD 145 million turnover, 113 employees, 7 chartered vessels (mainly 1,100 TEUs, one 1,350 TEUs), 23,600 TEUs lease container fleet, offices in Los Angeles, Australia, New Zealand, Hong Kong.

Source: Adapted from Brooks (2000) and Fusillo (2009)

2.5 The changing container line industry due to strategic co-operations

The strategic co-operations (mainly M&As) have changed the market share of the main players in the container liner industry over time. The difference in capacity of the largest carrier compared to the twentieth ranked company was less in 1979 than in 1989 (see Table 2.3). Furthermore, by 2007 the high concentration of container lines was evident as the largest top eight container lines accounted for a similar percentage of global capacity by 20 container lines in 1979 (Mary and Pamela 2006; Slack and Fremont 2009). In addition, about 11 of the companies in the 1979 table were no longer present 28 years later, and two others (CGM and APL although present in names in 2007), had lost their original corporate identities through mergers and acquisitions (M&As). Thus, these changes are mainly due to the strategic co-operations among the container lines. In this period the ownership of the container lines have moved from North America to Asia and Europe (see Table 2.3). By 1989, only two US carriers remained in the top 20. In addition these strategic co-operations caused many types of global players based in the US industry to totally vanish by 2007. The only European carrier that maintained its market share of the top 20 between 1979 and 1989 was Maersk Line (Slack and Fremont 2009).

However, the strategic co-operations have not paved the way for the intended synergetic growth with utilising the resources of partnering container lines (Midoro, Musso and Parola 2005). For example, both Maersk group and P&O Nedlloyd have seen their market shares stagnating. In the three years following the acquisition, there has been an exodus of the majority of P&O Nedlloyd's customers from Maersk Line, as well as a decrease in the customer satisfaction at the combined company's liner operations (UNCTAD Secretariat 2011), by the end of 2006, Maersk’s global market share had fallen from 18.2 per cent to 16.8 per cent.

Table 2.3: The changes in container industry due to the strategic co-operations

	1979				1989				2000				2009			
Rank	**Container line**	**Country**	**Fleet Capacity**	**% world**	**Container line**	**Country**	**Fleet Capacity**	**% world**	**Container line**	**Country**	**Fleet Capacity**	**% world**	**Company**	**Country**	**Fleet Capacity**	**% world**
1	**Sea- Land**	US	43,525	4.6	**Evergreen**	Taiwan	132,162	4.4	**Maersk Sea-Land**	Denmark	607,505	9.4	**Maerska**	Denmark	1,652,017	14.61
2	**Hapag-Lloyd**	West Germany	36,931	3.9	**Maersk**	Denmark	91,602	3.1	**PONL**	UK/Neth	304,712	4.7	**MSC**	Switzerland	1,019,725	9.02
3	**OCL**	UK	30,768	3.2	**Sea-Land**	US	71,728	2.4	**MSC**	Swiss	232,506	3.6	**CMA-CGM**	France	588,000	5.20
4	**Maersk**	Denmark	27,425	2.9	**APL**	US	61,624	2.1	**APL**	Singapore	215,466	3.3	**Evergreen**	Taiwan	455,999	4.03
5	**OOCL**	Hong Kong	23,931	2.5	**NYK**	Japan	56,598	1.9	**Coscon**	China	214,272	3.3	**Hapag-Lloyd**	Germany	454,526	4.02
6	**Seatrain**	US	22,788	2.4	**Mol**	Japan	52,828	1.8	**Evergreen**	Taiwan	201,811	3.1	**COSCO**	China	390,394	3.45
7	**CGM**	France	20,802	2.2	**K-Line**	Japan	51,507	1.6	**Hanjin**	Korea	155,143	2.4	**CSCL**	China	387,168	3.42
8	**NYK**	Japan	20,164	2.1	**Yanming line**	Taiwan	46,989	1.5	**NYK**	Japan	148,694	2.3	**APL**	Singapore	342,461	3.03
9	**Evergreen**	Taiwan	18,889	2.0	**Hapag-Lloyd**	West Germany	43,686	1.4	**OOCL**	Hong Kong	136,576	2.1	**Hanjin**	Korea	337,378	2.98
10	**USL**	US	18,472	1.9	**P&OCL**	UK	42,821	1.4	**ZIM**	Israel	130,661	2.0	**NYK**	Japan	283,109	2.5
11	**Farrel**	US	18,228	1.9	**Nedlloyd**	Netherlands	42,658	1.4	**K-Line**	Japan	126,697	2.0	**MOL**	Japan	281,967	2.49
12	**APL**	US	17,410	1.8	**OOCL**	Hong Kong	42,457	1.4	**CMA-CGM**	France	126,135	1.9	**OOCL**	Hong Kong	286,780	2.54
13	**Star Shipping**	Norway	17,218	1.8	**Cosco**	China	40,907	1.4	**MOL**	Japan	118,353	1.8	**K-Line**	Japan	267,988	2.37
14	**MOL**	Japan	16,793	1.8	**CGM**	France	35,884	1.2	**Yang Ming**	Taiwan	117,105	1.8	**Yang Ming**	Taiwan	240,433	2.13
15	**Nedlloyd**	Netherland	14,938	1.6	**ZIM**	Israel	34,728	1.2	**HMM**	Korea	109,520	1.7	**ZIM**	Israel	203,228	1.80
16	**Brostrom**	Sweden	14,681	1.5	**UASC**	Gulf States	30,193 1	1.0	**Hapag-Lloyd**	Germany	106,501	1.6	**HamburgSud**	Germany	157,039	1.39
17	**Zim**	Israel	14,590	1.5	**POL**	Poland	27,484	0.95	**Senator**	Korea	92,546	1.4	**HMM**	Korea	157,208	1.39
18	**Wilhemsen**	Norway	14,374	1.5	**DSR**	East Germany	27,197	0.9	**CSCL**	China	81,032	1.2	**PIL**	Singapore	123,084	1.09
19	**East Asiatic**	Denmark	14,063	1.5	**Hanjin**	Korea	26,374	0.9	**Lloyd Triestino**	Taiwan	76,642	1.2	**CSAV**	Chile	117,873	1.04
20	**ACT**	UK	13,225	1.4	**Hyundai**	Korea	21,826	0.7	UASC	**Gulf States**	70,075	1.1	**Wan Hai**	Taiwan	113,532	1.00
Total of the top 20			419,215	44.1	**Total of the top 20**		981,253 3	2.8	**Total Of the top 20**				**Total Of the top 20**			
Europe			204,425	21.5	**Europe**		256,651	8.6	**Europe**		1,377,359	21.2	**Europe**		**3,871,307 3**	4.23
North America			120,423	12.7	**North America**		133,352	4.5	**North America**		0.00		**North America**			0 .00
Asia			94,377	9.9	**Asia**		471,648	15.7			1,793,857	27.6	**Japan**		**833,064**	7.37
World Total			**950,963**	**100**	**World total**		**2,995,000**	**100**	**World total**		**6,489,959**	100	**S. and S. E. Asia**		**2,834,437 2**	5.06
													World total		**11,308,531**	100

Source: Adapted from Slack and Fremont (2009 p. 30)

Similarly other major global mergers and acquisitions such as APL-NOL, Hanjin-Senator line and P&O-Nedlloyd line have not shown a synergetic growth apart from the market share directly received from acquired container lines (see Table 2.3). Global alliances also have not shown the intended synergetic growth in that sense (see Table 2.1). There are several reasons for this, such as prevailing economic conditions, conflict between strategic partners and organisational issues (Midoro and Pitto 2000). The focus of the current study is to identify how resources integration affects the performance of strategic co-operations.

2.6 Factors that affect the performance of strategic co-operation

According to Cruijssen et al. (2007), a strategic co-operation is often a doubtful undertaking in which it is difficult to plan the required activities or measure the realised output. Therefore having a reliable relationship is essential for successful strategic co-operations. Shirvastava (1986) suggests that several reasons for this poor performance including inappropriate choice of partners due to inadequate pre-strategic co-operation analysis, lack of a carefully designed diversification strategy, and a lack of integration among partnering firms. The risk of opportunism among partners is another threat for strategic co-operations (Meer-Kooistra and Vosselman 2000; Tomkins 2001). Similarly, recent empirical research conducted by Chalos and Connor (2004) confirms that partner unreliability and incompatibility contribute to the managerial complexity of a strategic co-operation.

More specifically in M&As, the existence of a strong culture in the acquiring firm can also potentially have an impact on performance if it is transferred effectively to the acquired firm (Das and Teng 2000). Weber, Shenker and Raveh (2001) identify the

effects of corporate culture differences on the post-merger performance of M&As. Accordingly, the greatest risks in cross-border M&As arise from the failure to understand the culture, regulatory structure or competitive environment, and sometimes all of these three considerations in the target market. The negative attitudes on the part of the acquired team towards the acquiring organisation, negative attitudes towards co-operation from the top management team and the lack of commitment from the acquired company top managers to successful integration of the merging companies affect the post-M&A's performance (Weber, Shenker and Raveh 2001). For example Christine and Brian (2004) identify that constant neglect of human integration when deciding upon M & As among firms as playing a critical role in the post M&A performance. As M&As focus more on commercial and financial considerations, issues associated with people often take second place (Christine and Brian 2004). Eventhough, among the resources in firms, the most important in a cross-border acquisition is the skill of people (Firstbrook 2007).

The study undertaken by Wu, Shih and Chan (2009) indicates the importance of identifying complementary partner capabilities such as managerial capabilities, market coverage, diverse customers and quality of distribution systems and intangible assets such as proprietary knowledge, reputation and marketing knowledge capabilities is vital to post strategic co-operation. Local market knowledge, customer and supplier relationships, technical capabilities, and the influence and reputation of management are the other resources that need to be blended with the acquiring firm (Firstbrook 2007). Accordingly, the greatest risks in cross-border M&As arise from the failure to understand the culture, regulatory structure or competitive environment, and sometimes all three considerations in the target market (Weber, Shenker and Raveh 2001).

The negative attitudes on the part of the acquired team towards the acquiring organisation, negative attitudes towards co-operating with the top management team, the lack of commitment of the acquired top managers to successful integration of the merging companies all affect the post-M&A's performance (Weber, Shenker and Raveh 2001).

This knowledge would help to understand whether merging firms culturally and strategically fit each other (Cartwright and Cooper 1993). According to Weber, Shenker and Raveh (2001), the differences in corporate culture are negatively related to top managers' co-operation. Extreme differences in culture lead to a lower level of top-management commitment and co-operation with the acquiring firm's top management team (Buono and Bowditch 1989; Weber, Shenker and Raveh 2001). This may eventuate in a major barrier to successful integration (Shirvastava 1986). The differences in corporate culture are also negatively associated with all other attitudinal and behavioural variables, such as commitment, attitude towards co-operation and stress (Buono and Bowditch 1989; Weber, Shenker and Raveh 2001). Therefore, researchers have recognised the importance of integration of intangible resources to performance of a post strategic co-operation.

According to Midoro and Pitto (2000), the main factors driving instability among container line shipping alliances are the organisational complexity of the alliance and the intra-alliance competition that is likely to undermine the level of mutual trust between partnering container lines. Shipping alliances can be complex for two reasons (i) the complexity of the tasks that the alliance is undertaking and (ii) the complexity of its organisational structure (Midoro and Pitto 2000). The complexity of the task that a

shipping alliance sets out to accomplish depends on the scope of the shipping alliance activities, environmental uncertainty surrounding these activities and adequacy of skills and competencies within the shipping alliance. Midoro, Musso and Parola (2005) suggest that strategic co-operations should not be set up by integrating resources of each partner with mere intentions of commercial and financial gains, instead they should be set up based on the co-competencies of each partner. With this approach the strategic co-operation as a whole can deliver a value which is greater than the sum of its partners, if they operate individually (Midoro and Pitto 2000). Each partner may have comparative strength within one or more key fields of activity that could be effectively deployed to the alliance's advantage (Midoro, Pitto and Parola 2005). A study by Ferrari et al. (2008) on the network complexity of shipping groups identifies that the cultural and political origin of shipping lines affects the decisions of joining alliances. However, there has not been an in-depth study previously involving the integration of resources of container lines to post strategic co-operation success.

The other factor which affects growth is intra-shipping alliance competition, which creates mistrust and undue competition among the partners. The second relevant factor affecting task complexity is the degree of environmental uncertainty surrounding the activities of the alliance (Fusillo 2006). The cost structures of members force them to change their freight strategies, for example high-cost members prefer a higher freight rate than low-cost members, but this outcome provides low-cost members with a strong incentive to deviate from the agreed upon price during periods of slow demand and excess capacity (Fusillo 2006).

2.7 Summary

Container transport has become a critical link in production and distribution. Initial container trade mostly involved finished goods and semi finished goods, today containerisation also carry commodities apart from the high-value time-sensitive cargoes. The high fixed costs involved in the container liner industry, difficulty in accessing resources from the market, low freight rates has taken a long time to achieve the target growth organically (Das 2011; Heaver 2002; Song and Panayides 2002). Thus, container lines have adopted strategic co-operations such as slot charters, liner conferences, shipping alliances, pool agreements, consortia and M&As to access the resources needed to expand their services. The strategic co-operations (mainly M&As) have changed the market share of the main players in the container liner industry over time. The main factors driving instability among container line shipping alliances are the organisational complexity of the alliance and the intra-alliance competition that is likely to undermine the level of mutual trust between partnering container lines. A study by Ferrari et al. (2008) on the network complexity of shipping groups identifies that the cultural and political origin of container lines affects the decisions of joining alliances. However, there does not appear to have been an in-depth study investigating how and to what extent resources are integrated during and often a strategic co-operation between container lines.

The following chapter examines the corporate growth strategies by focusing on the RBV approach. The chapter discusses the importance of intangible resources for a firm’s competitive advantage and explains the challenges faced in integrating them in strategic co-operations.

CHAPTER THREE

INTEGRATING INTANGIBLE RESOURCES IN STRATEGIC CO-OPERATIONS

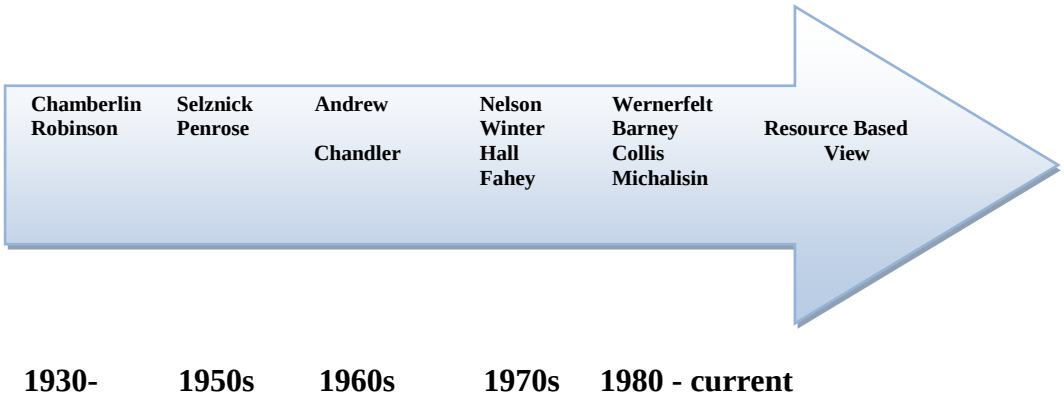
3.1 Introduction

This chapter begins by revisiting the evolution of the RBV in order to understand the importance of the contribution of resources to the heterogeneity of firms and competitive advantage. An analysis of these resources is then presented, classifying them according to their characteristics as tangible and intangible resources in firms and more specifically in container lines. The chapter then discusses the relationship between the formation of strategic co-operations and resources in firms, thus linking discussions in Chapters Two and Three. This is followed by an examination of the processes that need to be adopted in order to integrate intangible resources at the time of the formation of strategic co-operations. The chapter concludes by discussing the integration of intangible resources in particular and the resulting performance of strategic co-operations.

3.2 Development of the Resource Based View

The concept of the contribution of resources to the growth of firms has been studied by researchers since the early 1930s. Almost eight decades ago the economists Chamberlin (1933) and Robinson (1933) recognised the importance of the contribution a firm's specific resources, to the performance of a firm (see Figure 3.1). They were able to identify the heterogeneity of firms due to their unique resources, which gave rise to imperfect competition and abnormal profits. In particular, Chamberlin (1933) stressed firms' specific resources such as technical know-how, reputation, brand image, and patents and trademarks as being superior resources, which contribute to heterogeneity among firms.

Figure 3.1: Evolution of Resource Based View



Source: Author

In 1959, Penrose was one of the first to develop a theory with regard to a firm's growth tied to the efficient management of resources. In her theory, Penrose (1959, p. 24) notes that:

> A firm is more than an administrative unit; it is also a collection of productive resources the disposal of which between different uses and over time is determined by administrative decisions. When we regard the function of the private business firm from this point of view, the size of firm is best gauged by some measures of the productive resources it employs.

However, her work gained relatively little attention in the sphere of strategic management due to the Industrial Organisation Economic Theory, which was the dominant paradigm at that time (Galbreath 2004). This theory identified industry structure as the key factor affecting performance across industries, while disregarding the importance of intra-industry heterogeneity (Porter 1981). Despite this, researchers such as Selznick (1957) and Chandlers (1962) also continued to contribute to the knowledge stream regarding the importance of resources and firms' growth. Their studies focused on the contribution of distinct firm-level competencies to the

achievement of the external expectations of firms. This view was further strengthened by Nelson and Winter (1982) as their research also pointed out the role of knowledge, organisational routines and capabilities, as firm-based resources which significantly contribute to the survival of firms, as well as their improved performance.

The culmination of this thinking was in 1984, when Wernerfelt (1984) developed the RBV. According to RBV theory, firms are identified in terms of their distinctive tangible and intangible resources, which contribute to their competitive advantage (Barney 1991). These distinctive resources in firms contribute to their performance differences even among firms in the same industry (Barney 2001; Penrose 1959; Peteraf 1993; Wernerfelt 1984) and these valuable firm resources are usually scarce, imperfectly imitable, and lacking in direct substitutes (Barney 1991; Peteraf 1993). RBV became an acceptable theory in 1991, when Barney (1991) published an article on the theoretical view of contribution of resources to sustainable competitive advantage of firms in the *Journal of Management* (Amit and Schoemaker 1993).

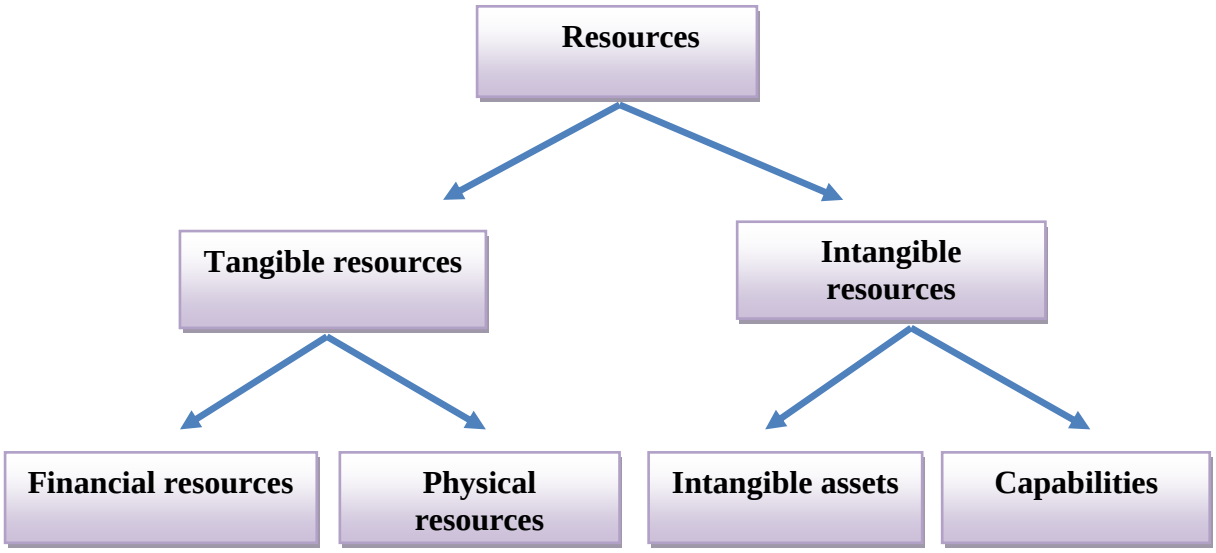
Accordingly, each firm's unique resources, which are accrued over time, contribute to its competitive advantage (Amit and Schoemaker 1993; Gruber, Heinemann, and Brettel 2010; Miller and Shamsie 1996; Teng 2007; Wernerfelt 1984). There is a considerable amount of research that has been carried out on the contribution of resources to the sustainable growth of firms in other industries; it appears that the research undertaken on the contribution of resources to gaining competitive advantage in container lines by using RBV and the integration of the resources in strategic co-operations of container lines has been minimal. Therefore, the objective of this study is firstly to identify valuable intangible resources, which contribute to the competitive advantage of

container lines, and secondly, to investigate the integration of intangible resources in strategic co-operations and their contribution to the performance of post strategic co-operations of container lines.

3.2.1 Resources in an organisation context

As explained by Galbreath (2004, p. 32) "resources are organisational level factors that have the potential to contribute to the economic benefit of a firm". These resources can be separated into two fundamental categories (see Figure 3.2) tangible resources and intangible resources (Fahy 2000b), each of which are discussed below.

Figure 3.2: The classification of resources in firms



Source: Author

3.3 Tangible resources

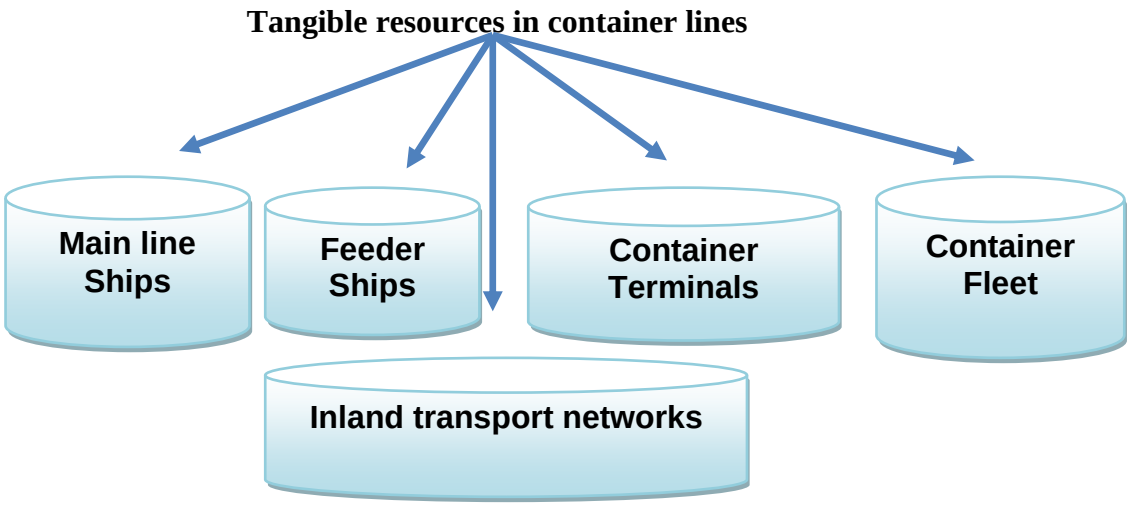
Tangible resources are the basic attributes of a firm (Amit and Schoemaker 1993). These tangible resources can be seen, touched, and measured by accounting standards (Hofer and Schendel 1978; Boulton 2000; Vause 2001). The tangible resources in firms

can be further grouped into financial resources and physical resources (Hofer and Schendel 1978; Boulton 2000 and Vause 2001). The financial resources are comprised of currency earned from operation, raised financial capital, stocks or bonds and financial investments (company shares) (Galbreath 2004). The physical resources include buildings such as offices, factories, equipment and land (Galbreath 2004). As these tangible resources are readily available to all the firms in the industry, economic benefits of those resources will be likely to accrue to all the firms (Barney 1986). Further, due to the observable nature of tangible resources, a competitor could imitate them (Barney 1986). This structural change is called commoditisation (Barney and Wright 1998). Therefore, it can be observed that the contribution of tangible resources to the sustainable competitive advantage of firms is relatively less. However, Foss (1997) and Lippman (2003) challenge this idea by stating that tangible resources, specifically, financial assets (cash, raised financial capital, financial investments) contribute to sustainable competitive advantage, especially as they help to develop other resources, such as conducting marketing promotions to build the brand image of firms. This is also known as resource interconnectedness (Foss 1997; Lippman and Rumelt 2003). The research work undertaken by Baird (2008), Fossey (2007), Notteboom (2002) and Lim (1998) also identifies the contribution of specialised tangible resources to the competitive advantage of container lines. The next section discusses the specialised tangible resources which contribute to the competitive advantage of container lines.

3.3.1 Tangible resources in container lines

Baird (2008) identifies, tangible resources in container lines as main line ships, feeder ships, containers, terminals and inland transport vehicles, which a container line must put in place to commence a global service (Baird 2008) (see Figure 3.3).

Figure 3.3: Tangible resources in container lines



Source: Adapted from Baird (2008 p. 5)

Lim (1998) and Notteboom (2002) explain that having larger vessels help container lines to achieve economies of scale. For example, the study conducted by Samsung revealed that a vessel with a capacity of 12,000 TEU on the Europe-Far East route would make an 11 per cent cost saving per container slot compared to an 8,000 TEU capacity vessel and even 23 per cent compared to a 4,000 TEU capacity vessel (UNESCAP 2005). The study by Drewry Shipping Consultants in 2001 also revealed the possibility of obtaining cost differences amounting to 50 per cent between a Panamax 4,000 TEU vessel and a mega post-Panamax 10,000 TEU vessel (Notteboom 2004). Further, it could be observed that among global container lines from 1987 to 1997 an increase of average vessel capacity from 1,155 TEU to 1,581 TEU and ten

years later, 2,417 TEU and 2,618 TEU in 2009 (Notteboom, 2004). Thus, in order to maximise the benefits of economies of scale, new E-class vessels of Maersk Line are built to carry 14,000 TEUs (Fossey 2007).

As stated by Baird (2008), having terminals operated by container lines is observed as a strategic tangible asset. Thus, many container lines merge with container terminal operators to gain possession of container terminals (Geraldo, Anthony and Stephen 2003). These terminals have been equipped with most up-to-date cranes to accommodate state of the art vessels (Geraldo, Anthony and Stephen 2003). Some container lines have developed logistics facilities, allowing them to take more control in the supply chain utilising these specific tangible resources (Evangelista and Morvillo 2000; Heaver 2002). These logistical services include freight forwarding, warehousing, distribution, labelling and packaging and even providing financial services (Evangelista and Morvillo 2000; Heaver 2002). The empirical study conducted by Lu (2007) revealed that the four most important tangible resource attributes that are important to container lines are financial stability, the number of vessels, dedicated terminals, and the number of branch companies or agencies (Lu 2007). Similarly, empirical studies by Collison (1984), D'Este and Meyrick (1992), Marlow and Goggin (1993), Tengaku Jamaluddin (1995) and Chiu (1996) reveal that tangible resources such as vessels, handling equipment (gantry cranes, yard handling equipment), EDI facilities and warehouse facilities contribute to the competitive advantage of the container lines. The next section discusses the intangible resources in firms.

3.4 Intangible resources

The concept of intangible resources suggests something that is not apparent and is difficult to quantify (Blair, 2001). As defined by Blair and Wallman (2001, p.3), intangible resources are "non-physical factors that contribute to or are used in producing goods or providing services, or that are expected to generate future productive benefits for the individuals or firms that control the use of those factors". According to Shrivastava et al. (1999), the tangible resources have traditionally been calculated (financially valued) by firms and are shown on financial statements for the purpose of accounting disclosure. However, the contribution of intangible resources to a firm's success cannot be valued due to the difficulty of calculating them and as a result may not appear on a firm's financial statements (with the exception of few intangible assets such as goodwill) (Shrivastava et al. 1999).

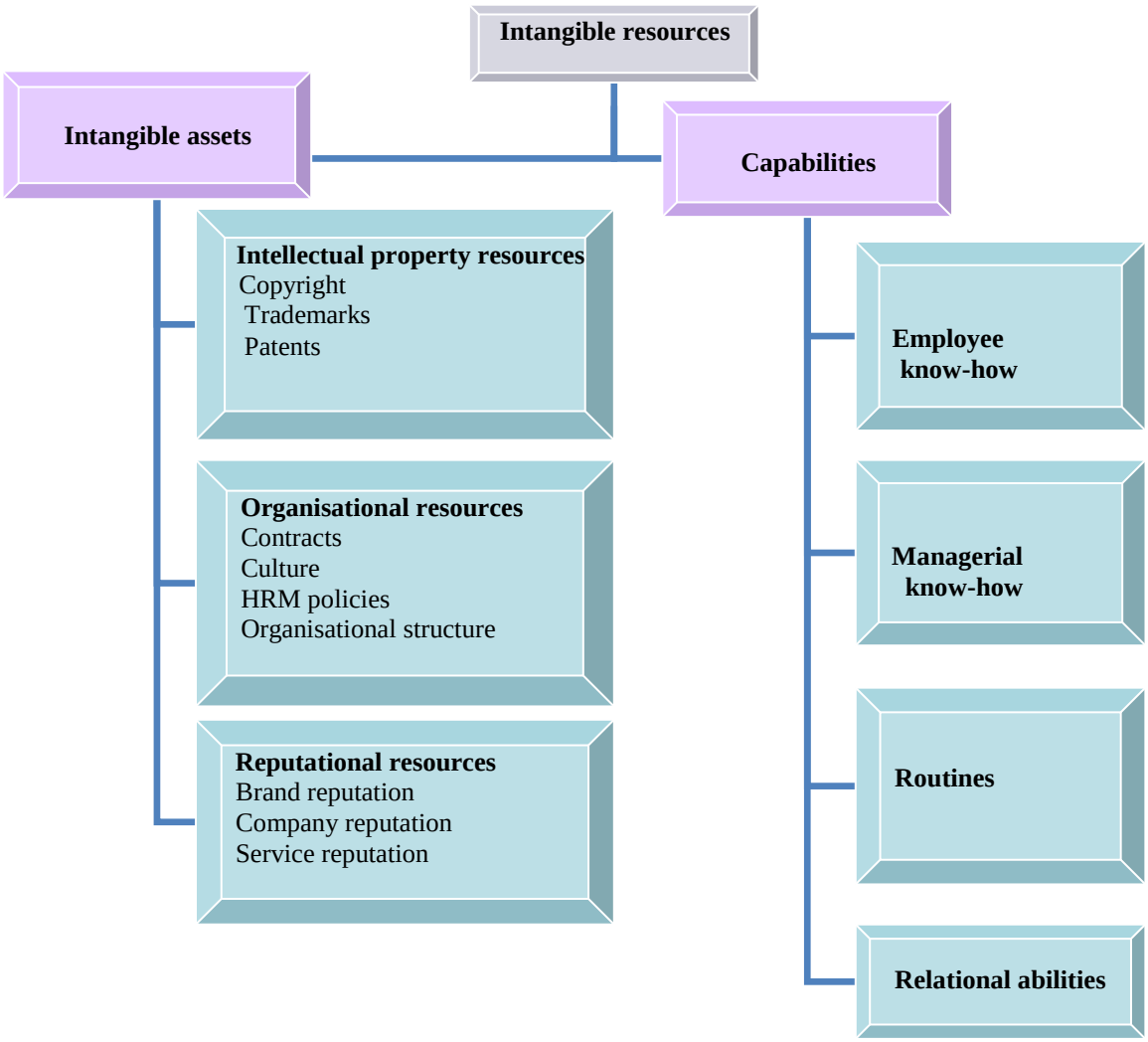
Many researchers recognise that it is intangible resources, rather than tangible resources, that contribute to a firm's competitive advantage because they are valuable, rare, inimitable and non-substitutable (VRIN) (Amit and Schoemaker 1993; Itami and Roel 1987; Michael, Robert and Douglas 1997; Michalisin, Smith and Kline 1997). According to Amit and Shoemaker (1993) the valuable intangible resources enable firms to improve efficiency and effectiveness through creation and implementation of strategies, which facilitate to meet customer needs at lower costs and achieve better customer satisfaction than competitors. Amit and Shoemaker (1993) further explain that the rare intangible resources are possessed by a small number of current or potential competitors, or preferably by one firm, as a possession of similar resources by large number of firms in the competitive market could reduce the ability of each firm's

competitive advantage. Further, Amit and Shoemaker (1993) identify that inimitable resources, as the resources that cannot be imitated by competitors and non-substitutable resources, which have no equivalents, provide the sustainable competitive advantage to firms.

According to Fahy (2002), in terms of major contributors to global economic growth, service industries have achieved the highest percentage of GDP (Hufbauer and Warrant 1999). The fundamental resources or factors of production or sources of competitive advantage in many service industries are intangible resources, rather than the more traditional financial and physical resources of manufacturing industries (OECD 2001), because unique intangible resources are the basis of service differentiation among competing firms (Fahy 2002). Therefore, understanding these unique intangible resources is vital for container lines to achieve competitive advantage by differentiating their services.

Intangible resources can be categorised into two groups, assets and capabilities (Hall 1993) (see Fig. 3.4). Intangible assets, which are possessed by firms, and capabilities are factors that essentially represent the know-how of firms (Anderson and Kheam 1998; Hall 1992). Day (1994) argues that although closely related to organisational processes, capabilities are separate and can be explained as bundles of skills and accrued knowledge. The intangible resources, which were categorised into groups as intangible assets and capabilities (skills), can be further categorised as shown in Figure 3.4.

Figure 3.4: Intangible resources:



Source: Adapted from Galbreath (2004)

This classification could also be observed in many other areas of specialities such as general management, strategic management, marketing and economics (Barney 1986; Barney 1991; Brooking 1996; Michalisen et al. 1997; Welbourne and Wright 1997).

3.4.1 Intangible resources that are assets

Intangible resources that are assets can be categorised in to three groups such as intellectual property resources, organisational resources and reputational resources (Fahy 2000a; Hall 1992) (see Figure 3.4)

3.4.1.1 *Intellectual property resources*

Intellectual property resources are intangible resources protected by law. They are largely derived from the intellectual and innovative capacity of human know-how (Brooking 1996). The intellectual property resources can be further subdivided into three groups as copyrights, patents and trademarks (Hall 1992) as summarised in Table 3.1.

Table 3.1: Intellectual property resources

Intellectual property resources	Description	Authors
Copyrights	Copyrights are the legal protection for creative ideas. These creative works can be in the areas of literacy, artistic and related work, films or computer software.	Hall (1992), Brooking(1996), Galbreath (2004)
Patents	Patents are the official acknowledgment of an inventor's right of ownership to his creation. A patent is an agreement between a state and an inventor, where a state grants a monopoly in the event of exploitation of his/her creation for a limited period of time in the state's territory.	Hall (1992), Galbreath (2004)
Trademarks	The trademarks can be signs, aspects of packaging, names, letters, words, signatures, pictures, symbols, or logos used to differentiate the products or services of one firm from another. Therefore trademarks consist of registered, legally protected products, services, and corporate brands.	Hall (1992), Brooking (1996), Galbreath (2004)

3.4.1.2 *Organisational resources*

Organisational resources include a wide range of intangible assets (Edvinsson and Malone 1997). As explained in Table 3.2, they can be classified into contracts, culture, human resources management policies, and organisational structure. Hall (1992) explains that organisational contracts (for example, franchise agreements and licensing agreements) can be one of the key intangible assets for some firms because contracts are legally enforceable by law and therefore help to build and sustain a competitive advantage.

Table 3.2: Organisational resources

Organisational Assets	Description	Author
Contracts	Contracts are legally binding agreements between two or more parties. There are different types of contracts such as agency agreements, franchised agreements, licensing agreements and property leases.	Hall (1992), Brooking (1996), Galbreath (2004)
Organisation culture	Culture of a firm consists of shared values, beliefs, attitudes and behaviour of employees. These complex patterns in a firm influence decision making processes and make it unique from other firms.	Chatman and Jehn (1994), Itami and Roel (1987), Galbreath (2004), Robinson and Pearce (1998)
Human resource management policies	They consist of a firm's employee-related practices including hiring, compensation, education, incentives, rewards, and training.	Lado and Wilson (1994), Galbreath (2004)
Organisational structure	This is considered as the working and reporting structure of the firm, which determines the task of employees, responsibilities, authority and their role in the organisation.	Barney (1991), Galbreath (2004), Boulton et al.(2000)

Other organisational resources such as organisational culture, HRM policies and organisational structure contribute to order, stability, and quality of a firm (Galbreath 2004). Although they are considered as the glue of the organisation (Boulton et al. 2000; Brooking 1996), they are not thought of as the most important or valuable assets

of a firm, as their key role is to provide the strength and solidity between higher-order' resources (capabilities) and other tangible and intangible resources (Boulton et al. 2000; Brooking 1996). Indeed, such organisational resources are an important link between what and how the firm does and how it does it (Fenandez, Montes and Vazquez 2000).

3.4.1.3 *Reputational resources*

Reputational resources can take on many dimensions (see Table 3.3). It is defined as the "representation of a firms's past actions and future prospects that describes the firm's overall appeal to all of its key constituents when compared with other leading rivals" (Fombrun, 1996, p. 72). Podolny and Phillips (1996, p. 455) also state that "reputation is determined by the value (quality) of the actor's previous efforts."

Table 3.3: Reputational resources

Reputational resources	Description	Authors
Brand reputation	The brand consists of products, services, and corporate names or symbols used to differentiate one brand from another and to give a firm meaning and identity in the industry in which it operates.	Park, et al.(1986) Brooking (1996) Capron and Hulland (1999b), Galbreath (2004)
Company reputation	Company reputation is the overall picture that firms depict to their key investors and customers. This includes public opinion on factors such as trustworthiness, investor credibility, workplace diversity, managerial credibility, social and environmental responsibility, and regulatory accountability.	Fombrun and Shanley (1990), Hall (1993), Michalisin et al.(1997) Galbreath (2004)
Service reputation	Service reputation is the public perception of service innovations, product/ service quality and reliability, and overall service image.	Hall (1993), Galbreath (2004)

As such, managers engage in an array of activities with the intention of building a good reputation over time (Fombrun and Shanely 1990). Therefore reputation is the degree to which a firm is held in high esteem or value (Obloj and Capron 2011; Weiss, Anderson and MaCinnes 1999).

According to market researchers such as Fombrun and Shanely (1990), Keller (1993), and Sirivastava (2001), reputation is manifested in the perception of external stakeholders such as customers, shareholders, distribution channels, and even governments (Michalisin et al. 1997; Obloj and Capron 2011). As in most instances the customers are not in a position to decide the quality of the services offered for purchasing, reputational resources provide the necessary information to the customer about the trustworthiness, credibility and quality of the firm (Kreps and Wilson 1982; Shapiro 1983). Therefore, reputational resources can be considered as a driver of consumers' positive reactions towards a firm.

3.4.2 Capabilities

Sanchez, Heene and Thomas (1996, p. 7) view capabilities as "repeatable patterns of action in the use of assets to create, produce, and/or offer products to a market". Furthermore, Amit and Schoemaker (1993, p.6) state that capabilities refer to

> A firm's ability to deploy resources, usually in combination using organisational processes, to effect a desired end. They are information-based tangible and intangible processes that are firm specific and are developed over time through complex interactions among firm's resources.

Mansfield, Schwartz and Wagner (1981) argue that sustainable competitive advantage is achieved by a firm's capability to deploy or transform its resources (Dierickx and Cool

1989; Lado, Boyd and Wright 1992; Leonard-Barton 1992). Day (1994a) argues that although capabilities are closely knitted with organisational processes, they are separated and can be identified as bundles of skills and accrued knowledge. Considering the above definitions, it can be observed that researchers hold two different views about capabilities. One view suggests that capabilities are processes (Amit and Schoemaker 1993; Sanchez 1996; Grant 2002; Lu 2007) . The other suggests that capabilities are bundles of resources (Day 1994a) (see Table 3.4). The latter view is taken as the basis for this research because the objective is to identify the resources which contribute to the competitive advantage of container lines.

Table 3.4: Capabilities

Capabilities	Description	Author
Employee know-how	The know-how of employees include collective learning, knowledge, innovative thinking, decision–making and problem solving skills, experience, and creativity of employees.	Nelson and Winter (1982), Itami and Roehl (1987), Galbreath (2004)
Managerial know-how	Managerial know-how includes the intellectual prudency, communicative, planning, and organisational skills of managers.	Day (1994b), Teece (1998), Galbreath (2004)
Relational abilities	Relational abilities include relationships that firms have developed and maintained with customers and business partners.	Charan (1991), Hall (1992), Dwyer et al..(1987), Morgan and Hunt (1994), Webster (1992), Galbreath (2004)
Routines	Routines have largely become flows of tacit know-how within the firm, which are exercised by individuals, across teams, and the firm at large, helping to facilitate what the firm does and how it does. Therefore these are series of repeatable operations, methods or actions in the firm.	Nelson and Winter (1982), Srivastava et al. (1999), Grant (1996), Galbreath (2004)

Know-how is the fundamental building block of capabilities no matter whether these capabilities are defined as organisational processes (or organisational routines) or as

firm-level activities such as research and development, marketing and customer service know-how involves knowledge that is tacit, complex, vague, and difficult to codify (Nelson, 1982). As emphasised by Crossan et al. (1999), the know-how of a firm is mainly held and exercised by individuals such as employees and managers and is collectively held by teams and even the company at large. Furthermore, the capabilities can be categorised into four groups, based on their characteristics, as employee know-how, managerial know-how, relational abilities and routines (Amit and Schoemaker 1993). Allatta and Singh (2011) explain organisational routines as recurring and predictable patterns of behaviour carried out by employees in a firm. They are an efficient mechanism for storing organisational knowledge, and have been touted as reducing governance costs and improving firm performance. The routines save firms time and energy because they do not require deliberate management of stimuli (Gersick and Hackman, 1990). They are the basic components of firm's capabilities and are the foundation for what the firm can do (Cyert and March 1963; Karim and Mitchell 2000; Nelson and Winter 1982).

Intangible resources can be categorised further as people dependent and people independent (Hall 1992). Intangible resources that are people dependent include know-how of employees and managers, organisation culture, reputation and networks. Intangible resources that are people independent include contracts, licences, trade secrets, and intellectual property rights and data bases. Another intangible resource classification is intangible resources which can be protected by law (such as trademarks), and intangible resources which cannot be protected by law (such as organisational networks) (Hall 1992). Though acquiring firms may be confident that they have acquired some of the acquirers' intangible resources (such as patents), they

cannot be confident as to the retention of people-dependent intangible resources (such as know-how, culture or networks) as staff may walk away from the new entity (Dierickx and Cool 1989).

As argued by Barney (1986) and Kay (1993), resources are only valuable in the context of the industries in which they are applied. A study on container line selection carried out by Saleh and Lalonde (1972, p.10) states that "transport service is viewed by shippers as essentially a standardised and homogeneous product". Therefore, it is important for container lines to differentiate their services from those of competitors to achieve competitive advantage. According to RBV, the service differentiation of container lines will depend on efficient and effective management of resources by container lines with utilisation of their VRIN resources to formulate unique customer specific services (Fahy 2002; Hall 1992). Thus the next section seeks to identify the intangible resources important to container lines for service differentiation.

3.4.3 Intangible resources in container lines

Empirical studies that have been carried out by few researchers on the service attributes of container lines have been the main source. The main objective of these studies was to identify the service attributes that determine the choice of container lines by shippers or consignees. The findings of these studies have been summarised from a resource perspective in Table 3.5. The study by Jerman (1978) evaluated container line services expected by shippers and consignees in the United States. The four most important service attributes for container lines to be selected were co-operation between container lines and shipper personnel (capability), knowledge of shippers' needs on the part of a

container line representation (capability), container line reputation for dependability and (reputation) container line reputation for quality service (service reputation).

Table 3.5: Summary of empirical studies

Service attributes (Grouped as in tangible resources)	Bardi (1973)	Jerman (1978)	McGinnis (1979)	Pearsons (1980)	Brooks (1983)	Collison (1984)	Suthiwartnarueput (1988)	Matear and Gray (1993)	Franckel (1993)	Gibson et al.(1993)	Tengku (1995)	Chiu (1996)	Lu (2007)
Capabilities (skills) – intangible resources													
Frequency of service		*	*		*	*	*	*	*	*	*	*	*
Transit time	*	*	*		*	*	*	*	*	*	*	*	*
On time pickup and delivery	*		*		*		*	*				*	*
Co-operation between carriers and users	*	*			*	*	*	*			*	*	*
Speed and accuracy of documentation						*	*	*	*		*	*	*
Competitive freight rates	*	*	*	*	*	*	*	*		*	*	*	*
Quick cargo tracking		*		*	*	*	*	*	*		*	*	*
Cargo handling								*			*		
Fast claims handling	*			*	*	*	*	*		*	*	*	*
Directness of sailings					*		*	*			*		*
Sales representatives service	*				*		*			*	*	*	*
Port coverage					*		*	*				*	
Service reputation-Intangible resources													
Reputation for quality service	*	*			*	*	*				*	*	*
Loss and damage records	*		*		*	*	*		*	*	*	*	*
Reliability of service/punctuality	*	*	*		*	*	*	*	*		*	*	*
Willingness for long term contracts					*								

Source: Adapted from Lu (1997)

The most important service attributes to the shippers were co-operation between container line and shipper personnel (capability), container lines' ability to quickly trace shipments (capability), total transit time for the shipment (capability), knowledge of shippers' needs on the part of a container line representative (capability), container line assistance in obtaining rate or classification changes (capability).

The study by McGinnis (1979) analysed shippers' attitudes towards an array of factors of container lines that affect the choice of freight transportation. A mail survey questionnaire was posted to a random sample of 1,000 traffic and transportation executives. The respondents represented a broad spectrum of industries and geographic areas. The inclusion of several geographical areas is another unique feature of that study, compared to other studies which were mostly limited to one geographical area. The study therefore provided a broad comparative view about perceptions in different geographical areas, revealing that service attributes such as speed and reliability of service (capability), loss and damage record (capability), and competitive rates (capability) were the most important factors contributing to shippers' decisions when selecting a container line. The study emphasises the contribution of capabilities on the selection of container line services. Furthermore, McGinnis (1979), similar to Bardi (1978), identified the importance of service quality compared to the freight rate offered by the carrier in the decision-making process of the shipper. Therefore container lines are increasingly expected to provide a quality service. As identified in the above studies, the contribution of intangible resources is significant for achieving service quality and the uniqueness of service offered by the container line.

Pearson's (1980) research on container liner performance and service quality from a UK shippers' perspective revealed that the important service attributes of container lines were port itinerary (capability), sailing date and expected arrival date of the container line (capability), transit time (capability), regularity of the service (service reputation), and the reliability of the service (service reputation), all of which can be categorised as intangible resources.

Brooks (1990) investigated the determinants affecting the choice of a container line by shippers with reference to exporters in Eastern Canada. Brooks (1990) carried out the study on the same sample both in 1982 and 1989 and there were significant differences in response from shippers to selection criteria. Brooks (1990) identified the cost of services (capability) as the main service attribute that determined carrier selection in the 1960s and 1970s. However Brooks (1990) study revealed that by 1989 container lines had improved their performance significantly on two service attributes (frequency of sailing and cost of services) and due to that, the transit time (capability) and the door-to-door elapsed time (capability) had become the new determining criteria on which container line selection decisions were made. Therefore, these studies reveal that shippers' choices changed over time, becoming focused more on service quality than on the cost of the service. This also indicates the importance of understanding these important intangible resources, because then only they can be used to develop these service attributes.

In 1984 Collison study focused on domestic container liners selection by shipper. The shipper sample consisted of customers of the major container lines engaged in the Pacific Northwest Central Alaska liner trade. The most important service attributes

identified by shippers were overall average time in transit (capability), schedule reliability (capability), and the ability to service outbound and inbound ports that meet shippers' requirement (capability), which were all intangible resources (capabilities). Suthiwartnarueput (1988) explored the efficiency of the shipping industry in Thailand. His study revealed that the most important service attributes from the shippers' perspective were competitive rates (capability), punctuality (service reputation), and past loss and damage experience (service reputation), transit times (capability), frequency of sailings (capability), and directness of sailings (capability) and all of these service attributes can be grouped as capabilities/ reputational resources.

Matear and Gray's (1993) study focused on freight transport services in the Irish sea market. Their study examined the factors that were important in the choice of freight services of both shippers and freight suppliers purchasing shipping services. For shippers, the most important service attributes they found were fast responses to problems (capability), avoidance of loss or damage (capability), on-time collection and delivery (capability), value for money price (capability), and good relationship with carriers (capability). In contrast, for freight suppliers the most important service attributes were the punctuality of sea service (capability), a high frequency of sea service (capability), and a fast response to any problem (capability). This study also emphasises the importance of contribution of intangible resources (capabilities) to container line selection decision processes. This study reveals that capabilities change according to the industry.

The importance of transit time is also upheld by Hayuth (1985) and Brooks (1982, 1986) who found transit time to be a key choice variable in the selection of an ocean

carrier by Canadian shippers. Therefore, a transition can be observed in factors determining container line choice from cost of service to reliability, quality and transit time of services. According to Franckel (1993) the nine important quality concerns with regard to container liner services are service reliability (service reputation), service time and maintaining delivery time (capability), availability of promised or advertised capacity (capability), safety of cargo (service reputation), security and maintenance (capability), cargo tracking and cargo flow control (capability), documentation and effectiveness of information flows (capability). All the above factors also can be categorised as capabilities/ reputational resources. Tengku (1995) investigated liner shipping services in the Far East/Europe trade. The five service attributes (capabilities) which shippers and container lines deemed important were handling of cargo, service knowledge ability, punctuality of service and transit time, frequency of service and competitive freight rates. According to Gibson et al. (1993) the service factors that contributed to the selection of container lines by shippers were a willingness to meet service expectation (capability), an established track record of outstanding performance (reputation), willingness to focus on continuous improvement (capability), the ability to handle special needs and emergencies (capability), and finally willingness to meet cost goals (capability).

Chiu's (1996) study on service attributes which were most important to shippers and container lines in Taiwan when selecting a container line, revealed that the four most important service attributes to shippers were a prompt response to problems (capability), reliability of transit time (service reputation), documentation service notice of delays (capability) and lost and damage claims assistance (capability). On the other hand the four most important service attributes to container lines were transit time

(capability), prompt response to any problem (capability), understanding shippers needs (capability), and reputation of the container line which can be recognised as intangible resources, and knowledge ability of sales personnel (reputation). Similarly, as shown by all the above studies, these service attributes can be categorised in to intangible resources (capabilities and service reputation).

Lu's (2007) study focused on the Taiwanese liner shipping industry with the objective of empirically evaluating key resources and capabilities in the liner shipping context. This is one of the few studies that focus on important resources from the (RBV). Lu's (2007) study was heavily influenced by the findings of research studies undertaken by Pearson (1980), Brooks (1990), Collison (1984), Chiu (1996), and Lu and Marlow (1999), with respect to selecting perceived capabilities and resources that contribute to the successful growth of container lines. The five most important intangible resource from the perspective of respondents found in Lu's (2007) study were corporate reputation, financial stability, the number of vessels, dedicated terminals and number of branch companies or agencies. In his study, he also found the efficiency of loading and discharging, on-time pick-up, service routes planning, accurate documentation, and container positioning as the five most important capabilities. Furthermore, container lines consider having a wide coverage of offices operated by their own staff or by their agencies as a strategic resource (Lu 2007). Container lines such as Maersk and APL prefer to have the regional offices managed by their own staff rather than outsourcing them to agents. Similarly, container lines train local staff and send several expatriates (to very senior positions) to work alongside local personnel, with the objective of gaining an advantageous position by combining country-specific and firm-specific

resources effectively (La 2005). Container lines such as Maersk and APL adopt this practice.

According to all the above studies related to container lines, intangible resources such as capabilities are the main factors that contribute to the selection of their services by customers (shippers) in many parts of the world. However these research studies have been carried out from the perspective of identifying the service attributes of container lines, that is, those that are contributing to customer choice in the decision-making process. Accordingly, findings have been biased towards capabilities (see Table 3.5). Empirical studies on the contribution of intangible resources (assets) to the sustainable growth of container lines have been minimal, particularly the studies that include organisational resources, culture and reputation as an intangible resource. Therefore, there is a gap in knowledge on how intangible resources (both assets and capabilities) contribute to the sustainable growth of container lines from the perspective of resource based view. In this respect, one of the key focuses of the current study will be to identify the intangible resources (assets and capabilities) from the container line perspective that contribute to the competitive advantage of container lines. Furthermore, there does not appear to have been extensive research on the contribution of integration of these intangible resources to the performance of strategic co-operations. Therefore another important focus of the study will be how the integration of intangible resources contributes to the performance of strategic co-operations.

Das's (2011) longitudinal study revealed that trade routes bring revenue to container lines, and they are being identified as important intangible resources. The first step in the design of a regular container line service consists of the identification of the markets

to be served or trade routes that would be served (Das. 2011; Kjetil, Trond and Haakon 2009). The setting of a trade route comprises several steps. Once the trade route for the container line service has been identified, the service planner will have to make decisions on several operational steps, such as to identify: the service frequency (including the fixed days/hours of the week for departure/arrival), the vessel capacity, the fleet mix and the vessel speed, and the number and order of port calls per round trip and the required number of vessels, derived from the desired frequency and the vessel round trip time (function of route length, vessel speed and total port time) (Ducruet et al. 2010). Therefore trade routes is an intangible resource which contributes to the performance of the container line. According to Teng (2007), firms initially attempt to develop required resources organically in the firm. The benefit to be gained from developing resources internally is that they provide the firm with better control rather than acquiring them from other firms (Teng 2007). However, the internal development of resources is often not practical for firms due to economic and competitive reasons, such as the inability to develop these resources internally in a timely manner to meet the market demand (Das 2011). Therefore, firms resort to strategic co-operations as a way of accessing these resources from other firms (Das and Teng 2000). The next section discusses the relationship between resources and the type of strategic co-operation.

3.5 Rationale for strategic co-operation formation and resources

Firms integrate their resources through a strategic co-operation to create value by pursuing the potential synergy between them (John and Harrison, 1999). Hamel, Doz and Prahalad (1989) explain that firms view each strategic co-operation as a window of opportunity to access their partner's key capabilities and resources. Therefore, RBV

theory has been used to explain the formation of strategic co-operations (alliances and M&As), with an emphasis on how firms use and leverage resources, in an attempt to further their strategic objectives and create value (Lane and Lubatkin 1998; Mowery, Oxley and Silverman 1996; Nakamura, Shaver and Yeung, 1996; Zollo and Singh 2002).

Ramanathan et al. (1997) discuss the conditions that persuade firms to favour limited integrated strategic co-operations (LISCs) rather than M&As (close integrated strategic co-operation). In the context where only some of the resources of the target firm are considered valuable by the acquiring firm, LISCs as opposed to M&As, are the preferred option. Further, when non-desired resources are not easily separable from other resources in firms, LISCs allow the partnering firms to access only the asset each desires while bypassing the non-desired resources (Ramanathan et al.1997). In addition LISCs are preferred by firms since a certain degree of asset specificity is usually involved with firms (some of the less valuable or redundant resources) unlike in an M&A that cannot be easily disposed of without losing some valuable resources. Furthermore, Nelson and Winter (1982) identify that firms prefer to form LISCs in order to prevent their know-how from diminishing. The choice is about whether the firm should relinquish its resources permanently (if forming an M&A) or for a specific period only (LISC) (Das and Teng 2000). Therefore, according to RBV theory, firms engage in varying strategic co-operations due to different resource options.

When the discussion is focused on container lines, as explained in Chapter Two, different types of strategic co-operations can be observed such as LISCs, which include conferences, shipping alliances, pool agreements/joint services, consortia, and closely

integrated M&As. In these processes of consolidation different levels of resource integration could be observed among these strategic co-operations. The incentives to consolidate have to be similar to general trends of other industries, such as to achieve economies of scale (offer larger vessels), operational synergies (better allocation of vessels) or market control (increase market power) through resource integration (Brooks and Ritchie 2006; Elmuti and Kathawala 2001; Fusillo 2006; Midoro and Pitto 2000; Pierre 2000; Ryoo and Thanopoulou 1999; Slack, Comtois and Mccalla 2002; Song and Panayides 2002). Furthermore, these incentives inspire container lines to form strategic co-operations utilising large volumes of tangible resources such as main line ships, feeder ships, agency networks and intangible resources such as core skills. However, most container lines which have evolved into global lines have started as regional container lines. They are built with cultural and own development values (Ferrari, Francisco and Marco 2008). In this respect, the post-strategic co-operation success of these container lines depends on the successful integration of intangible resources such as culture, work patterns and values (intangible resources) (Ferrari, Francisco and Marco 2008). However, there are few studies that have investigated the integration of resources in strategic co-operations among container lines. Midoro and Pitto (2000) have observed that lack of such cohesion is the reason for failures or the inability to achieve synergetic growth subsequent to consolidation processes between container lines.

3.6 Processes of integration of intangible resources

According to Wang and Zajac (2007), firms generally overestimate their abilities to integrate resources effectively when setting up strategic co-operations. Therefore, the

potential synergies are often not realised in most strategic co-operations (Porter 1987). The empirical studies have revealed that even though a large volume of research is available, many firms have not taken adequate steps for adopting effective processes to integrate intangible resources (Cartwright and Cooper 1993). This has affected the synergetic growth of many strategic co-operations (Chaudhuri and Tabrizi, 1999). Allatta and Singh (2011) and Hasspelagh and Jemison (1991) have identified adopting integrating processes as being important when a strategic co-operation involves accessing new knowledge, which is often tied to key employees who may leave the entity if they are not integrated properly (Allatta and Singh 2011; Hasspeslagh and Jemison 1991).

At the initial stages of the formation of the strategic co-operation, it is important to select suitable partners with similar values, beliefs, and practices, with whom firms can work effectively to achieve the resulting synergies (Iyer 2002). Therefore, firms expend considerable effort in searching for compatible partners that can complement resources and build capabilities to explore new business opportunities (Iyer 2002; Weitz and Sandy 1995). Furthermore, firms evaluate the potential strengths of the partnering firms at the initial stages of forming the strategic co-operations but it is by and large unilateral; firms learn the strategic intentions, skills and competencies that potential partners possess (Iyer 2002). The objective of this learning about the partners is to identify the organisational fit, which is defined as the match between administrative practices, cultural practices, and personnel characteristics of the target and parent firms that may directly affect how the firms can be integrated with respect to day-to-day operations once the strategic co-operation has been made (Jemison and Sitkin 1986).

After understanding the strengths and weaknesses of each partner, the next stage of strategic co-operation formation is defining the legal framework and the objectives of the strategic co-operation (Altman and Taylor 1973; Clark and Mills 1979). The next step in this integration process is to acquire knowledge about partnering firms, such as skills, processes and routines (Iyer 2002). The processes and routines of strategic partners can also take the shape of self-appraisals by partners (Huber 1991). Each firm generates information about necessary adaptations and ways to implement them; this information is then exchanged within and between partners (Huber 1991). Mutual training is another approach of learning and understanding of corporate culture and work practices of partners in a strategic co-operation (Parkhe 1991). As discussed above in the intangible resources section, these intangible resources of each firm are vital for the competitive advantage of the firm. Therefore, integrating them effectively in strategic co-operations is important for their performance.

More specifically in M&As where close integration of human element is needed, Birkinshaw et al. (2000) emphasise the importance of two integration processes, task integration and human integration. Task integration focuses on value creation of M&As by integrating intangible resources such as capabilities, intellectual properties, reputational and organisation processes. Human integration is concerned primarily with generating employee satisfaction, and ultimately a shared identity, among the employees from both firms mainly by integrating the cultures of the partnering firms (Birkinshaw et al. 2000). According to Blake and Moutan (1985), although task integration and human integration processes are conceptually distinct, they are not independent of one another because aspects of human integration, such as enhanced employee satisfaction, are likely to make efficient capability transfer and other

intangible resources sharing easier; and task integration, in turn, is likely to enhance employee satisfaction and shared identity (Blake and Moutan 1985). The task integration mechanisms proposed are internal staff meetings, cultural awareness seminars, mixed project teams, personnel rotation and personnel training programmes, (Haspeslagh and Jemison, 1991; Sales and Mirvis 1984; Shirvastava, 1986). Birkinshaw et al. (2000) identify that meetings among managers, rotation of personnel between units, standardised documentation, international technical seminars, and international project teams facilitate the integration of the human factor. Furthermore, formulating the integrating processes jointly with active involvement of the acquired company's management team and effectively using the skills and knowledge of the acquired firm helps to generate commitment from the acquired container line staff (Hakanson 1995).

In addition, prompt and in-depth communication from senior managers about the consequences of the M&A is vital to maintain employee morale and commitment in the acquired firm (Hakanson 1995). Bruckman and Peters (1987) identify the importance of establishing post-merger integration teams at firm level. The team should be represented by employees of both firms (Bruckman and Peters 1987). These teams should address problems such as the cultural fit between the acquiring and acquired firms, critical employee retention plans, and organisational development and change strategies. Bruckman and Peters (1987) further suggest the importance of identifying the members who should represent these teams prior to the M&A being announced. These members can then be trained to face the various issues arising during the formation of the M&As. In most empirical studies on M&As, the researchers have identified the cognitive limitations of managers and subsequent impact on post M&A performance (Cyert and March 1963). Therefore the actions of management in the processes of integration

(Hasspeslagh and Jemison 1991) may determine the extent to which the potential objectives of the M&As are realised (Hasspeslagh and Jemison 1991). Chakrabarthi and Mitchell (2005) identify that employees of the acquiring and acquired firms have to be selected on the basis of merit to fill key jobs in the new entity, as fairness in conducting the selection process will gain stronger staff, higher morale, and greater productivity in the strategic co-operation. These processes may help the sustainability of skilled staff in a post-merger or acquisition process would help to retain the intangible resources in the new entity.

The studies by Jerman et al. (1978), McGinnis (1979), Collision (1984), Tengku (1995), (Elmuti and Kathawala 2001)and Gibson et al. (1993) indicate that the selection of container lines by shippers and consignees mainly depends on capabilities of container lines and other intangible resources. Accordingly, the sustainability of skilled staff contributes to the competitive continuation of service execution of container lines. The studies undertaken by Brooks and Ritchie (2006), Elmuti and Kathawala (2001), Fusillo (2006), Midoro and Pitto (2000), Pierre (2000), Ryoo and Thanopoulou (1999) and Slack et al. (2002) have extensively explored the motives for consolidations, but how resources are integrated and the subsequent contribution of resources to synergetic growth of container lines has not been empirically researched in container lines. Accordingly, the methodology will be developed to assist in understanding the strategic resources and the impact the processes of consolidations among container lines have on them.

3.7 Performance of post strategic co-operations

The justification of the choice of performance measurements stem from RBV theory, suggesting that the possession and deployment of VRIN resources will lead to a competitive advantage, which is ultimately measured by market performance indicators (Barney 1991; Bates and Flynn 1995; Combs and Ketchen 1999; Bowen and Wieserma 1999; Peteref 1993; Michalisan et al. 1997; Rouse and Daenbach 1999). Spanos and Lioucas (2001) explain that firm resources are positively associated with sales growth and market share. Furthermore, with respect to RBV and performance, several RBV researchers (such as Miller and Shamasie 1996, Powell and Dent-Micallef 1997) include both profitability and market-based measures (such as sales growth market share) to study the association between resources and firm success.

However, researchers have differing opinions regarding the measures of performance of strategic co-operations. Some researchers use subjective measures such as perceived satisfaction to determine the performance of strategic co-operations, while others consider profitability, sales growth, revenues and costs, which are objective measures (Contractor and Lorange 1988; Mohr and Spekman 1994; Mjoen and Tallman 1997; Parkhe 1993). In addition to this, some studies have assessed LISC (alliance) performance based on achieving the objectives of individual partner firms (Dollinger and Golden 1992; Thomas and Trevino 1993). Other studies have used the survival-termination dichotomy as a proxy for LISCs (alliance) performance, based on the assumption that terminated alliances are less successful (Geringer and Hebert 1988; Park and Russo 1996). However, this last approach has been criticised for not involving direct measuring of the performance and also for combining alliance performance with

alliance instability (Inkpen and Beamish 1997). In LISCs, each partner firm of the alliance has the option to evaluate their performance differently (Deeds and Hill 1996). To overcome this problem, the researchers have used the alliance per se as the unit of analysis to measure alliance performance, based on alliance goal achievement in terms of new product development (Deeds and Hill 1996) and profitability of alliance (Cullen et al. 1995).

Based on the above assumptions, some studies measure alliance performance through the perceived achievement of partner firms' strategic objectives (Parkhe 1993; Yan and Gray, 1994; Zaheer et al. 1998). On the other hand, as partner firms rely on alliances to fulfil specific strategic objectives, alliance performance needs to be assessed based on the aggregated achievements of the partner firms (Parkhe 1993; Yan and Gray, 1994; Zaheer et al. 1998). Following this partner locus, some studies evaluate alliance performance through perceived the achievement of partner firms' strategic objectives (Parkhe 1993; Yan and Gray 1994; Zaheer, McEvily and Perrone 1998).

The advantage of focusing on the partner is that it highlights the fact that an alliance is made up of partner firms, and the success of an alliance cannot be evaluated independently of the interests of the constituent partner firms. After all, economic rent-seeking by individual firms is the basis for any cooperative strategy (Parkhe 1993; Yan and Gray 1994; Zaheer, McEvily and Perrone 1998). Also, one partner's perception of goal achievement cannot be sufficient (Parkhe 1993; Yan and Gray 1994; Zaheer, McEvily and Perrone 1998). Therefore, Beamish (1987) and Harrigan (1988) use mutual satisfaction between the partners as a measure of alliance performance. A popular but less explicit form of the partner locus consists of measuring alliance

performance in terms of the partner firms' satisfaction with the alliance (Mjoen and Tallman 1997). In the current study, the latter approach is adopted and alliance performance is viewed as the degree to which the agreed objectives of an alliance are achieved by each line. This way each container line can evaluate to what extent their objectives are achieved by being in a strategic co-operation.

According to Haspeslagh (1987), it is important to recognise the distinction between economic and non-economic value, both of which are present in M&As, because economic value can be thought of as benefits, which are achieved through the ultimate accruing to shareholders via the stock prices, market share growth and economies of scale. Haspeslagh (1987) identified that the non-economic value tied to the human cost of M&As tends to be very high. Research has revealed that M&A announcements, especially in combination with poor handling of the communication, increase uncertainty, stress, and absenteeism, while reducing job satisfaction, commitment, the intent to remain in the new firm, and perceptions about the firm's trustworthiness of employees (Schweiger et al.1991). Post-acquisition changes often involve a forced reduction in the workforce and structural redesign in order to cut costs and reduce redundancy. The impact of such organisational change is particularly strong on employees who perceive that they lack control over the forces of change (Schweiger et al. 1991). Such employees are likely to feel a greater reduction in job control, experience feelings of helplessness, withdraw psychologically from the work they do, and generate an intention to leave the organisation (Fried et al. 1996). Other studies investigating post-M&A performance suggest physiological effects displayed by employees of the firm. These are well documented, and include headaches, insomnia, and gastronomical difficulties which are often symptomatic of pressures that occur in

the general business environment (Fried et al. 1996). Evidence is an increase in turnover rate, wrongful termination and reduce moral (Fried et al. 1996). Probably the most common long-term consequence is the productivity problems that evolve from the joined firms. The human impact can be measured through voluntary personnel loss, and retention of acquired personnel.

3.8 Summary

This chapter reviewed the contribution of tangible and intangible resources to the sustainable competitive advantage of firms in general. It then explained the contribution of specific tangible resources such as main line ships, feeder ships, container terminals and value added services to the sustainable competitive advantage of container lines. According to the studies, intangible resources tend to be mainly identified as capabilities such as freight rates, speed and reliability, loss and damage, inventories, company policy, cost of service, frequency of sailings, transit time, and directness of sailings and reputation. The capabilities are based on the know-how of employees and managers of the organisations.

The chapter also discussed the rationale for strategic co-operation formation from the resource perspective. Therefore, RBV theory was used to explain the formation of strategic co-operations with an emphasis on how firms use and leverage resources in an attempt to further their strategic objectives and create value. The chapter identified the importance of adopting processes to better integrate intangible resources when strategic co-operations are being developed by focusing on the task integration mechanisms such as internal staff meetings, cultural awareness seminars, mixed project teams, personnel rotation and personnel training programmes. Finally, the chapter concluded by

proposing measures for strategic co-operation performance. The following chapter proposes the research methodology, with the focus on investigating the primary and two secondary research questions.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

The previous chapters identified the necessity for conducting a major empirical study to explain the contribution of intangible resources to the market performance of container lines, and more specifically the integration of intangible resources and their contribution to the post strategic co-operation performance of container lines. Thus, the purpose of this chapter is to explain the development and implementation of a two-stage data gathering process suitable for the study. The research design explains how this two-stage data gathering, involving firstly an exploratory mail survey and secondly an in-depth in-person interviews, are planned and structured to address the primary research question (PRQ) and two subsidiary research questions (SRQ1 and SRQ2). The chapter continues by identifying the sample, selection of the respondents and design of the questionnaires for both methods of data gathering. Also explained are the processes used for the pre-testing stages of both surveys, how they are administered and importantly the error control processes.

4.2 Research design

As discussed in Chapter One, this thesis explores the integration of intangible resources in strategic co-operations among global container lines by addressing the PRQ:

PRQ: **Does the integration of intangible resources contribute to the post strategic co-operation success of container lines?**

As explained in Chapter One, to answer the PRQ, the two following SRQs are established.

SRQ1: Which intangible resources contribute to the market success of container lines?

SRQ2: Do container lines adopt processes to ensure the successful integration of intangible resources when strategic co-operations are being developed?

The research design suggests the plan and the structure to obtain answers to these research questions. As will be explained in this chapter, this is achieved by allocating limited resources in an efficient manner when collecting, measuring, and analysing data (Fink 1995; Hair et al. 2011; Ketchen, Boyd and Bergh 2008; Lakshman, Singha and Biswas 2000).

As indicated by PRQ the purpose of the research is to study whether the integration of intangible resources of the partnering container lines contributes to the post strategic co--operation success. However, prior to identifying the integration of intangible resources as indicated in SRQ1, the intangible resources which contribute to market success of container lines have to be determined. The stage one survey is an exploratory study, which focuses on the perceptions of senior managers regarding the contribution of intangible resources to market performance and their involvement in strategic co-operations among global container lines. It is intended that the findings of the stage one survey will identify the key intangible resource items which contribute to market performance of container lines as well as determine suitable respondents to contribute to the second stage in-depth study. Apart from the study by Ryoo and Thanopoulou (1999) on strategic co-operations among Korean container lines and Lu's (2006) study using the Delphi method to evaluate strategic co-operations in liner shipping, empirical studies using two stage data gathering methods in this field are limited. The next section discusses the rationale for the data gathering methods.

4.2.1 Methods for data gathering

There are several methods of primary data gathering available to researchers such as self-administered surveys (via mail, fax and internet), interviews (telephone and in-person) and participant observation (Creswell and Clark 2011; Cycyota and Harrison 2006; De Vaus 2002; Dixon-Wood, Bonas and Booth 2005; Fink 2003b; Wilson 2010; Zikmund 2010) According to Oishi (2003), De Vaus (2002) and Zikmund (2003), all these methods have advantages and disadvantages. The challenge the researcher faces is the selection of the most suitable data gathering method in considering the advantages and disadvantages of each method (Neuman 2003; Oishi 2003) to maximise the research findings. The RBV based literature recommends interviews (in-person and telephone), and surveys (mail and internet) as suitable data gathering methods, mainly due to the ability of the interviews to better depict organisational phenomena and the suitability of surveys to generate empirically robust data (Hoskisson et al. 1999; Lockett and Thompson 2001; Rouse and Daellenbach 2001). Of interest, Galbreath (2002), Hall (1992) and Fahy (2002) have used the mail survey method to gather perceptions of senior managers of the contribution of resources to the success of firms in their RBV based exploratory studies.

Brooks (1990), Chiu (1996), Lu (2007), Matear and Gray (1993) and Suthiwartnaruept (1988) also have used the mail survey method in their exploratory studies to gather the perceptions of senior managers on the selection of container lines by customers with regard to the performance of service quality. These studies were discussed in detail in Chapter Three . Further, as recognised by Creswell and Clark (2011), De Vaus (2002), Krosnick (1999), Neuman (2003), Wimmer and Dominik (2005) and Zikmund (2010), the mail survey method has several advantages such as reaching a large number of

respondents in a limited period of time at a low cost, being more economical than faxing, and the ability to respond anonymously, thereby avoiding interviewer bias. In addition, the respondents can complete the mail survey questionnaire at a time when it is convenient to them and by checking personal records if necessary. Further studies done by Burns (2008) have revealed mail surveys have higher response rates than internet based surveys. These advantages and its proven success in previous RBV based studies have influenced the decision to select a mail survey method for the stage one exploratory survey of the current study. However, suggested by Neuman (2003), the researchers cannot control the conditions under which a mail questionnaire is completed. A researcher cannot visually observe the respondent's reactions to questions, physical characteristics, or the setting. The mail questionnaires format limits the kinds of questions that a researcher can use. These disadvantages could be minimised with the use of the in-person interview method.

The interview method (telephone or in-person) as discussed earlier is a suitable method for the RBV based studies because they provide the deeper understanding of the particular topic (Rouse and Daellenbach 2001 and Yeoh and Roth 1999). Others (such as Baur, Donald and Weekly 2004, Cameron and Price 2009; Duffy et al. 2005; Frey and Oishi 1995; Hair et al. 2011; Neuman 2003; Wilson 2010 and Zikmund 2010) also recommend interviews to obtain qualitative data from respondents. Cameron and Price (2009), Hair et al. (2011) Oishi (2003) and Zikmund (2010) further emphasise that the in-person interview method is more suitable when it is necessary to ask complex questions, because the physical presence of the interviewer often enhances interviewer-respondent rapport and facilitates an in-depth discussion by allowing the observation of nonverbal cues that may indicate confusion or hesitation on the part of the respondents.

Further the research studies by Capron and Hulland (1999) and Birkinshaw et al. (2000) have used in-person interviews as a method to study the integration of intangible resources in acquisitions among firms. As the objective of the second stage, of the current study is to obtain in depth information from a more focused selected sample of senior managers on the integration of intangible resources in strategic co-operations of container lines. The survey in-person interview method was selected for the second stage data collection.

In addition, the use of two methods of data gathering helps to overcome the potential bias and sterility of a single method approach and enhance the research outcomes (Creswell and Clark 2011; Dillman, Phelps and Tortora 2009; Ticehurst and Veal 2005) and such use of complementary methods increases the probability of valid results, as the limitation of each method will be compensated by the strengths of the others and it enhances chances of using both qualitative and quantitative approaches in the same study (Azorin and Cameron 2010; Collis and Hussey 2003; Creswell and Clark 2011; Leeuw De 2005; Zhu 2010).

4.2.2 Secondary data

According to Cameron and Price (2009) and Zikmund (2010), although secondary data are gathered and recorded by someone else, these data can provide valuable information needed for the new research study. The main advantages of using secondary data is that obtaining it is almost always less expensive, providing faster access than acquiring primary data (Wilson 2010). In this research, Containerisation International, Maritime Review and Alphaliner Monthly Monitor are used as main secondary data sources. The data from these secondary sources help to:

1) Find details about container lines, such as their market share (with regard to TEU capacity, cargo volumes and number of vessels)

2) Obtain information about different types of strategic co-operations, dates of their occurrences, members of the strategic co-operations and any changes in the members (if the members have moved out from the strategic co-operation or new members have joined in).

3) Types and volumes of resources integrated or acquired through the strategic co-operations.

4.3 Stage one: Mail survey

The mail survey is the first stage of data gathering with the purpose of gathering a large amount of data from a variety of respondents within a relatively short period of time. The detailed process of developing and administering the mail survey is explained from sections 4.3.1 to 4.3.8.

4.3.1 Population design

The objective of the exploratory study is to gain a holistic view of the perceptions of senior managers attached to agencies and regional offices representing global container lines. The total population of agencies and regional offices was considered for the stage one survey in order to maximise the number of diverse perceptions captured in the study. As it is an investigation of all the individual elements which made up the population, this sampling method is identified as a census (Cooper and Emory 1995; De Vaus 2002; Sekaran 2000; Wimmer and Dominick 2005; Zikmund 2010).

All container line regional offices or their agencies selected for the survey represent global container lines which call at the Port of Colombo, Sri Lanka. The Port of Colombo is the main gateway to the Indian subcontinent, which has an economy with a growth of nine per cent per annum (UNCTAD 2010). Its strategic location in the middle of the main international sea route connecting the Far East and Western Europe has enabled the Port of Colombo to connect cargo to various destinations in the world. It has been a regional transhipment hub port since the early 1970s when containerisation was first introduced to the region. The large south port development in Colombo has further strengthened Sri Lanka's claim as a regional transhipment hub (Fossey 2010). This strategic importance has influenced all leading global container lines to set up their operations in Colombo, Sri Lanka (Fossey 2010). All the agencies and regional offices selected for survey have been in operation for at least five years; which is another indication of the strategic importance of the Port of Colombo, because long period of operation of these global lines have a stronger presence in Port of Colombo to substantiate its claim as a maritime hub. Further, these global container lines represented by the regional offices and agencies account for a total volume of 12 million TEUs or 90 per cent of global TEU capacity in the year 2010 (Alphaliner 2010). Lu's (2007) study was also conducted in a similar maritime hub in Taiwan. The comparison between cultures and work ethics may be different between the hubs, as explained in Chapter Two. Globally, container lines are represented by regional offices and agencies and these agencies and regional offices are the life lines of the container lines. They are responsible for the marketing of container services, handling shipping documents and handling vessel operations, and how vessels reach the port (McCalla, Slack and Comtois 2004). Thus, these offices are directly engaged with the customers and their

conduct has an impact on the services offered by container lines. Due to these reasons Lu's (2007) study also recognises the importance of understanding the perceptions of senior managers in container lines and their agencies concerning the contribution of resources to the market performance of container lines. Thus, their views and perceptions are important for container lines when they plan strategic co-operations.

The regional offices are operated by local employees but the senior manager or CEO is employed from the container line's country of origin. The agencies are either solely representing the container line or the firm has a separate office to represent the global container line. Although agencies do not have capital invested in transport equipment or physical handling of containers, they provide the same services as the container lines from the perspective of marketing, ship operations at the port, and document handling to shippers and consignees (Lu 2007).

The agency offices are organised and operate in the same manner to the container line offices they represent. The customer care strategies, marketing, HR and financial systems of these offices are the same as to those of the container line they represent. This includes the logo and colours of the container line being used to decorate the agency offices; all letterheads and other documents with which a container line corresponds with external organisations. In addition, the container lines train the staff of the agency to represent them with the same corporate identity. Therefore, the shippers or consignees are made to feel that they are dealing with the container line directly.

The total population of regional offices and agencies consists of 84 firms. These firms are either regional offices or agencies representing global container lines. Sekaran

(2000), Wimmer and Dominick (2005) and Fowler (2008) recognise that identifying the population accurately is vital for the accuracy of data gathered, therefore in the current study several sources are used to confirm the population data. The information identifying the 84 senior managers representing global container lines is obtained from the Ceylon Association of Ship Agents (2009/2010) directory. This is an annual directory which provides detailed information about global container lines. It contains all the contact details of senior managers of each container line and each agency (representing global container lines) in Colombo, Sri Lanka. In addition, Ship Link Directory (http://www.shiplink.lk/Shipping-Lines-Local-Agents.html) is a web-based directory containing the websites of all the leading container lines and information about container lines and their agents established in Sri Lanka. This was a useful means to check the accuracy of the other directory. This information was also verified using the website of each individual container line, which provides information about the regional offices and agencies representing them. The searches revealed that four agencies have not taken the membership of the Ceylon Association of Ship Agents; therefore, their names did not appear in the directory. The contact details of these four members were taken from the Ship Link directory. The next section discusses the reasoning for selection of respondents from agencies and regional offices for the stage one survey.

4.3.2 Selection of respondents

Cavena et al. (2001) and Sekeran (2000) state that surveys are useful and suitable methods of gathering data to find answers to research questions, provided the data is collected accurately from suitable respondents who can provide the correct answers to the questions. Therefore, when selecting respondents for the survey, their knowledge of

the subject in order to answer the survey questionnaires and the authority of the potential respondents to discuss the issue on behalf of their firm was considered (Kumar, Stern and Andersen 1993; Muthusamy and White 2005; Phillips 1981).

A senior manager (for example CEO, General Manager, Managing Director, Director, Vice Chairman or a senior manager responsible for a particular division) from each regional office or agency was selected for the survey. Bagozzi et al. (1991) and Phillips (1981) recognise that the use of a single respondent could potentially bias the results by introducing measurement errors. However, Gatignon et al. (2002) and Shortell and Zajac (1990) argue that using a knowledgeable single respondent is a valid approach to measuring strategic research questions and that the bias introduced by such a respondent is likely to be negligible compared to multiple respondents' responses. This view is further strengthened by Huber and Power (1985), who consider it prudent to use a single knowledgeable respondent instead of several respondents with varied knowledge, because an average of responses is less accurate than the answers provided by a single knowledgeable respondent. In addition, Dyer and Hatch (2006), Fahy (2002), Galbreath (2004) and Hall (1992), who have undertaken RBV based studies identified that only a CEO or senior manager, who understands and controls the totality of resources has specialised knowledge to effectively assess the firm's resource base with respect to its performance. Therefore, considering the above views, the strategy of using a single respondent was adopted for this study.

4.3.3 Development of mail survey questionnaire

The mail survey questionnaire (Appendix A) is designed to gather data to address the first subsidiary research question (SRQ1). Accordingly, the relevant question

dimensions and question types were included to gather the required information from the respondents. To obtain clarity, each question dimension was given a letter from the English Alphabet, for example, letter A is given to the intangible and tangible question dimensions. The intangible and tangible resources dimension (see Table 4.1) explores the importance of the resources' contribution to the market performance of container lines. The review of literature further identified different types of strategic co-operations among container lines. As the stage one survey is an exploratory study, the strategic co-operation dimension explores only the occurrences of these strategic co-operations among leading global container lines.

Table 4.1: Question dimensions

Section	Dimensions discussed in the questionnaire	No. of items	Types of questions			
			Dichotomous	Likert	Forced choice	Open
A	Intangible and tangible resources	41		40		1
B	Resources and strategic co-operations	4	1	2	1	
C	Container lines' market performance	4			4	
D	Demographic questions	5			2	3
	Total number of items	**54**	**1**	**42**	**7**	**4**

This information will be used to identify the strategic co-operations, which will be focused on in-depth in the second stage survey with respect to the integration of intangible resources. The container lines' market performance dimension is included to ascertain the variation among different container lines in relation to market performance. As discussed in previous chapters, the importance of resources varies from industry to industry and within the industry. Therefore, exploring these demographic variations among container lines is another objective of this dimension.

Similarly, the demographic dimension explores the variations among respondents and relationships between perceptions on resources.

4.3.3.1 *Question type and measurement scale*

As indicated in Table 4.1, the question dimensions are comprised of different types of questions. The different question types facilitate retrieving different depths of information from respondents (Cameron and Price 2009). The Likert scale questions help the respondents to describe their views easily (De Vaus 2002; Zikmund 2010), which is an important feature when considering the time constraints of prospective respondents. Of interest, previous studies based on RBV by Galbreath (2004) and Fahy (2002), have also used Likert scale questions in their mail surveys to help respondents express the contribution of resources have on the success of firms, which is similar to the objectives of the current study. A five-point Likert scale was used for the stage one survey questionnaire because it provides a midpoint option to include an 'unsure' response, which helps to obtain more accurate views from respondents (Cameron and Price 2009; De Vaus 2002; Weng 2004; Zikmund 2010). The 'not applicable' option was also included in the scale to enhance the quality of the data obtained (De Vaus 2002; Visser, Krosnik and Lavrakas 2000). Researchers have recognised that if the 'not applicable' option is not included in the question wording, there is a tendency for respondents to provide arbitrary answers (De Vaus 2002; Visser, Krosnick and Lavrakas 2000). As suggested by De Vaus (2002) and Zikmund (2010) numbers were assigned to negative responses and high numbers were assigned to positive responses to facilitate coding.

Further, in relying on the suggestions by Krosnick (1999) and Wong (2004) all the Likert scales were labelled with labels to clarify the meaning to the respondents and assist them to provide more accurate responses. Thus, Likert-scale questions A1.1–A1.40 (Appendix A) responses were labelled ‘not important’ to ‘very important’ to measure the importance attached by the respondents to different resource items (Zikmund 2010). Similarly, for the responses of Likert-scale questions B2.1–B2.2 ‘strongly disagree’ to ‘strongly agree’, options were used to measure the level of agreement of respondents for statements (Zikmund 2010) with ‘unsure’ and ‘not applicable’ options also included in both sets of questions. To enable respondents to broaden their answers, with different depths, different types of questions (see Table 4.1) such as closed and open-ended, forced choice and dichotomous were also included in the questionnaire (Cameron and Price 2009; Visser, Krosnick and Lavrakas 2000), but open-ended questions were limited to only a few because researchers such as Hair et al. (2011) and Krosnick (1999) have found that in mail surveys, respondents may be less motivated to answer too many of these questions as there is no interviewer to encourage them.

In the questionnaire, Likert scale questions A.1–A.40 were included to assess the respondents’ perceptions regarding contribution of each intangible and tangible resource item to market performance. Open-ended question A.2 was included to encourage respondents to elaborate, or include other important tangible and intangible resources to the ‘already developed’ list (Appendix A). The Likert scale type questions B.1–B.2 were used to identify opinions on the successful acquisition of intangible and tangible resources in strategic co-operations. Forced-choice questions C.1–C.4 were included to obtain information about the economic performance of container lines, as the

respondents could be reluctant to provide absolute data due to commercial sensitivity of them regarding their container line. Therefore, these forced-choice questions helped to obtain approximate figures of this data. Finally, demographic questions D.1–D.5 were comprised of open-ended questions, forced-choice questions and a check list to identify the variance in the sample. The next section explains the development of questionnaire.

4.3.3.2 *Layout of the mail survey questionnaire*

The following steps were taken to design the mail survey questionnaire layout in order to obtain maximum respondent attention and encourage questions to be answered (Hair et al. 2011; Polkinhorne 2005; Zikmund 2010). Previous studies by Cameron and Price (2009), De Vaus (2002), Wilson (2002) and Zikmund (2010) suggest that lengthy mail survey questionnaires demotivate respondents and tend to reduce the response rates. Therefore, the length of the mail survey questionnaire was kept to a maximum of two pages. Easy-to-understand simple language was used in the writing of questions to enable a clear understanding to the respondents (Cameron and Price 2009; Frazer and Lawly 2000; Polkinhorne 2005). Double-barrel questions, leading questions and loaded questions were avoided to prevent confusion and misunderstanding of the questions (Cameron and Price 2009; De Vaus 2002; Zikmund 2010).

The questions were not interrupted by page breaks, and they were printed on a single side of the paper to prevent respondents missing questions (Alreck and Settle 2003). Adequate space was provided in open-ended questions to allow for detailed answers (Cahoon 2004; Oishi 2003). To obtain better differentiation between the Likert scale questions, each question was highlighted in either a dark or light colour (Alreck and Settle 2003). This can avoid questions being missed by respondents (De Vaus 2002). As

indicated above, each question dimension was labelled alphabetically from section A through to section D, in the questionnaire (see Table 4.1). Thus adopting a thematic approach (Burns 2008; Cahoon 2004), individual items within each section were given an alpha-numerical label, for example: A.1, A.2, and A.3 to avoid possible confusion of data analysis (Cahoon 2004). Similarly, item numbering begun from one, for each section, to reduce the flow of errors from section to section. Furthermore, by grouping similar questions together, each section was given a particular label (Fink 1995; Frey and Oishi 1995; Oishi 2003), when a respondent starts thinking about a particular topic, it is presumably easier for him or her to continue to do so, rather than having to switch back and forth between questions (Frazer and Lawly 2000; Oishi 2003).

4.3.4 Pre-testing of mail survey questionnaire

Pre-testing is necessary to identify questions that respondents have difficulty in understanding, or may interpret differently than the researcher intended and to minimise format, wording and bias errors (Alreck and Settle 2003; Arnon 2009; Burns 2008; Cycyota and Harrison 2006; Czaja 1998; Floyd 1992; Hair et al. 2011; Krosnick 1999; Visser, Krosnick and Lavrakas 2000; Zikmund 2010). It is particularly important to pre-test self-administered questionnaires because researchers are not available to clarify the question meanings or probe incomplete answers (Burns 2008; De Vaus 2002 Floyd 1992; Hair et al. 2011; Visser Krosnick and Lavrakas 2000). Further, double-barrel questions, leading questions and loaded questions were avoided to prevent confusion and misunderstanding of the questions (Cameron and Price 2009; De Vaus 2002; Zikmund 2010)

Therefore, before administering the mail survey questionnaire, a pre-test was undertaken. The pre-test sample consisted of two main groups, 12 academics from Australian Maritime College (AMC) and four senior managers from the shipping industry. The mail survey questionnaire (Appendix A), cover letter (Appendix B) and participant information sheet (Appendix C) were pre-tested by the AMC academics, all of whom had extensive maritime related research and industry experience with five being holders of doctoral degrees in maritime-related topics. In general, they provided feedback on the structure of the questionnaire, wording of questions and conceptual flow to ensure the questionnaire is academically sound and suitable for senior managers of the agencies and regional offices of container lines. The focus of the pre-test feedback from the four senior managers from the container liner industry in Sri Lanka was on the suitability of the questionnaire from the industry perspective.

Each pre-test package included a cover letter (Appendix D) that began by thanking the respondents for participating in the pre-test, followed by an explanation of the purpose of the research and the primary and secondary research questions. The letter explained the procedure of administering the mail survey and some of its features and the contact details of the interviewer, in case the pre-testing sample respondents had any queries (Cahoon 2004). Furthermore, to provide guidance to the pre-testers, 14 questions covering specific areas were included in the last page of the letter (Appendix D) (Cahoon 2004). These questions were divided into three sections. Section One focused on the structure and arrangement of the questionnaire, including the flow of the questionnaire, grammatical errors and user-friendliness of the questionnaire. Section Two focused on completion of the questionnaire, including the time taken to complete the questionnaire, clarity of the questionnaire, suitability of the language used for the

questionnaire and coding. Section Three focused on the overall purpose of the questionnaire, covering the relevance of topics and questions to the study, clarity of each section, and a prompt to pre-test respondents for any new suggestions.

The pre-testers were given one week to pre-test the documents. Written comments were received from all the pre-testers and their comments were mainly on question wordings, the necessity for additional questions to be included and the clarity of some phrases in the covering letter of the mail survey documents. After examining all the suggestions, only the suggestions that would help improve the survey instrument and achieve the research objectives in a given period of time were considered (Cycyota and Harrison 2006; Gay and Diehl 1992). After making the necessary changes, the questionnaires were then sent to the Human Research Ethics Committee of the University of Tasmania. The committee examined all the survey documents to be sent to the respondents from an ethical perspective and proposed a few minor changes, which were corrected and re-submitted for approval.

4.4 Process of administering mail survey

Low response rates in mail surveys have been a continual major concern for researchers (Goodstadt et al. 1997; Hansen 2006). Therefore, in the current research, a range of different strategies were adopted to increase the response rate when administering the mail survey such as the posting of questionnaire packages from within Sri Lanka to minimise any postal delays, attaching cover letters to each package and providing reminder calls to respondents two weeks after posting the questionnaire packages.

4.4.1 Design of cover letter

The cover letter (Appendix B) creates the first impression for respondents about the study (Burns 2008; Cameron and Price 2009) by explaining the significance of the study and the importance of the respondents' contribution to the success of the study and highlighting why potential respondents were selected for the study. This is identified as social utility appeal (De Vaus 2002; Yu and Cooper 1983). The researchers found that a social utility appeal is the best motivator for respondents of research studies conducted by universities and academic institutions (Houstan and Nevin 1977). Houstan and Nevin (1977) further stress that social utility appeal enhances the speed of return as well as the number and quality of the responses.

The cover letter also indicated the anticipated time to complete the questionnaire. As questionnaires are expected to be answered by senior managers this would encourage them to participate for the survey since to take only 15 minutes was required (Burns 2008). The letters further indicated the confidentiality of handling data. The respondents were informed that approval for the study had been given by the Human Research Ethics Committee of the University of Tasmania. In addition, contact details of this committee were included, so that respondents could inform them if any concerns of an ethical nature had occurred during the data gathering. At the end of the letter as an incentive to motivate respondents to participate in the survey, the benefits this research would bring to the industry in general were mentioned and a promise was made to send all interested respondents a summary of the findings.

As recommended by Burns (2008), Delener (1995) and Oishi (2003) all the cover letters were printed on AMC letterheads to add legitimacy to the survey through

identification of the survey sponsors. Further, since the sample size is manageable, a personal salutation was used (for example Dear Mr Jones), and all letters were dated to coincide with the mailing, as an undated letter will appear to be less personalised (Burns 2008; Cameron and Price 2009). Further each cover letter was individually signed in ink as per Oishi (2003) recommendation by the researcher and Head of Department, so that each prospective respondent would feel that he or she had been singled out for this interview and that his or her opinion was very important to the study (Delener 1995).

4.4.2 Administering the mail survey

The questionnaire package included a covering letter, a mail survey questionnaire and a stamped self-addressed envelope in which to return the completed questionnaire. To add legitimacy to the survey all the questionnaire packages were posted in envelopes stamped with the AMC logo. The envelopes were personalised by fixing a separate stamp instead of bulk postage as recommended by De Vaus (2002) and Burns (2008). To expedite the process of circulating the mail survey questionnaires, all the respondents were emailed the same package three days after posting the questionnaire pack (Muthusamy and White 2005). This offers the respondents alternative options by which to respond. Eight of the respondents answered the questionnaires in the hard copy form and returned them by mail. The next section discusses the development of second stage survey which was conducted as an in-depth in-person interview. Although the findings from both stage one and two data collections are analysed in Chapter Five and Chapter Six, some findings from stage one are discussed in the next section which provide the rationale for the development of the stage two instruments.

4.5 Stage two: In-person interview

The rationale for using in-person interview method was discussed in section 4.2.1. The stage two in-person interview questionnaire was developed as a semi-structured interview questionnaire, comprising more open-ended questions to gather in-depth qualitative data (Creswell and Clark 2011; Eriksson and Kovalainen 2008) in order to better address research questions PRQ and SRQ2. Sections 4.5.1 to 4.5.5.2 in this chapter explain the development and administering of the in-person interview questionnaire. Section 4.6 explains the error control processes adopted to minimise errors in both stages of data collection.

4.5.1 Population and sample design

The population and the sample were developed based on the findings of the stage one exploratory survey. The stage one survey revealed that global container lines, in the survey had undergone six types of strategic co-operations in the last ten years (see Table 4.2). The most common form of strategic co-operation was the slot charter with a frequency of 35. The least common was M&As with a frequency of nine. Further, the findings explain that some container lines have undergone more than one type of strategic co-operation.

Table 4.2: Frequency of occurring strategic co-operations in the last ten years

Strategic co-operation	No.	Number of strategic co-operations by container line	%
Slot charters	35	One strategic co-operation	100%
Joint services	34	Two strategic co-operations	89%
Shipping alliances	25	Three strategic co-operations	78%
Consortia	24	Four strategic co-operations	63%
Liner conferences	19	Five strategic co-operations	11%
M&As	9	Six strategic co-operations	11%

From the six strategic co-operations listed in only four were selected (joint services, shipping alliances, consortia and M&As) for the second stage of the study. The slot charters were not considered for the interview due to the fact that their resource integration is minimal. In addition, the results of the stage one survey and review of literature indicated that functioning liner conferences no longer officially exist at present, due to anti-competition laws imposed in many regions of the world which banned their operation (Tupper 2008). Therefore, only joint services, shipping alliances, consortia and M&As were considered for the second stage survey.

As proposed by Fink (2003), Visser, Krosnick and Lavrakas (2000), Wilson (2010) and Zikmund (2010), in order to equally apportion the respondents, a stratified sampling method was used. Stratification is the process of dividing members of the population into homogeneous subgroups before sampling (Hoinville, Jowell and Colin 1985; Visser, Krosnick and Lavrakas 2000; Wilson 2010a; Zikmund et al. 2010). The stratified sample frame was divided into four strata - joint service, shipping alliance, consortium and M&A. In order to equally allocate the respondents to each stratum, nine respondents were considered as it was the least frequently registered in the first stage as indicated in Table 4.2. This stratified sample represents four leading global strategic co-operations, six major acquisitions, eight joint services and seven consortia among global container lines. Containerisation International and Alphaliner Monthly Monitor provided the necessary secondary information to determine the strategically important global strategic co-operations for the selection of respondents for the stage two surveys. The detailed process of selecting respondents from each agency or container line is explained in the next section.

4.5.2 Selection of respondents

The 36 respondents were selected to represent both acquirer and acquired container line views. The consortia and joint services were also selected based on either global or regional significance. In addition the respondents' experience of strategic co-operations, the role they played in the strategic co-operation, their job purview and work experience were also taken into consideration for selection. The stage one survey provided the necessary information needed. Thus, as explained by Eriksson and Kovalainan (2008), Krosnick (1999) and Polkinhorne (2005) the participants for the second stage survey were selected for their ability to provide substantial contributions to the research study from their experience and not merely because they fulfilled the representative requirements of statistical inference. Thus this was a convenience sample.

4.5.3 Development of in-person interview questionnaire

The second stage in-person interview questionnaire (Appendix F) was aimed at gathering data to address PRQ and SRQ2. Thus, the interview questionnaire was developed for an in-depth discussion to obtain qualitative information. As discussed in the review of literature the following question dimensions (see Table 4.3) were used to address research questions PRQ and SRQ2. The respondents' role in strategic co-operations' dimension focused on demographic questions related to respondents' involvement in strategic co-operations.

Table 4.3: Question dimensions and type of questions

Section	Dimensions discussed in the questionnaire	No. of items	Type of question			
			Dichoto-mous	Likert	Forced Choice	Open
A	Respondent's role in strategic co-operations	3	1			2
B	Features of strategic co-operations	5				5
C	Intangible resources Integration	20		19		1
D	Process of integration	16	6		3	7
E	Facilitators of integration	10		9		1
F	Economic performance	14		13		1
G	Organisational success	8	2	5	1	
	Total	**76**	**9**	**46**	**4**	**17**

The literature does not provide a clear differentiation of the main features of some strategic co-operations, thus, the features of the strategic co-operation dimension sought to clarify the main features of these strategic co-operations among container lines. Further, this dimension focuses on the integration of resources and investigates whether resource acquisition is the main motive for forming these strategic co-operations.

The intangible resources' integration is the other important dimension, focusing on the integration of intangible resources in strategic co-operations. Out of 30 intangible resource items examined in the stage one survey only 19 intangible resource items were selected for the stage two interviews (Appendix F). The following factors were considered to identify the most important intangible resources. (i) Intangible resource items, which received mean values lower than 3.5 are not considered for the second stage survey because their contributions are not relatively significant to the success of container lines' market performance as perceived by the respondents (the Likert scale 1=Not important 5=Very important). (ii) The Chronbach Alpha values in the reliability

scale and correlation indicators were also taken into consideration to identify intangible resource items for this survey. The lower correlation indicates that they are lesser important for the scale. (iii) Factor analysis was used to group the resources items into smaller number of variables. The factor analysis also revealed a strong correlation among some of these resource items, so these resources were grouped into (listed below) smaller number of resource items as indicated below.

- Organisation culture: shared values and beliefs of employees, and attitude and behaviour of employees.
- Marketing and sales strategies included: courtesy of sales representative and ability of sales representative to handle problems.
- Sailing schedules included: high frequency of sailing, short transit time and reliability of advertised sailing schedules.

In addition, the intangible resource items such as the reputation of services offered and the company overall reputation were not included in the questionnaire as their integration cannot be perceived separately. Accordingly, 19 intangible resource items were considered for the second stage interviews.

The review of literature as discussed in Chapter Three identified the importance of implementing different processes to integrate intangible resources among strategic co-operations, and those processes were categorised into task integration and human integration. Therefore, the process of integration dimension focused on utilising these processes among container lines to integrate intangible resources. In addition, the literature review chapters discussed there are certain factors that facilitate the integration of intangible resources. Accordingly the facilitators of integration dimension

focuses on identifying senior managers' perceptions in relation to the facilitation of these factors for integration processes. The final question dimension focuses on the economic and organisational success of strategic co-operations. According to the literature, the performance of the strategic co-operation can be measured in relation to economic performance and organisation performance. The objective of these dimensions are to ascertain the relationship between integration of intangible resources and economic and organisation performance of strategic co-operations.

4.5.3.1 *Question type and measurement scale*

In the stage two interview, several types of questions such as open-ended, dichotomous and forced-choice questions were used to make the interview more interesting and lively and to prevent early termination of the conversation (Oishi 2003). However, more open-ended questions were (see Table 4.4) used in the stage two survey questionnaire compared to stage one survey questionnaire to encourage deeper discussions with the respondents in order to obtain qualitative information. According to Polkinhorne (2005) and Krosnick (1999), qualitative questions help respondents to describe and relate their experience as it actually happened.

Table 4.4: Types of questions

Question type	Number of questions	%
Likert	46	61
Open	17	22
Forced choice	4	5
Dichotomous	9	12
Total	**76**	100

The Likert scale type questions were also included in the stage two interviews to retrieve direct answers from respondents. The same guidelines adopted in the stage one

survey were considered when selecting five point scale and labelling them (Appendix F). Accordingly Likert-scale questions C.1–C.19 responses were labelled as ‘strongly agree’ to ‘strongly disagree’. The Likert scale questions F.1–F.13 and G.1–G.4 responses were labelled as ‘very dissatisfied’ to ‘very satisfied’ to measure the level of satisfaction indicated by respondents for statements. In particular, Likert scale questions C.1–C.19 assessed the respondents’ answers on integration of intangible resources in strategic co-operations among container lines. Likert scale questions E.1–E.9 were used to gather information on the facilitators of integration of intangible resources in strategic co-operations, and questions F.1–F.14 and G.1–G.5 focused on gathering information about the post-strategic economic performance and organisational success of container lines. To accommodate any exceptional or unusual answers, an ‘other’ option was included in the forced-choice and dichotomous type questions (Cameron and Price 2009; Cooper and Emory 1995; Hair et al. 2011; Zikmund 2010).

In the questionnaire, open-ended questions A.2, A.3 and forced-choice question A.1 were included for respondents to explain the role they played in the strategic co-operation and, open-ended questions B.1–B.6 were included to determine the main features of different types of strategic co-operations and motives for forming them. In addition, open-ended questions D.2, D.5, D.7, D.11, D.13, D.15 and D.16, dichotomous questions D.1, D.3, D.6, D.8, D.12, D.14 and forced-choice questions D.4, D.9, and D.10 were used to find information about how different processes were utilised to integrate intangible resources in strategic co-operations. Furthermore, open-ended question F.14, dichotomous G.4 and G.6, and forced-choice questions G.5 and G.7 were included to ascertain the integration of intangible resources in strategic co-operations and post strategic co-operation performance. Finally, questions H.1–H.3 were included

as open-ended and forced-choice questions to allow respondents to raise any questions or further issues about the interview or the findings of the stage one data gathering already sent with the advance letter. Respondents were also invited to provide their contact details if they wished to receive the findings of the second stage.

4.5.3.2 *Layout of the in-person interview questionnaires*

The in-person interview questionnaire layout was developed to assist the interviewer because if the questionnaire layout is not clear and flowing there is a tendency to miss questions by the interviewer. The same questionnaire layout guidelines used for stage one survey were used for the stage two interviews to make the in-person interview questionnaire clear to the respondents. Apart from these similarities in the design, the following strategies for designing the questionnaire were used for the in-person interview process. Although Alreck and Settle (2003) and De Vaus (2002) suggest that the lengthy questionnaires could make the respondents fatigued, Hoinville (1978) states that, if the interviewer is present to motivate the respondents and clarify any questions, the length of the questionnaire can be longer. Questionnaires that are too short may also make the in-person interview survey appear insignificant (De Vaus 2002; Wilson 2010). Therefore, after considering the average time for an in-person interview, the issues to be discussed, and avoiding respondent fatigue, the survey questionnaire was designed to have 12 pages in length.

Further to minimise the chance of questions being missed by the interviewer, all question routing statements and instructions were placed to the right of the page adjacent to the relevant possible responses (De Vaus 2002). In the questionnaire, all text that was to be read aloud by the interviewer was printed using Cambria font and other

comments, such as question routing or instructions to the interviewer were in italics, in order to be clearly distinguishable during the in-person interview (Cahoon 2004; Oishi 2003). Furthermore, when designing the questionnaires, similar questions were grouped together and each section was given a particular name, as in the mail survey questionnaire (Oishi 2003). This helps the respondents to focus on one particular section, rather than having to switch back and forth between questions (Oishi 2003). Transition statements were included at the beginning of each question group to introduce the particular area and to reduce any monotony of the discussion (Oishi 2003).

According to Visser (2000), an important purpose of question order is to help establish the respondent's comfort and motivation in order to provide high quality data. If a questionnaire begins with questions about matters that are highly sensitive or controversial, or that require substantial cognitive effort to answer carefully, or that seem poorly written, respondents may become fatigued and stressed and terminate the interview (Burns 2008; Krosnick 1999). Therefore, the in-person interview began with questions that were easy to understand and answer and on non-controversial topics (Burns 2008; Krosnick 1999). Similarly, more sensitive demographic items were positioned towards the end of the questionnaire.

When response choices are complicated or numerous, respondents can find it difficult to remember the first choice by the time the last one is read (Oishi 2003). Therefore, to facilitate the response process, two response cards were provided to all the respondents during the in-person interview. Response Card A (Appendix G) was also used to assist respondents to answer Likert scale questions containing five possible responses (for

example, ‘strongly agree’ to ‘strongly disagree’) (Oishi 2003). The ‘not applicable’ option was also included as the sixth option. Response Card B (Appendix G) also used to facilitate Likert-scale questions, but the response wording was different (for example ‘very satisfied’ to ‘very dissatisfied’), as it was used to help answer a different set of questions (Oishi 2003).

4.5.4 Pre-testing

Similar to the mail survey questionnaire, the in-person interview questionnaire was also pre-tested before administering. The pre-testing process of the in-person interview questionnaire took the form of two stages (De Vaus 2002; Oishi 2003; Zikmund 2010). As for the mail survey, the first stage of the pre-test focused on the mechanics of the paper version of the instrument, whereas the second stage of the pre-test (also known as polishing pre-test) (Cahoon 2004) focused on flow, question routine, timing, pronunciation of questions and respondent’s interest (Oishi 2003). Similar to the mail survey, the pre-test sample consisted of two main groups, academics from AMC and senior managers from the industry. Twelve staff members and four industry personnel participated in the pre-testing of the questionnaire. In the first stage of pre-testing, the following documents were sent to the academic sample and the industry personnel to pre-test advance letter (Appendix H), in-person interview questionnaire (Appendix F), participant information sheet (Appendix I), consent form (Appendix J), confirmatory telephone call document (Appendix K) and meeting schedule (Appendix L).

As in the mail survey, a letter was sent (Appendix M) explaining the procedure of administering the in-person interview and its key features with the pre-test document package. Other details such as the contact details of the interviewer, in case the pre-

testing sample respondents had any queries (Cahoon 2004), and a questionnaire including 14 questions covering specific areas (Appendix N) were also included in the package. The pre-testers were given one week to send responses. Valuable suggestions on types of questions, the wording of the questions, layout of the questionnaire were made by the pre-testers.

4.5.4.1 *The polishing pre-test*

The polishing pre-test is essentially a dry run of the in-person interview in which the interviewer goes through the questionnaire with a convenient sample of respondents (Collins 2003; Oishi 2003). This helps to develop the skills of the interviewers (Hansen 2006), which is important because a skilled interviewer can often increase response rates. Hansen (2006) suggest that interviewer training represents a crucial aspect of dealing with the declining response rate and more experienced interviewers can achieve 33 per cent more completed interviews than less-experienced interviewers. For the polishing pre-test conducted in Sri Lanka, two academic staff members from the University of Moratuwa in Sri Lanka and two industry personnel were selected to pre-test the time duration of the interview, the correct pronunciation of words pre-test the use of response cards, and assess the respondent's fatigue, as well as the quality of recording instruments.

4.5.5 The Process of administering in-person interviews

Research conducted by Hansen (2006) indicates that the main reason for declining response rates in surveys is due to the large number of surveys senior managers have to deal with during a given period of time. Therefore, the multi contact approach as used

by Cahoon (2004) was adopted using in advance letter, confirmatory telephone call and reminder telephone calls to enhance the response rates.

4.5.5.1 *Design of advance letter for in-person interview*

The advance letter (Appendix G) was sent prior to contacting prospective respondents for the in-person interview. According to Burns (2008), Oishi (2003), Leigh et al. (1987) and Houston and Nevin (1977), advance letters can reduce refusal rates and increase the response rate by reducing the element of surprise and increasing the time that potential respondents have to think about participating in the survey. As in the cover letter, the advance letter explained the research area and the importance of the respondent's contribution to the success of the study. As per the mail survey in stage one, all advance letters were printed on Australian Maritime College letterhead to add legitimacy to the research and each letter was personalised to each respondent (Oishi, 2003).

The cover letter indicated the estimated time that it may take to complete the mail survey questionnaire. This had not been mentioned in the advance letter as it was considered that it may create a negative effect on the respondents' participation in the interview, as the expected time duration was a little longer than 40 minutes (Hansen 2006), but the exact time required for the interview was mentioned at the time of the confirmatory telephone call. The letters further indicated confidentiality in handling data and the involvement of AMC in the study. Respondents were informed that approval for the study had been received from the Human Research Ethics Committee of the University of Tasmania and contact details of this committee were provided so that respondents could inform them if respondents had any concerns during the data

gathering. Finally, as an incentive to participate, the benefits that this research could bring to the industry in general were mentioned and a promise was made to send the summary of the findings to all interested respondents. Apart from the strategies to encourage the respondents, the advance letter included a few other courtesy features, such as thanking the respondent for the help given for the stage one study, and mentioning that a future confirmatory call would be given to arrange an appointment to conduct the interview. In addition, an attachment of the findings of the first stage was also included with the letter. The letter further informed the respondent about the period that the interviewer would be available in Sri Lanka to conduct the interview. This was also emphasised in the letter as a strategy to arrange early appointments.

4.5.5.2 ***Process of conducting interviews***

The advance letter was first posted to respondents, highlighting the uniqueness and importance of the survey, and thereby avoiding having to call respondents during crucial times of the day to arrange appointments for in-person interviews. The advance letter also informed the respondent about the subsequent confirmatory call, which was to be made by the interviewer. Accordingly, each prospective respondent was given a confirmatory call, to secure an appointment (Polkinhorne 2005). For each appointment a meeting schedule (Appendix L) and a confirmatory letter was produced (Appendix K) (Cahoon 2004). The meeting schedule provided space to take down details of the meeting for the in-person interview, including date, meeting time and address of the meeting place. Of interest, the meeting schedule provided the option to nominate a different person from the organisation, if the contacted person was not willing to participate in the interview. In a situation where even this was not possible, two questions were asked regarding the integration of intangible resources in the container

lines. The details of the respondents who decided to participate in the interview were included in each meeting schedule and, at the end of the confirmatory telephone call, the appointment details were reconfirmed with the respondent. As recommended by Polkinhorne (2005) a reminder call was made on the morning of the appointment, prior to leaving for the respondent's office for the interview, in order to avoid any cancellation and to prepare the respondent for the interview. Before departing for the interview, all the interview materials were checked to make sure that all the necessary documents were present (the total package included questions, advance letter and other documents). Pre-departure preparation also included checking the recording equipment for power and storage space availability for recording (Oishi 2003).

Before commencing the interview, a personal introduction was made to the respondent by the interviewer with the exchange of business cards. Then permission was sought from the respondent to record the interview and the respondent was requested to give his or her consent for the interview by signing the consent form (Appendix I). Most of the respondents agreed to sign the consent form, however a three declined due to the sensitivity of information to be revealed. According to Collins (2003), it is the interviewer's task to help in unpacking the experience and gaining access to deeper levels of knowledge of respondents with regard to the subject matter. Therefore, at the beginning of the interview, appreciation was shown to the respondent for his or her contribution to the stage one of the study. During the interview, respondents often felt more motivated and confident when they were told that their role in the interview was that of an expert and that there was no right or wrong answer to the questions raised (Hansen 2006). This too had an impact on reducing the potential response bias, deriving from the respondent's perceptions that answers should be socially desirable (Hansen

2006). Assurance of the respondent's anonymity was the other important factor that facilitated the respondent's openness (Hansen 2006). In addition, the interviewer was able to establish himself as being relatively less knowledgeable about the topic and to inform the respondent that he was seeking from the respondent an expert view on the issues discussed (Hansen 2006; Oishi 2003). This facilitated the respondent to express his or her views openly without any social bias. During the interview, if the interviewer felt that the respondent was losing interest, or the interview was heading to a different area, different probing techniques were used to enhance the responses.

Furthermore, Oishi (2003) states that the interviewer needs to engage the respondent with a personable but professional manner from the beginning of the interview. Thus, the interview started by asking the respondent to explain their career path in order to commence the discussion. After the general comments, the interview progressed to focusing on the issues involved. As the interview continued, the interviewer limited his role to probing and moving the respondent along the topics of interest at the same time as allowing a free flow of issues. Essentially, the interviewer let the respondent lead the interview to issues the respondent felt were important.

Following the above steps, two interviews per day were conducted, allowing time to travel from one place to another and to organise the interviews effectively. In addition, all the interview recordings were transcribed after listening to them and analysing them at the end of each day. This technique helped to enhance the quality of later interviews immensely.

4.6 Error control process

As identified by Visser et al. (2000) and Zikmund (2010), several types of errors can occur in the survey processes. These errors can be divided into four types: sampling errors or coverage errors, respondent errors and measurement errors. The sampling or coverage errors occur when the sample does not properly represent the target population This can occur due to economic reasons, such as not considering the whole population from which to select the sample, or the results obtained from the survey can be biased to one section of the sample (Hair et al. 2011; Zikmund 2010). Sampling errors or coverage errors were minimised in the stage one survey, as the whole population was included in the survey. To establish the correct contact details of the respondents, the latest version of the directory was used. Therefore, all the information regarding the respondents was up-to-date. The in-person interview sample was selected using the data received from the stage one survey. Further, when selecting the prospective respondents, their work experience, job purview and their authority to represent the organisation were also considered. These steps helped to minimise sampling or coverage errors.

Non-response errors are very common in mail surveys, however these can also occur in in-person interviews due to several reasons, for example, the prospective respondent refuses to participate in the survey, or the appropriate respondent is not selected for the survey, or due to physical factors, such as the respondent is unable to respond to the mail questionnaire (Hair et al. 2011; Zikmund 2010). In order to minimise non-response errors with the mail survey and prior to contacting prospective respondents for in-person interviews, cover and advance letters were sent respectively. The letters clearly

explained the objectives and the importance of the respondents' contribution to the surveys, which enhanced the response rate by reducing anxiety. To reduce the risk of mail being lost, all the mail and the advance letters were posted from Sri Lanka. Furthermore, each package included a postage-paid self-addressed envelope in order to improve the response rate. The option of email was also offered so the respondents could return their responses electronically if they so wished. This minimised non-response errors, as the respondents were made to feel that they were given an easy option to respond.

As a strategy to minimise non-response errors in in-person interviews, each respondent was offered the findings of the stage one survey . Furthermore, during the confirmatory telephone conversation, each respondent's agreement to participate in the interview was sought and if they required any clarification regarding the interview this was provided prior to the interview. To deter any early termination, verbal and non-verbal encouragements, as explained in the administration process were used. According to Franke and Franke (1977), individual response bias errors occur when the respondent knowingly provides incorrect information. This error was minimised by enlisting the most suitable respondents for the survey (Krosnick 1999). During the in-person interview at the beginning of Section G, respondents were informed that the interview was close to completion to retain respondents' attention. Duffy et al. (2005) explain that in-person interview respondents are more susceptible to social bias due to the presence of an interviewer. To minimise the social bias in the responses, every respondent was informed that there was no right or wrong answer and only their perceptions were considered (Duffy et al. 2005). Furthermore, respondents were informed by the interviewer that he or she was less experienced in the subject being discussed than the

respondents. This was to make them more comfortable in explaining their experience (Leigh, Claude and Martin 1987).

The non-response error can occur due to measurement errors in the mail survey and the in-person interview questionnaire (Visser, Krosnick and Lavrakas 2000). Measurement errors can occur due to formatting and administration issues in questionnaires (Phillips 1981). To minimise formatting errors in questionnaires, steps were taken to reduce ambiguity and enhance the clarity of the questions (De Vaus 2002). As mentioned under questionnaire development (section 4.4.3), several types of unsuitable questions were not included in the questionnaires. All the instructions given in the questionnaires were kept clear and uniformly simple. Furthermore, to minimise memory error during the in-person interview, response cards were given to respondents (Oishi 2003). The questions were properly pronounced by the interviewer during the in-person interview and several probing techniques, as mentioned in the in-person interview administering section (section 4.4.8), were used to enhance the quality of answers and to avoid early termination. To ensure interviewer alertness during the interview, only two interviews were scheduled per day to minimise any error due to interviewer fatigue.

In the mail survey, non-response bias was analysed with the aim of assessing the generalisability of the sample population (Armstrong & Overton, 1977). Ideally, the strongest test of non-response bias was to contact non-respondents and compare the data from them. However, this option could not be performed due to financial constraints. As a result, non-response bias was dealt with by comparing early respondents with late respondents. As proposed by Armstrong and Overton (1977), this method is based on an assumption that those respondents who are slower to respond are more likely to be non-

respondents. That is, some prospective respondents are too busy, or uneasy about filling in a survey. Accordingly, comparison between early and late respondents reveals that there are no significant differences on key demographic variables (Appendix O-Item A).

4.7 Summary

This chapter explained the reasons for the selection of the two stage data gathering . The mail survey was selected as it was more suitable for an exploratory study and the in-person interview was selected to provide an in-depth component to data gathering . For the stage one mail survey, the total population (84 senior managers) representing global container lines and their agencies were selected. Based on the responses received from them, 36 senior managers were selected for the stage two in-person interviews representing four types of strategic co-operations. The detailed process of developing questionnaires to suit the selected data gathering methods and the processes adopted to pre-test these questionnaires were also discussed in this chapter. In addition, this chapter has discussed the questionnaire administration and error control processes adopted by the researcher to enhance the data quality. The next chapter discusses the findings of the stage one mail survey followed by an analysis of findings of the interviews in Chapter Six.

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CHAPTER FIVE

RESOURCES IN CONTAINER LINES

5.1 Introduction

This chapter discusses the findings of the stage one mail survey. The chapter begins by identifying the profiles of respondents and the regional offices and the agencies which represent the global container lines. The chapter continues with explaining the measures taken to determine the reliability of the scale used for the mail survey questionnaire. The major part of this chapter focuses on respondents' perceptions of the contribution of resources to the market performance of the container lines with a particular focus on the contribution of intangible resources. The findings of the mail survey are then compared with surveys from other studies to determine similarities and differences in perceptions and to validate the selection of the Sri Lankan sample of agencies and regional offices representing global container lines. The chapter concludes with the perceptions of respondents with regard to accessing intangible and tangible resources through strategic co-operations and reporting the different types of strategic co-operations among container lines.

5.2 General characteristics of respondents

Eighty-four questionnaires were mailed to senior managers of container lines and agencies representing global container lines in Sri Lanka. In total, 47 completed usable responses were returned, representing a response rate of 56 per cent. This is a reasonably high response rate, particularly when compared with other RBV focused mail surveys which received response rate of less than 20 per cent (see for example Galbreath 2004; Hall 1992; Soo et al. 2001, Spanos and Lioukas 2001). The personalised cover letters sent to each of the prospective respondents explaining their

contribution to the study, providing postage-paid envelopes to return the responses and e-mailing an additional package of questionnaires giving respondents the option to respond via e-mail, all as recommended by literature, appear to have helped increase the response rate of the survey. In addition several reminder calls were made to the respondents encouraging them to return their responses.

5.3 Respondents' profiles

In the current study, 77 per cent of respondents who participated in the stage one mail survey held senior positions (see Table 5.1). Of this group, nine per cent of the respondents were chairmen and 68 per cent were managing directors, directors or general managers of a container line or an agency. All of them mentioned they were involved in the overall management of container line or agency activities, which included operations, marketing and administration. This demonstrates that these respondents were likely to have an holistic view and good experience in managing all resources in the organisation. The remaining 23 per cent of respondents were also senior managers responsible for divisions under their purview such as operations, marketing, finance and administration. As indicated in Chapter Four, the studies by Fahy (2002), Hall (1992) and Aaker (1989) emphasised the importance of choosing chief executive officers or managing directors as key respondents because they have the best overall knowledge of the firm's resources or are responsible for the totality of resource management.

Table 5.1: Job profile

		No.	%
Job title			
	Chairman	4	9
	Managing Director	12	26
	Director	10	21
	General Manager	10	21
	Senior Manager	11	23
Working experience (years)[1]			
	<5	6	13
	6–10	10	22
	>10	30	65
Education and professional background [2]			
	Business management	22	32
	Operations	21	31
	Accounting/finance	4	6
	Engineering	4	6
	Marketing	10	15
	Other	7	10

[1] One respondent did not disclose this information
[2] Some senior managers have more than one educational background

5.3.1 Work experience

In order to further ascertain how well respondents understood the container liner industry, they were asked to indicate how long they had worked in the industry. As shown in Table 5.1, nearly 87 per cent of respondents had worked in the container liner industry for more than five years and 65 per cent had worked for more than ten years, suggesting that respondents had sufficient practical experience to enable them to answer questions.

5.3.2 Educational and professional background

The respondents had varied backgrounds of education and professional experience. Thirty two per cent of them had studied business management, and some of them had further studied accounting and finance (see Table 5.1). The operations of container lines

was the second most common professional qualification or discipline among respondents, with 31 per cent identifying themselves as being from an operations background, and in addition, six per cent of these respondents had studied marketing at the Chartered Institute of Marketing. Therefore, a total 15 per cent of the respondents were professionally qualified in marketing including the six per cent of operation personnel, who had studied marketing. Further, six per cent of the respondents were engineers and the ten per cent of respondents who belonged to the 'other' category had become members of the Institute of Chartered Shipbrokers following their academic programs.

5.4 Profile of the firms

The 47 respondents who participated in the stage one mail survey worked for container lines, or agencies representing global container lines. Of these, 21 per cent of respondents represented regional offices of container lines and the remaining 79 per cent worked for agencies. As explained in Chapter Two, these regional offices and agencies are the main revenue generators, or 'lifelines' of global container lines. They compete with other lines to secure cargo for the container line they represent and, when ships enter the port, liaise with authorities and customers/shippers and consignees for a quick turnaround of the ships. These regional offices and agencies are therefore vital to the growth and survival of the container lines (Lu 2007). Hence, the perceptions of the senior managers who represent these offices are important for identifying the resources that contribute to the market performance of container lines.

5.4.1 Number of employees

Of the regional offices and agencies represented in the study, 83 per cent had more than 20 employees (see Table 5.2). The number of employees is an important factor to consider when selecting firms for RBV based research as some intangible resources are peopledependent. For this reason the previous RBV based studies by Hall (1992) and Galbreath (2004) propose a minimum of 20 employees when selecting institutions to be considered for surveying. However, in the current study as most regional offices of container lines and agencies have a limited number of staff, this threshold figure was lowered to correlate with the realities of the industry. In fact, only 17 per cent of offices had less than twenty employees, and all had approximately 15 employees.

Table 5.2: Profile of organisations

		No.	%
Type of organisation			
	Agencies	37	79
	Regional offices	10	21
Number of employees			
	20 or less	8	17
	21–50	27	57
	51–100	12	26
Number of TEUs (per annum)[1]			
	1,000–50,000	15	36
	50,001–200,000	16	38
	200,001 and over	11	26
Gross revenue ($US)[1]			
	100,000–500,000	9	31
	500,001–10,000,000	8	28
	10,000,001 and over	12	41
Increase of market share			
	Less than 1 per cent	3	9
	2–5 per cent	18	53
	6–10 per cent	11	32
	More than 10 per cent	2	6

[1] All senior managers did not disclosed this information

5.4.2 Market performance

The market performances of the container lines were analysed to explain the diversity of the market share of the respective container lines in the Port of Colombo. The number of TEUs handled, gross revenue and increase in market share of the container lines in the Port of Colombo were considered for this analysis because these market performance indicators are common to all the container lines, so they are comparable. However, due to the commercial sensitivity of these data, on average, only 80 per cent of respondents disclosed this information. The number of TEUs handled (as shown in Table 5.2) by each container line during the last financial year varied from 1,000 TEUs or less to over 200,000 TEUs. A wide variation also can be seen on TEU volumes handled by different container lines. In a similar manner, the gross revenue of container lines also varies from US$ 100,000 or less to US$ 10,000,000 or over.

5.4.2.1 *Increase in market share*

The market share of the container lines in the study has increased in the last three years in varied proportions. Fifty three per cent of container lines' market share has increased between two and five per cent whilst 32 per cent has increased between six and tent (see Table 5.2). Thus, only nine per cent and six per cent of container lines fall into extreme groups that is, less than one per cent and over ten per cent of market share growth. These market performance indicators explain the varied market presence of these container lines in this study.

In the next section, the perceptions of respondents to the relative contribution of resources (intangible and tangible) to market performance of container lines are discussed with the objective of identifying the key resources that are important to the

market success of container lines. A further analysis is also presented on whether the perceptions of senior managers differ according to the demographic variables mentioned above.

5.5 Relative contribution of resources

The main focus of the stage one mail survey was to identify important resources (more specifically intangible resources), which contribute to the market success of the container lines. These findings focus on answering the first subsidiary research question developed in Chapter One:

> **SRQ1: Which intangible resources provide the greatest contribution to market success of container lines?**

Furthermore, this exploratory study was designed to confirm the knowledge of respondents on resources related to the market performance of container lines and these findings formed a pre-qualification for the selection of respondents to the second stage in-depth study. The next section explains the processes of measuring the reliability of the questionnaire.

5.5.1 Reliability of the survey questionnaire

The reliability of the mail survey questionnaire was measured as suggested by Hair et al. (2011) using Cronbach Alpha. Cronbach Alpha measures the degree to which items in the survey questionnaire work together in relation to the underlining concept (Churchill 1991; Cooper and Emory 1995; Sekaran 2000). The closer the Cronbach Alpha value is to one, the greater the reliability of items in the survey questionnaire being assessed (Sekaran 2000). A Cronbach Alpha value 0.6 or above for a survey

questionnaire is generally accepted as a reliable instrument (Sekaran 2000). As indicated in Table 5.3, for the current study, the overall Cronbach Alpha value of 0.89 substantiates that the mail survey questionnaire was a reliable tool to measure the perceptions of the contribution of intangible and tangible resources to the market performance of container lines. The column ‘Cronbach Alpha if item deleted’ indicates that the impact of removing each item from the scale (value ranging from 0.87 to 0.88) is lower than the overall Cronbach Alpha value of 0.89. This further confirms the homogeneity of the scale in its measurement of different aspects of the same variability showing internal consistency among groups of items to form single scale. The close range scale ‘Scale mean if item deleted’ (value range 15.63–15.84) further confirms the homogeneity of the scale. Thus, if items in the scale were deleted, the mean figure would not change considerably. Further, the figures of ‘Corrected item-to-total correlation’ (value range 0.21–0.61) explain the level each item correlates with the total Alpha score (Churchill 1991; Cooper and Emory 1995; Sekaran 2000). As the total Cronbach Alpha value (0.89) is higher than 0.65, the low values representing resource items in the ‘Corrected item-to-total correlation scale’ (lower than 0.30) can also be considered suitable for further analysis in the current study.

Table 5.3: Reliability of scale

Cronbach Alpha = 0.89				
Resources (Intangible and Tangible)	**Scale mean if item deleted**	**Scale variance if item deleted**	**Corrected item-to-total correlation**	**Cronbach Alpha if item deleted**
Intangible Resources				
Organisational Resources	**15.71**	**242.36**	**0.31**	**0.88**
Business planning processes	15.63	248.07	0.27	0.88
The operating and reporting structure	15.67	244.53	0.28	0.88
Employee recruitment policy	15.70	242.85	0.30	0.88
Employee training policy	15.67	239.46	0.47	0.88
Employee compensation policy	15.74	242.42	0.21	0.88
Employee retrenchment policy	15.84	236.81	0.32	0.88
Organisation culture	**15.69**	**242.96**	**0.34**	**0.88**
Shared values and beliefs of employee	15.70	239.70	0.32	0.88
Attitudes and behaviour of employee	15.67	246.21	0.36	0.88
Intellectual resources	**15.68**	**240.34**	**0.35**	**0.875**
Trademark	15.69	236.31	0.48	0.87
Licenses	15.67	244.37	0.22	0.88
Reputational resources	**15.6**	**244.17**	**0.36**	**0.88**
Company overall reputation	15.63	246.17	0.34	0.88
Reputation of services offered	15.65	242.17	0.37	0.88
Capabilities	**15.70**	**238.44**	**0.43**	**0.87**
Competitive pricing	15.68	245.40	0.22	0.88
Trade secrets	15.72	236.84	0.41	0.87
Short transit time	15.70	242.09	0.22	0.88
High frequency of sailing	15.71	238.55	0.41	0.87
Reliability of advertised sailing schedules	15.66	242.55	0.43	0.87
Prompt response to shippers' complaints	15.64	244.29	0.38	0.88
On time pickup and delivery	15.67	239.15	0.61	0.87
Fast claim response	15.73	231.16	0.62	0.87
Low cargo damage or loss record	15.70	229.78	0.56	0.87
Ability to quickly trace cargo	15.66	238.15	0.55	0.87
Accurate documentation	15.63	245.66	0.37	0.88
Ability to provide consolidation services	15.78	225.14	0.58	0.87
Ability to provide insurance services	15.87	228.67	0.42	0.87
Courtesy of sales representative/employees	15.66	241.59	0.43	0.87
Ability of sales representative to handle problems	15.67	240.42	0.50	0.87
Long-term contractual relationship with shippers	15.66	241.73	0.36	0.88
Strategic alliances with other container lines	15.70	239.41	0.39	0.87
Long-term contractual relationship with inland transport companies	15.77	241.37	0.22	0.88
Tangible resources	**15.74**	**236.30**	**0.39**	**0.87**
An appropriate number of main line vessels	15.69	237.27	0.36	0.88
An appropriate number of feeder vessels	15.72	233.17	0.41	0.87
Number of branches or agencies globally	15.70	240.48	0.27	0.88
Dedicated terminals	15.75	236.04	0.36	0.88
EDI facilities	15.67	242.23	0.42	0.87
Website facilities	15.70	242.61	0.26	0.88
Cargo tracking system facilities	15.66	240.93	0.42	0.87
Warehouse facilities	15.85	228.04	0.49	0.87
Suitable cargo handling equipment	15.78	230.06	0.44	0.87
Buildings and other physical structures	15.83	232.19	0.46	0.87

As explained in earliar chapters, the premise of the RBV theory is that firms compete on the basis of the strength of resources rather than on the structural characteristics of industries (Foss, Knudsen and Montgomery 1995; Hoopes, Madsen and Walker 2003; Priem and Butler 2001). As discussed in Chapter Three on RBV, the resources in firms can be generally grouped into tangible and intangible resources (Hall 1992). Accordingly, the following sections explain the relative contribution of intangible and tangible resources to the market success of container lines.

5.5.2 Intangible resources

The focus of this section is on identifying intangible resources that contribute to the market success of container lines based on the importance attached by the senior managers. To facilitate analysis, intangible resources are further categorised as per Chapter Three into four groups, reputational resources, organisational resources, intellectual property resources and capabilities. Furthermore, each resource item is ranked based on the mean values to indicate the relative importance within each group of resources.

5.5.2.1 *Reputational resources*

The reputational resources are comprised of two resource components: company overall reputation and reputation of services offered. Of these, as indicated in Table 5.4, company overall reputation was considered of higher importance (mean = 4.79), which made it rank second among all intangible resources.

Table 5.4: Reputational resources

Reputational resources	Rank	Mean	S.D
Company overall reputation	2	4.79	0.41
Reputation of services offered	5	4.64	0.71

Mean scores are based on five-point Likert scale (1=Not important 5=Very important)
Source: Appendix O-Item C

The reputation of services offered (mean = 4.64) is considered equally important by senior managers. Thus, it is ranked fifth among all the intangible resources. Accordingly, respondents identified that executing each service (capability) to the satisfaction of the customers adds to the overall reputation of the container line. The reputational resource component also showed the smallest standard deviations (S.D = 0.41 and S.D = 0.71), which means that the respondents were more consistent in their assessment on the contribution of reputation resources to market performance. Particularly in the container line industry where customers are not able to tell the quality of the services offered for sale prior to purchasing, reputational assets can inform them of the credibility and quality of the container line (Kreps and Wilson 1982; Shapiro 1983). Roberts and Dowling (2002) also considered reputational resources as valuable intangible assets that allow a firm to achieve lasting profitability.

5.5.2.2 *Organisational resources*

Among organisational resources, business planning processes received the highest mean value (mean = 4.81) and among all intangible resources it was thus ranked first (see Table 5.5). Respondents considered that business planning processes are important, because having proper business planning processes in place could help to achieve the market success of the container lines. In addition, the respondents perceived the

operation and reporting structure (mean = 4.43), employee training policy (mean = 4.36) and employee recruitment policy (mean = 4.11) all make a moderate contribution to market performance (see Table 5.5) because the role of these organisational resources are to provide strength and solidity to higher-order resources (capabilities) and other intangible and tangible resources (Brooking 1996; Boulton et al. 2000).

Table 5.5: Organisational resources

Organisational resources	Rank	Mean	S.D
Business planning processes	1	4.81	0.45
Operating and reporting structure	10	4.43	0.65
Employee training policy	12	4.36	0.79
Employee recruitment policy	18	4.11	0.74
Employee compensation policy	26	3.66	1.09
Employee retrenchment policy	29	2.70	1.27

Mean scores are based on five-point Likert scale (1=Not important 5=Very important)
Source: Appendix O-Item C

However, employee compensation policy (mean = 3.66) and employee retrenchment policy (mean = 2.7), which were ranked 26 and 29 respectively, were of lesser importance because employee compensation policies and employee retrenchment policies are only used in a process of staff layoffs, which are not regular occurrences in container lines and agencies. Therefore their contribution to market success is relatively less.

5.5.2.3 *Organisational culture*

The organisational culture is an important element of organisational resources which influences decision making processes and makes it unique from other firms (Chatman and Jehn 1994; Itami and Roel 1987; Robinson and Pearce 1998). The organisational culture is made up of two main components, attitudes and behaviour of employees, and

shared values and beliefs of employees. The senior managers have attached high importance to the attitudes and behaviour of employees, which has a mean score of 4.38 (see Table 5.6) and ranks 12 among intangible resources compared to shared values and beliefs of employees which depict the holistic approach of a container line. This has a mean score of 4.09 (see Table 5.6). Attitudes and behaviours are the more employee-centred aspects of culture. The respondents consider this employee-centred aspect of culture as having relatively higher contribution to the market performance of container lines.

Table 5.6: Organisational culture

Organisational culture	Rank	Mean	S.D
Attitudes and behaviour of employees	12	4.38	0.77
Shared values and beliefs of employees	19	4.09	1.02

Mean scores are based on five-point Likert scale (1=Not important 5=Very important)
Source: Appendix O-Item C

According to Walsh (1988), the cultural differences also affect the synergetic growth of the M&As. In the next chapter, which analyses the findings of the second stage of the empirical study, the perceptions of senior managers on cultural differences affecting strategic co-operations among container lines are discussed in detail.

5.5.3 Capabilities

Capabilities are described by Day (1994), in a more general sense as the complex bundles of knowledge within the firm that are exercised through organisational processes that enable firms to co-ordinate and make productive use of their assets. In essence, a firm must have distinctive capabilities to achieve superior levels of success in competitive markets (Day 1994; Galbreath 2004). In the current study, the capabilities

to which the respondents have attached higher importance are the capabilities that are related to main functions, such as the sales and marketing of the agencies and regional offices of the container lines (see Table 5.7). Accordingly, the five most important capabilities are accurate documentation (mean = 4.77), prompt responses to shipper complaints (mean = 4.66), long-term contractual relationship with shippers (mean = 4.53), courtesy of sales representative (mean = 4.49), and reliability of advertised sailing schedules (mean = 4.47) and ability to quickly trace cargo (mean = 4.45).

Table 5.7: Capabilities

Capabilities	Rank	Mean	S.D
Accurate documentation	3	4.77	0.43
Prompt response to shippers' complaints	4	4.66	0.52
Long-term contractual relationship with shippers	6	4.53	0.75
Courtesy of sales representative/employees	7	4.49	0.66
Reliability of advertised sailing schedules	8	4.47	0.58
Ability to quickly trace cargo	9	4.45	0.72
Ability of sales representative to handle problems	13	4.36	0.64
On-time pickup and delivery	15	4.34	0.60
Competitive pricing	16	4.32	0.70
Short transit time	19	4.09	1.05
Strategic alliances with other container lines	21	4.06	0.87
Low cargo damage or loss record	22	4.04	1.16
High frequency of sailing	23	3.96	0.91
Trade secrets	24	3.91	1.02
Fast claim response	25	3.81	0.99
Long term contractual relationship with inland transport companies	27	3.34	0.75
Ability to provide consolidation services	28	3.26	1.36
Ability to provide insurance services	30	2.34	1.54

Mean scores are based on five-point Likert scale (1=Not important 5=Very important)
Source: Appendix O-Item D

In addition, there are capabilities such as ability to provide consolidation services (mean = 3.26), the ability to provide insurance services (mean = 2.34) and a long term contractual relationship with inland transport companies (mean = 3.34), which have received relatively less response due to the fact that they are not the main functions of the container lines. To further analyse correlations among these capabilities, factor

analysis was conducted. By using this process, the original variables correlation were examined to determine if they can be explained by the existence of a smaller number of hypothetical variables (Pallant 2007).

5.5.4 Application of factor analysis

The common understanding among researchers is that to perform a factor analysis, the sample size should have 100 respondents or more (Pallant 2007). The studies by MacCallum et al.(1999) however reveal that even with smaller samples, factor analysis can be performed. The research by MacCallum et al. (1999); McDonald (1985); Harman (1976); and Muliak (1972) do not make explicit recommendations about sample size. According to them, factor analysis can be performed, when communality figures are consistently high (probably all greater than 0.6). In the current study all the resource items have shown a communality value higher than 0.6 (see Appendix O-item). This indicates the data have sufficient loading to perform factor analysis. To perform factor analysis it must be ensured that the data matrix has sufficient correlation (Hair et al. 2011). Two measures are frequently used to examine correlation among the data matrix (Hair et al. 2011; Pallant 2007). The Bartlett test of sphericity is one such measure to test the correlation among the variables (Pallant 2007). Another measure, which quantifies the degree of inter-correlation among the variables and the appropriateness of factor analysis is the Keiser-Meyer-Olkin (KMO) test (Pallant 2007). The KMO test results for this study were 0.64 and the Bartlett's test shows significance (sig .00) for carrying out the factor analysis (see Table 5.8) (Pallant 2007). Both Kaiser's criterion and Scree plot were used to determine the number of factors to retain (Zwick and Velicer 1986).

Table 5.8: KMO and Bartlett's test

KMO and Bartlett's Test		
KMO Measure of Sampling Adequacy		0.64
Bartlett's Test of Sphericity :	Approx. Chi-Square	374.18
	Df	153.00
	Sig.	.00

Factor extraction determinines the smallest number of factors that can be used to best represent the interrelations among the set of variables (in the current study they are 'Capabilities') (Zwick and Velicer 1986). Accordingly, the final extraction should achieve a balance between a simple solution with as few factors as possible, and one that needs to explain as much of the variance in the original data set as possible (Zwick and Velicer 1986).

The final step is to determine the suitable rotation approach to use and how to interpret the factors derived from the analysis. While there are two main approaches, orthogonal and oblique (Tabachnick and Fidell 2007), in the current study, Varimax rotation with principal-component analysis, which is an orthogonal type rotation, was employed to simplify the rows and columns of the factor matrix so that resulting factors are uncorrelated to facilitate interpretation (Churchill 1991; Cooper and Emory 1995 and Harman 1976). To determine the number of components (factors) to be extracted in the factor analysis Kaiser's criterion and Scree plot were used (Churchill 1991; Cooper and Emory 1995; Harman 1976). In Kaiser's criterion, (See Table 5.9) components with Eigen values above 1 (5.27, 2.26, 1.75, 1.58, 1.13, 1.05), which represent a total of 72.38 per cent variance (Churchill and Lacobucci 2002), are further examined using Scree plot to determine number of factors (see Figure 5.1).

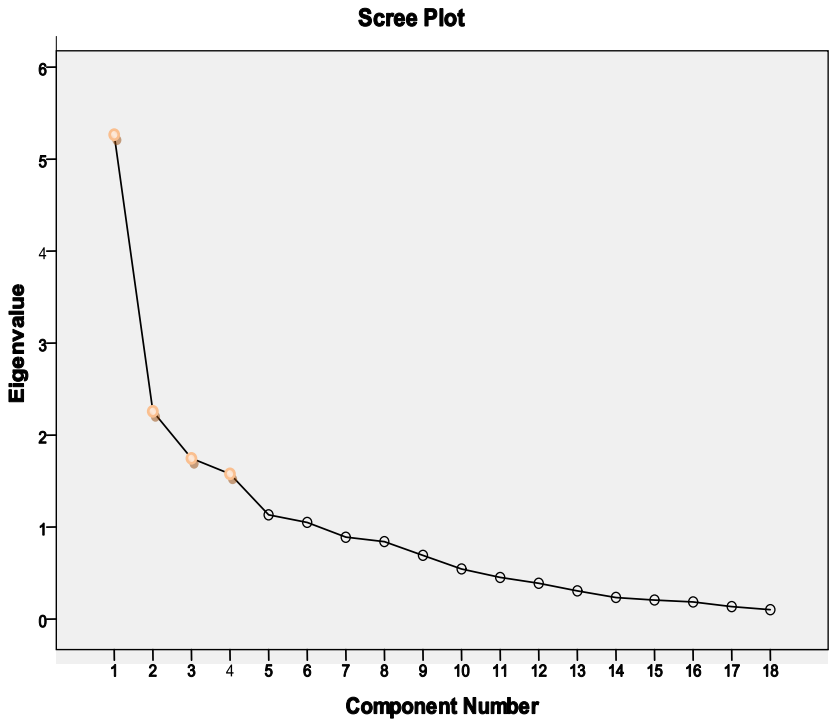
Table 5.9: Total variance explained

Component	Variance Explained								
	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.27	29.25	29.25	5.27	29.25	29.25	2.89	16.06	16.06
2	2.26	12.54	41.79	2.26	12.54	41.79	2.40	13.32	29.39
3	1.75	9.70	51.49	1.75	9.70	51.49	2.12	11.70	41.09
4	1.58	8.77	60.26	1.58	8.77	60.26	1.93	10.70	51.79
5	1.13	6.29	66.55	1.13	6.29	66.55	1.89	10.50	62.29
6	1.05	5.83	72.38	1.05	5.83	72.38	1.82	10.09	72.38
7	.89	4.94	77.32						
8	.84	4.67	81.99						
9	.69	3.84	85.84						
10	.54	3.02	88.86						
11	.45	2.51	91.37						
12	.39	2.16	93.52						
13	.31	1.70	95.22						
14	.23	1.30	96.52						
15	.21	1.15	97.67						
16	.19	1.03	98.69						
17	.14	.75	99.44						
18	.10	.56	100.00						

Extraction Method: Principal Component Analysis.

The Kaiser criterion often provides too many components (Tabachnick and Fidell 2007). Therefore, a Scree plot is used to determine the number of factors (Tabachnick and Fidell 2007). In the Scree plot, the elbow-shaped change at the fifth point indicates that only components above this point should be retained (see Figure 5.1). Thus four factors were retained from the factor analysis, which represents a variance of 51.8 per cent (see Table 5.10).

Figure 5.1: Scree plot



5.5.5 Findings of the factor analysis

As indicated in Table 5.10, the four factors retained from factor analysis were cargo handling capabilities, sales capabilities, sailing capabilities and pricing capabilities, all based on the varying capabilities of which they are comprised. The capabilities in each factor, which have a loading higher than .50, are indicated in bold. This shows a strong correlation among the capabilities belonging to each factor. The cargo handling

capability (see Table 5.10) is comprised of capabilities such as low cargo damage or loss record, the ability to provide consolidation services, the ability to provide insurance services, on time pickup and delivery, long term contractual relationship with inland transport companies, the ability to quickly trace cargo, fast claim response and strategic alliance with other container lines.

Table 5.10: Factor components

	Rotated component matrix Components			
Capabilities	**Cargo capabilities**	**Sales capabilities**	**Sailing capabilities**	**Pricing capabilities**
Low cargo damage or loss record	**0.77**	0.22	0.30	
Ability to provide consolidation services	**0.76**			0.38
Ability to provide insurance services	**0.74**			
On-time pickup and delivery	**0.68**	0.23	0.21	0.24
Long-term contractual relationship with inland transport companies	**0.67**	-0.42		
Ability to quickly trace cargo	**0.61**	0.49		
Fast claim response	**0.56**	0.44	0.36	
Strategic alliances with other container lines	0.39		0.36	
Ability of sales representative to handle problems		**0.77**		0.26
Courtesy of sales representative/employees		**0.73**	0.24	
Long-term contractual relationship with shippers		**0.64**		
Short transit time			**0.85**	
High frequency of sailing			**0.79**	0.21
Reliability of advertised sailing schedules		0.37	**0.63**	
Prompt response to shippers' complaints		**0.52**		
Competitive pricing				**0.81**
Accurate documentation		**0.71**		
Trade secrets				**0.65**

Extraction method: Principal component analysis.

Rotation Method: Varimax with Kaiser Normalisation.

The second factor is sales capabilities (see Table 5.10), which consists of three items, ability of sales representative to handle problems, courtesy of sales representative/employees, and long-term contractual relationship with shippers. The sailing capabilities were grouped into the third factor (see Table 5.10) which is comprised of short transit time, high frequency sailing and reliability of advertised sailing schedules. This finding is closely related to the findings by Lu (1997) and McGinnis (1979) as they also have factored these same capabilities in their studies as speed and reliability factors.

The pricing capability is the fourth factor, (see Table 5.10), which consists of trade secrets and competitive pricing. Previous studies by researchers (Brooks 1993; Chiu 1996; Collison 1984; Matear and Gray 1993; Mc Ginnis 1979) also found competitive pricing to be a separate factor in their studies. However, pricing capability was perceived as having relatively less importance (mean = 4.12) compared to other capabilities in the current study (see Table 5.10). Even though pricing significantly affects carrier selection by shippers, with the development of services the shippers now give more consideration to service quality than price when selecting a container line (Brooks 1984; Collison 1984; Jerman, Anderson and Constantin 1978). As discussed in earlier review chapters, the quality of services are dependent on effective utilisation of intangible resources. This relative change could be seen even among the respondents in Sri Lanka. Thus, sales (mean = 4.46) and sailing capabilities (mean = 4.17) are more important capabilities to container lines than pricing capability as they contribute to the market performance of the container lines (see Table 5.11). The low standard deviation (S.D = 0.68) received for sales capability further confirms the uniformity in the perceptions among respondents of the current study, regarding the importance of

marketing capability. This also indicates the relationship between capabilities and the co-functions of the respondents attached to agencies and regional offices. Further it substantiates that there is a relationship between resource importance and the industry (Barney 2001). Of interest, strategic alliances with other container lines, which have a factor loading less than .05, does not show any correlation with any of the factors.

Table 5.11: Cronbach Alpha value for capability dimension

Capability	Rank	Cronbach Alpha	Mean	S.D
Sales capability	1	0.67	4.46	0.68
Sailing capability	2	0.76	4.17	0.85
Pricing capability	3	0.73	4.12	0.86
Cargo handling capability	4	0.69	3.65	1.02

Mean scores are based on five-point Likert scale (1=Not important 5=Very important)

5.5.5.1 *Intellectual property resources*

As indicated in Table 5.12, the respondents attached lower importance to intellectual resources. Even though intellectual property resources are legally protected and competitors are unable to imitate them, the respondents consider their importance is less compared to reputational and organisational resources and capabilities, which are considered more significant to the market performance of container lines than intellectual property resources.

Table 5.12: Intellectual property resources

Intellectual property resources	Rank	Mean	S.D
Licenses	14	4.34	0.82
Trade mark	17	4.19	0.92

Mean scores are based on five-point Likert scale (1=Not important 5=Very important)
Source: Appendix O-Item C

5.6 Differences in perceptions between demographic groups

Until now, the discussion has been based on the general perceptions of survey respondents on the contribution of intangible resources to market performance. The research study now investigates whether these perceptions on intangible resources vary according to demographic groups. The dimensions such as market performance are based on TEU volumes and gross revenue, educational background, type of firms (agencies and regional offices) and work experience of employees were the demographic groups considered to find any variations among perceptions on the contribution of intangible resources to market performance. These demographic groups were considered because they could be compared among the participating agencies and container lines as suitable data available for the comparison. However, a significant difference could only be observed on the work experience of employees. As this was compared with two independent samples, the statistical method 'independent sample T-test' was used to measure the significance of difference.

5.6.1 Work experiences

In this section, the importance of the perceptions of senior managers of intangible resources according to work experience is analysed. Based on work experiences, senior managers were categorised into two groups, one consisting of senior managers, who have worked in the container line or agency for more than 15 years, and the other group who have worked for less than 15 years. The purpose of this analysis is to examine whether there are any statistically significant differences between these two groups, and specifically which group differs from others. As shown in Table 5.13, the group who have worked for more than 15 years attached very high importance to intangible

resources such as on time pickup and delivery, low cargo damage and loss record, ability to handle sales representative problems, and strategic alliances with other container lines than the other group of respondents. As the demographic sample sizes were relatively small (<15 =23 and >15 = 24) the non-parametric Mann-Witney U Wilcoxon test was also carried out to see whether or not there is a significant difference between the perceptions of two groups (see Table 5.14).

Table 5.13: Comparison of two groups

	<15		**>15**		**F**	**Sig.**
	Mean	**S.D**	**Mean**	**S.D**		
On-time pickup and delivery (capability)	4.17	0.64	4.52	0.51	0.69	0.04
Low cargo damage or loss record (capability)	3.63	1.35	4.48	0.73	2.85	0.01
Ability of sales representative to handle problems (capability)	4.17	0.70	4.57	0.51	0.01	0.03
Strategic alliances with other container lines (capability)	3.79	1.02	4.35	0.57	0.24	0.03

Table 5.14: Mann-Witney U Wilcoxon test

	On-time pickup and delivery (capabilities)	**Low cargo damage or loss record (capabilities)**	**Ability of sales representative to handle problems (capabilities)**	**Strategic alliances with other container lines (capabilities)**
Mann-Whitney U	195.50	153.00	190.50	184.00
Wilcoxon W	495.50	453.00	490.50	484.00
Z	-2.00	-2.83	-2.07	-2.30
Asymp. Sig. (2-tailed)	.05	.01	.04	.02

The findings of the independent sample T-test and Mann-Whitney U Wilcoxon test results were similar. In both tests, the group of respondents, who have worked for container lines for more than 15 years, have ranked the same capabilities higher. Furthermore, it reveals that even though there are wide variations among demographic

groups apart from work experience of employees, their perceptions on market performance of intangible resources are uniform.

5.7 Tangible resources

Among the tangible resources, cargo tracking systems have a mean score of 4.43 and EDI facilities have a mean score of 4.42 and are ranked as first and second most important tangible resources respectively (see Table 5.15). The main tangible resource of a container line, which is an appropriate number of main line vessels has received a lesser response of 4.20 mean and has ranked third among tangible resources, as the main responsibilities of agencies and regional offices are related to marketing and vessel operations, respondents have attached higher importance to IT related tangible resources such as cargo tracking systems and EDI facilities. This finding also confirms that the importance of some resources is specific to certain industries.

Table 5.15: Tangible resources

Tangible resources	Rank	Mean	S.D
Cargo tracking system facilities	1	4.43	0.72
EDI facilities	2	4.41	0.68
An appropriate number of main line vessels	3	4.20	1.13
Number of branches or agencies globally	4	4.09	1.09
Website facilities	5	4.09	0.92
An appropriate number of feeder vessels	6	3.87	1.28
Dedicated terminals	7	3.57	1.22
Suitable cargo handling equipment	8	3.28	1.39
Buildings and other physical structures	9	2.85	1.23
Warehouse facilities	10	2.65	1.42

Mean scores are based on five-point Likert scale (1=Not important 5=Very important)
Source: Appendix O-Item E

Another important finding of this study was the importance attached to the financial stability of container lines. The item, ‘financial stability’ was not included in the original list developed for data gathering, In the survey questionnaire the respondents

were given an option to include other tangible and intangible resources important to the container lines. Financial stability was included by many respondents as an important element.

5.7.1 The demographic variations in tangible resources

As indicated above, the sample consists of senior managers attached to container lines and their agencies. Therefore, demographic variations were analysed to find any differences of perceptions of these two groups (container lines and agencies). The perceptions of demographic variations were analysed to find out if there are any differences in their perceptions due to institutional background. The senior managers of container lines have attached higher importance to the appropriate number of main line vessels, number of branches and agencies globally than IT related tangible resources such as cargo tracking facilities and EDI facilities, which were identified as highly important by the agents (see Table 5.16). This difference in perception may be due to the fact that container lines have invested heavily in main line vessels and branches around the world. Thus, container lines appear to aspire to enhancing market performance by using these tangible resources rather than using IT related tangible resources. This suggests that perceptions of container lines and agencies vary on certain resource items.

Although there are differences in perception with regard to tangible resources, similarities in perception can also be seen for some tangible resources. For example, agencies and container lines have also attached less importance to warehouse facilities, buildings and other physical structures, which they believe contribute less to market performance than other resources.

Table 5.16: Mean comparison of tangible resources

Agencies	Mean	S.D	Rank	Regional offices	Mean	S.D	Rank
Cargo Tracking facilities	4.41	0.72	1	Appropriate number of main line vessels	4.51	0.71	1
EDI facilities	4.32	0.68	2	Number of branches and agency globally	4.42	0.70	2
Appropriate number of main line vessels	4.11	1.13	3	Cargo Tracking facilities	4.33	0.82	3
Number of branches and agency globally	4.02	1.09	4	EDI facilities	4.34	0.82	4
Website facilities	4.03	0.92	5	Website facilities	4.01	0.67	5
Appropriate number of feeder vessels	3.81	1.28	6	Appropriate number of feeder vessels	3.82	1.14	6
Dedicated terminals	3.54	1.22	7	Dedicated terminal	3.63	1.17	7
Suitable cargo handling equipment	3.24	1.39	8	Suitable cargo handling equipment	3.52	1.35	8
Buildings and other physical structures	2.86	1.23	9	Buildings and other physical structures	3.21	1.42	9
Warehouse facilities	2.67	1.42	10	Warehouse facilities	2.11	1.36	10

Mean scores are based on five-point Likert scale (1=Not important ,5=Very important)

5.8 The overall comparison

As indicated in Table 5.17, the findings of this study are ranked based on the importance attached by the senior managers of the container lines and agencies as compared with the findings of Galbreath (2004), Hall (1990), and Lu (2007). The respondents attached higher importance to reputational resources and organisational resources, which they see as contributing more to the market performance of container lines than capabilities (see Table 5.17). The intellectual property resources contribute the least to the market performance of container lines among intangible resources. The difference between mean values of capabilities, organisational resources and intellectual property resources are relatively less due to the fact that some resource items (for example employee retrenchment policy (orgnanisational resource) and ability to provide insurance services (capability) do not have a direct link with market performance, therefore their low mean value have affected the overall mean values of capabilities and

organisational resources. However, as a group intellectual property resources' contribution to market performance is more important than tangible resources. Further as a group, the contribution of tangible resources to market performance is less than intangible resources. This indicates that some intangible resource may be more important to market success than others, further these resources have an inclination to industry and co-functions of the agencies and regional offices of container lines which assist in addressing SRQ1. Furthermore, there has not been a comprehensive study including all the resource items carried out that focuses on the container liner industry.

Table 5.17: Overall comparison

Resources (intangible and tangible)	Mean	Rank	Hall Years		Galbreath (2004)	Lu (2007)
			1987	1990		
Reputational resources	4.71	1	1	1	3	1
Organisational resources	4.43	2	4	4	1	N/A
Capabilities	4.38	3	2	2	2	2
Intellectual property resources	4.27	5	5	5	5	N/A
Tangible resources	**3.74**	**6**	**6**	**6**	**6**	**3**

Mean scores are based on five-point Likert scale (1=Not important ,5=Very important)

In Hall's study (1992) reputational assets and capabilities have been given higher importance when compared to organisational assets. Further, operations related capabilities have also been given high importance in Hall's (1992) study, but the current study, marketing related capabilities have received higher importance (ranked third). This is due to the nature of the container liner industry. The container liner industry is a service industry. Therefore, its growth depends largely on the marketing capabilities of regional offices and agencies. Galbreath's study (2007) also reveals that intangible resources as a group contributes more to market performance than tangible resources. However, according to his analysis, financial resources, which are grouped as tangible

resources, also make a significant contribution to the market success of firms. This observation can also be seen in the current study. The findings suggest that when taken in the context of a container line's broad resource pool, some intangible and tangible resources, but not all, might be VRIN resources, which have a larger impact on the market success of the container lines.

According to the current study, certain intangible resources do seem to have an important role in explaining a container line's success. Further, the overall survey explains that the perceptions of the Sri Lankan sample coincides with other samples used for similar studies around the world by researchers such as Fahy (2000a), Galbreath (2004), Lu (2007), and Spanos (2001). Another significant finding is that even when market performance indicators are varied, there is a considerable uniformity in perceptions of the contribution of intangible and tangible resources to market performance, but as revealed in the current study, perceptions on tangible resources can vary according to the industry sector, for example, regional offices of container lines have attached a higher importance to container vessels than to IT related tangible resources. This demographic variation prevails among container lines and agencies throughout the world, therefore these findings will enable container lines to have a common understanding of how regional offices and agencies value their resources. Thus, container shipping service firms with the ability to create and deploy resources to satisfy customer logistics service needs will achieve superior performance (Yang, Marlow and Lu 2009).

5.9 Resources in strategic co-operations among container lines

As a continuation of this study to the second stage, all the respondents were asked to indicate their perceptions on acquiring tangible and intangible resources during strategic co-operations (see Table 5.18).

Table 5.18: Acquiring resources

	Mean	S.D
Forming strategic alliance is a suitable method to acquire tangible resources	4.05	0.94
Forming a strategic alliance is a suitable method to acquire intangible resources	3.38	1.19

Mean scores are based on five-point Likert scale (1=Strongly disagree,5=Stronlgy agree)
Source: Appendix O-Item F

The respondents perceive strategic co-operations are more suitable for accessing tangible resources than intangible resources. Accordingly, the acquisitions of tangible resources from strategic co-operations received a mean value of 4.05. (see Table 5.18). The acquisition of intangible resources through strategic co-operations has been seen as less successful. This finding further strengthens the validity of the sample of respondents on resource management because previous studies of Capron and Hulland (1999a) and Walsh (1991) reveal that strategic co-operations are more suitable for acquiring tangible resources than intangible resources, but literature revealed that integration of intangible resources of partnering firms is vital for the success of strategic co-operations (Das and Teng 2000). Thus, the second stage of this study focuses on how these resources are integrated in strategic co-operations.

5.10 Summary

This chapter focuses on the perceptions of senior managers of container lines on intangible and tangible resources. All the respondents who participated in the surveys hold senior positions in the container lines. The respondents perceive intangible resources as being more important resources than tangible resources. Among these, reputational assets and capabilities are considered to be more important than other intangible resources. Among capabilities, factors related to marketing received higher preferences than other capabilities. Among tangible resources, IT-related tangible resources received higher preference than other tangible resources. Hence, senior managers believe that intangible resources in general contribute to the market success of container lines. The senior managers' perceptions related to acquisition of intangible resources were analysed. The respondents understand the difficulty in accessing intangible resources rather than tangible resources. The next chapter discusses integration of these intangible resources in strategic co-operations among container lines.

CHAPTER SIX

INTEGRATION OF INTANGIBLE RESOURCES

6.1 Introduction

This chapter focuses on the findings of the second stage of the research, which was conducted by in-person interviews in Sri Lanka. These interviews were focused on the integration of intangible resources in strategic co-operations among container lines. Strategic co-operations among container lines can be categorised into two groups based on the level of integration as either LISCs or closely integrated strategic co-operations (M&As). Accordingly, the chapter begins by discussing the integration of intangible resources in LISCs (shipping alliances, joint services and consortia), and then the characteristics of these LISCs and motives for forming them are discussed. The chapter continues by explaining the processes adopted to integrate intangible resources in LISCs. The focus on LISCs ends by discussing their economic and organisational performance.

The second half of the chapter discusses the discussion on closely integrated acquisitions by identifying the main features of global acquisitions among container lines and the motives that prompt their formation. This is then followed by an explanation of the processes adopted to integrate the intangible resources of the acquisitions. The chapter ends by comparing the integration of intangible resources and organisation and economic performance of the acquisitions.

Therefore this chapter addresses the PRQ and SRQ2 research questions developed in Chapter One:

PRQ: Does the integration of intangible resources contribute to the post strategic co-operation success of container lines?

SRQ 2: Do container lines adopt processes to ensure the successful integration of intangible resources when strategic co-operations are being developed?

6.2 Interview response rate

As explained in Chapter Four in the population and sampling design section, 36 respondents were selected for the in-person interviews. A 100 per cent response rate was achieved and this may be attributed to a number of steps mentioned in Chapter Four that were taken prior to the interview taking place. An advance letter was sent to the participants, explaining the importance of this study and the value of the respondents' contribution to the study has created awareness about the second stage of the survey at the time of giving the confirmatory telephone calls to prospective respondents. As promised in stage one of the study, the findings of the survey was attached and this was in the form of a conference paper (Sigera, Cahoon and Fei 2010) to further develop motivation and enthusiasm among respondents. Time was allocated at the end of each in-person interview to provide an opportunity to discuss the stage-one findings. An additional factor that may have contributed to gaining early confirmation of interview appointments was the mention in the letter of the researcher travelling from Australia to Sri Lanka to conduct the study. The duration of each interview ranged from 35 to 65 minutes, resulting in an average duration of 45 minutes. It was found that some respondents who initially hesitated to discuss more sensitive issues in detail at the commencement of the interviews were able to discuss these with much ease as the interview progressed due to assurances given by interviewer regarding the confidentiality of handling the data and the identity of each respondent. Apart from three interviews (where the senior managers declined to expose their identities due to

the sensitivity of the information they shared), all the interviews were recorded. However, the senior managers who did not agree to record their interviews allowed adequate time for the researcher to note the answers to all questions in detail.

6.3 Profile of the respondents

As explained in Chapter Four, respondents were selected according to their ability to answer the interview questions with some authority. One determinant of this was their role within the company and their involvement in the overall decision-making process of their organisation. All participants were senior managers who held responsibility for the overall management of intangible resources of the container line or agency (specific positions are indicated in Table 6.1). The participants' work experience and the role they performed in strategic co-operations were also considered when selecting respondents for this second stage of the research.

Furthermore, as shown in Table 6.1, only five per cent of senior managers had worked in the industry for less than ten years. More specifically, nearly 95 per cent of respondents had worked in the container liner industry for more than ten years, suggesting that senior managers had abundant practical experience to enable them to answer questions and thus increase the reliability of the study.

Table 6.1: Profile of respondents

		No.	%
Job title			
	Chairman	05	14
	Managing Director	15	42
	Director	02	06
	General Manager	10	28
	Senior Manager	04	10
Working experience (years)			
	1-5	0	0
	6-10	2	5
	11-15	20	56
	16-20	9	25
	<20	5	14
Number of employees			
	20 or less	06	17
	21-50	25	69
	51-100	05	14

All of the senior managers had active roles in strategic co-operations. Four senior managers participated at the regional level of the integration process. Furthermore, eight senior managers had experienced more than one strategic co-operation during their tenure. One of the senior managers, who had experienced an acquisition as an acquired container line employee, subsequently had become an employee of the acquiring container line and became a key member of the local team of the subsequent acquisition. In the same manner, another senior manager who spearheaded the acquisition, later led the local acquired container line team in another acquisition.

Similarly, among the senior managers, who represented LISCs, one senior manager (who represented consortia) had played an important role in commencing with the particular consortia. In the same way, another senior manager was instrumental in getting some container lines into the consortia.

6.4 Limited integrated strategic co-operations

This section focuses on LISCs. Firstly the main features of these co-operations are outlined, and the motivating factors that lead to their formation are identified with respect to resources integration. This is followed by a description of the integration itself and the processes by which container lines identify intangible resources. The section concludes by analysing the post-economic and organisational performance of LISCs.

6.4.1 Main features of limited integrated strategic co-operations

The three types of LISCs considered in the current study are, shipping alliances, joint services and consortia. The integration of these strategic co-operations is mostly limited to one intangible resource (or one task in most instances); hence the integration of resources is limited, as they are collectively grouped as limited integrated strategic co-operations. Due to the limited integrated nature of these strategic co-operations, there is no close integration of the human element in LISCs. Similar to the findings of Brooks et al. (1993), the senior managers who participated in this research were reluctant to disclose all the features of the strategic co-operations. This could be mainly due to the commercial sensitivity of the agreements between consortia and joint services partners. .

6.5 Motives for forming LISCs

The main motives for forming LISCs were to reduce costs by sharing resources such as container ships (see Table 6.2). As the container industry is capital intensive, sharing vessels helps the container lines to reduce the capital cost of purchasing ships and allows for expansion of services.

Table 6.2: Motives for forming LISCs

Motives for forming strategic co-operations	No.
Reduce cost by sharing resources	27
Enter into new trade routes and increase market coverage	24
Provide frequent services	23
Reduce competition/rate undercutting	15
Maximise the income	10

The following comments made by a senior manager of a container line, further confirms the motives for forming shipping alliances.

> *The main thing is where you are able to have much more frequent services to your customers and cost benefit to them. If you are operating as an individual line from [the] Far East to Europe, on weekly frequency on the number of port calls, you need around eight to nine ships to operate a particular service. So, when you are operating this service on your own, it will be a weekly call on [a] restricted number of ports. But when you join in, the ships become bigger, there will be more port calls and will be able to provide more frequent services with more port coverage.*
>
> *Director (Shipping Alliance #1)*

The senior managers whose container lines have undergone joint services and consortia also explained that the main motives for setting them up was to share tangible resources, thereby reducing costs, expanding market coverage and entering into new markets. Another important aspect that senior managers attached to being in joint services and consortia was that they helped to minimise undue price undercutting. The following comment made by a senior manager further confirms the motives for entering into LISCs.

> *Because of losing money, when we started, we had lot of competition from the party, who was operating here. They used to undercut the rates we quoted. This prevailed for some time and as a result of this rates came down. So we decided to join together and work. This way the competition was minimised. At the end of the day, it increased revenue. Here we have come to an understanding, the way we operate. Now we have understanding even on the each other's clients.*

Managing Director (Consortia #1)

In addition to this, there was agreement on resources sharing, such as ships to minimise cost and extended coverage and enter into new trade routes (No. = 27). Another observation is that reduced rate undercutting (No. = 15) and maximise income (No. = 10) were not main motives. The main motives of LISC seems to be reducing cost by integration of tangible resources.

6.6 Integration of intangible resources in LISCs

As indicated in Table 6.3, in shipping alliances, joint services and consortia, sailing schedules are the closely integrated intangible resource. The sailing schedules have achieved a mean value of 4.33 for shipping alliances and 4.14 for joint services and consortia. Further, low standard deviations (shipping alliance = 0.50 and joint service and consortia = 0.50) confirm the uniformity of the perceptions of senior managers on the level of integration of this intangible resource.

Table 6.3: Integration of intangible resources in LISCs

	Shipping Alliance (SA)			Joint Services Consortia (JS)/(Co)		
Intangible resources	**Mean**	**S.D**	**Rank**	**Mean**	**S.D**	**Rank**
Sailing scheduling	4.33	0.50	1	4.14	0.50	1
Business planning processes	3.67	0.50	2	4.05	0.86	2
The operating and reporting processes	3.56	0.57	3	4.00	0.95	3
On time pickup and delivery systems	2.56	1.13	4	2.19	0.60	6
Organisation culture	2.44	0.67	5	2.09	0.96	9
Trade secrets	2.22	0.25	6	2.10	0.70	8
Preparation of shipping documents	2.22	0.67	7	1.95	0.22	11
Long term contractual relationships with shippers	2.00	0.11	8	1.95	0.22	13
Handling of shipper complaints	2.00	0.27	9	2.00	0.34	10
Employee recruitment policies	2.00	0.36	10	1.90	0.30	17
Cargo tracking systems	2.00	0.44	11	1.95	0.22	12
Long term contractual relationships with other container lines	2.00	0.47	12	1.95	0.22	14
The employee training policies	2.00	0.88	13	1.90	0.30	18
Cargo handling systems	2.11	0.33	14	1.95	0.22	15
Claims handling systems	1.89	0.33	15	1.95	0.22	16
Marketing/sales strategies	1.78	0.44	16	2.33	1.02	4
Trademark	1.78	0.44	17	2.19	0.81	7
Licenses	1.67	0.50	18	1.90	0.30	19
Competitive pricing	1.67	0.50	19	2.29	0.96	5

Mean scores are based on five –point Likert scale (1=Strongly disagree ,5=Strongly agree)

Therefore, the most integrated intangible resource, that of sailing schedules (mean = 4.33), has helped to integrate tangible resources (ships) in strategic co-operations, and contributed to the success of achieving the main motives for forming strategic co-operations, namely reducing costs by sharing tangible resources (ships), entering into new trade routes, increasing market coverage and providing more frequent services.

In addition to sailing schedules, the business planning processes (mean $_{SA}$ = 3.67, mean $_{JS/CO}$ = 4.05$_{JS/CO}$) and operating and reporting processes (mean = 3.56$_{SA}$, mean = 4.00 $_{JS/CO}$) are the other closely integrated intangible resources of the LISCs. As explained by a director of a shipping alliance, even business planning processes and operating and reporting processes are integrated at a macro level.

> *At the micro level there is no integration of business planning processes but at macro level, yes, there is integration. The link is not very evident and not very rigid. If you wanted to start a service from A to B, the first option of refusal will be for alliance partners. If it is in your business plan, then they will say they will join. If not, they will say they will not join.*
>
> *Director (Shipping Alliance #3)*

This limited integration is occurring due to several reasons. One reason is the loosely integrated structure of strategic co-operations, which permits limited integration of intangible resources. This is further confirmed by comments made by senior managers:

> *A shipping alliance from its structure permits limited integration of intangible resources, because among the alliance also there is competition, some trade secrets are shared but very limited.*
>
> *Managing Director (Shipping Alliances#2)*

> *All shore-based activity stands alone with the shipping agents.*
>
> *Managing Director (Consortia #1)*

Further, due to the loose-knitted nature of these strategic co-operations, most intangible resources (as indicated in Table 6.3) are kept separate from the strategic co-operations. The following comments made by a senior manager confirm these findings:

> *Intangibles are the cutting edge, so they are kept apart from the strategic co-operation. The strategic alliances actually reduce the risk on tangible resources and give them the opportunity to optimise competitive advantage on intangibles.*

Managing Director (Shipping Alliance # 1)

Antitrust laws are another inhibiting factor in the integration of intangible resources among shipping alliances. For example, the anti-competitive laws in the EU prohibit the integration of pricing ($mean_{SA}$ = 1.67) and marketing strategies ($mean_{SA}$ = 1.78) among container lines (see Table 6.3). Further, these laws and regulations have determined the nature of strategic co-operations as identified in the following comments:

> *Specially on Europe trade there is no talk about prices or marketing, it is totally prohibited.*
>
> *General Manager (Shipping Alliance # 7)*

> *We cannot discuss price and marketing issues, even we are asked not to meet on [sic.] public places.*
>
> *General Manager (Shipping Alliance #8)*

However, the same strict guidelines are not observed with regard to competitive pricing ($mean_{JS/CO}$ = 2.29) and marketing ($mean_{JS/CO}$ = 2.33) strategies in joint services and consortia operating on a regional basis. These consortia appear to have limited understanding about each others' pricing and marketing strategies, as indicated in the following comment:

> *For competitive pricing there is a minimum guideline, you shouldn't undercut below this, even among customers we have understanding that we will not approach joint service partners' customers, some of these agreements go up to principal level.*
>
> *Shipping Manager (Joint Service #2)*

These, strategic co-operations are basically operated in regional areas, where anti-competitive laws are non-existent and this integration is not seen among joint services

and consortia, which operate in Europe and US trade. Therefore higher standard deviation values (for competitive pricing ($S.D_{JS/CO}$ = 0.96) and marketing strategies ($S.D_{JS/CO}$ 1.02) confirm the differences in integration depending on the regional areas. Further, these capabilities are not totally integrated, but there is an understanding, more or less, among the parties with regard to these capabilities. Furthermore, at the agency level or regional offices level, there is limited integration in on time pickup and delivery systems ($mean_{SA}$ = 2.56 and mean $_{JS/CO}$ = 2.19). This is mainly due to the common cut-off time imposed on the container lines of the strategic co-operation by the vessel operating line to deliver the containers to the ship.

Further, in these LISCs the container lines market their services independently. This individual identity of container lines in LISCs is further clarified by the following comment made by a senior manager:

> *[Otherwise] we can have an agent on the name of shipping alliances in Colombo. But nobody will like it because they all will lose their identity. These alliances are not going to be forever so permanent structures are limited and not necessary.*
>
> *Managing Director (Shipping Alliance #2)*

Other intangible resources, which have a low mean values, are kept away from the LISCs and the container lines use these resources independently to gain competitive advantage over others container lines.

However, the senior managers recognised that to achieve harmonious operations among the partnering container lines of the LISCs, it was necessary to have an understanding about the partners' intangible resources. The specific intangible resources (mainly capabilities) that the container lines are concerned with when strategic co-operations are

being developed are discussed below. As explained by one senior manager, it is important to understand the work culture or the service objectives of the partnering container lines.

> *It is important to understand the work culture of other parties, if not they will not fit in the strategic co-operation, for example, if the partner just goes more for price than giving a good service for higher cost, then we inform this to the principal, because it affects the progress of our company when partnering with such an organisation.*
>
> *Managing Director (Shipping Alliance #4)*

Some container lines compete by providing low rates (pricing strategy), but others create their competitive advantage by providing better services. When lines with different strategic objectives join together, it can create problems in working in a strategic co-operation. As indicated by another senior manager of a container line, their whole operation of the strategic co-operation fell apart in 1997 due to the lack of punctuality of the other partner as the clients were not satisfied with their service. Therefore, punctuality is another important element, which managers have to consider when strategic co-operations are being developed. Reliability and accuracy of the services (capabilities), which include good documentation systems and cargo tracking systems, are also recognised as being important by senior managers. For example, if the partner is using manual systems instead of computer-based systems, this could affect the smooth function of the strategic co-operation, including the integration of sailing schedules.

The work approach with regard to strategic co-operations is identified as another important aspect by senior managers

> *It is important to identify intangible resources because some consortia fall apart after working for some time; it depends on your culture. There are some lines who would*

> *dictate terms, dishonour agreements then consortium obviously fall apart. So, it is important to identify which lines you should work with.*
>
> *Managing Director (Consortia #6)*

Another significant factor identified by some senior managers is the compatibility of marketing strategies (capability) of the integrating container lines. It is essential to identify the compatibility of these intangible resources, as these partnering container lines could seize the other's market share with the use of better marketing strategies. This is possible because when the sailing schedules are integrated, the operational capabilities of the partnering container lines will also be enhanced or upgraded to an equal level. Therefore, if the marketing strength of a container line is comparatively weak, then there is a possibility of that container line losing its customers to the lines with stronger marketing strategies in the strategic co-operation. The regional offices and agencies are finding this is an important issue, because these differences in marketing strategies (capabilities) have affected their competitive advantage. Subsequently this could affect the performance of the container line. Therefore, this indicates the importance of understanding the strengths and important intangible resources (mainly capabilities) of the partnering container lines. Even though the integration may be on a single intangible resource (sailing schedules), if their strengths (mainly intangible resources) are not similar or their offering services are varying, the container lines could lose customers due to the lack of performance of the other container lines. Hence, it is important to identify the intangible resources (mainly capabilities related to the integration of sailing schedules) before setting up the strategic co-operation. Service quality is an important element in LISCs, which is further explained by a country manager of a container line:

> *Yes, it will help because all of us are selling the same service to our clients, so we should say it in one voice. If different communications are going to the market then it becomes a problem. Because if that ship is operated by our partner and if there is a mess up, it can reflect on us, because I am selling it as my own service, but the container physically is loaded to a partner's ship.*
>
> *Country Manager (Shipping Alliance # 6)*

The above comments further indicate that even though limited integration of intangible resources occur in these strategic co-operations, senior managers believe it is important to identify the compatibility of intangible resources mainly related to integration of sailing schedules. The next sections explain the processes adopted to integrate intangible resources (mainly sailing schedules) in LISCs with the objective of addressing SRQ2.

6.7 The processes adopted to identify intangible resources

All the container lines that participated in the survey have used market surveys and discussions to identify intangible resources in LISCs. The market surveys have focused on operational aspects, cultural or the work ethics of the container lines. As explained by one senior manager:

> *The market surveys were done before getting into the alliance. They checked slot allocation, trade routes, vessel sizes, ports of call and sometimes they look at inland connections and number of hours in the port. How strong the partner in the particular market and their work practices were also studied. The sizes of ships came to the discussion only after the route was decided. For example if the vessel draft was 14m, then it could berth only in two berths in port of Colombo, a smaller ships will have more option of berthing and turnaround time, so the vessel size was determined after the route was decided.*
>
> *Shipping Manager (Joint Service#1)*

As indicated above, the work culture or approach is important to the success of the strategic co-operation and as a result, the market surveys have focused on that aspect also. The regional offices and agencies have played a key role in providing this

information to the head offices in deciding on partners for strategic co-operations. The discussions are the other method used to identify these resources. It happens with other prospective partners, agencies and other market players to get vital information, which is needed to set up the strategic co-operation.

6.8 Processes used to integrate intangible resources

The container lines have used several processes to integrate intangible resources in these limited integrated strategic co-operations such as setting up task teams and organising meetings (see Table 6.4). Apart from these, mixed project teams and joint training are also used in a few instances.

Table 6.4: Processes adopted to integrate

Process	No.
Staff meeting	23
Task team	19
Mixed project teams	6
Joint training sessions	4

6.8.1 Staff meetings

The discussions are normally carried out by a team of senior managers locally. The local team focuses on the following, as indicated by a senior manager:

> *When we come to know there is going to be a service from our consorta to Colombo, the top people (agents) in Colombo meet with the connected staff (operations and marketing staff). The vessel windows of calling (schedule), the allocation of slots, manifest reporting (document), and cut-off time are discussed in these meetings.*
>
> *Senior Manager (Consortia #9)*

The frequencies of these meetings vary between strategic co-operations. Some strategic co-operations have regular meetings to continue smooth operations. However, in some

strategic co-operations, they have the initial meeting. These meetings are repeated if the operating model of the strategic co-operation is changed. This is due to all the operational functions being common to all the container lines. Normally, the lead container line organises the meetings locally. The lead container line is appointed based on cargo volumes and geographical strength, and the meetings are normally held in their premises. The lead container line will speak to the port on behalf of alliance members.

6.8.2 Task teams

Task teams have been set up both in head office and at local level (see Table 6.4). The functions of the task teams at head office level can be grouped into two areas: setting up of strategic co-operations and monitoring their performance. Therefore, container lines may be seen to have set up teams to look after these activities in their regional head offices.

> *The liner project team, who is involved in looking at joint ventures, corporate gains and mergers and acquisitions. The team is consisted [sic] of people with different skills. That team does all market study and feasibility study and report[s] to corporate managers (top managers).*
>
> *Managing Director (Shipping Alliance #1)*

The final decisions regarding the setting up of strategic co-operations are made at the regional corporate management level. Furthermore, these teams look into disputes or problems that would occur during the processes of operations of these strategic co-operations. Continuous monitoring of the performance of the strategic co-operations is done by these regional offices. However, if any complaint arises about the operation, it is first dealt with at the local level. If it is not solved, then it is handled at the regional level. These committees further observe whether the strategic co-operation members adhere to the commitments of the strategic co-operations.

> *There was a monitoring committee, who reported the performance of the strategic co-operation. For example, they looked into whether consortium partners adhere to commitments of the strategic co-operations such as cargo volumes they had to load.*
>
> *Director (Joint Service #2)*

When the strategic co-operation is set up at the regional office or head office level, the standard operational procedures are sent by them to the local offices. These operational procedures provide the directions on integration of sailing schedules. Then local level task team is also set up, consisting of very senior members of the container line or the agency. The function of these local teams is mainly limited to the integration of sailing schedules. Accordingly, senior managers and operations level managers represent all the local teams (see Table 6.5).

Table 6.5: Composition of local task teams

Division	No.
Operations	20
Marketing	5
Human resources	2
Finance	2

As indicated above, the marketing teams were included only few occasions in the discussions regarding the strategic co-operation, this being due to the nature of the structure of these strategic co-operations.

The discussions held by the local task team were based on the standard operational procedures set by the head office or the regional head office.

> *They have line-specific guidelines which is specific operation. Then we have service-specific guidelines (alliance). For example, if you accept dangerous cargo in this particular alliance, the procedure is mentioned. The guidelines include reporting formats, productivity levels, also information flow at alliance level from you to them.*

Managing Director (Shipping Alliances #3)

6.8.3 Mixed project teams and joint training sessions

As the integration is limited to a single task (integrating sailing schedules), the mixed project teams and joint training sessions are not as common as in acquisitions. The mixed project teams are only formed when they want to set up or meet with local authorities such as ports or customs. In these instances, the lead container line takes the initiative to lead the processes and communicate with the port. Each container line conducts training specific to their staff. If the operational procedure is changed, then the operational managers of the local offices instruct regional offices to train the staff regarding the operational changes, but even these have been ineffective among some container lines. This confirms the limited integration of these strategic co-operations, where the container lines operate as independent entities.

6.9 The post strategic co-operation performance

The post-strategic co-operation performance will be discussed in two sections: the first section discusses the integration of intangible resources from the perspective of organisational performance (how it affects the internal organisation functions) and the second section focuses on how the integration of intangible resources affects economic performance. These two sections answer the PRQ from the perspective of LISC.

6.9.1 Organisational performance

In general, being part of a strategic co-operation has helped to enhance performance. Container lines have started calling at Colombo more frequently due to these strategic co-operations. As quoted by two senior managers of container lines:

> *Yes if not for the shipping alliance, we would not have called [at] Colombo, because when we join tighter, we can create a service and call [at] Colombo and have [an] office so it provides jobs. Some other lines also call [at] Colombo, because of [their] shipping alliance.*
>
> *Country Manager (Shipping Alliance #6)*

> *Because of this strategic co-operation, they were able to maintain cargo volumes, these cargo volumes helped to maintain job security, job responsibilities and career advancements.*
>
> *General Manager (Shipping Alliance # 7)*

At the local level, the joint services have helped container lines to provide improved services and increased job security and career advancements for staff members (see Table 6.6). As commented by one senior manager:

> *Our container line had only four or five employees in the offices when [the] container line started calling [at] Colombo, but with the strategic co-operation today more than 80 employees are working in the container line office in Colombo.*
>
> *Country Manager (Joint service #6)*

Therefore, limited integrated strategic co-operations have provided a more stable work environment for local staff.

Table 6.6: Organisation performance

Organisation performance	Rank	Mean	S.D
Job security	1	3.92	0.04
Job responsibilities	2	3.90	0.04
Career advancement opportunities	3	3.88	0.04
Work climate	4	3.76	0.12
Salary	5	3.74	0.12

Mean scores are based on five-point Likert scale (1=Not satisfied, 5=Very satisfied)

6.9.2 Economic performance

As indicated in the motives for forming LISCs, the main motive is to share limited resources or tasks to increase market cover, increase frequency, enter into new trade

routes, achieve economies of scale, but specially among the shipping alliance partners, where there is heavy competition (price and marketing) among the partners, they have mixed feelings. The respondents acknowledge the presence of a strategic co-operation to pave the way for extended market coverage and increase frequency, but in the same manner they believe that LISCs encourage more competition mainly because the operational capabilities of the members have improved to an equal level (see Table 6.7). In that respect, members of the consortia and joint service are content due to the strategic co-operation they are able to minimise price undercutting. In general, the shipping alliances have been able to minimise undue competition, but due to LISCs the members have not been able to increase the market share.

Table 6.7: Economic performance

Economic performance	Rank	Mean	S.D
Achieved economies of scale	1	4.40	0.50
Gained the ability to provide more frequent services	2	4.28	0.46
Entered into new trade routes	3	4.28	0.46
Increased cash flow	4	4.12	0.53
Reduced capital costs of purchasing or supplying ships	5	4.12	0.44
Increased the use of the terminal facility	6	3.80	0.76
Increased market share	7	3.76	0.83
Gained the ability to access specific niche markets	8	3.76	1.23
Increased the utilisation of containers	9	3.75	0.89
Reduced external competition	10	3.54	1.02
Achieved a more efficient work force	11	3.42	1.14
Stabilised freight rates	12	2.83	1.17
Accessed general management skills	13	2.22	1.15

Mean scores are based on five-point Likert scale (1=Not satisfied, 5=Very satisfied)

LISCs help container lines to provide more frequent services, enter into new trade routes and increase cash flow. The success of these factors is based on the operational performance, understanding the strength of the partners and how these resources are integrated in these strategic co-operations. Therefore, the economic performances are in

line with the objectives of forming LISCs. Consequently, the container lines have been able to minimise cost and maintain a better service coverage. As explained above, most intangible resources are kept away from the LISCs, therefore container lines use them to achieve market success based on the cost saving they achieved from LISCs. In addition, all senior managers acknowledge the importance of the compatibility of intangible resources of LISC partners for the continuation of the LISCs. The next sections 6.10-6.14 focus on the integration of intangible resources, the processes adopted to integrate intangible resources in acquisitions and post acquisition performance.

6.10 Main features and motives of acquisitions

The nine senior managers interviewed were involved in six different global acquisitions. Five were part of the acquired container line and the remaining four were in the acquiring container line. In all six acquisitions, the acquirer container line had acquired the total assets of the acquired container line, which included acquisition of mainline ships, feeder vessels, selected employees and systems. As commented by one director (Acquirer #1), "*the container line acquired all types of resources that belonged to the acquired container line including the shares it had invested*". The average time taken for an acquisition was six to nine months. However, in one acquisition, the integration process had gone on for more than two years, as it adopted the strategy of gradual integration, which is different from other acquisitions. The study by Kay and Shelton (2000) indicate that swift integration processes help to make acquisitions successful, because it minimises anxiety among employees.

6.10.1 Motives for forming acquisitions

As indicated in Table 6.8, the main motives for forming the acquisitions were entering into new trade routes to provide more frequent services, and to reduce the cost of acquiring tangible resources such as ships. A senior manager, who had experience in acquisitions, further identified acquiring knowledge, new staff, new technology, accessing well-established brand names and eliminating competition from some markets as other important motives for forming acquisitions. Accessing skilled employees and systems have also been motives of some acquisitions, but this was not common for all the acquisitions.

Table 6.8: Motives for forming acquisitions

Motives for acquisitions	No.
Enter into new trade routes and increase market coverage	9
Provide frequent service	9
Reduce cost by acquiring tangible resources	8
Access new brand name	4
Reduce competition	3
Acquire new staff	3
Acquire new systems /technology	2

Comments made by the following senior manager further reiterate the motives for acquisitions:

> *The acquired container line had a strong brand image in USA, our (acquirer) line had a strong presence in Middle East and Africa. At that time our line was 18-20 on the rank based on TEU capacity. Our motive was to come within first 10 among TEU capacity. [The acquired] line was in eighth position of the world TEU capacity.*
>
> *Senior Manager (Acquirer # 1)*

Apart from these motives, another senior manager commented:

> *Other main objectives were to take out the competition from [the European] sector, which was very strong. Also [European] freight rates were very high at that time. So this merger helped to optimise that. The acquisition of [a] second container line took away competition from African trade.*
>
> *Country Manager (Acquired #5)*

Following the acquisitions, these container lines were left with large volumes of tangible and intangible resources. The management of these resources from acquired container lines posed many challenges to the container lines, including the handling of staff members, and tangible resources such as ships. Of interest the motives for acquisitions does not include accessing the intangible resources of acquired container lines is a priority. Only few container lines even consider accessing skill know-how from the acquired line. The motives of the majority of lines motive have been to access the market share of acquired lines by acquiring the tangible resources of acquired container line. However, Das and Tang (2000), Cartwright and Cooper (1995) and Midoro and Pitto (2000) emphasise the importance of a successful integration of intangible resources for achieving the motives of acquisitions. The next section, therefore, will focus on the integration of these intangible resources in acquisitions.

6.11 Integration of intangible resources in acquisitions

As shown in the Table 6.9, low mean values indicate that the integration of intangible resources has been relatively low in acquisitions. Accordingly, the highest mean value of 3.77 is related to sailing schedules. Therefore, in acquisitions, the closely integrated intangible resource is ‘sailing schedules’ (capability. Further the study revealed the acquiring container lines were found to have integrated the sailing schedules of the acquired container line due to their profitability. The integration of sailing schedules was achieved by increasing the frequency of existing services or enhancing ship

capacity to accommodate cargo volumes of the acquired container line. Furthermore, integrating sailing schedules helps to optimise the usage of ships acquired. Das (2011) also recognises in her study that trade routes (with respect to current study sailing schedules) are an important intangible resource for a container line, as they affect both revenue and costs of the container line. When a container line decides on a trade route (sailing schedules), it has to select ports (tangible resource), set up a network of offices (tangible resource) or establish an agency (tangible resource), employ staff to promote sales, and secure suppliers and customers before actual sailing starts (Das 2011). Thus, integrating sailing schedule includes accessing of all the above mentioned tangible and intangible resources of the acquired container line, as the objective of the acquisition is to capture the market share of the acquired line and obtain economies of scales.

The other intangible resource that was closely integrated was "business planning processes" (organisational resources) *(*mean = 3.67). The integration of business planning processes has also been from a macroeconomic perspective, involving the selection of trade routes and integration of related activities. The third closely integrated intangible resource is "trade mark" (intellectual resource) (mean = 3.00). In three acquisitions the "trade marks" (intellectual resource) of the acquired container lines were incorporated into the acquiring line's trade mark (intellectual resource). It is evident that the integration of trade marks were adopted as marketing strategies to retain the loyal customers of the acquired line. This factor is strongly present in regions where the acquired line is dominant or the country of which container line was originated. However, in another acquisition the acquiring container line adopted (rather than integrated) the acquired line's "trade mark" as the acquired container line was a well-established global line. Instances were also evident of the acquiring line adopting some

of the marketing and pricing policies of the acquired line, as shown by the following comments from senior managers:

> *We became more client friendly and forwarder friendly, the acquired line had a different strategy to forwarders, we were very much anti-forwarder before the acquisition — our ratio between direct customer and forwarder [was] 90/10, but after the acquisition the proportion change[d] to 60/40. Previously our focus was direct client. So [the] marketing team had to meet about 90 clients to get the same cargo throughput.*
>
> *Country Manager (Acquirer #4)*

> *The pricing policy became [a] bit [easy]… [the] acquired line had…very high freight prices, but it was reduced.*
>
> *Senior Manager (Acquired #1)*

Table 6.9: Integration of intangible resources

Intangible resources	Mean	S.D	Rank
Sailing schedules	3.78	0.67	1
Business planning processes	3.67	1.00	2
Trademarks	3.00	1.50	3
Trade secrets	2.89	0.33	4
Operating and reporting processes	2.88	1.17	5
Marketing/sales strategies	2.78	0.97	6
Long-term contractual relationship with other container lines	2.76	0.33	7
Long-term contractual relationships with shippers	2.64	0.33	8
Competitive pricing	2.56	0.88	9
Organisation culture	2.22	0.67	10
Cargo handling systems	2.22	0.67	10
Preparation of shipping documents	2.21	0.67	12
Handling shipper complaints	2.20	0.67	13
Claims handling systems	2.19	0.67	14
Cargo tracking systems	2.18	0.67	15
On-time pickup and delivery systems	2.17	0.67	16
Employee training policies	2.16	0.33	17
Licences	2.10	0.78	18
Employee recruitment policies	2.00	0.50	19

Mean scores are based on five-point Likert scale (1= Strongly disagree, 5=Stronlgy agree)

In most instances, the intangible resources of the acquirer line were the most up-to-date and, as the acquirer line was more familiar with them, they were adopted into the new

entity.The detailed process used to identify these resources' compatibilities and the processes by which they were integrated are discussed in the next section. In the assimilation process, the acquirer lines did not place much value on the intangible resources of the acquired container line. This confirms the low mean values indicated in Table 6.9. In particular, organisational resources (such as employee training policies, employee recruiting policies, and capabilities such as claims handling systems, on-time pickup and delivery systems, cargo tracking systems, preparation of shipping documents and handling shipper complaints) were all those of the acquirer line. In other words, the acquirer line culture became the culture of the new entity, as demonstrated by the following comment from a senior manager:

> *The working culture was changed. Before acquisition it was totally American culture, but after acquisition it was exclusively Singaporean culture. This was the culture of the acquirer line. The former staff of [the] acquired line was uneasy about this new culture. They were not so happy.*
>
> *Senior Manager (Acquired #1)*

Another senior manager from an acquirer line further elaborated on the observations he has made with respect to culture differences. for example:

> *Our staff have a short and a quick lunch, sometimes we have it [at] our own desk. The acquired line staff was used to [taking a] proper one-hour lunch.*
>
> *At our container line no jobs were for life, [the] job is [while] you are [still] employable, but this was much different [in the] acquired line. [There] the jobs were for life.*
>
> *Country Manager (Acquirer # 4)*

Likewise adapting to culture differences and systems was challenging for staff from the acquired container line. In one particular acquisition where the acquired container line possessed the most up-to-date systems (intangible resources) and a well-recognised

trade mark, the acquired container line's intangible resources were adopted by the acquirer line. One of the main objectives of this acquisition was to acquire these up-to-date systems (intangible resources/capabilities), and these views are reflected in the comments made by two senior managers below:

> *They did an evaluation between the two systems. Possibly on merit they came to a conclusion that the acquirer's systems will be adopted. That study was done at the head office, the volume of business was so big that the existing systems were able to handle them.*
>
> *Director (Acquirer #1)*

> *The acquired company used all the technological components of the acquired container line. There was no integration of systems. The preparation of shipping documents, cargo tracking systems, on-time pickup and delivery systems, cargo handling systems, preparation of shipping documents, claims handling systems, cargo tracking systems, and long-term contractual relationships with shippers were all retained by the acquired container line. The working culture was changed from acquirer to a mid culture. The former employees of [the] acquired container line were uneasy about this new culture. Many employees of [the] acquired container line left the new entity.*
>
> *Senior Manager (Acquirer #2)*

The acquirer container line of this acquisition was dominant in other areas of maritime industry such as tankers and bulk trade, but its presence was very minimal in the container industry as a global player. Therefore the acquisition of a well-established global container line with all the assets was a quick way to achieve increased market share and coverage. However, this acquisition retained the culture of the acquirer container line.

6.12 Processes of integrating of intangible resources in acquisitions

The Chapter Three suggested that different processes are used in acquisitions to integrate intangible resources. The next sub-sections explain the processes by which

intangible resources are integrated in acquisitions. These include how management teams identified intangible resources and the processes used for their integration. The last two sub-sections explain the contribution of integration of intangible resources to the economic and organisational performance of the post-acquisition entity. Thus, this section addresses the research question SRQ2 from the perspective of acquisitions.

6.12.1 Processes adopted to identify intangible resources in acquisitions

During the process of integration all the senior managers who participated in the second-stage interview emphasised the importance of identifying the compatibility of intangible resources of two container lines involved in the acquisition. As indicated in Table 6.10, to identify intangible resources in the acquired line during an acquisition, a variety of methods were used by the acquiring container line such as interviews, discussions, tests, and other miscellaneous methods. The most common methods used to identify intangible resources during acquisitions were discussions and market surveys (shown under "Other methods" in Table 6.10). As explained by one senior manager (Acquirer #1): "*our base customers, work culture and our strength are evaluated at a macro level*". The objectives of these macro level studies were to identify the general compatibility of partners prior to acquisitions and market impact, as well as the reputation of the container line as a whole and their services.

The knowledge tests (in seven acquisitions) and interviews (in six acquisitions) were used to select suitable staff for the new entity, but these processes were not common to all the acquisitions. Resource mapping (in three acquisitions), running two parallel organisations after the acquisition for some period (in one acquisition), and recruiting a few employees from the acquired container line (in one acquisition) for a short period

were among the other methods used to identify intangible resources. The studies by Gupta and Roos (2001) also identify that resource mapping helps to identify resources needed to create value and how these resources can be integrated in the new entity.

Table 6.10: Processes adopted to identify intangible resources

		Discussions	Knowledge tests	Interviews	Other methods
Acquired	**1**	*	*	*	*
Acquired	**2**	*	*	*	*
Acquired	**3**	*			*
Acquired	**4**	*	*	*	*
Acquired	**5**	*	*	*	*
Acquirer	1	*	*		*
Acquirer	2	*	*	*	*
Acquirer	3	*			*
Acquirer	4	*	*	*	*
Frequency		**9**	**7**	**6**	**9**
Per cent		**100**	**77.7**	**66.7**	**100**

Two senior managers further revealed that resource mapping was conducted with the objective of identifying gaps and any overlapping areas in the resource profiles of both container lines. As they explained:

> *The mapping was done to understand the strengths of the (acquirer's and acquired) current structure of resources. A large integration team was set up, they did the mapping. But, prior to that, mapping had been done on [a] global level. But we found dissimilarities, so the local team also got involved in this mapping process.*
>
> *Country Manager (Acquirer #4)*

The mapping was undertaken by the same container line when it was acquiring another global line. From the perspective of a senior manager of an acquired line:

> *It was like this; the head of the local organisation had mapped out the organisation plan fresh, and then had defined the characteristics of people needed for each job. Then the best suitable employee was selected from either organisation (acquired/acquirer), who possessed the characteristics, defined under each job to fill in the new organisation chart.*
>
> *General Manager (Acquired #4)*

Hence, mapping helps to identify the required intangible resources (skills of employees, systems) and where these resources are available and where they should fit into the acquiring line. After the mapping was complete, tests and interviews were conducted to identify the employees with required skills to fill the job positions in the acquiring container line. Two types of tests were undertaken, psychometric tests and standard aptitude tests to assess the knowledge and understanding of the junior and middle level managers. As explained by senior managers (in Acquirer #1 and Acquired #2 container lines), the employees had to undertake psychometric tests, which consisted of predictive index and logical index tests before they could be selected by the acquiring line.

The predictive index test helps to identify the profile of the employee and the logical index test assesses the logical reasoning speed of the employee. Some container lines took a more lengthy approach to identifying intangible resources or to studying the processes. As explained by a managing director (Acquirer #2), the learning processes used to identify the intangible resources of the acquired container line differed from previous acquisitions. Even after the acquisitions, the two container lines had operated in parallel for two years and during this period the acquiring container line had studied the work routines (capabilities), other business processes (organisational resources) and the culture of the acquired container line. Meanwhile, staff of both container lines had to sit for the tests to be selected by the acquiring line. These were standard aptitude tests, which had to be sat by the middle and junior managers. In this acquisition, training sessions were conducted over a period of two years for staff in both container lines, after which staff were assessed and the most suitable employees were selected.

6.13 Processes used to integrate intangible resources in acquisitions

To assist with the integration of intangible resources, senior managers identified four types of processes by which to integrate intangible resources: staff meetings, mixed project teams, joint training sessions, and task teams (see Table 6.11).

Table 6.11: Processes used to integrate intangible resources

		Staff meeting	Task team	Joint training sessions	Mixed project team
Acquired	**1**	*	*	*	
Acquired	**2**	*	*	*	
Acquired	**3**	*	*		
Acquired	**4**	*	*	*	
Acquired	**5**	*	*	*	
Acquirer	1	*	*	*	*
Acquirer	2	*	*	*	*
Acquirer	3	*	*	*	*
Acquirer	4	*	*	*	*
Frequency		**9**	**9**	**8**	**4**
Per cent		**100**	**100**	**88.8**	**44.4**

6.13.1 Staff meetings

As indicated in Table 6.11, senior managers reported that staff meetings had been conducted in all of the acquisitions. The meetings had been chaired by very senior members (country head, regional head) of both container lines. The studies by Birkinshaw et al. (2000) and Fubini, Price and Zollo (2006) have also identified the importance of senior management involvement in the acquisition from the beginning, because chairing of meetings by senior managers provide strong clues about the direction of the acquiring container line and, more subtly, about the degree of its commitment to the proclaimed course. Generally, these meetings had been used to inform employees about the developing processes of acquisitions, which included assurance of job security, career opportunities and details about changes to job

responsibilities. Furthermore, and importantly, the objective was to reduce the anxiety of employees with regard to job security and career advancement. It is evident from these discussions that the focus of the meetings was on integrating human skills. In one acquisition, the meetings were held in a common place. In another acquisition the meetings were held on a weekly basis interchangeably in the premises of both container lines. This helped to develop understanding between the staff of both container lines.

However, in general the information dissemination was not extensive for an acquired container line, as noted by one senior manager:

> *We were not informed of how the micro level acquisition will happen prior to the effective date of acquisition, so we were informed very late about this micro level integration. The future and job security were not disclosed to us in detail until just before the effective date came to existence. Therefore, employees were very anxious about their future.*
>
> *Senior Manager (Acquired #1)*

A senior manager (Acquired #1) further confirmed that the local country manager was not included in the acquisition team, indicating uncertainty about his job in the acquiring container line. Of interest is the very different perspective taken in the same acquisition where a better understanding of the acquisition processes was provided in real time, as explained by a senior manager of an acquirer line:

> *The meetings were locally held in a common place to discuss the integration developments and issues. If they come to our office this time, we will go to their (acquired container line) office next time; gradually developing a sense of relationship without creating animosity. No staff of the acquirer line had the right to say we bought over you. Basically both sides were not allowed to make threatening statements to harm the cordial relationship.*
>
> *Senior Manager (Acquirer #2)*

As mentioned above, the level of information in the meetings varied from being inclusive and informative to a lack of information dissemination, all of which may positively or negatively affect the post-acquisition performance of these container lines.

6.13.2 Task team to facilitate the integration

In all acquisitions a task team had been appointed (see Table 6.11). The task teams had been compiled from the senior corporate members of the container line including the local country manager, chief financial manager, HR manager, and operations and marketing managers (see Table 6.12). The task team's initial purpose was to discuss the assimilation processes which would then involve other departments. The inclusion of senior corporate managers was believed to signal staff the importance of the integration process. In one example, the task team was appointed for two years to monitor the integration process. Of interest was an occasion where the local country manager had not been involved in the task team, resulting in a slower dissemination of information and enhanced anxiety among staff about the acquisition processes due to his negative comments.

Studies by Haspeslagh and Jemison (1991), Sales and Mirvis (1984) and Shrivastava (1986) confirm the contribution of staff meetings, mixed project teams, and the joint training sessions for task integration during acquisitions. Further, these processes contribute to human integration by providing clear communication and leadership from senior managers and create job security and a conducive work climate for staff. Another important aspect recognised by Haspeslagh and Jemison (1991) is the close correlation between human and task integration in that a lack of human integration can affect task integration and subsequent post-acquisition performance.

Table 6.12: The composition of the task teams

		Composition of staff team (Managers)		Composition of staff team (Departments)			
		Senior	**Middle**	**Operations**	**Marketing**	**Human Resources**	**Finance**
Acquired	**1**	*					
Acquired	**2**	*					*
Acquired	**3**	*	*	*	*	*	
Acquired	**4**	*					
Acquired	**5**	*	*	*	*	*	*
Acquirer	1	*	*	*		*	
Acquirer	2	*					
Acquirer	3	*					*
Acquirer	4	*	*		*		
Frequency		**9**	**4**	**4**	**4**	**4**	**4**
Per cent		**100**	**44.4**	**44.4**	**44.4**	**44.4**	**44.4**

6.13.3 Joint training sessions

Joint training sessions can be identified as a variation of mixed project teams that were conducted as on-the-job training. As shown in Table 6.11, joint training sessions were conducted in eight instances. The training appears to have been provided to deliver more effective training in the areas of computer software, customer service, marketing, and work practices and systems. In each of these cases, it was the acquired company staff that had to learn the new systems and processes and adopt the acquiring container line's culture to become assimilated into the work culture of the acquiring container line. On a more individual level, selected staff of the acquired container line was appointed a "buddy" in the partnering container line to, in the words of a senior manager, “assimilate acquired container line staff members to the new culture and technical processes". This was not observed in previous acquisitions with respect to integration processes. The senior manager, who joined from the acquired line, further explained the

role played by the “buddy” of the acquiring container line: “he looked after technical, cultural, and emotional needs of the acquired company employees”.

6.13.4 Mixed project teams

Mixed project teams were set up in 44.4 per cent of acquisitions with the main purpose of working together to synthesise learning from vessel operations, marketing and customer relationships. In some instances, mixed global teams travelled together to show the staff of other offices the importance of co-operation and working together in order to demonstrate the willingness from both parties to make the acquisition happen as planned and reduce infighting among global managers. A senior manager of an acquired container line reported how family had been included in team activities involving group outings to assist in further integrating the culture of the acquiring container line. However, as shown in Table 6.11, mixed project teams were set up only in a few acquisitions and in most cases senior managers of acquired container lines were unaware of them being established. Although mixed project teams were set up globally, the local acquisition process was spearheaded by the acquiring team. Furthermore, in all these acquisitions the acquirer container line office has been the main location to which all the new staff members have been integrated, but in one acquisition the selected staff from the acquirer container line were moved into the premises of the acquired line. In this instance, to avoid confrontation and facilitate smooth integration, the members of the acquired line staff were given the same seating and cubicles. Instructions were also given on how to communicate with the acquired line staff.

The above discussion addresses the SRQ 2, the container lines have adopted different processes to integrate intangible resources in acquisitions. These processes were

spearheaded on most occasions by senior members of the container line. The processes have mainly focused on integrating the human element into the new entity because intangible resources were adopted from acquirer line. However, the human integration process varied depending upon the differing motives of the acquisitions.

6.14 The post strategic co-operation performance acquisitions

The post strategic co-operation performance has been discussed in two sections: the first section discusses the integration of intangible resources from the perspective of organisational performance. The second section focuses on how the integration of intangible resources affects the economic performance. These two sections answer the PRQ from the perspective of acquisitions.

6.14.1 Organisational performance of acquisitions

Overall, the employees of the acquired lines were not satisfied with the performances of the organisations after the acquisitions. During the interviews, senior managers were asked to indicate whether their members of staff were satisfied after the acquisition. In general, the acquired container line employees were dissatisfied about career advancement and their job security. In addition, they felt insecure about their future, which in some cases was a fear that was realised as indicated in the following views from senior managers:

> *The principle was to retain the best person for the job, all jobs below the country head were advertised and the best person was taken in. Then most of jobs were advertised, the incumbent and the guy from the acquired line had to apply. At the beginning it did not look that it was tilted towards acquirer line people, but with time the whole acquired line staff [were] weeded off.*
>
> *Chairman (Acquired #5)*

> *[Sometimes] they put a new person from [the] acquired line on top of an acquirer container line person. They used PI (predictive index) tests as a basis and tried to fix acquired line people in the container line. So they could say that these attributes were needed for this job, and this person from [the] acquired line has these attributes and fix them for the job. Specially to get rid of the people whom they think are not wanted, they will place a person on top of you to make you leave. However, they may pay a good compensation to you.*
>
> *Country Manager (Acquirer #4)*

Table 6.13 shows the five organisational performance measures which ranked lowest. Essentially they indicate that senior managers were relatively unhappy about job responsibility (mean = 2.88), the work climate (mean = 2.62), salary (mean = 2.63), their career advancements (mean = 2.50) and job security (mean = 2.25) in the acquiring container line, with senior managers reporting how, in some cases, the acquired container line staff had lesser job responsibilities than their original position. This de-motivated the staff of acquired lines because some had been senior managers who managed divisions of the acquired line. The slow rate of information dissemination and lack of accuracy among acquired container lines have also contributed to the anxiety and insecurity of employees. The lack of involvement of acquired local members in the mixed project teams also contributed to the anxiety and insecurity of staff members.

Table 6.13: Organisation performance of acquisitions

Organisation performance	Rank	Mean	S.D
Job responsibilities	1	2.88	0.56
Work climate	2	2.62	0.31
Salary	3	2.62	0.34
Career advancement opportunities	4	2.50	0.25
Job security	5	2.25	0.13

Mean scores are based on five-point Likert scale (1=Not satisfied ,5=Very satisfied)

Due to the reasons shown in Table 6.13, the overall satisfaction of staff being acquired was found to be very low. High staff turnover was evident in all the acquisitions

experienced by senior managers during the post-acquisition period (Table 6.13). For example, one senior manager stated:

> *They absorbed everyone from the acquired line. Now about 90 per cent who were taken are not there. That is the story all over the world. There are few, who have moved forward in the acquirer line, the cultural mismatch, bleak future in the career were the main reasons to this high turnover.*
>
> *Chairman (Acquired #5)*

The staff turnover mostly occurred among middle managers (see Table 6.14) and senior managers. The turnover of middle managers tended to be higher because at the beginning of the acquisition, more middle managers joined from the acquired lines whereas senior managers opted not to join the acquiring line in most acquisitions. The majority of the staff members who left were from the acquired line.

Table 6.14: Staff turnover after acquisitions

		Staff turnover	The category of employees		
			Senior managers	Middle managers	Junior managers
Acquired	**1**	*		*	
Acquired	**2**	*		*	*
Acquired	**3**	*	*	*	
Acquired	**4**	*	*	*	*
Acquired	**5**	*		*	
Acquirer	1	*	*	*	*
Acquirer	2	*	*	*	*
Acquirer	3	*	*		
Acquirer	4	*	*	*	*
Frequency		**9**	**6**	**8**	**5**
Per cent		**100**	**66.7**	**88.9**	**55.6**

All the acquisitions offered voluntary redundancy schemes (VRS) to reduce the excess staff after the integration processes. Middle managers were offered the most VRS

although on some occasions, VRS were offered only for specific staff members as indicated in the following two comments:

> *The volunteer retirement scheme was offered, but people who had more marks in [the] aptitude test were kept back when they wanted to leave. The company had their own reservation about who should leave and who should stay. This selection was made based on the skill and attitude of the employees. They paid them three years salary upfront. In the first round of VRS two years' salary was paid up front, in [the] second round it became three years upfront. There were no forced retrenchments, but the head of the division in that particular area had the chance to hand pick the ones to stay.*
>
> *Senior Manager (Acquirer #1)*

> *The redundancy scheme was offered to people who were identified. This was to minimise the loss of good employees. Thus, very few remained because of very strong culture and the change of management style of the acquirer line.*
>
> *Managing Director (Acquirer #4)*

Another observation is that junior managers had the lowest turnover, apparently fitting into the new organisation better than others. The above findings are consistent with M&As occurring in other industries, where managers from the acquiring firm will often colonise the acquired firm by providing it with their own management tools and controlling the implementation of these tools (Walsh 1998). The working culture, routines, know-how of managers and know-how of employees are some of the intangible resources identified as being significant to the growth of a firm that can be neglected or ignored in this process. As a result, employees of the acquired firm will feel threatened in this endeavour and will try to leave the organisation (Walsh 1988). This top-management turnover and lack of human integration affects task integration and synergetic growth and this curtails achieving the economic objectives of these acquisitions (Capron and Hulland 1999a).

In some instances, the acquirer line had to change their policy and take over marketing functions because staff members of the acquired line were not motivated to execute the

work at the required level. In some instances, in other parts of the world, the staff members of the acquired container lines vacated their post without even handing over the work to new staff. The success of processes adopted depends on human integration, which can be measured in terms of continuous leadership, communication, number of voluntary retirements and change of personnel situation (Birkinshaw 2000). The results of the longitudinal study undertaken by Das (2011) confirms the difficulty in retaining intangible resources after forming acquisitions. As explained by another senior manager:

> *Another aspect of localising the activities [was] to appoint a local CEO or country manager to run the local operations, this could say way of diluting culture of local blend, but the container line which [was] acquired had a different policy, they employed all the senior managers from local industry, but CEO localising strategy they did not adopt. They brought a CEO from their country*.
>
> *Chairman (Acquired #5)*

The main focus of the first stage of this study was the market performance of container lines. Successful market performance depends on intangible resources that are people orientated (such as reputation, capabilities, organisation processes) more than legally protected intangible resources (such as intellectual property and tangible resources), and it was discovered that this is something of which container lines were aware. In order to successfully integrate these intangible resources, container lines have used various processes such as joint training sessions, mixed project teams and staff meetings. Despite these efforts, cultural differences, the complexity of the acquisitions, and differences in line management have meant that these approaches have failed to retain both people dependent and other intangible resources, such as trade marks and licences, which are protected by law. As identified by Fubini, Price and Zollo (2006) most senior

managers are unable to add value to merger integration efforts. Furthermore, the tendency to retain acquirer staff members at the expense of acquired staff members has also contributed to the gradual decline of intangible resources of the acquired lines.

6.14.2 Economic performance of acquisitions

As indicated in the above literature, there is a direct relationship between human integration, task integration and economic performance. The economic performance indicators as shown in Table 6.15 indicate that the loss of staff has a negative effect on the growth of market share. For example, this could be due to customers being confused about the new entity, systems and processes, and changes to staff, as exemplified in the following quotes from senior managers:

> *The acquirer line had a market share of 11 to 12 per cent globally. The acquired line had about 4 to 5 per cent. The game was to achieve a carrier with 20 per cent. There are obvious reasons why it did not happen. The critical areas they should have looked at were customers, people, the hardware systems, operating systems, IT systems, actual operating systems, the trade lanes, and who is dominant where, port side costs, vessel operating costs. The cost side rationalising was not taken into consideration during the acquisition process.*
>
> *Chairman (Acquired #5)*

> *One plus one did not become two, pretty quickly 1.1, they lost people in Rotterdam and USA and things were disrupted. There were serious issues; the work was disrupted for months. When those customers went away the company could not recover. Some key people whom they should have kept left. They went for assets, not for people and intangible resources.*
>
> *General Manager (Acquired #6)*

Table 6.15: Economic performance

Economic performance	Mean	S.D	Rank
Achieved economies of scale	4.33	0.50	1
Gained the ability to provide more frequent services	4.22	0.44	2
Entered into new trade routes	4.11	0.33	3
Increased the use of the terminal facility	3.79	0.67	4
Increased the utilisation of containers	3.78	0.67	5
Reduced external competition	3.76	0.67	6
Accessed general management skills	3.75	0.67	7
Achieved a more efficient work force	3.67	1.00	8
Increased cash flow	3.56	1.24	9
Increase market share	3.33	1.00	10
Reduced capital costs of purchasing	3.33	1.32	11
Gained the ability to access specific niche markets	3.00	1.23	12
Stabilised freight rates	2.11	1.45	13

Mean scores are based on five-point Likert scale (1=Not satisfied 5=Very satisfied)

As a consequence, due to the high staff turnover, the acquisitions have failed to gain access to general management skills for the new organisation (mean = 3.75) or achieve a more efficient work force. The success of integrated sailing schedules depends on securing cargo, which was earlier handled by the acquired container line. The high turnover among marketing staff taken over from the acquired line, and the introduction of the existing systems of the acquirer line has resulted in customers being confused. As a result, the market share has fallen, especially in the short term. Even in the long term, container lines have not been able to synergise the growth as indicated by the general manager (Acquired #6) above.

However, the acquisitions have helped container lines to achieve economies of scale. By using newly acquired ships (tangible resources) and integrating sailing schedules, container lines were able to provide more frequent services (mean = 4.22) and enter into

new trade routes (mean = 4.11). Furthermore, container lines were able to reduce competition in some regional areas by acquiring leading container lines in that region.

6.15 Summary

This chapter analyses the loose-knitted strategic co-operations such as slot charters, joint services and shipping alliances, which are more common than M&As among container lines. The main motives for forming strategic co-operations are to reduce costs by sharing resources, increasing market coverage by entering into new trade routes and providing frequent services to the customers by integrating tangible resources. Due to antitrust and other regulations, structure of strategic co-operations and motives for forming them, the integration of intangible resources has been limited to few intangible resources. They are sailing schedules, business planning processes, operating and reporting processes. Even these intangible resources are integrated to optimise the usage of tangible resources (ships). The services of container lines in the LISCs are marketed by each line separately as their own services. As a result, the members of the loose-knitted strategic co-operations use the intangible resources to sustain the competitive edge over the other members. This competition has curtailed the synergetic growth of LISCs.

The discussion on the six global acquisitions in this chapter focused on accessing tangible and intangible resources of acquired lines. The main motives for these acquisitions were to acquire tangible resources such as ships and expand the market coverage and frequency of services. All acquisitions identified the importance of integrating intangible resources and adopting processes for integration, especially with regard to the human element. In recent acquisitions in particular, the acquiring lines

with some previous experience of undergoing acquisitions used already developed techniques to integrate human elements. Despite this, these acquisitions overall failed to successfully integrate the human element. Cultural differences and management issues were the main reasons for this, as identified by the senior managers who participated in this study. The main motive being the acquisition of tangible resources and limited work force restriction can be other reasons for failure in human integration, a failure that has affected both the post-organisation and economic performance of acquisitions. This addresses the PRQ: Does the integration of intangible resources contribute to the post-strategic co-operation success of container lines?

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

7.1 Introduction

This chapter highlights the key findings of the study and provides an evaluation of its achievement in relation to answering the research questions. The thesis began in Chapter One by explaining the growing trends among container lines to form strategic co-operations. Within the thesis it became evident that the integration of intangible resources is a significant issue for post strategic co-operation performance. Accordingly, the chapter begins by briefly revisiting the purpose of the research. This is followed by a summary of the survey findings. The chapter ends by discussing the limitations of the study and suggestions for future research.

7.2 Purpose of the research

According to RBV theory, a strategic co-operation can be defined as a result of resources integration among firms (Das and Teng 2000). The literature identifies the challenges faced when integrating intangible resources in strategic co-operations. Only a limited number of research studies have been conducted on how the integration of intangible resources contributes to the performance of strategic co-operations among container lines. This research seeks to bridge this gap in knowledge.

Thus, the thesis has focused on answering the following primary research question (PRQ):

PRQ: Does the integration of intangible resources contribute to the post strategic co-operation success of container lines?

To further examine PRQ, two subsidiary research questions (SRQ1 and SRQ2) were explored.

SRQ1: Which intangible resources provide the greatest contribution to the market success of container lines?

SRQ2: Do container lines adopt processes to ensure the successful integration of intangible resources when strategic co-operations are being developed?

The study was conducted in two stages. The use of two different research methods in two stages combining both quantitative and qualitative research approaches help increase the validity of results as the limitation of each method is compensated by the strengths of the other. Furthermore, the use of two-stage methodology, helps to alleviate the potential bias and sterility of a single-method approach, thereby enhancing research outcomes. Hence, the stage one exploratory mail survey was aimed to identify perceptions held by senior managers with regard to the resources which contribute to the market success of container lines. More specifically, the mail survey helped to gain understanding on the perceptions of the larger sample of senior managers of container lines on intangible resources with regard to market success. Accordingly these findings enabled to identify intangible resource items that should be included in the second stage study and select most suitable respondents who could contribute to the stage two in-depth in-person interview. This second stage of the research focused on the processes adopted by container lines when integrating intangible resources. It also examined the successful integration of intangible resources' contribution to performance of strategic co-operations of container lines. The second stage was conducted with selected group of senior managers, who had extensive experience in strategic co-operations.

7.3 Summary of the findings

The findings from the study can be grouped into three main areas: which are discussed in the following sub-sections

- Resources that provide the greatest contribution to the market success of container lines.
- Integration of intangible resources in LISCs (shipping alliances, joint services and consortia).
- Integration of intangible resources in acquisitions.

7.3.1 Resources that contribute to the market performance

The stage one exploratory survey revealed that intangible resources which are VRIN make a significant contribution to the market success of container lines addressing SRQ1: Which intangible resources contribute to the market success of container lines?

Of the intangible resources, respondents considered that reputation resources as a group have a relatively significant impact on market success compared to other intangible resources. The reason for this is that the reputation of a container line and its services increases the possibility of attracting customers to the container line. Organisational resources such as business planning processes, operating and reporting structure, employee recruitment policy and employee training policy have been identified as the most important internal processes of the container lines, which contribute to their market success. The capabilities such as accurate documentation, a prompt response to shippers' complaints, long-term contractual relationship with shippers, courtesy of sales representative/employees, and the reliability of advertised sailing schedules are closely

related to the main functions of the regional offices and agencies of the container lines. These capabilities have been identified as having greater contributions to the market success of container lines and are dependent on skills and knowledge of people.

The least important intangible resource was found to be intellectual property resources (trademarks and licenses). This may be due to the respondents' recognition that the intangible resources, which are people dependent, are more important to the market success of container lines as they are closely attached to the container line, compared to intangible resources that are protected by law such as trade marks and licences. This confirms the premise of RBV theory that some resources are more important or (VRIN) than others such as, which are strategic for to container lines (Aaker 1989; Barney 1986; Wernerfelt 1984).

In general, senior managers attached less importance to tangible resources than intangible resources. However, perceptions regarding tangible resources differed between respondents from agencies and those from container line regional offices. For instance, respondents from agencies identified that among tangible resources IT-related resources, such as cargo tracking systems and EDI facilities, are more important whereas respondents from regional offices attached greater importance to the appropriate number of mainline vessels and number of branches and agencies globally. The reason for this may be that container lines have capital invested in main line vessels and branches and agencies globally; therefore they focus more on these items for market success, while agencies recognise IT related tangible resources required for market success. However, such differences in perception between agencies and regional offices could not be observed when considering the importance of intangible resources.

Of interest, the respondents of the stage one exploratory survey viewed strategic co-operation as a more suitable approach for acquiring tangible resources than intangible resources. In particular, they recognised that people-dependent intangible resources are closely connected to the firm itself, resulting in a high probability of employees leaving the new entity and thus confirming the immobility of these intangible resources. This further demonstrates the understanding respondents have on the uniqueness and immobility of mainly people dependent intangible resources.

Stage two of the study focused on the contribution made by integrated intangible resources on the performance of strategic co-operations among container lines. The findings from this stage helped to answer both the primary research question and the second subsidiary research question:

PRQ : Does the integration of intangible resources contribute to the post strategic co-operation success of container lines?

SRQ2 : Do container lines adopt processes to ensure the successful integration of intangible resources, when strategic co-operations are being developed?

Due to different levels of resource integration found in strategic co-operations, the findings are grouped into two main areas, them being the as integration of intangible resources in acquisitions and the integration of intangible resources in LISCs.

7.4 Integration of intangible resources in LISCs

Chapter Six suggested four types of LISCs: shipping alliances, joint services, consortia and liner conferences. Liner conferences were not considered in this study as they are non-existent at present due to imposed anti-trust laws. The main motives for forming

these LISCs were to reduce costs by sharing resources, mainly in terms of sharing ships by integrating sailing schedules.

In shipping alliances, joint services and consortia, sailing schedules is the only closely integrated intangible resource. This is due to several reasons. One reason is the loosely integrated structure of strategic co-operation permitting only limited integration of intangible resources. Antitrust laws are another reason that inhibits the integration of intangible resources among shipping alliances. The antitrust laws specifically prohibit integrating competitive pricing and marketing strategies. Due to this policy, especially in Europe and the USA, trade 'conferences' cannot be observed.

Therefore, in limited integrated strategic co-operations, other intangible resources (organisational processes, capabilities and organisational culture) are more or less kept away from the strategic co-operations and they are used to gain competitive advantage of container lines. This confirms the literature. Das (2011) also identifies that in LISCs only lower resource commitment and co-ordination is occurring, as the interaction among the partners is task specific (only one or two capabilities).

7.4.1.1 ***Processes of integration of intangible resources***

This section seeks to address SRQ2 with respect to LISCs. The integration processes adopted in LISCs are few in number and simple in complexity. This is also mainly due to the nature of the limited integration of intangible resources. All the container lines that participated in the research have used market surveys and discussions to identify the intangible resources of partnering container lines. The container lines have used several processes to integrate intangible resources in these LISCs such as setting up

task teams and organising meetings. Apart from these, mixed project teams and joint training were also used. The task teams were set up in both in the head offices and at a local level. The functions of the task teams at the head office level can be grouped into two areas: setting up strategic co-operations and monitoring their performance. The local task teams supervised the smooth functioning of the strategic co-operation at the local level. They consisted of senior members of the container line or the agency. As the integration is limited to a single task (integrating sailing schedules), the mixed project teams and joint training sessions are not as common as they are in acquisitions.

7.4.1.2 ***Post integration performance of LISCs***

This section addresses PRQ with respect to LISCs. In the LISCs, the integration of sailing schedules has helped to enhance the post strategic co-operation performance of container lines. For example, the container lines have started calling some ports frequently due to the formation of these LISCs. Therefore, LISCs have provided a more stable work environment for local staff, job opportunities and career advancements. In general, this limited integration of intangible resources have helped to reduce costs by sharing tangible resources, increasing the frequency of services, entering into new trade routes and achieve economies of scale.

However, especially among the shipping alliance partners, where there is intense competition (price and marketing) among the partners, mixed feelings about strategic co-operations were expressed at the local agent level. The respondents acknowledged strategic co-operations pave the way for entering into new trade routes and extended market coverage and increased service frequency, but at the same time they believe that LISCs intensify the competition for market share among the members, mainly due to

increasing the operational capabilities of the strategic co-operation members to an equal level. In that respect, members of the consortia and joint services, which are operating in regional areas, are relatively satisfied with strategic co-operations as they are able to minimise price undercutting and by having an understanding of each container lines' customers to avoid encroaching into partnering container lines' market share. However, container lines attached to shipping alliances were unable to minimise this undue competition as they were bound by antitrust laws. Even though the integration of intangible resources is very limited in these LISCs, the contribution of intangible resources is significant to the performance of the post-strategic co-operation.

7.4.2 Integration of intangible resources in acquisitions

In the acquisitions the sailing schedules (capability) were the most closely integrated intangible resource. The sailing schedules were integrated when container lines started new services on the acquired lines' routes, increasing the frequency of a current service or allocating larger ships in order to accommodate the cargo of the acquired container line. The integration of these sailing schedules has thereby increased the frequency of services and ship capacity. In addition, the integration of sailing schedules has helped to optimise the usage of ships acquired. The sailing schedules are an important intangible resource, as they affect both the revenue and cost of the container line, when considering the costs it has to incur on commencing a trade route by itself (Das 2011). These costs include the setting up of network of offices or agencies, staff to promote sales, and identifying potential customers before actual sailing starts and also the time cost of developing these resources. However, acquisitions allow container lines to acquire all the resources related to the trade route of the acquired container line, including regional offices and agencies within a short period.

Apart from sailing schedules, other intangible resources such as the capabilities, organisational processes and organisational culture of the acquirer container line were adopted by the new entity and new employees were required to get assimilated to them, in other words the acquirer container line placed less value on the acquired container line's intangible resources. Nevertheless, in one particular acquisition in this research, where the acquired container line possessed the most updated systems (intangible resources) and a well recognised trade mark compared to the acquirer container line, the acquired container line's intangible resources were adopted by the new entity. Even in this acquisition the acquirer container line's culture prevailed in the new entity.

7.4.2.1 ***Processes of integration of intangible resources***

Acquisitions varied in the processes that had been adopted in order to integrate intangible resources. For instance, in the period prior to executing the integration process, the methods employed to identify the intangible resources involved the acquirer line, in consultation with the acquired line, holding discussions among corporate senior-level managers and conducting market surveys. To select suitable staff for the new entity, knowledge tests (in seven acquisitions) and interviews (in six acquisitions) were carried out. In most instances, both staff from the acquirer line and acquired line had to undertake these tests and interviews. As previously indicated, these processes were not common in all acquisitions. Resource mapping (in three acquisitions), running two parallel organisations after the acquisition for some period (in one acquisition), and recruiting selected employees from the acquired container line were other methods used to identify intangible resources in these acquisitions, but they too were not used in all the acquisitions.

To assist with the integration of intangible resources, four types of processes were identified by senior managers. These are staff meetings, mixed project teams, joint training sessions, and appointing task teams. Generally, these meetings had been used to educate employees on the developments of the acquisitions. The objective of these meetings was to reduce the anxiety any employees might develop with regard to job security and career advancement. However, it was found that the dissemination of information among the acquired line staff members was relatively low, resulting in anxiety among these staff members. In a few of the acquisitions, mixed project teams were set up with the main purpose of working together to synthesise learning from vessel operations, marketing and customer relationships, but local members of the acquired line were not aware of this. In all acquisitions a task team had been appointed. The task teams had been compiled from the senior corporate members of the container line including the local country manager, chief financial manager, HR manager, and operations and marketing managers. The above discussions on processes adopted to integrate intangible resources answer SRQ2 with respect to acquisitions. The processes by which the integration takes place can have a severe effect on the success of the new entity. For instance, the acquirer lines insisted on using its own management tools and implementation methods, and failed to consider the acquired lines' existing working cultures, routines and employee knowledge, thus creating a negative impact on the growth of the new entities.

7.4.2.2 ***Post-acquisition performance***

This section addresses the PRQ with respect to acquisitions. On the whole, the employees of the acquired lines were not satisfied with the performances of the organisations after the acquisitions. The acquired container line staff members were

dissatisfied with career advancement and their job security. In addition, they felt insecure about their future. High staff turnover among senior managers was evident in all the acquisitions during the post-acquisition period. All the acquisitions offered voluntary redundancy schemes to reduce the excess staff after the integration processes. The majority of the staff members who left were from the acquired line.

The top management turnover and lack of human integration have affected task integration and synergetic growth, which in turn have curtailed achieving the economic objectives of these acquisitions. According to the economic performance indicators, a loss of staff has a negative effect on the growth of market share, for example, the high staff turnover specifically in the marketing teams. In the markets where the acquired line was dominant also affected the post acquisition performance due to customers being confused about the entity, systems and processes, and changes to staff. Strategies adopted by acquirer lines to minimise this negative effect include retaining the trade mark of the acquired line, or, as evident in some acquisitions the acquirer line taking control of the marketing functions, rather than handing this responsibility over to de-motivated staff from the acquired line. This finding shows the uniqueness of intangible resources and their immobility and indicates the difficulty in retaining intangible resources that are people. Further, the scale of these acquisitions and the functions of line managers have affected the failure of integration. However acquisitions have helped container lines to achieve economies of scale. By using newly acquired ships (tangible resources), container lines were able to provide more frequent services and enter into new trade routes. Container lines were also able to reduce competition in some regional areas by acquiring leading container lines in that region.

7.4.3 Limitations of the study

The findings of this study need to be considered in relation to the following limitations: the use of the single informant, the demographic scope of the study, and generalisability of the findings. These are discussed below.

The findings may be biased as they are the views of a single respondent from a container line or agency, even though they were in an ideal position to make an overall judgment of both the container line's resource base and performance levels. Further, the respondents were from regional offices of container lines and agencies involved in global strategic co-operations; however these regional offices and agencies are the life lines which generate revenue for the container lines.

The findings of the study can be applied to the whole global container liner industry, taking into consideration limitations such as the cultural differences in different maritime hubs. Other differences include firm sizes compared to cargo volumes, gross revenue and TEU volumes and the trade in which they are involved. These variables also should be considered because of the varying importance of resources in these contexts. Furthermore, it should be noted that this study focused on the post-strategic co-operation integration process where strategic co-operations follow different time lines, which also should be taken into consideration.

Further limitations may be found in the use of the mail survey (stage one data gathering) of this study. To minimise this limitation the second stage was conducted as an in-person interview, where more in-depth questions were used to gain qualitative answers and probe deeper on key issues.

Another limitation of this research was that data was collected at one point in time and therefore the hypothesised relationships were examined in a static fashion. Longitudinal research may have indicated how perceptions of key resources and capabilities change over time.

7.5 Suggestions and recommendations for future research

This study reveals the importance of VRIN resources. As container lines find it challenging to integrate these VRIN resources in strategic co-operations, future research may be focused on mitigating these challenges and gaining a further understanding of effectively integrating the resources.

Future studies could also be focused on several markets instead of only one market. This may identify whether there are any country-specific resource items. Furthermore the present study examined a general set of endogenous resources; however a variety of other resources may be studied with a focus on market success. For example market orientation, entrepreneurship, and market sensing and innovation are resources which were not operationalised in this study. In addition, the resource contribution to market performance could be analysed through a regression model which identifies the contribution of each resource item to its market performance.

Another possibility for future research is to investigate whether integration processes have helped the container lines to integrate the intangible resources through a longitudinal study. Such an in-depth study could be conducted using a selection of container lines, and applying a different methodology such as a case study approach. The sample for the study could be selected from the main offices which take corporate

decisions pertaining to strategic co-operations of these container lines. The cultural impact on acquisitions is another important factor that affected the smooth integration of resources in acquisitions. This could be further studied to find out how these cultural impacts affect acquisitions in other maritime hubs.

The effect of integration of intagible resources on performance of strategic co-operations can be quantitativle analysed through a statitical or mathamatical mode l.Which would explain in more specifically the cause and effect of independent variables (intangible and tangible resources) on dependent variables (strategic co-operation performance).

It is also suggested that a more detailed study be undertaken on the differences between consortia and joint services and their integration of intangible resources. Due to the commercial sensitivity of these strategic co-operations the total picture of these strategic co-operations could not be revealed. However, a similar study could be carried out which focuses on a few selected strategic co-operations using a case study methodology.

Finally, the results of this study reveal that intangible resources (VRIN resources) make a significant contribution to market success of container lines. Therefore, the senior managers of the container lines should ensure that processes are implemented for effective integration of these intangible (VRIN) resources to achieve the intended synergetic growth when strategic co-operations are being developed. In addition, when forming closely integrated strategic co-operations (M&As), the senior managers should consider the compatibility of the corporate cultures of the merging container lines and

the measures should be identified to integrate these different coporate cultures at the pre planning stage. The measures to retain intangible resources of the acquired container line should be implimented, specially due to the major impact of losing acquired container line sales and marketing staff has on the new entity.

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APPENDIX A

STAGE ONE
MAIL SURVEY QUESTIONNAIRE

AUSTRALIAN MARITIME COLLEGE

UNIVERSITY OF TASMANIA

Contribution of Resources to Market Success of Container Lines

Please return by 7th of February 2010

SECTION A – Tangible and intangible resources

A1. The following table lists a range of tangible and intangible resources found in container lines. The intangible resources are further classified into organizational processes, culture, intellectual property and reputation, and capabilities.

Please consider the importance of the contribution of each of the following resources to the market success of your container line.

Please circle each appropriate response.

		Importance					
	Intangible resources	Not important	Not very Important	Unsure	Important	Very important	N/A
	Organizational processes						
A1.1	Business planning processes	1	2	3	4	5	0
A1.2	The operating and reporting structure	1	2	3	4	5	0
A1.3	Employee recruitment policy	1	2	3	4	5	0
A1.4	Employee training policy	1	2	3	4	5	0
A1.5	Employee compensation policy	1	2	3	4	5	0
A1.6	Employee retrenchment policy	1	2	3	4	5	0
	Culture						
A1.7	Shared values and beliefs of employee	1	2	3	4	5	0
A1.8	Attitudes and behavior of employee	1	2	3	4	5	0
	Intellectual property and reputation						
A1.9	Trade mark	1	2	3	4	5	0
A1.10	Licenses	1	2	3	4	5	0
A1.11	Company overall reputation	1	2	3	4	5	0
A1.12	Reputation of services offered	1	2	3	4	5	0
	Capabilities						
A1.13	Competitive pricing	1	2	3	4	5	0
A1.14	Trade secrets	1	2	3	4	5	0
A1.15	Short transit time	1	2	3	4	5	0
A1.16	High frequency of sailing	1	2	3	4	5	0
A1.17	Reliability of advertised sailing schedules	1	2	3	4	5	0
A1.18	Prompt response to shippers' complaints	1	2	3	4	5	0
A1.19	On time pickup and delivery	1	2	3	4	5	0
A1.20	Fast claim response	1	2	3	4	5	0
A1.21	Low cargo damage or loss record	1	2	3	4	5	0
A1.22	Ability to quickly trace cargo	1	2	3	4	5	0
A1.23	Accurate documentation	1	2	3	4	5	0
A1.24	Ability to provide consolidation services	1	2	3	4	5	0

A1.25	Ability to provide insurance services	1	2	3	4	5	0
A1.26	Courtesy of sales representative/employees	1	2	3	4	5	0
A1.27	Ability of sales representative to handle problems	1	2	3	4	5	0
A1.28	Long-term contractual relationship with shippers	1	2	3	4	5	0
A1.29	Strategic alliances with other container lines	1	2	3	4	5	0
A1.30	Long term contractual relationship with inland transport companies	1	2	3	4	5	0
	Tangible Resources						
A1.31	An appropriate number of main line vessels	1	2	3	4	5	0
A1.32	An appropriate number of feeder vessels	1	2	3	4	5	0
A1.33	Number of branches or agencies globally	1	2	3	4	5	0
A1.34	Dedicated terminals	1	2	3	4	5	0
A1.35	EDI facilities	1	2	3	4	5	0
A1.36	Website facilities	1	2	3	4	5	0
A1.37	Cargo tracking system facilities	1	2	3	4	5	0
A1.38	Warehouse facilities	1	2	3	4	5	0
A1.39	Suitable cargo handling equipment	1	2	3	4	5	0
A1.40	Buildings and other physical structures	1	2	3	4	5	0

A2. Please indicate below, if there are any other tangible/intangible resources beyond the above list that contribute to the market success of your container line.

Tangible resources: _____

_____

Intangible resources: _____

_____

SECTION B—Development of resources and strategic co-oprations

B1. Is forming a strategic alliance with another container line a suitable method of acquiring resources?

Yes…….. ❑01→ Go to next question
No…….. ❑02→ Go to question B4

B2. Please use one of the six responses to indicate the extent to which that you agree or disagree with each of the following statements

		Strongly disagree	Disagree	Unsure	Agree	Strongly Agree	N/A
B2.1	Forming a strategic alliance is a suitable method to acquire intangible resources	1	2	3	4	5	0
B2.2	Forming strategic alliance is a suitable method to acquire tangible resources	1	2	3	4	5	0

B.3 Please indicate whether your container line has been involved in any of the following strategic co-operations in the last ten years

Liner conference…… ❑01
Shipping alliance…… ❑02
Pooling agreement…….. ❑03
Consortia…… ❑04
Slot charters…… ❑05
Joint service agreements…….. ❑06
Mergers and acquisition…….. ❑07
Not at all…… ❑08

SECTION C – Container lines market performance

C.1 Please indicate, how many TEUs were handled by your container line in the Port of Colombo last financial year.

1,000 or less…….. ❑01
1,001 - 10,000…….. ❑02
10,001 - 50,000…… ❑03
50,001-100,000…….. ❑04
100,001-200,000…… ❑05
200,001-500,000…… ❑06
500,001-1,000,000…… ❑07
Over 1,000,000..... ❑08

C.2 Please indicate how many full time permanent employees work for your company in Sri Lanka.

20 or less…….. ❑01 101-150……❑04

21-50…….. ❑02 151-200……❑05

51-100…….. ❑03 201 or more……❑06

C.3 Please indicate in which of the following categories the container lines total gross revenue was for the last financial year (In US dollars).

$100,000 or less…… ❑01 $1,000,001-10,000,000……❑04

$100,001-500,000…….. ❑02 $10,000,001-100,000,000……❑05

$500,001-1,000,000…….. ❑03 $100,000,000 and over …… ❑06

C.4 In the last three years how many per cent has your container lines market share grown?

Less 1%……❑01 2-5%……❑02 6-10%……❑03 10 %more….❑04

SECTION D – Demographic questions

D.1 What is your current job title?

_____

_____

_____

D.2 What are your general responsibilities in the container line?

_____

_____

_____

_____

D.3 For how many years in total have you had a senior management role in container lines? ……years

D.4 In which discipline is your professional background and qualifications?

Business management……❒01 Engineering…… …… .. ❒04

Operations……❒02 Marketing…… ❒05

Accounting/finance…… ❒03 Other please specify)…… ❒06

D.5 Would you like to receive a copy of the summary results of the study when they become available?

Yes..... ❒01 No..... ❒02

Email address:..... ❒03

This completes the survey, thank you for your time and assistance with this important study

APPENDIX B

COVER LETTER

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AUSTRALIAN MARITIME COLLEGE

UTAS

<<<Date>>>
<<<Title>>><<FirstName>><LastName>>
<<<Job Title>>
<<<Company>>>
<<<Address>>>
<<<City>>>
<<<State>> <<PostalCode>>

Dear <<Title>> <<LastName>>

Re: Contribution of Resources to Market Success of Container Lines

You have been identified as someone who can contribute in a significant way to a major study on how intangible resources may contributes to the success of container line consideration. The study has been initiated by the Department of Maritime and Logistics Management at the Australian Maritime College to identify the contribution of intangible resources to the market success of container lines. It is hypothesized that competitive performance of container lines depends on the effective use of these strategic resources.

In order to complete this study, your input will make a significant contribution to the quality of information obtained. You are kindly requested to complete the attached questionnaire, which should take about 15 minutes to complete, and return it in the reply-paid envelope supplied. Please be advised that all information provided will be treated strictly confidential and you and your corporation details will not be identified in the final report. Should you have any concerns of an ethical nature or complaints about the manner in which this study is conducted, please contact Marilyn Knott, Ethics officer of the Human Research Ethics Committee (Tasmania) Network at Tel.+ 61 3 6226 2764; email: Marilyn.Knott@utas.edu.au.

A summary report of the results of the study will be made available to all participants' organizations on request. The report will discuss how strategic resources, may contribute to the success of container lines. You may find the report useful in identifying and recognizing the value of your own organization's resources, when making strategic decisions.

If you have any questions or require additional information in this regard, please feel free to contact Mr. Indika Sigera (Tel: +61 3 6335 4658; e-mail: lcsigera@utas.edu.au).

Thank you for your co-operation

Yours sincerely

Indika Sigera
Researcher

Dr. Stephen Cahoon
Head of Department of Maritime and LogisticsManagement

APPENDIX C

PARTICIPANT INFORMATION SHEET

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AUSTRALIAN MARITIME COLLEGE

UTAS

Participants Information sheet
Social science/ Humanities research

Title of project: Contribution of Resources to Market Success of Container Lines

You are invited to participate in a research study into the consolidations among container lines and sustainability of intangible resources. Prior to you decide to participate; it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. The study is being conducted by Indika Sigera at the Department of Maritime and Logistics Management, the Australian Maritime College at the University of Tasmania Australia.

1. What is the purpose of this study?

The study will be comprised of two stages. This will be the second stage, this stage of the study will focuses on processes adopt by container lines to successfully integrate these intangible resources during strategic co-operations and contribution of successful integration of intangible resources to post consolidated container line.

In stage one we investigated whether container lines have an understanding of their intangible resources with relevance to their contribution of market success of container lines.

2. Why have I been invited to participate in this study?

You have been invited to participate as a senior manager employed in the container line or in a shipping agency representing container line at the level of making decisions with respect to utilisation of these resources to success of the particular container line. Around 50 senior managers representing container lines and agencies will be invited to participate for the mail survey.

3. What does this study involve?

It is important that you understand that your involvement in this study is voluntary. While we are pleased to have your participation, we respect your right to decline. There will be no consequences if you decided not to participate. If you decide to discontinue participation at any time, you may do so without providing an explanation. All information will be treated in a confidential manner, and your name will not be used in any publication arising out of the research. In the final report, you will be referred to by a numeric pseudonym. We will remove any references to personal, which might allow someone to guess your identity. In order to do this, the researcher will be de-identified the data before it is analysed. This means that your name and contact details will be kept in a separate, password-protected computer file from any data that you supply. This will only be able to be linked to your responses by the researcher. The data will be kept securely at Australian Maritime College for years and will then be destroyed.

The stage two of the research involves collecting and analysing data with relevance to container lines understanding of their intangible resources with relevance to their contribution of market success of container lines. The main data collection process of this stage will be through a mail survey.

4. Are there any possible benefits from participating in this study?

The findings of this important study will help the participating container lines to understand the knowledge they have on how intangible resources contribute to their market success. It will facilitate container lines to develop methods to better manage these intangible resources in a process of consolidation.

5. Are there any possible risks from participating in this study?

There should be no risks to the participants in this study, other than normal risks involved in everyday life. We estimate that the total time commitment required of you, if you were to participate in this research would not exceed 15 minutes.

6. What will happen to the results of the study

This study constitutes one of the main sources of primary data for the researcher's doctoral thesis. The findings may later be presented or published and in other academic arenas, including journals. Copies of such publications can be supplied upon request to any participants in the study.

7. What if I have questions about this research?

If you would like to discuss any aspect of this study please contact the researcher or the chief investigator:

Researcher
Indika Sigera
Department of Maritime and Logistics Management,
Tel: + 613 6335 4658
Email:lcsigera@utas.edu.au

Chief investigator
Dr. Stephen Cahoon,
Head of Department of Maritime Management,
Tel: + 613 6335 4769
Email: s.cahoon@amc.edu.au

We are happy to discuss any aspect of the research with you. Once the study is completed a summary of our findings can be emailed to you upon request. You are welcome to contact us at that time to discuss any issue relating to the research study.

This study has been approved by the Tasmanian Social science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study should contact the executive officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive officer is the person nominated to receive complaints from research participants.
Thank you for taking time to consider this study. This information sheet is for you to retain

APPENDIX D

PRE-TESTING LETTER

Locked Bag 1397
Launceston Tasmania 7250 Australia
Phone + 61 3 6335 4728 Fax + 61 3 6335 4720
www.amc.edu.au

Thank you for agreeing to pre-test the mail survey that will be used in my study on Consolidation among Container Lines and Sustainability of Intangible Resources to fulfil the requirements of a PhD thesis.

I am a PhD candidate at the Department of Maritime and Logistics Management, the Australian Maritime College, University of Tasmania (UTAS).

Please pre-test the following documents:

- The cover letter of the mail survey
- The mail survey document
- Participants information sheet (as required by the ethics committee)

The objectives of the research

The main objectives of the research are to understand the impact that consolidations among container lines have on intangible resources of them. As there is a tendency for the shipping lines to lose these resources during a consolidation, it is vital for them to retain these resources to provide competitive services superior to their competitors. Therefore, this research will enable the shipping lines to understand their strategic resources, which enable them to be competitive. The broader objective of this research will be to develop methods that enable container lines to carry out consolidation processes with effective integration of intangible resources.

Further, an important goal of this study is to examine the following research questions, which determine the focus of this research.

Thus, primary research question for this study is to verify:

> *Does the integration of intangible resources contribute to post strategic co-operation success of container lines*?

The subsidiary research questions are as follows:

> *Which intangible resources provide the greatest contribution to the market success of container lines?*
>
> *Do container lines adopt processes to ensure the successful integration of intangible resources when strategic co-operations are being developed?*

As I am planning to meet the ethics committee submission date of Friday 20 November 2009, it would be appreciated if any suggestions could be returned by 12:00PM Wednesday 18th November 2009.

The mail survey process

The process of conducting the survey is:

1. A mail survey with a cover letter, questionnaires and returned paid envelop using AMC logo will be sent to respondents in container lines and agencies which are solely representing container lines in Sri Lanka.

2. CEOs and senior managers of container lines and agencies representing their main lines will be potential respondents.

3. As mailing from Australia to Sri Lanka and vice versa is time consuming (usually it takes about 3 weeks one way) all survey mails will be sent from my home address in Colombo, Sri Lanka and returned mails will be collected in this address. I will use the same name in returned paid envelopes and in the cover letter for consistency and to minimise the errors.

4. To increase the response rate a reminder email with the survey questionnaire attached will be sent to the participants.

5. The survey questionnaire consists of three parts. Part A focuses on the intangible and tangible resources contribution to market success of container line. Part B focuses on development of resources and strategic alliances. Part C and D will enquires about container lines market performance and participants' background.

If you have any questions about the survey questionnaire, please either call me on (03) 6335 4658 or email at lcsigera@utas.edu.au.

Regards

Indika Sigera

APPENDIX E

PRE-TESTING QUESTIONS STAGE ONE

The list of questions for pre-testing the mail survey questionnaire

Comments emerging from your evaluation will be used to improve the questionnaire potential issues have been divided into three categories.

The structure arrangement of the questionnaire

1) Are the questions numbers are arranged in chronological order?
2) Is the structure and the lay-out of the questionnaire simple and easy to understand for the respondent?
3) Are the instructions clear and understandable for the respondent?
4) Are there any spelling or grammatical error?

Completing the questionnaire

5) How long did the questionnaire take to read through?
6) Are any of the questions unclear or ambiguous?
7) Are any questions difficult to answer?
8) Did you object to answer any questions?
9) Is the language appropriate for the various questions provided?
10) Is the coding of the responses adequate for use during statistical analysis?

Purpose of the questionnaire

11) Are there any major topics or ideas ignored?
12) Should any questions be excluded due to them being irrelevant?
13) Did you understand the focus of each section in the questionnaire?
14) Are there any other points you would like to suggest?

APPENDIX F

STAGE TWO
IN-PERSON INTERVIEW
QUESTIONNAIRE

CONFIDENTIAL

2010 Study on the Contribution of Intangible Resources to Post Strategic Co-operation

Success of Container Lines

STAGE TWO

Document number :_____

Date of interview :_____/2010

Time interview started_____am/pm

Time interview ended:_____

Length of interview:_____ minutes

INTRODUCTION	
Good morning/afternoon Mr/Mrs/Ms/Capt_____ I am Indika Sigera from the Australian Maritime College, Thank you for helping me to complete the first stage of study on the contribution of intangible resources to the competitive performance of container lines. I was able to produce a research paper based on findings of the first stage of survey to IAME 2010 conference in Lisbon, Portugal. Did you receive the copy of this research paper along with my letter? If you have any questions about the research paper we can discuss them at the end of the interview.	❑ Yes - go to the start of interview ❑ No - promise to send soon and go to start the interview
Start the interview As I indicated in the letter, the purpose of the study is to explore the contribution of intangible resources to the performance of strategic co-operations in container lines. Strategic co-operations among container lines can be in several forms, such as conferences, shipping alliances, pool agreements, consortia, as well as mergers and acquisitions. Whether you have been personally involved in the development of strategic co-operations in your container line does not matter, your views about strategic co-operations are still important for this study. Involvement in this interview is entirely voluntary. You may decline to answer any of the interview questions you do not wish to answer and may terminate the interview at any time. All information you provide will be treated confidentially. Are you ready to continue?	❑ Yes - go to **Response Card** section ❑ *No - explain the significance of accuracy rather than risk faulty interpretation or memory on my part*
Recording of interview Would you be agreeable with me recording this interview to ensure your responses are recorded accurately? **Response Card** We will be using several response cards during the interview. I will hand them to you during the interview to assist with responding to questions. If you have no questions, let's begin the interview now.	

SECTION A. Demographic questions

A.1 Have you had an active involvement during a strategic co-operation?
Yes…… ❑01 ⟶ *Go to next question*
No…… ❑02 ⟶ *Go to section B*

(Identify the strategic co-operation by its generic name (for example, Liner conference, shipping alliance etc) from stage one survey information)

A.2 What was your job position during the time of the strategic co-operation?
……
……
……

A.3 Could you please explain the role you played in the process of strategic co-operation?
……
……
……
……

SECTION B. Strategic co-operations

Now I would like to ask a few questions about the strategic co-operation your container line was involved in.

B.1 If the strategic co-operation had a title, what was it? *(For example, Grand Alliance, Global Alliance)*
……
……
……

B.2 When did this strategic co-operation begin operating?
……
……
……

B.3 How long did it take to complete?
……
……
……

B.4 Could you please explain the main features of the strategic co-operation?

(*From the below list, select the appropriate strategic co-operation)*

(a) Liner conference

……
……
……
……
……

(b) Shipping alliance

……
……
……
……
……

(C) Pooling agreement

……
……
……
……
……

(d) Consortium

……
……
……
……
……

(e) Merger or acquisition

……
……
……
……

B.5 In your view, what would have been the main motives for the container line to begin this strategic co-operation?

……
……
……

SECTION C. Integration of intangible resources

Now, I would like to change the focus to discussing intangible resources in your strategic co-operation. In particular I am interested in how the intangible resources of each container line (agency) were integrated to gain further benefit. Please view Response Card A to answer these questions. To what extent do you agree that the successful integration of following intangible resources contribute to the post strategic co-operation performance of container line?

	Intangible resources	Strongly Disagree	Dis agree	Unsure	Agree	Strongly Agree	N/A
C.1	Business planning processes	1	2	3	4	5	0
C.2	The operating and reporting processes	1	2	3	4	5	0
C.3	Employee recruitment policies	1	2	3	4	5	0
C.4	The employee training policies	1	2	3	4	5	0
C.5	Organisation culture	1	2	3	4	5	0
C.6	Trade secrets	1	2	3	4	5	0
C.7	Competitive pricing	1	2	3	4	5	0
C.8	Marketing/sales strategies	1	2	3	4	5	0
C.9	Trade mark	1	2	3	4	5	0
C.10	Licenses	1	2	3	4	5	0
C.11	Sailing scheduling	1	2	3	4	5	0
C.12	Handling of shipper complaints	1	2	3	4	5	0
C.13	On time pickup and delivery systems	1	2	3	4	5	0
C.14	Cargo handling systems	1	2	3	4	5	0
C.15	Preparation of shipping documents	1	2	3	4	5	0
C.16	Claims handling systems	1	2	3	4	5	0
C.17	Cargo tracking systems	1	2	3	4	5	0
C.18	Long term contractual relationships with shippers	1	2	3	4	5	0
C.19	Long term contractual relationships with other container lines	1	2	3	4	5	0

C.20 Are there still any ongoing issues related to integration of intangible resources in the strategic co-operation?

……
……
……
……
……

SECTION D. Processes of integration

Now, more specifically, I would like to ask questions on the processes that can be adopted by the container line (agency) to integrate intangible resources in the strategic co-operation.

D.1 Did the head office provide you with specific guidelines on how intangible resources should be managed during the integration process?

Yes …… ❑01 → *Go to next question*
No…… ❑02 → *Go to question D.3*
Unsure…… ❑03 → *Go to question D.3*

D.2 Could you please briefly explain the guidelines provided by the head office?

……
……
……
……
……

D.3 In your view, is it important for the container line (agency) to clearly identify the intangible resources of the partnering organisation prior to a strategic co-operation?

Yes…… ❑01 → *Go to next question*
No…… ❑02 → *Go to question D.6*

D.4 Has your container line (agency) used any of the following methods to identify these intangible resources?

Interviews …… ❑01 → *Go to question D.6*
Discussions…… ❑02 → *Go to question D.6*
Knowledge test…… ❑03 → *Go to question D.6*
Any other methods…… ❑04 → *Go to next question*

D.5 Could you please explain how the method was used?

……
……
……
……

D.6 Do you believe the container line (agency) should organise staff meetings to educate employees regarding how the intangible resources will be integrated?

Yes…… ❑01 → *Go to next question*
No…… ❑02 → *Go to question D.8*

D.7 What information should these meetings provide to staff about how the intangible resources will be integrated?

……
……
……
……
……
……
……

D.8 Should the container line (agency) appoint a task team to facilitate the integration of intangible resources?

Yes…… ❑01 → *Go to next question*
No…… ❑ 02 → *Go to question D.12*

D.9 Which categories of employees should be included in this team?
Senior managers…… ❑01
Middle managers…… ❑02
Junior managers…… ❑03
Executives…… ❑04
Others_____ ❑05

D.10 Which departments of container line (agency) should be represented in this team?
Operations…… ❑01
Marketing and sales…… ❑02
Human resources…… ❑03
Finance…… ❑04
Others_____ ❑05

D.11 What activities should the task team initiate to facilitate the integration of intangible resources?

……
……
……
……

D.12 Should the container line (agency) set up mixed project teams to facilitate the integration of intangible resources? (*Project teams comprise of members from all partnering organisations)*

Yes…… ❑01 → *Go to next question*
No…… ❑02 → *Go to question D.14*

D.13 Which activities should the mixed project team initiate to facilitate the integration of intangible resources?

……
……
……

D.14 In your view, should the container line (agency) organise joint training sessions to facilitate the integration of intangible resources? *(Develop understanding about work practices*)

Yes…… ❑01 → *Go to next question*
No…… ❑02 → *Go to question D.16*

D.15 What activities should be included in these joint training sessions?

……
……
……
……
……

D.16 Are there any other processes container lines (agency) should use to integrate the intangible resources?

……
……
……
……
……
……

SECTION E. Facilitators of integration

Now, we move to questions that examine what makes the integration of intangible resources successful in the strategic co-operation. Please view Response Card A to answer these questions. To what extent do you agree that the following factors improve how intangible resources are integrated in strategic co-operations?

		Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	N/A
E.1	Mutual acceptance of the strategic co-operation process	1	2	3	4	5	0
E.2	Selection of partners according to an intangible resources profile	1	2	3	4	5	0
E.3	Careful designing of the strategy to integrate intangible resources	1	2	3	4	5	0
E.4	Integration of information on intangible resources	1	2	3	4	5	0
E.5	Mutual trust between partners	1	2	3	4	5	0
E.6	Interpersonal relationships between senior managers	1	2	3	4	5	0
E.7	Integration of work cultures	1	2	3	4	5	0
E.8	Sharing of good practices	1	2	3	4	5	0
E.9	Positive attitude of employees towards the consolidated container line	1	2	3	4	5	0

E.10 Could you explain why work culture similarities (differences) among container lines facilitate (impede) the integration processes of intangible resources?

……

……

……

……

SECTION F. Economic performance

In this section, the questions focus on the container line's performance after the strategic co-operation. Please view Response Card B to answer these questions. In your view, how satisfied was the container line in achieving the following performance objectives after the strategic co-operation.

	Economic performance	Very Dissatisfied	Somewhat Dissatisfied	Unsure	Somewhat Satisfied	Very Satisfied	N/A
F.1	Increased market share	1	2	3	4	5	0
F.2	Achieved economies of scale	1	2	3	4	5	0
F.3	Achieved a more efficient work force	1	2	3	4	5	0
F.4	Increased cash flow	1	2	3	4	5	0
F.5	Increased the use of the terminal facility	1	2	3	4	5	0
F.6	Increased the utilisation of containers	1	2	3	4	5	0
F.7	Stabilised freight rates	1	2	3	4	5	0
F.8	Reduced external competition	1	2	3	4	5	0
F.9	Gained the ability to provide more frequent services	1	2	3	4	5	0
F.10	Entered into new trade routes	1	2	3	4	5	0
F.11	Accessed general management skills	1	2	3	4	5	0
F.12	Reduced capital costs of purchasing or supplying ships	1	2	3	4	5	0
F.13	Gained the ability to access specific niche markets	1	2	3	4	5	0

F.14 Were there any other expected or unexpected objectives achieved (or not achieved) by the strategic co-operation?

……
……
……
……
……

(*If the* container line *has undergone a merger or an acquisition go to section G (any other type strategic co-operation go to section H)*

Section G. Organisational success

We are now almost finished the interview. The next questions relate to employee satisfaction after the strategic co-operation. Please view Response Card B to answer these questions. In your view, how satisfied are the employees after the strategic co-operation in relation to the following factors?

		Very Dissatisfied	Somewhat Dissatisfied	Unsure	Somewhat Satisfied	Very Satisfied	N/A
G.1	Job security	1	2	3	4	5	0
G.2	Job responsibilities	1	2	3	4	5	0
G.3	Work climate	1	2	3	4	5	0
G.4	Salary	1	2	3	4	5	0
G.5	Career advancement opportunities	1	2	3	4	5	0

G.4 Was there any employee turnover due to the strategic co-operation?

Yes…… ❒01 → *Go to next question*
No…….. ❒02 → *Go to question G.6*

G.5 Which was the major category of employees who left the company?

Senior mangers…….. ❒01
Middle managers……..❒02
Junior managers…… ❒03

G.6 Did the container line (agency) offer a voluntary redundancy scheme?

Yes…… ❒01 → *Go to next question*
No…….. ❒02 → *Go to closing statement*
Others_____ ❒02

G.7 Which was the major category of employees who accepted the redundancy scheme?

Senior mangers…….. ❒01
Middle managers…….. ❒02
Junior managers…… ❒03
Others_____ ❒03

Section H. Closing statement and question

H.1 This completes my questions. Do you have any questions about this interview, the first stage of the study or the report I mailed to you?

……
……
……
……

H.2 Would you like to receive a copy of the summary results of the study when they become available?

Yes…….....❒$_{01}$
No……..❒$_{02}$

H.3 I can send a copy of the report by email, what email address should I send the report to?

……@……..

This complete the interview, thank you for your time and assistance, it has made a valuable contribution to this research.

APPENDIX G

RESPONSE CARDS A-B

Response Card A

Please reply to the interviewer's statements that most closely resembles your opinion on the issue

There is no right or wrong answer only your personal opinion matters

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	Not Applicable

2010 Study on the contribution of intangible resources to the post strategic co-operation success of container lines

Response Card B

Please reply to the interviewer's statements that most closely resembles your opinion on the issue

There is no right or wrong answer only your personal opinion matters

Very Dissatisfied	Somewhat Dissatisfied	Unsure	Somewhat Satisfied	Very Satisfied	Not Applicable

2010 Study on the Contribution of Intangible Resources to the Post Strategic Co-operation Success of Container Lines

APPENDIX H

ADVANCE LETTER

Locked Bag 1397
Launceston Tasmania 7250 Australia
Phone + 61 3 6335 4728 Fax + 61 3 6335 4720
www.amc.edu.au

AMC
AUSTRALIAN MARITIME COLLEGE

UTAS

<<<Date>>>
<<<Title>>><<FirstName>><LastName>>
<<<Job Title>>
<<<Company>>>
<<<Address>>>
<<<City>>>
<<<State>> <<PostalCode>>

Dear <<Title>> <<LastName>>

Re: 2010 Study on the contribution of intangible resources to the post strategic co-operation success of container lines

Thank you for your valuable contribution to the first stage of our international research on how senior managers in container lines/agencies manage intangible resources. As a result of your contribution, we are pleased to enclose a copy of a research paper accepted for inclusion in the conference of the International Association of Maritime Economists (IAME 2010) in Lisbon, Portugal in July. Please feel free to contact Mr. Indika Sigera, if you have any queries about the research paper.

We would now like to invite you to participate in the second stage of this important study conducted by the Department of Maritime and Logistics Management at the Australian Maritime College. The study is being conducted in partial fulfilment of a Doctor of Philosophy degree for Mr Sigera. The second stage of the study aims to explore the contribution of intangible resources to the performance of the post strategic co-operation of container lines. While stage one involved the completion of a mail survey, stage two will be conducted by an in-person interview. Mr Sigera will be travelling to Sri Lanka in July to conduct the interviews. Within one week, Mr Sigera will be calling you by telephone or e-mail to ask whether you are interested in participating in this major study. The inputs from you will help us to identify processes that facilitate the successful integration of intangible resources during strategic co-operations among container lines. A summary report of the results of the study will be made available to all participating senior managers on request. You may find the report useful in identifying the processes used to integrate intangible resources when developing strategic co-operations.

This study has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study please contact the Executive Officer of the HREC (Tasmania) Network on +61 3 6226 7479 or email human.ethics@utas.edu.au. The Executive officer is the person nominated to receive complaints from research participants. If you have any questions or require additional information about this study, please feel free to contact Mr Sigera (Tel: +61 3 6324 9658; e-mail: lcsigera@utas.edu.au).

Yours Sincerely

Indika Sigera
Researcher

Dr. Stephen Cahoon
Research Supervisor
Head of the Department of Maritime and Logistics Management

APPENDIX I

PARTICIPANT INFORMATION SHEET

Locked Bag 1397
Launceston Tasmania 7250 Australia
Phone + 61 3 6335 4728 Fax + 61 3 6335 4720
www.amc.edu.au

AUSTRALIAN MARITIME COLLEGE

UTAS

Participant Information sheet
Social science/Humanities research

Title of project: 2010 Study on the contribution of intangible resources to the post strategic co-operation success of container lines

You are invited to participate in a research study conducted on the consolidations among container lines and sustainability of intangible resources. Prior to you deciding to participate; it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully. This research is being conducted by Indika Sigera in partial fulfillment of a PhD, under the supervision of Dr Stephen Cahoon at the Department of Maritime and Logistics Management, the Australian Maritime College at the University of Tasmania, Australia.

1. What is the purpose of this study?

The study comprises two stages. The first stage investigated whether container lines have an understanding of intangible resources and the contribution to the market success of container lines. Stage one is complete.

The second stage of the study, which this Participant Sheet refers to, focuses on (1) the processes adopted by container lines to successfully integrate intangible resources during strategic co-operations and (2) the contribution of intangible resources to the performance of post consolidated container lines.

2. Why have I been invited to participate in this study?

You have been invited to participate because of your experience as a senior manager employed in a container line or shipping agency representing container lines. Around 50 senior managers representing container lines and agencies will be invited to participate in this study.

3. What does this study involve?

It is important to understand that your involvement in this study is voluntary. While we are pleased to have your participation, we respect your right to decline. There will be no consequences if you decide not to participate. If you decide to discontinue participation at any time, you may do so without providing any explanation. All information will be treated in a confidential manner, and your name will not be used in any publication arising out of the research. In the final report, you will be referred to by a numeric pseudonym. We will remove any references to any personal details,

which might allow someone to guess your identity. In order to do this, the researcher will de-identify the data before it is analysed. This means that your name and contact details will be kept in a separate, password-protected computer file from any data that you supply. This will only be able to be linked to your responses by the researcher. The data will be kept securely at Australian Maritime College for five years and will then be destroyed.

This stage two of the research study involves collecting data by in-person interviews in Sri Lanka

4. Are there any possible benefits from participating in this study?

The findings of this important study may assist participating container lines understand the processes they could adopt to successfully integrate intangible resources during strategic co-operations. It may also provide examples of methods to better manage intangible resources when developing strategic co-operations

5. Are there any possible risks from participating in this study?

There should be no risks to the participants in this study, other than normal risks involved in everyday life. We estimate that the total time commitment required of you, if you were to participate in this research be between 30- 45 minutes.

6. What will happen to the results of the study

This study constitutes one of the main sources of primary data for the researcher's doctoral thesis. The findings may later be presented or published and in other academic arenas, including journals. Copies of such publications can be supplied upon request to any participants in the study.

7. What if I have questions about this research?

If you would like to discuss any aspect of this study please contact the researcher or the chief investigator:

Researcher
Indika Sigera
Department of Maritime and Logistics Management,
Tel: + 613 6324 9658
Email:lcsigera@utas.edu.au

Chief investigator
Dr. Stephen Cahoon,
Head of the Department of Maritime and Logistics Management,
Tel: + 613 6324 9769
Email: s.cahoon@amc.edu.au

We are happy to discuss any aspect of the research with you. Once the study is completed a summary of our findings can be emailed to you upon request. You are welcome to contact us at that time to discuss any issue relating to the research study.

This study has been approved by the Tasmanian Social science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study please contact the executive officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive officer is the person nominated to receive complaints from research participants.

Thank you for taking time in considering this study. This information sheet is for you to retain

APPENDIX J

CONSENT FORM

CONSENT FORM

Title of Project:2010 study on the contribution of intangible resources to the post strategic co-operation success of container lines.

By signing this form, I agree that:

1. I have and understood the information presented in the 'information sheet' about a study being conducted by Indika Sigera of the Australian Maritime College.
2. I understand that the study involves 30-45 minutes during an in-person interview to discuss issues on the contribution of intangible resources to the performance of container lines**.**
3. The nature and possible effects of the study have been explained to me. I understand that my participation is low-risk and that discussion will address non-sensitive issues.
4. Any questions that I have asked have been answered to my satisfaction. I am free now, and in the future, to ask questions about the study.
5. I understand that all research data will be securely stored on the Australian Maritime College premises for five years and will then be destroyed.
6. I understand that the researcher will keep my identity confidential and that any information I supply to the researcher will be used only for the purposes of the research.
7. I agree that research data gathered from me for the study may be published provided that I cannot be identified as a participant.
8. I agree to participate in this investigation and understand that I may withdraw at any time without any effect, and if I so wish may request that any data I have supplied to date be withdrawn from the research.

Name of Participant: ……..

Date:…….....

Signature: …….....

9. **Statement by Researcher**

☐ I have explained the in-person interview and the implications of participation to this participant and I believe that the consent is informed and that he/she understands the implications of participation.
If the researcher has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐ The participant has received the information sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project

Name of researcher: Indika Sigera Date:…..……

Signature:……..

APPENDIX K

CONFIRMATORY TELEPHONE CALL DOCUMENT

CONFIRMATORY TELEPHONE CALL

TELEPHONE LOG

Respondent's Name: _____ Date :_____/_____/2010

Position: _____ Time _____am/pm

Company Name: _____ Date _____/_____/2010

Telephone: _____ Time _____am/pm

mobile: _____

Email: _____

Good morning/afternoon Mr/Mrs/Ms/Capt_____,I am Indika Sigera from the Australian Maritime College. Recently, I sent you a letter in relation to a major study being conducted on the contribution of intangible resources to the success of container lines.

I am calling you today to ask whether you are willing to participate in this important study. Senior managers from other container lines and agencies are also being invited to participate in the study.

In appreciation of your participation in this study, a summary report, similar to the report provided at the completion of the first stage of the study, will be provided to you that discusses the processes that container lines may adapt to successfully integrate the intangible resources during strategic co-operations. The study will be conducted as an in-person interview. As indicated in the advance letter, I have flown from Australia to Sri Lanka to conduct a range of interviews with other senior managers like yourself and will be in Sri Lanka for a few weeks. The interview consists of a number of questions focusing on how intangible resources are integrated during strategic co-operations in container lines. Regardless of whether you have been personally involved during the development of strategic co-operations, your views are still important for this study. I believe the results of this study will be of value to the industry. Would you be interested in participating in this important study?

(Pause and wait for the response)

(Go to next page)

APPENDIX L

MEETING SCHEDULE

If respondents say Yes	**If respondents say No**
1. Date :_____ Meeting time: _____ Street address:_____ Suburb:_____ Telephone:_____ Mobile:_____ → *Declaration* A	1. Is there anyone else in your organisation that may be interested in participating in the study? Yes→ Name:_____ Telephone:_____ Email:_____ → *Declaration B* No → *Go to question 2*
DECLARATION A Thank you for agreeing to participate in this study. I will meet you at *(mention time)* on *(mention date) at (mention address)*	2. Could I ask you two quick questions that would significantly contribute to this study? Yes → *Go to question 3* No → *Go to declaration B*
	3. Do intangible resources contribute to competitive performance of container lines? Yes No
	4. Does successful integration of intangible resources contribute to post strategic co-operation performance of container lines? Yes No
	DECLARATION B Thank you for your time

APPENDIX M

EXPLANATORY PRE-TEST LETTER

STAGE TWO

Locked Bag 1397
Launceston Tasmania 7250 Australia
Phone + 61 3 6335 4728 Fax + 61 3 6335 4720
www.amc.edu.au

Thank you for agreeing to pre-test the in-person interview questionnaire that will be used in my PhD study on the contribution of intangible resources to success of container lines.

Please pre-test only the following documents:

- Confirmatory telephone call document used when making appointments with respondents
- Meeting schedule
- The advance letter
- In-person interview questionnaire document labelled as "confidential" with its response cards
- Participant information sheet (as required by the ethics committee)
- Consent form

Note: A document explaining the in-person interview process and a list of pretesting questions are attached herewith to facilitate the pre testing process

The aims of the PhD research

The aims of this research are (1) to identify intangible resources that contribute to the competitive performance of container lines and (2) the processes that can be adopted by container lines to successfully integrate the intangible resources of partner companies when strategic co-operations are being developed. There are two stages to the research. During the first stage of the study, which is now complete, senior managers in Sri Lanka identified in a mail survey the intangible resources that contributed to the competitive performance of container lines.

In the second stage of the study, of which the above documents relate to, the focus will be on identifying processes used by container lines to successfully integrate the intangible resources during the formation of strategic co-operations and to subsequently identify a relationship between the successful integration of intangible resources and the performance of post-consolidated container lines. The same sample of senior managers in international container lines and agencies operating in Sri Lanka will once again be surveyed, this time I will be interviewing the senior managers in person in Sri Lanka.

The primary research question guiding the PhD thesis is:

Does the integration of intangible resources contribute to the post strategic co-operation success of container lines?

There are two secondary research questions:

Which intangible resources provide the greatest contribution to the market success of container lines?

Do container lines adopt processes to ensure the successful integration of intangible resources, when strategic co-operations are being developed?

Thanking you
Indika Sigera
PhD Candidate

The in-person interview process in Sri Lanka

1. All potential respondents will be contacted by advance letter to invite them to participate in this study.

2. Each of the potential respondents will be called or e-mailed within one week of receiving the letter to seek agreement to participate and to arrange a time to conduct the in-person interview. The confirmatory telephone call document and meeting schedule will be used during this stage.

3. Prior to beginning the in-person interview, respondents will be asked for permission to record the interview. Recording will enable an accurate account of issues discussed and assist with the error control process. If permission is not granted, notes will be written during and immediately following the interview.

4. In general, there are eight sections of questions that will be discussed in the interview.

5. Any sentences in italics are either prompts for the interviewer or question routing.

6. The respondents will not receive a copy of the in-person interview questionnaire.

7. I will make all the phone calls or send e-mails to arrange appointments and conduct the in-person interviews in Sri Lanka.

8. Please feel free to make any comments and corrections directly on the in-person interview questionnaire

If you have any questions about the in-person interview questionnaire, please either call me on (03) 6324 9658 or email me at lcsigera@utas.edu.au

APPENDIX N

PRE-TESTING QUESTIONS STAGE TWO

The list of questions for pre-testing the in-person interview questionnaire

Please consider the follower questions when reading through the questionnaire. Comments from your pre-testing will be used to improve the questionnaire. Questions have been divided into three categories.

The structure arrangement of the questionnaire

1) Do the question numbers flow in chronological order?
2) Are the instructions clear and understandable for the respondent?
3) Are there any spelling or grammatical errors?
4) Does the layout of the questionnaire make it easy for the interviewer to use?

Completing the questionnaire

5) How long did the questionnaire take to read through?
6) Are any questions unclear or ambiguous?
7) Are any questions difficult to answer?
8) Did you object to any questions?
9) Is the language appropriate for the various questions provided?
10) Is the coding of the responses adequate for use during statistical analysis?

Purpose of the questionnaire

11) Should any other topics or ideas be included?
12) Should any questions be excluded due to them being irrelevant?
13) Did you understand the focus of each section in the questionnaire?
14) Are there any other points you would like to suggest?

APPENDIX O

DATA SHEETS

ITEM A: Non-response bias

Intangible and Tangible resources	Early responses		Late responses			
	Mean	SD	Mean	SD	F	Sig
Business planning processes	4.79	.51	4.83	.39	0.424	0.796
The operating and reporting structure	4.29	.75	4.57	.51	1.099	0.152
Employee recruitment policy	4.21	.66	4.00	.91	0.115	0.370
Employee training policy	4.38	.77	4.35	.71	0.219	0.901
Employee compensation policy	3.71	1.04	3.61	1.16	0.105	0.758
Employee retrenchment policy	2.71	1.40	2.70	1.15	0.961	0.973
Shared values and beliefs of employee	4.04	1.12	4.13	.92	0.341	0.769
Attitudes and behaviour of employee	4.38	.71	4.39	.84	0.308	0.943
Trade mark	4.25	.79	4.13	1.06	1.635	0.662
Licenses	4.33	.70	4.35	.94	0.925	0.952
Company overall reputation	4.79	.51	4.74	.45	0.191	0.710
Reputation of services offered	4.75	.68	4.43	.90	2.973	0.179
Competitive pricing	4.42	.72	4.22	.67	0.723	0.331
Trade secrets	3.92	1.10	3.91	.95	1.19	0.99
Short transit time	4.08	1.10	4.09	1.08	0.046	0.991
High frequency of sailing	3.96	.91	3.96	.93	0.238	0.995
Reliability of advertised sailing schedules	4.46	.72	4.35	.89	0.061	0.640
Prompt response to shippers' complaints	4.75	.53	4.57	.51	1.705	0.229
On time pickup and delivery	4.25	.68	4.43	.51	0.008	0.296
Fast claim response	3.75	1.03	3.87	.97	0.946	0.684
Low cargo damage or loss record	3.92	1.14	4.17	1.19	0.086	0.453
Accurate documentation	4.83	.38	4.70	.47	2.398	0.272
Ability to provide consolidation services	3.17	1.37	3.35	1.35	5.035	0.275
Courtesy of sales representative/employees	4.46	.78	4.52	.51	0.449	0.653
Long-term contractual relationship with shippers	4.50	.78	4.57	.73	0.086	0.827
Strategic alliances with other container lines	4.13	.74	4.00	1.00	2.129	0.744
Long term contractual relationship with inland transport companies	3.25	1.42	3.43	.90	0.229	0.886
An appropriate number of main line vessels	4.04	1.37	4.35	.78	0.199	0.769
An appropriate number of feeder vessels	4.08	1.14	3.65	1.37	0.126	0.628
Number of branches or agencies globally	3.96	1.12	4.22	1.04	3.099	0.598
Dedicated terminals	3.75	1.19	3.39	1.23	0.655	0.353

ITEM B: Factor analysis with communalities

	Rotated component matrix				Communalities
	Cargo capabilities	Marketing capabilities	Sailing capabilities	Other capabilities	
Low cargo damage or loss record	*0.773*	0.222	0.305		0.727
Ability to provide consolidation services	*0.763*			0.376	0.653
Ability to provide insurance services	*0.735*				0.857
On time pickup and delivery	*0.685*	0.230	0.210	0.238	0.827
Long term contractual relationship with inland transport companies	*0.667*	-0.423			0.753
Ability to quickly trace cargo	*0.607*	0.492			0.708
Fast claim response	*0.564*	0.442	0.365		0.635
Strategic alliances with other container lines	0.385		0.358		0.733
Ability of sales representative to handle problems		*0.771*		0.264	0.794
Courtesy of sales representative/employees		*0.731*	0.240		0.798
Long-term contractual relationship with shippers		*0.639*			0.704
Short transit time			*0.847*		0.798
High frequency of sailing			*0.788*	0.211	0.703
Reliability of advertised sailing schedules		0.367	*0.632*		0.753
Prompt response to shippers' complaints		0.448	0.517		0.705
Competitive pricing				*0.807*	0.671
Accurate documentation		0.249		*0.712*	0.603
Trade secrets				*0.651*	0.709

Item C: Intangible Assets													
		Organisational						Org. Culture		Intell property		Reputational	
No/Code	Respondents	A1.1	A1.2	A1.3	A1.4	A1.5	A1.6	A1.7	A1.8	A1.9	A1.10	A1.11	A1.12
		Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt
1	Managing Director	5	5	4	5	3	2	4	4	5	5	5	5
2	Group Executive Director	5	4	4	4	2	2	4	4	5	5	5	5
3	General Manager	5	4	5	4	4	2	2	5	5	3	5	5
4	Senior Manager	5	5	4	5	4	3	2	2	5	5	5	4
5	Group Executive Director	5	4	4	5	4	3	2	4	4	3	4	4
6	General Manager	5	5	5	5	4	3	5	5	5	5	5	5
7	Manager-Customer Service	5	5	4	4	5	0	3	3	3	4	5	5
8	Senior Manager	5	4	4	4	5	4	5	5	4	4	4	4
9	Senior Manager P&I	5	5	5	5	3	3	4	4	4	4	5	5
10	Managing Director	4	4	4	4	2	2	3	3	2	2	4	4
11	Senior manager customer support	5	5	5	5	5	4	5	5	5	5	5	5
12	In charge of P&I correspondents service a	5	5	2	4	4	2	5	5	2	5	5	2
13	Managing Director	5	4	4	4	4	3	5	5	2	4	4	4
14	Customer support Manager	5	4	4	4	4	3	4	4	4	5	5	4
15	Assistant General Manager	4	5	5	5	4	4	5	4	5	5	5	5
16	Senior Manager operations	5	5	4	4	5	0	3	3	3	4	5	5
17	Managing Director	5	4	4	4	4	4	4	3	4	5	5	5
18	Manager Shipping Operation	5	5	4	4	4	2	4	4	4	5	4	2
19	no information included	5	4	4	4	4	2	4	4	4	4	5	5
20	Senior Manager	5	5	5	5	3	3	4	4	4	4	5	5
21	Deputy General Manager	5	5	4	5	2	2	1	5	5	5	5	5
22	Senior liner Manager	5	4	4	5	4	2	4	5	5	4	5	5
23	no information included	3	2	2	2	2	2	4	4	4	3	5	5
24	Executive Vice President	4	4	4	5	4	4	4	5	4	4	4	4
25	Liner Manager	4	4	4	5	5	2	5	5	4	4	5	5
26	Managing Director	5	4	5	5	4	2	5	5	5	5	5	5
27	Executive Vice President	4	3	4	3	2	0	3	3	3	5	5	5
28	Managing Director	5	5	5	5	5	4	5	5	3	5	4	4
29	Senior Manager operations	5	4	4	4	4	2	5	5	5	5	5	5
30	General Manager	4	4	2	4	4	4	4	5	4	4	5	5
31	General Manager	5	4	4	5	4	0	5	5	4	5	5	5
32	Manager- Operations	4	4	5	4	3	4	4	5	5	5	5	5
33	Managing Director	5	4	5	5	4	4	4	4	4	4	3	2
34	Deputy General Manager	5	5	5	5	5	2	5	5	5	5	5	5
35	Director commercial	5	4	4	4	4	4	4	4	4	4	5	5
36	Managing Director	5	4	4	4	4	3	4	4	5	4	5	5
37	Senior Manager	5	5	4	4	2	4	4	5	5	4	5	5
38	Director	5	5	4	4	3	3	5	5	5	5	5	5
39	Executive vice president	5	4	4	4	2	4	4	4	5	5	4	4
40	Manager- Operations	5	5	2	4	1	1	4	5	5	5	5	5
41	Director	5	5	5	5	4	3	5	5	5	5	5	5
42	Chife executive officer	5	5	4	2	1	1	2	4	2	2	4	4
43	General Manager	5	5	5	5	5	5	5	5	5	5	5	5
44	Director	5	5	4	5	4	4	5	5	5	5	5	5
45	Director	5	5	4	4	4	4	5	5	4	4	5	5
46	Director	5	5	4	5	4	4	5	4	4	3	5	5
47	Managing Director	5	4	4	5	5	2	5	5	4	4	5	5
	Analysis												
	(1) - Not Important	0	0	0	0	2	2	1	0	0	0	0	0
	(2)- Not very important	0	1	4	2	6	12	3	1	4	2	0	3
	(3) - Unsure	1	1	0	1	4	10	4	5	4	3	1	0
	(4) - Important	7	20	28	20	23	15	17	14	18	17	9	10
	(5) - Very important	36	22	12	21	8	1	19	24	18	22	34	31
	(0) - -N/A	0	0	0	0	0	4	0	0	0	0	0	0
	Total	47	47	47	47	47	47	47	47	47	47	47	47
	1 - Not Important %	0%	0%	0%	0%	4%	4%	2%	0%	0%	0%	0%	0%
	2 - Not very Important %	0%	2%	9%	4%	15%	30%	9%	2%	9%	4%	0%	6%
	3 - unsure %	2%	2%	0%	2%	11%	21%	9%	11%	9%	9%	2%	0%
	4 - Important %	15%	45%	62%	47%	45%	32%	40%	34%	36%	34%	19%	21%
	5 - very Important %	81%	49%	28%	45%	17%	2%	38%	51%	45%	51%	77%	70%
	0 - N/A %	0%	0%	0%	0%	0%	9%	0%	0%	0%	0%	0%	0%
	1 + 2	0%	2%	9%	4%	19%	34%	11%	2%	9%	4%	0%	6%
	4 + 5	96%	94%	89%	91%	62%	34%	79%	85%	81%	85%	96%	91%
	Mean	4.81	4.43	4.11	4.36	3.66	2.70	4.09	4.37	4.19	4.34	4.79	4.64
	Mode	5	5	4	4	4	4	4	5	5	5	5	5
	Median	5	4.5	4	4	4	3	4	5	4	5	5	5
	S.D	0.45	0.65	0.795	0.79	1.09	1.27	1.02	0.77	0.92	0.82	0.41	0.71

Item D = Capabilities																			
		Capabilities																	
No/Code	Respondents	A1.13	A1.14	A1.15	A1.16	A1.17	A1.18	A1.19	A1.20	A1.21	A1.22	A1.23	A1.24	A1.25	A1.26	A1.27	A1.28	A1.29	A1.30
		Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt
1	Managing Director	4	4	3	4	5	4	4	3	4	5	5	2	2	5	5	5	5	3
2	Group Executive Director	4	4	4	4	4	4	4	4	4	5	5	2	0	4	4	4	3	4
3	General Manager	4	2	4	4	4	5	4	5	4	5	5	2	1	5	4	5	2	2
4	Senior Manager	5	5	4	4	4	4	4	2	4	4	5	4	2	4	4	5	4	4
5	Managing Director	5	2	4	2	4	5	4	2	4	4	4	2	2	4	5	4	4	3
6	President- Transportation Group	4	2	4	4	4	5	4	4	5	4	5	2	2	5	4	5	5	4
7	Assistant Vice President	2	2	4	4	5	5	4	4	4	4	4	2	1	5	4	5	4	4
8	Senior Manager	4	3	4	3	4	4	4	4	5	5	5	5	5	5	5	5	4	3
9	Senior Manager P&I	4	5	5	4	5	5	4	4	5	5	5	4	2	4	4	5	4	4
10	Managing Director	4	4	4	4	4	4	4	4	4	4	4	2	2	4	4	4	4	2
11	Senior manager customer support	5	5	5	5	5	5	5	4	4	5	5	4	1	5	5	5	4	1
12	Assistant General Manager	4	4	2	2	4	4	4	2	2	4	5	2	1	4	4	4	0	4
13	General Manager	5	3	4	4	4	5	4	2	2	2	5	5	1	2	4	4	5	4
14	Managing Director	4	4	5	4	5	5	5	4	5	4	4	5	4	5	4	5	4	4
15	Manager Shipping Operation	5	4	5	5	5	5	5	4	5	5	5	4	4	4	4	5	5	5
16	Senior Manager operations	2	2	4	4	5	5	4	4	4	4	4	2	1	5	4	5	4	4
17	Deputy Manager Operations	4	5	4	4	4	5	4	4	3	5	5	4	4	4	4	5	4	4
18	General Manager	4	4	1	2	1	4	4	2	0	4	5	2	1	4	5	5	4	2
19	Director	4	3	4	4	5	5	5	2	4	4	5	2	1	4	4	5	4	2
20	Senior Manager	4	5	5	4	5	5	4	4	5	5	5	4	2	4	4	5	4	4
21	Deputy General Manager	5	5	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5
22	Senior liner Manager	4	2	4	4	5	5	5	4	4	5	5	5	4	5	5	5	4	2
23	Managing Director	5	4	5	5	4	4	4	3	3	4	5	4	4	4	4	4	4	3
24	Executive Vice President	4	4	4	4	4	4	4	4	4	4	4	2	2	4	4	4	4	4
25	Managing Director	4	4	4	4	4	5	4	5	4	4	4	4	4	5	5	4	4	4
26	General Manager	5	5	4	4	5	5	5	4	4	5	5	4	0	5	5	5	4	4
27	General Manager	4	3	5	3	2	3	4	3	3	4	5	3	2	3	3	3	3	3
28	General Manager	4	4	2	2	4	4	4	2	4	4	4	2	2	4	2	2	4	4
29	Senior Manager operations	5	5	5	4	5	5	2	2	0	0	4	0	0	5	4	5	3	0
30	Director	4	4	5	5	4	4	5	4	5	5	5	4	2	5	5	5	5	2
31	Deputy General Manager	5	5	5	5	5	5	5	5	4	4	5	4	0	5	5	2	4	4
32	Managing Director	5	5	5	5	5	4	4	4	3	4	5	1	1	5	4	5	4	4
33	Managing Director	5	4	4	4	5	5	5	4	4	4	5	4	2	5	4	4	4	4
34	Managing Director	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
35	Director commercial	4	4	2	4	4	4	4	3	4	5	5	3	3	4	4	4	4	4
36	Executive vice president	5	4	4	5	4	5	5	5	5	5	5	4	2	4	5	5	4	4
37	Senior Manager	5	2	5	4	5	5	4	4	4	5	5	0	0	5	5	5	5	0
38	Director	4	3	4	4	4	5	4	5	4	5	4	2	2	4	5	4	4	2
39	Chife executive officer	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4	5	4	5
40	General Manager	5	4	5	4	5	5	5	4	5	5	5	4	1	5	4	4	4	4
41	Director	5	5	5	5	4	5	5	5	5	5	5	4	3	5	5	5	4	4
42	Director	4	4	5	5	5	5	5	4	5	5	4	4	4	4	4	4	5	4
43	Director	4	5	5	4	5	5	5	5	5	5	5	4	4	5	5	5	5	4
44	Executive Director	4	4	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	2
45	Group Director-Cyeline Group	5	4	4	4	5	5	4	4	5	5	5	4	3	5	4	5	5	4
46	Managing Director	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4
47	Managing Director	4	5	2	4	4	5	4	4	5	4	5	2	2	5	5	4	4	2
	Analysis																		
	(1) - Not Important	0	0	2	1	1	0	0	0	0	0	0	1	10	0	0	0	0	1
	(2)- Not very important	2	7	4	4	1	0	1	8	2	1	0	14	14	1	1	2	1	8
	(3) - Unsure	0	5	1	2	0	1	0	4	4	0	0	2	3	1	1	1	3	5
	(4) - Important	25	20	21	28	20	14	27	23	21	19	11	19	9	19	25	13	29	27
	(5) - Very important	19	15	19	11	24	31	18	11	17	25	35	8	5	25	19	30	12	3
	(0) - -N/A	0	1	0	0	0	0	0	0	2	1	0	2	5	0	0	0	1	2
	Total	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
	1 - Not Important %	0%	0%	4%	2%	2%	0%	0%	0%	0%	0%	0%	2%	21%	0%	0%	0%	0%	2%
	2 - Not very Important %	4%	15%	9%	9%	2%	0%	2%	17%	4%	2%	0%	30%	30%	2%	2%	4%	2%	17%
	3 - unsure %	0%	11%	2%	4%	0%	2%	0%	9%	9%	0%	0%	4%	6%	2%	2%	2%	6%	11%
	4 - Important %	53%	43%	45%	60%	43%	30%	57%	49%	45%	40%	23%	40%	19%	40%	53%	28%	62%	57%
	5 - very Important %	40%	32%	40%	23%	51%	66%	38%	23%	36%	53%	74%	17%	11%	53%	40%	64%	26%	6%
	0 - N/A %	0%	2%	0%	0%	0%	0%	0%	0%	4%	2%	0%	4%	11%	0%	0%	0%	2%	4%
	1 + 2	4%	15%	13%	11%	4%	0%	2%	17%	4%	2%	0%	32%	51%	2%	2%	4%	2%	19%
	4 + 5	94%	74%	85%	83%	94%	96%	96%	72%	81%	94%	98%	57%	30%	94%	94%	91%	87%	64%
	Mean	4.32	3.91	4.09	3.96	4.47	4.66	4.34	3.81	4.04	4.45	4.77	3.26	2.35	4.49	4.36	4.53	4.06	3.34
	Mode	4	4	4	4	5	5	4	4	4	5	5	4	2	5	4	5	4	4
	Median	4	4	4	4	5	5	4	4	4	5	5	4	2	5	4	5	4	4
	S.D	0.70	1.02	1.05	0.91	0.58	0.52	0.60	0.99	1.16	0.72	0.43	1.36	1.55	0.66	0.64	0.75	0.87	0.75

Item E = Tangible resources											
		Tangible resources									
No/Code	Respndnts	A1.31	A1.32	A1.33	A1.34	A1.35	A1.36	A1.37	A1.38	A1.39	A1.40
		Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt	Lkt
1	Managing Director	5	5	5	5	5	5	5	3	5	3
2	Group Executive Director	4	4	5	4	4	4	5	4	5	4
3	General Manager	4	2	2	1	4	5	4	1	4	4
4	Senior Manager	4	4	5	4	5	4	4	4	4	4
5	Managing Director	4	1	4	4	4	4	4	1	1	1
6	President- Transportation Group	2	2	5	1	5	5	5	1	1	1
7	Assistant Vice President	4	2	4	4	5	5	5	1	4	2
8	Senior Manager	6	5	4	4	3	3	3	3	3	4
9	Senior Manager P&I	5	5	4	2	4	4	4	2	2	2
10	Managing Director	5	5	5	5	5	5	5	5	2	2
11	Senior manager customer support	5	5	5	4	5	5	5	1	4	4
12	Assistant General Manager	5	2	4	2	4	4	5	2	5	3
13	General Manager	5	5	4	2	5	2	4	2	2	1
14	Managing Director	4	4	5	4	5	4	5	4	4	4
15	Manager Shipping Operation	4	4	4	5	5	5	5	4	4	4
16	Senior Manager operations	4	2	4	4	5	5	5	1	4	2
17	Deputy Manager Operations	4	3	3	4	5	4	5	4	4	3
18	General Manager	4	4	5	2	4	4	4	1	4	4
19	Director	5	5	4	2	4	5	4	2	2	2
20	Senior Manager	5	5	4	2	4	4	4	2	2	2
21	Deputy General Manager	5	5	5	5	5	2	5	2	2	2
22	Senior liner Manager	4	4	4	2	4	4	5	5	4	4
23	Managing Director	4	4	4	5	3	3	3	3	3	2
24	Executive Vice President	4	2	4	2	4	4	4	2	2	2
25	Managing Director	4	4	4	2	4	4	4	2	4	4
26	General Manager	5	5	4	4	5	5	5	4	5	4
27	General Manager	3	3	3	3	3	3	3	3	3	2
28	General Manager	4	2	4	2	4	4	4	2	0	0
29	Senior Manager operations	0	5	0	4	5	4	4	0	0	4
30	Director	5	5	0	5	5	2	4	4	4	4
31	Deputy General Manager	4	4	4	5	5	5	5	4	4	4
32	Managing Director	4	3	4	4	4	3	5	1	1	1
33	Managing Director	5	5	5	4	4	3	5	2	2	2
34	Managing Director	5	5	5	4	5	5	5	5	5	4
35	Director commercial	4	4	5	3	5	5	5	3	5	3
36	Executive vice president	4	4	5	3	4	4	4	4	4	4
37	Senior Manager	0	4	4	4	4	4	4	0	4	0
38	Director	5	0	4	5	4	4	5	2	4	4
39	Chife executive officer	4	4	4	4	4	5	5	4	4	4
40	General Manager	4	4	4	2	4	4	2	2	2	2
41	Director	5	5	5	5	5	5	5	4	4	4
42	Director	4	4	4	4	4	2	4	2	2	2
43	Director	5	5	4	5	5	4	5	4	5	4
44	Executive Director	5	5	5	5	5	5	5	1	5	2
45	Group Director-Cyeline Group	5	5	5	4	4	4	4	4	3	3
46	Managing Director	4	4	4	4	5	5	5	5	4	4
47	Managing Director	4	4	4	4	5	4	5	2	2	2
	Analysis										
	(1) - Not Important	0	1	0	2	0	0	0	9	3	4
	(2)- Not very important	1	7	1	11	0	4	1	13	10	14
	(3) - Unsure	1	3	2	3	3	5	3	5	4	5
	(4) - Important	23	16	25	19	21	20	17	13	19	21
	(5) - Very important	18	18	16	11	22	17	25	4	8	0
	(0) - -N/A	2	1	2	0	0	0	0	2	2	2
	Total	47	47	47	47	47	47	47	47	47	47
	1 - Not Important %	0%	2%	0%	4%	0%	0%	0%	19%	6%	9%
	2 - Not very Important %	2%	15%	2%	23%	0%	9%	2%	28%	21%	30%
	3 - unsure %	2%	6%	4%	6%	6%	11%	6%	11%	9%	11%
	4 - Important %	49%	34%	53%	40%	45%	43%	36%	28%	40%	45%
	5 - very Important %	38%	38%	34%	23%	47%	36%	53%	9%	17%	0%
	0 - N/A %	4%	2%	4%	0%	0%	0%	0%	4%	4%	4%
	1 + 2	2%	17%	2%	28%	0%	9%	2%	47%	28%	38%
	4 + 5	87%	72%	87%	64%	91%	79%	89%	36%	57%	45%
	Mean	4.20	3.87	4.09	3.57	4.41	4.09	4.43	2.65	3.28	2.85
	Mode	4	5	4	4	5	4	5	4	4	4
	Median	4	4	4	4	4	4	5	2	4	3
	S.D	1.13	1.28	1.09	1.22	0.68	0.91	0.719635	1.42	1.39	1.23

Item F = Development of resources and strategic cooperation										
No/Code		B1	B2.1	B2.2	B3					
		Yes/No	Lkt	Lkt	Confer	SA	Con	Slot	JS (Pol)	M&As
1	Managing Director	1	1	1	1	2		4	5	6
2	Group Executive Director	1	5	2	1		3		5	
3	General Manager	2	2	2		2		4	5	
4	Senior Manager-customer service	1	4	4	1	2	3		5	
5	Managing Director	1	4	5	1	2		4	5	6
6	President- Transportation Group	1	5	5	1	2	3	4		6
7	Assistant Vice President	1	2	5	1	2	3	4	5	6
8	Country/Branch Manager- MCC Transport	1	2	4				4		
9	Senior Manager P&I	2			1	2	3	4	5	
10	Managing Director		4	5				4		
11	Senior manager customer support	2						4	5	
12	Assistant General Manager		4	5	1	2	3	4	5	6
13	General Manager	1	3	4	1			4	5	
14	Managing Director	1	2	4	1	2		4		
15	Manager Shipping Operation	2					3	4	5	6
16	Senior manager	1	2	5	1	2	3	4	5	6
17	Deputy Manager Operations	2				2				
18	General Manager	1	4	4			3	4	5	6
	Director	1	4	4	1	2		4	5	
1	Senior manager	2				2	3		5	
2	Deputy General Manager	2	4	4			3	4	5	
3	Liner Manager	1	4	4					5	
4	Managing Director	1	3	4		2	3	4		
5	Eexcrcutive vice president	1	4	4				4	5	
6	Managing Director	1	4	4					5	
7	General Manager	1	2	4		2	3	4	5	
8	General Manager						3	4		
9	General Manager	1	2	4	1	2	3	4	5	
10	Manager- Operations	1	4	4						
11	Director	1	4				3	4	5	
12	Deputy General Manager	1	4	4	1	2		4	5	
13	Managing Director		3	3	1	2	3		5	
14	Managing Director	1	4	4		2		4	5	
15	Managing Director	1	5	5			3	4	5	
16	Director	1	4	4			3	4	5	
17	Executive vice president	1	5	5	1	2	3	4	5	
18	Manager- Operations	1	4	4			3	4	5	
19	Director	1	1	5	1	2				
20	Chife executive officer		2	2						
21	General Manager	1	2	4						
22	Director	1	4	5		2		4	5	6
23	Director	1	4	4			3	4	5	
24	Director	1	5	4				4		
25	Executive Director		1	5	1	2	3	4	5	
26	Group Director-Cyeline Group	1	4	5	1	2	3	4	5	
27	Managing Director	1	4	4				4	5	
47	Managing Director	1	4	5		2				
	Analysis									
1	(1) - Strongly Dis agree		3	1	19	25	24	35	34	9
2	(2)- Dis agree or (No)	33	9	3						
3	(3) - Unsure		3	1						
4	(4) - Agree (yes)	7	21	22						
5	(5) - Strongly Agree		5	13						
0	(0) - -N/A		0	0						
6	Total		41	40						
	1 - Strongly Dis agree %		7%	3%						
	2 - Dis agree %		22%	8%						
	3 - unsure %		7%	3%						
	4 - Agree %		51%	55%						
	5 - Strong agree %		12%	33%						
	0 - N/A %		0%	0%						
	1 + 2		29%	10%						
	4 + 5		63%	88%						
	Mean		3.38	4.05						
	Mode		4	4						
	Median		4	4						
	SD		1.19	0.94						