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**CORPORATE SOCIAL RESPONSIBILITY IN  
MARITIME TRANSPORT: A CONTINGENCY  
FRAMEWORK**

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## SUMMARY

Corporate social responsibility (CSR) involves the integration of social and environment concerns into business activities and processes. CSR has received growing attention from the maritime transport sector in view of rising competition and tightening of social and environmental regulations. However, the business case of CSR remains debatable. While some studies view CSR as a dilution of a firm's core competitive advantage, others view CSR as an intangible resource that garners support and allegiance from stakeholders.

The aim of this thesis is to analyse the relationship between corporate social responsibility (CSR) and business performance through the lens of contingency theory. Contingency theory asserts that situations influence the direction and magnitude of a relationship. A multi-level approach, consisting of internal, external, and dynamic level, was adopted to test this theory.

Semi-structured interviews and a pilot test were conducted. Subsequently, primary data were collected using an online survey that was administered to the populations of shipping firms and shippers located in Singapore. Depending on the hypotheses, the obtained data were analysed using various statistical methods including factor analysis, interaction regression analysis, structural equation modelling, nested-model comparison, and multi-sampling approach.

At the internal (intra-firm) level, it was found that the financial benefits of CSR are contingent on the primary competitive strategy of a shipping firm. There are greater benefits for shipping firms employing differentiation strategy (rather than low cost strategy) to implement CSR by virtue of greater mass in existing complementary resources (operational fit) as well as inherent congruency with customers' value orientation (customer fit).

At the external (environmental) level, the results show that the relationship between a shipping firm's involvement in CSR and shippers' willingness to pay for CSR is mediated by or contingent on factors such as customer satisfaction, customer loyalty, and shippers' CSR beliefs.

At the dynamic level, it was found that the financial benefits of CSR are contingent on shipping firms' continuous improvement capacities, which are related to their learning and absorptive capacities. In addition, adopting a relatively gradual and regular pace in implementing continuous improvement programmes augments the effect of CSR on business performance.

Overall, the findings reinforce contingency theory and provide a differentiated view of the relationship between CSR and performance. This differentiated view aligns with path dependence theory, theory of planned behaviour, and organisational learning theory which were used as anchors to reinforce the case of contingency at the internal, external, and dynamic level accordingly. The results also imply that CSR is not a one-size-fit-all strategy. Herein, maritime transport managers should evaluate the fit of their firms' internal resources, external environment, and dynamic capabilities with respect to CSR prior to its implementation.

## LIST OF PUBLICATIONS

1. Yuen, K.F., Thai, V.V. & Wong, Y.D. (2017), “Corporate social responsibility and classical competitive strategies in maritime transport: A contingency fit perspective”, Transportation Research Part A: Policy and Practice, Vol. 98, pp. 1-13. [SSCI]
2. Yuen, K.F. & Thai, V.V. (2017), “Corporate social responsibility and service quality provision in shipping firms: Financial synergies or trade-offs?”, Maritime Policy & Management, Vol. 44, No.1, pp. 131-146. [SSCI]
3. Yuen, K.F., Thai, V.V. & Wong, Y.D. (2016), “The effect of continuous improvement capacity on the relationship between of corporate social performance and business performance in maritime transport in Singapore”, Transportation Research Part E: Logistics and Transportation Review, Vol. 95, pp. 62-75. [SCI/SSCI]
4. Yuen, K.F., Thai, V.V. & Wong, Y.D. (2016), “Are customers willing to pay for corporate social responsibility? A study of individual-specific mediators”, Total Quality Management & Business Excellence, Vol. 27, No. 7-8, pp. 912-926. [SSCI]
5. Yuen, K.F. & Thai, V.V. (2016), “The relationship between supply chain integration and operational performances: A study of priorities and synergies”, Transportation Journal, Vol. 55, No. 1, pp. 31-50. [SSCI]
6. Yuen, K.F. & Thai, V.V. (in press), “Barriers to supply chain integration in the maritime logistics industry”, Maritime Economics & Logistics. [SSCI]
7. Yuen, K. F. and V. Thai (in press), "Service quality appraisal: a study of interactions", Total Quality Management & Business Excellence. [SSCI]
8. Yuen, K.F. & Thai, V.V. (accepted), “The influence of supply chain integration on operational performance: A comparison between product and service supply chains”, International Journal of Logistics Management. [SSCI]

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## LIST OF ABBREVIATIONS

<b>Abbreviation</b>	<b>Explanation</b>
AVE	Average Variance Extracted
B2B	Business-To-Business
B2C	Business-To-Consumer
CR	Composite Reliability
CSP	Corporate Social Performance
CSR	Corporate Social Responsibility
df	Degrees of Freedom
WTP	Willingness to Pay
RBV	Resource-Based View
KLD	Kinder, Lydenberg, and Dominic
SIC	Stakeholder Influence Capacity

## LIST OF SYMBOLS

Symbol	Explanation
$\Delta$	change
$\chi^2$	chi-square
$r$	correlation
$\alpha$	Cronbach's alpha
$\gamma$	effect of an exogenous variable on an endogenous variable
$\beta$	effect of an endogenous variable on an endogenous variable
$e$	error
$x$	observed variable
$R^2$	squared correlation
$t$	true score
$\sigma^2$	variance

# CHAPTER 1

## INTRODUCTION

*This chapter begins by establishing the background and motivation of the research. Subsequently, it states and defines the research objectives and the scope of the research. Thereafter, it highlights the structure of the thesis.*

### **1.1 Research Background**

Corporate social responsibility (CSR) has been defined as ‘a concept whereby companies integrate social and environmental concerns in their interaction with their stakeholders on a voluntary basis’ (Commission of the European Communities, 2014). CSR entails the practice of social and environmental activities. These activities mainly concentrate on improving the relationships of a firm with its stakeholders which consist of shareholders, charitable and community organisations, employees, suppliers, customers, and the environment (Sprinkle and Maines, 2010).

In today’s competitive environment, providing high quality and low cost shipping services is no longer sufficient in sustaining financial growth in the maritime transport sector (Boston Consultant Group, 2011). For this reason, many shipping firms are considering or implementing CSR as part of their strategy to boost their financial performance (Shin and Thai, 2015; Lam and Lim, 2016). According to Drobetz et al. (2014), a majority of shipping firms have integrated CSR practices into their strategic planning and operations, and have reportedly experienced financial performance improvements from practising CSR.

In the context of the maritime transport sector, CSR has been reported to provide added advantage for firms to differentiate their services, ward off or pre-empt port state interventions, offer licence to operate in environmentally sensitive areas, and improve

the retention of crew and shore-based talents (Matthews, 2010; Progoulaki and Roe, 2011). In some cases, CSR may also contribute directly to a firm's cost advantage as a result of improved environmental performance (Lun et al., 2015). For example, investing in energy-efficient ships reduces fuel consumption, which subsequently reduces their operating cost in the long-run.

Notwithstanding the strategic importance of CSR, there are counterarguments in the literature that a firm's CSR actions do not necessarily guarantee stronger financial performance. Some researchers argued that CSR entails a large amount of direct financial investments and opportunity costs (Barnett, 2007). While the cost is extensive, the measurable benefits are hard to quantify and may even be minute. Some economists reasoned that there is a lack of interconnectedness or compatibility between CSR and the existing resources and capabilities of firms. As such, improving social and environmental performances could trigger disproportionately high cost in firms and potentially dilute their existing competitive advantages (Brammer and Millington, 2008; Hull and Rothenberg, 2008). Furthermore, it was argued that possessing a good social image does not necessarily influence customers' purchase and consumption decision (Forbes, 2011). In some cases, customers may even fail to consider the bad social behaviour of a firm when making their selection or purchases (He and Lai, 2014).

The existing literature has gradually focused on when does the practice of CSR lead to stronger business performance (Grewatsch and Kleindienst, 2015). In other words, there is a growing consensus that the benefits of CSR are contingent rather than universal (Wood, 2010). Contingency theory asserts that the fit between CSR and a firm's internal and external environment influences performance (Husted, 2000; Donaldson, 2001). Some of the contingency variables that have been introduced in the literature relate to the size of a firm, the level of innovativeness of a firm, the pollution class of an industry, and the level of competition and information asymmetry in an industry (Schreck, 2009; Lee, 2015). Overall, the highlighted variables demonstrated that the amount of benefits that a firm can gain from practising CSR is dependent on

the degree of fit, or in other words, situational upon the favourableness of a firm's internal and external environment.

However, despite the current advancement of contingency theory research on CSR, there remain several gaps in the current literature. Firstly, existing contingency theory research has not adequately tied CSR decisions to the strategy of a firm even though they are inter-related. According to McWilliams and Siegel (2011), decisions to implement CSR are often grounded on the strategy of a firm. However, there is currently a lack of knowledge as to how the strategic orientation of a firm influences the amount of benefits it can obtain from practising CSR. Secondly, there appears to be very little contingency research on customers' response and attitude towards a firm's involvement in CSR. Even though customers represent the main source of revenue for most shipping firms, very little is known with regards to the 'black box' or decision-making process concerning their behaviour towards CSR. Lastly, most contingency research models on CSR are conceptualised on the assumption of stasis, which excludes the dynamic interaction between CSR and a firm's internal and external environment (Freeman, 2015). A firm's internal and external environment is constantly changing. Hence, a static view may not accurately reflect the dynamic interaction, and its influence on financial performance.

Three empirical studies (Studies 1, 2, and 3) are developed to address each of the highlighted gaps (Figures 1.1 and 1.2). As shown in Figure 1.1, the first study (Study 1) examines the internal fit of CSR. Drawing on path dependence theory, it analyses the contingency fit between CSR and the existing strategic orientation of shipping firms, and its effect on financial performance. The second study (Study 2) examines the external fit of CSR from the perspectives of shippers. Drawing on the theory of planned behaviour, it examines the conditions influencing shippers' willingness to pay (WTP) for CSR. Finally, as depicted in Figure 1.2, the third study (Study 3) incorporates dynamism, or the effect of time, into the research model. Drawing on organisational learning theory, it proposes that shipping firms with high continuous improvement

capacities are more dynamic and better positioned at aligning their CSR with their changing internal and external environmental conditions. As a result, shipping firms with high continuous improvement capacities benefit more financially from practising CSR. At the operational level, the study also examines whether varying the pace and consistency of continuous improvement influences the amount of benefits that shipping firms can obtain from practising CSR.

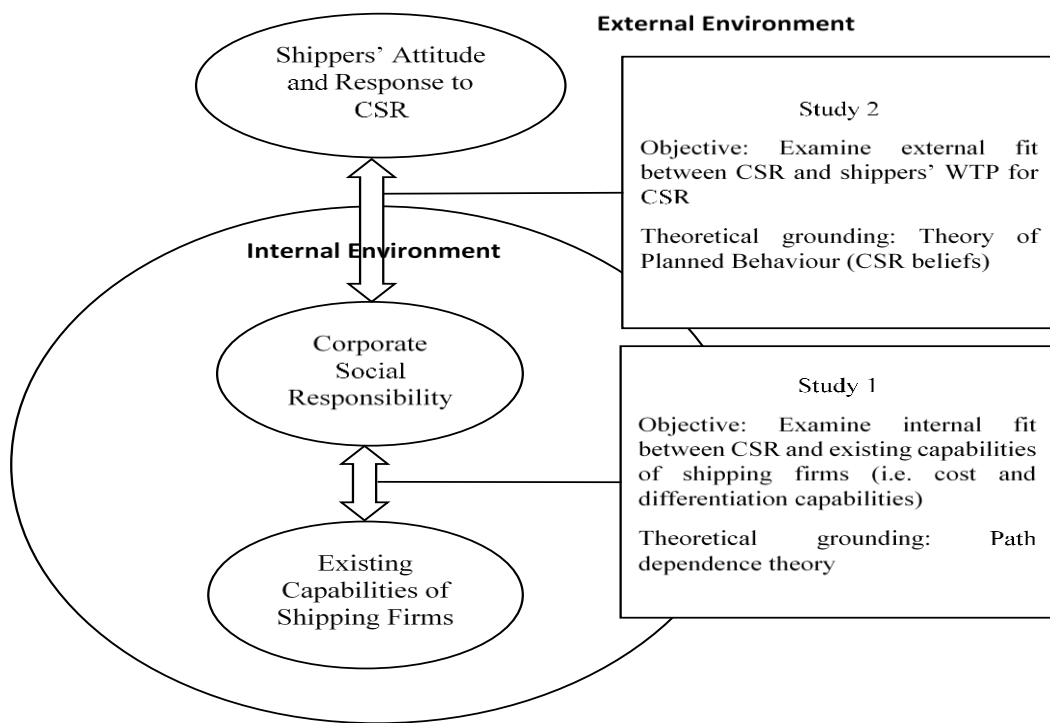
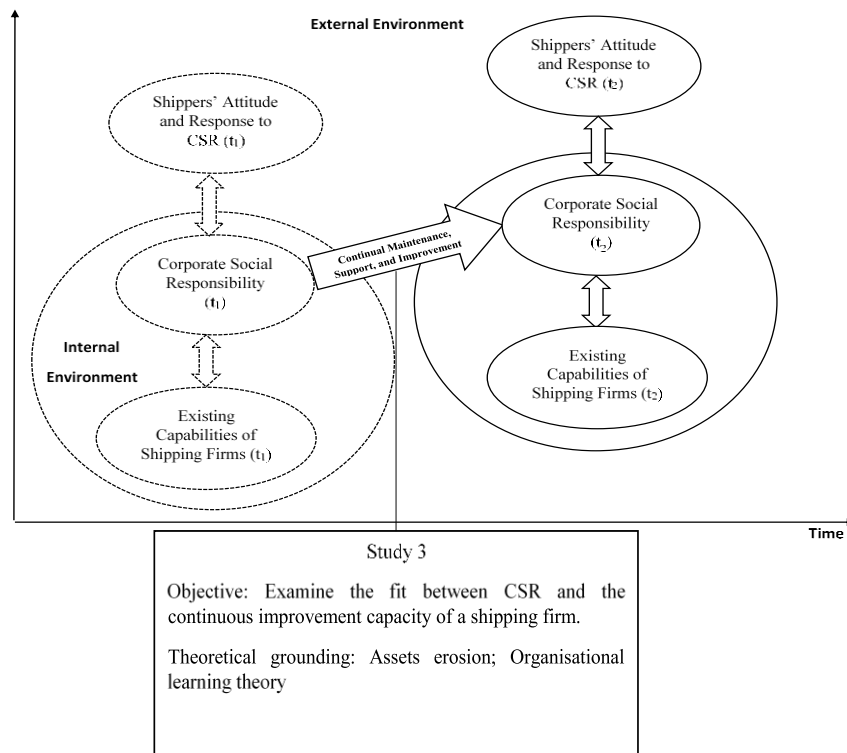


Figure 1.1 Graphical Illustration of Research Framework (1)



**Figure 1.2 Graphical Illustration of Research Framework (2)**

## 1.2 Research Objectives

The aim of this thesis is to analyse the relationship between CSR and business performance through the theoretical lens of contingency. To reiterate, contingency theory emphasises achieving congruency or ‘fit’ between a firm’s CSR and its environment. Subsequently, the degree of congruency or fit influences performance.

Three objectives are portrayed in Figures 1.1 and 1.2. The objectives of the thesis are to (1) examine the fit between CSR and classical competitive strategies of shipping firms, (2) examine the fit between CSR and shippers’ willingness to pay for CSR, and (3) examine the fit between CSR and the continuous improvement capacity of a shipping firm.

### **1.3 Research Scope**

The thesis limits its scope to strategic CSR. According to McWilliams and Siegel (2011), the objective of implementing CSR could be altruistic or strategic. The implementation of CSR is altruistic, or socially-motivated, when the objective of a firm is to serve the society with the intention of minimising negative externalities, and at the cost of profits. This usually applies to non-profit organisations, which are not the focus of this thesis.

On the other hand, the implementation of CSR is strategic, or privately-motivated, when the objective of practising CSR is to serve a firm's bottom line. This thesis limits its discussion to strategic CSR since the unit of analysis is a shipping firm. In general, shipping firms are business entities and expect returns from their investments in CSR.

### **1.4 Organisation**

The remaining of the thesis is organised as follows. Chapter 2 reviews and presents the literature that relates to the tenet of the thesis. This includes discussing concepts such as CSR, the link between CSR and financial performance, and contingency theory. These concepts underpin all three research objectives and studies. Chapter 3 describes the research methodology comprising both qualitative and quantitative approaches. Chapters 4, 5, and 6 address the research objectives individually. Accordingly, the chapter analyses the contingency fit of CSR at the internal level, external level, and dynamic level. To pinpoint their contributions, each of the chapter has its own background, literature review, hypothesis development, method of analysis, results and discussion, and conclusion. Although each chapter is self-contained, they build on the literature discussed in Chapter 2 and on the same interview and survey data presented in Chapter 3. Finally, the last chapter (Chapter 7) summarises the main contributions of the thesis, discusses the limitations, and recommends directions for future research.

## CHAPTER 2

# LITERATURE REVIEW

*This chapter starts off by reviewing the definitions and drivers of Corporate Social Responsibility (CSR). It then reviews the literature on CSR in maritime transport. Subsequently, it synthesises existing studies that analyse the relationship between CSR and financial performance. Thereafter, this chapter provides an overview of contingency theory and applies it to analyse the relationship between CSR and financial performance. It then identifies and highlights the gaps pertaining to existing contingency theory research on CSR. Finally, the chapter ends with a summary of the literature review, which pinpoints the key issues mentioned.*

### **2.1 Corporate Social Responsibility**

#### **2.1.1 Definition of Corporate Social Responsibility**

CSR is a concept that spans across numerous subject matters such as corporate sustainability, corporate citizenship, and business ethics (Gallego-Álvarez et al., 2011). Not surprisingly, this has resulted in numerous definitions in the literature (Dahlsrud, 2008). For example, The Commission of the European Communities (2014) defined CSR as ‘a concept whereby companies integrate social and environmental concerns in their interaction with their stakeholders on a voluntary basis’. A more common definition of CSR was from Davis (1973, p.312) who defined CSR as ‘the firm’s considerations of, and response to issues beyond the narrow economic, technical, and legal requirements of the firm to accomplish social and environmental benefits along with the traditional economic gains which the firm seeks’.

CSR is a multi-faceted construct. The keywords that are associated with this construct contain elements related to ‘environment’, ‘social’, ‘economic’, ‘stakeholder’,

and ‘voluntariness’ (Dahlsrud, 2008; Carroll and Shabana, 2010). The aspect of environment refers to a firm’s contributions to a cleaner environment and the integration of environmental concerns in its operations (Gonzalez-Benito and Gonzalez-Benito, 2006). The social dimension refers to the relationship between businesses and societies. It comprises a firm’s contribution to a better society or community, and the integration of social concerns in its operations (Chen and Delmas, 2011). The economic component refers to the socio-economic or financial aspects of a firm (Galbreath and Shum, 2012). This includes its ability to contribute to economic development and preserving profitability. The stakeholder dimension refers to a firm’s interaction with and responsibilities to various stakeholders including employees, suppliers, customers, and shareholders (Fu and Jia, 2012). Finally, the voluntariness dimension denotes actions beyond legal obligations (Turker, 2009). In other words, compliance with regulations does not qualify the practice of CSR (Sprinkle and Maines, 2010).

Apart from viewing CSR as a construct comprising various dimensions, another way to understand CSR is by viewing it as a structural set of inputs, processes, and outcomes (Wood, 2010). According to the model, firms have legitimacy obligations, public responsibilities, and moral obligations to practise CSR (Govindan et al., 2014). The processes of CSR describe the chain of CSR activities or issues that should be performed or addressed by firms when practising CSR. This includes environmental scanning, stakeholder management, and public affair management. The outcomes and impacts of performance describe the consequences of practising CSR i.e. its effect on people and organisations, the natural and physical environments, and social systems and institutions.

### **2.1.2 Types of Corporate Social Responsibility Activities**

The CSR activities that can be practised by a firm are extensive. However, they can be grouped into one of the three broad categories; (1) philanthropy, (2) business practices, or (3) product/service-related (Peloza and Shang, 2011).

Philanthropy is the most popular category of CSR activities practised by firms. This category includes activities such as cause-related marketing (i.e. where a donation is tied to a commercial exchange), cash donations, community involvement, employee volunteerism, promotion of a social or environmental issue, donation of in-house products and disaster relief products, event sponsorship, and provision of scholarships (Youn and Kim, 2008; Vlachos et al., 2009; White and Willness, 2009).

The next category of CSR activities is related to business practices. This includes environmental protection (e.g. reducing greenhouse emissions of a firm's operations), decreased-product-use message (i.e. promoting the decreased use of a firm's core products), promoting labour diversity, avoiding the publication of misleading information and communication, promoting fair trade and supply chain responsibility, equity treatment of suppliers and customers, managing customer and employee relations, career management, and improving working conditions, hygiene and safety, remuneration policy, and workforce satisfaction (Sen and Bhattacharya, 2001; Rokka and Uusitalo, 2008).

The last category of CSR activities is related to the product or service itself. This includes designing products that generate less pollution when used, and manufacturing products which are durable, organic, residual-free or biodegradable (Pivato et al., 2008; Trudel and Cotte, 2009).

### 2.1.3 Drivers of Corporate Social Responsibility in Firms

A firm could be motivated to practise CSR for altruistic or strategic reasons (McWilliams et al., 2006). The implementation of CSR is socially-motivated or altruistic if a firm's objective is to serve the society with the intention of correcting negative externalities, and at the cost of profits (McWilliams et al., 2006). An externality is defined as the uncompensated impact of one person's or entity's actions on the well-being of a bystander (Mankiw, 2012). Negative externalities denote that the impact is adverse. In general, firms with altruistic intentions do not make any deliberate effort in publicising their involvement in CSR. Neither do they expect returns from their contributions.

Alternatively, firms could practise CSR for strategic reasons. Strategic CSR was defined as any 'responsible' activity that allows a firm to achieve a sustainable competitive advantage, regardless of motive (McWilliams and Siegel, 2011). It is value-driven. In other words, the intention of practising CSR is to serve a firm's bottom line.

Firms may practise strategic CSR as 'window dressing' to appease various stakeholders. The pressures asserted by stakeholders could be coercive, normative, and mimetic (Zhu and Sarkis, 2007). Accordingly, these pressures originate from the government (Kilbourne et al., 2002), consumers (Ball and Craig, 2010), and competitors (Aerts and Cormier, 2009). Viewed in this light, firms practise CSR to avoid negative publicity, punishments from stakeholders, and to gain legitimacy or acceptance within a society.

Apart from avoiding punishments or alleviating pressures exerted by stakeholders, firms may also practise strategic CSR with the expectations of gaining some benefits. First, some firms believe that CSR can help recruit, motivate, and retain employees (Davies and Crane, 2010). Second, CSR can be used to entice customers to buy a firm's product and services (Vecchio and Annunziata, 2015). In a munificent environment,

firms may also use CSR to justify an increase in the prices of their product and services (Goll and Rasheed, 2004). Third, CSR could also result in cost-savings. For instance, reducing the usage of materials for packaging and encouraging energy conservation could provide substantial production and operating cost savings for a firm (Yang, 2012). Fourth, CSR may also be practised with the objective to mitigate a firm's risk. For example, firms may voluntarily reduce emissions in an effort to thwart legislation that could impose even tighter standards. CSR could also be viewed as an investment that prevents or mitigates the occurrence of untoward incidents, which could result in lawsuits and bad reputation for a firm. Last but not least, a firm may practise CSR to forge stronger relationships with its suppliers, attract capital from investors, and receive more favourable terms from creditors (Sprinkle and Maines, 2010).

## **2.2 Corporate Social Responsibility in Maritime Transport**

At present, most CSR research is conducted on industries that have a direct contact with consumers i.e. Business-To-Consumer (B2C) industries (Hietbrink et al., 2010). On the other hand, very little research has delved into CSR in a Business-To-Business (B2B) context, such as the maritime transport sector.

There are arguments in the literature stating that CSR is less relevant for firms operating in B2B industries. First, they are positioned further from their final consumers in the value chain (Haddock and Fraser, 2008). Consequently, they are less scrutinised for their involvement in CSR and have fewer incentives to implement CSR. Second, customers of a B2B transaction are argued to be more rationale in their evaluation and selection of a product or service (Leek and Christodoulides, 2012). The main criteria in their evaluation and selection are to a large extent based on basic performance objectives such as quality, speed, dependability, flexibility, and cost (Slack et al., 2009). This finding is consistent with Pruzan-Jorgensen and Farrag (2010) who noted that in the context of maritime transport, CSR only serves as a qualifier in

carrier selection when all other basic criteria such as price and logistics performance are equal.

The maritime transport industry is a highly-regulated industry with high standards for preserving the environment and ensuring employees' safety and well-being. Moreover, environmental and safety performances are constantly raised by additions and amendments to the regulations, thereby forcing the industry to cope with these new standards (Acciaro, 2014; Tzannatos and Stournaras, 2015). In a highly-regulated environment, it takes more effort for shipping firms to exceed the regulatory standards, which connotes practising CSR. While complying with these standards offers preventive benefits such as avoidance of port state detention which can dramatically affect ships' earning capacity (Knapp and Franses, 2007), the benefits of exceeding these standards are much harder to quantify and may confer limited market benefits. The benefits of CSR are limited due to a large amount of non-specific resources caused by high regulatory standards (Burke and Logsdon, 1996), which limit a shipping firm's autonomy in implementing social or environment programmes that maximise business value or profits (Lin and Wong, 2013).

In spite of the above arguments indicating that there are fewer benefits from implementing CSR, CSR has received growing attention from the maritime transport sector since the past decade. For instance, Pawlik et al. (2012) found that a majority of the leading container shipping companies are practising CSR, albeit with differences in their interpretation and focus on the facets of CSR. More recently, Drobetz et al. (2014) reported that most shipping firms today are practising CSR and are integrating it into their businesses at the strategic and visionary level. Their findings are consistent with Lam and Lim (2016) who reported that 94% of the surveyed shipping firms practised some form of CSR in their organisations.

The conceptual meaning of CSR, as interpreted by the maritime transport sector, does not differ considerably with other sectors. This was supported by two separate

studies conducted by Lu et al. (2009) and Pawlik et al. (2012). However, Kunnaala et al. (2013) found that environmental and safety dimensions of CSR, as compared to social dimensions, are more frequently emphasised on the internet pages of shipping companies. Among some environmental dimensions, Lam (2015) found that Green Design Ships, Engines and Machinery is the most important design requirement in meeting shipper's sustainability needs. In general, the focus of most shipping companies is on environmental issues. The reason could be their stronger association with financial performance (Cullinane and Bergqvist, 2014; Lirn et al., 2014; Lindstad et al., 2015). Environmental issues are often directly related to fuel consumption and, in times of rising energy costs, it makes business sense for shipping firms to place greater emphasis on environmental rather than social issues.

The motivations for implementing CSR in the maritime transport sector are generally strategic (Lam and Lim, 2016). One of the cited reasons concerns the need to improve reputation and satisfy stakeholders (Lam and Lai, 2015). Operating in a fiercely competitive environment, CSR can be employed as an attribute to differentiate a shipping firm's services from its rivals (Shin and Thai, 2015). High volume shippers usually launch global tenders for selecting their carriers (Pawlik et al., 2012). Such tenders can take several rounds with the first round focussing on basic criteria such as freight rates and service quality (i.e. ISO 9001), followed by an evaluation of discretionary criteria in the subsequent rounds (Beddow, 2011). In this regard, a growing number of shippers are using ISO 14000, or even ISO 26000, as discretionary criteria in their carrier selection (Celik, 2009; Matthews, 2010). Shipping firms without such systems may be at a disadvantage in securing the tender. CSR can also be used as a strategy to satisfy employees and enhance their performance (Korschun et al., 2014). Particularly for the maritime transport sector which is experiencing a shortage of qualified seafarers (Thai et al., 2013), responsible human resource management policies can attract, motivate, and retain good employees, improve their productivity, and reduce absenteeism (Dahalan et al., 2012).

## **2.3 The Relationship between Corporate Social Responsibility and Financial Performance**

Regardless of the motivations of a shipping firm to implement CSR, it is of both scientific and industry interest to ascertain whether there is a business case for practising CSR. In general, the practice of CSR entails a large amount of organisational resources, time, money, and effort (Barnett, 2007; Surroca et al., 2010). Sprinkle and Maines (2010) stated that the cost of CSR can be categorised into its implicit cost (i.e. direct investments) as well as its explicit cost (opportunity costs) i.e. the cost of forgoing the best alternative.

In any economic decision, a firm pursues an action such as an investment in CSR if that provides the greatest benefit or results in the least opportunity cost amongst other alternatives. However, given the intangible nature of CSR, its benefits are difficult to measure. It remains a major challenge for firms to ascertain or quantify the portion of their revenue that is attributable to their involvement in CSR (Sprinkle and Maines, 2010).

In spite of the difficulties in quantifying the benefits of CSR, a plethora of empirical studies have been conducted to examine the relationship between CSR and financial performance (Margolis et al., 2009; Aguinis and Glavas, 2012). Not surprisingly, the results are equivocal. Three different outcomes were reported by existing studies; negative, positive, and no relationship. The following subsections discuss the theories or arguments supporting each outcome.

### **2.3.1 Negative Relationship between Corporate Social Responsibility and Financial Performance**

The negative relationship between CSR and financial performance can be traced back to the article by Levitt (1958) on the “Dangers of Social Responsibility”, in which the author distinguished between the role of government and business. It was contended

that their roles are mutually exclusive. Two prominent theories were discussed in the literature that best represent this perspective. They are agency theory and trade-off theory.

Using agency theory, Friedman (2007) viewed CSR as a misuse of organisational resources and that a firm's investments could have been better spent on other value-added projects or as returns to shareholders. Agency theory was built on the idea of maximising shareholders' value since managers should act in the best interest of their principals who are the shareholders (Garriga and Melé, 2013). It was also suggested that without strong corporate governance, CSR is an executive perk and is subjected to exploitation for managers' personal agendas, and thus, reduces shareholders' wealth. Firms that engage in symbolic or fraudulent acts in the name of social responsibility increase the firms' risk and decrease their risk-adjusted returns (Barnett, 2007).

Another argument that supports the negative relationship between CSR and financial performance is trade-off theory. Organisational resources are limited which give rise to trade-offs in any decisions (Forgang and Einolf, 2015). While there are huge costs involved in implementing CSR, it was argued that the measurable economic benefits are very little. As a result, firms are better off investing in other alternatives such as strengthening their existing competitive capabilities. Under this view, CSR consumes valuable resources and dilutes the existing competitive advantage of a firm (Hull and Rothenberg, 2008). This is supported by neo-classical economists who explained that, constrained by complementary resources and capacity, practising CSR can trigger disproportionately high cost in a firm and has an adverse effect on firms' financial performance (Brammer and Millington, 2008).

### **2.3.2 Positive Relationship between Corporate Social Responsibility and Financial Performance**

A majority of existing research supports the claim that CSR is positively linked with financial performance. Two key theories were proposed to support this view. They are stakeholder theory and resource-based view (RBV) theory.

Contrary to agency theory, stakeholder theory posits that managers must satisfy a variety of constituents (e.g. workers, customers, suppliers, local community organisations) who can influence a firm's outcomes (Freeman, 2010). According to this view, it is not sufficient for managers to focus exclusively on the needs of shareholders. Stakeholder theory implies that it can be beneficial for the firm to practise certain CSR activities that non-financial stakeholders perceive to be important, because when absent, these groups might withdraw their support for the firm.

Donaldson and Preston (1995) stressed the importance of moral and ethics in the management of firms and supported the business case for practising CSR. They argued that there is a positive correlation between CSR and financial performance, simply because attention to CSR improves relationships with key stakeholder groups. This results in better overall performance. For example, good employee (including women and minorities) relations can improve morale, productivity, and satisfaction. Excellent community relations may provide incentives for local government to provide competition-enhancing tax breaks, improved schools (and a better workforce over the long term), or reduced regulation, thereby reducing the cost of firms' operations and improving their bottom line. Practising CSR also complements a firm's human resource management. Bhattacharya et al. (2012) suggested that CSR can be used as a lever for global talent management. Competition for the limited number of talents is growing and the success of a firm is increasingly underpinned by its ability to attract, motivate and retain talents. This is consistent with the findings of Brammer et al. (2007) who reported that CSR results in higher organisational commitment and job satisfaction.

This contributes to low attrition rate and high retention rate, which have a positive effect on a firm's financial performance (Frey et al., 2013)

The first theoretical paper to apply the RBV framework to CSR was Hart (1995), who focused exclusively on environmental responsibility. Hart asserted that environmental responsibility can constitute a resource or capability that leads to a sustained competitive advantage. Russo and Fouts (1997) empirically tested this theory using firm-level data on environmental performance and accounting profitability. The authors found that firms with higher levels of environmental performance experience superior financial performance, which they interpreted to be consistent with the RBV theory. A more formal model was subsequently developed by McWilliams and Siegel (2001). The authors outlined a model in which two companies produce identical products, except that one adds an additional social attribute to the product. Subsequently, they conducted a cost and benefit analysis to determine the level of resources to develop CSR activities. In addition, they assessed the demand for CSR and also evaluated the cost of satisfying this demand. The results supported the RBV framework and demonstrated that CSR can be an integral part of a firm's business and profitability (McWilliams et al., 2006). Even when it is not directly tied to a product or production process, CSR can be viewed as a form of brand building (Lii and Lee, 2012). Therefore, it should be considered as a form of strategic investment.

### **2.3.3 No Relationship between Corporate Social Responsibility and Financial Performance**

Some studies suggest that no relationship exists between CSR and financial performance. Margolis and Walsh (2003) who reported mixed findings across 109 empirical studies. 54 of them found positive relationship. Seven studies reported negative relationship whereas 28 studies reported non-significant relationship. It was suggested that there is no reason to expect a relationship, except possibly by chance. One of the central arguments is based on the notion that the relationship is too complex

and simply considering the bivariate relationship is not sufficient. Fu and Jia (2012) argued that complexity arises from a multitude of intervening or contextual variables that have been omitted by existing studies.

## **2.4 Contingency Theory**

As discussed above, the relationship between CSR and financial performance is equivocal. To address the mixed results, this thesis draws on contingency theory which states that context dictates the effectiveness of an organisational behaviour, which in this case, refers to CSR. Contingency theory opposes universalistic theory (Freeman, 2015). The former states that organisational effectiveness is influenced by the fit between a firm's strategic behaviour and its internal and external environmental conditions (Donaldson, 2001). According to Sousa and Voss (2008), 'fit' is central to contingency theory because the internal and external conditions faced by a firm are unique. As a result, a firm has to vary its behaviours or strategies to achieve an optimum fit with its conditions or environment.

From a statistical viewpoint, contingency theory posits that the effect of a variable (X) on another (Y) varies with the magnitude of a third variable (Z). Therefore, contingency theory asserts that there is no valid bivariate relationship between X and Y when their relationship is part of a larger causal system that involves a trivariate relationship. The third variable, Z, can therefore be considered as a moderator or an interaction variable (Frazier et al., 2004).

However, it should be noted that not all moderators satisfy the criteria of a contingency variable (Donaldson, 2001). Contingency variables are subsets of moderators, whereby the relationship they moderate involves certain characteristics and performance of a firm.

First, for a moderator to qualify as a contingency variable, the independent variable (X) that it moderates must be related to a feature, attribute, strategy, behaviour, or structure that characterise a firm. Second, the dependent variable (Y) must be related to a firm's performance. This includes measures such as profitability, employee satisfaction, customer satisfaction, or market growth.

The utility of contingency theory is wide and first applied to the field of organisational structure design (Freeman, 2015). For example, the effectiveness of an organisational structure (i.e. functional, divisional, or matrix) was found to be contingent on the size of the firm, the level of technology, and the desired span of control (Pugh et al., 1969; Child, 1972). In the field of communication, the effectiveness of the communication process in organisations was found to be contingent on the external and internal stimuli, such as the type of organisation and composition of the work force (i.e. age, gender, education, and tenure). In the theory of leadership, Fielder (1978) asserted that there is no best leadership style. Instead, the influence of leader's psychological orientation on group performance is contingent of three contextual factors. They are group atmosphere, task structure, and leader's power position. Lastly, in the context of group decision-making, the effectiveness of a decision procedure is contingent on a number of aspects of the situation (Beach and Mitchell, 1978). They are the importance of the decision quality and acceptance; the amount of relevant information possessed by the leader and subordinates; the likelihood that subordinates will accept an autocratic decision or cooperate in trying to make a good decision if allowed to participate; and the amount of disagreement among subordinates with respect to their preferred alternatives.

## **2.5 Corporate Social Responsibility and Financial Performance: A Contingency View**

Contingency theory provides an appropriate theoretical lens to analyse the relationship between CSR and financial performance, which has been found to be equivocal in the

existing literature (Margolis et al., 2009). With the introduction of contingency theory, it provides a much finer-grained and differentiated view, and thereby acknowledging that the effect of CSR on financial performance varies with context.

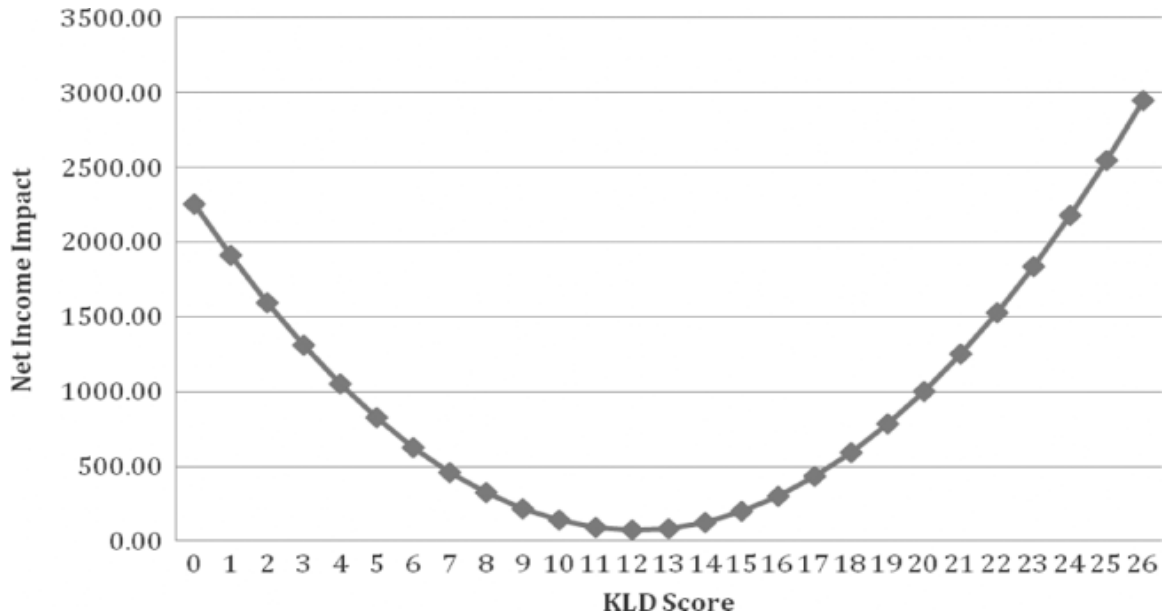
Barnett and Salomon (2012) presented a strong case of contingency in advocating the relationship between CSR and financial performance. The authors proposed that the relationship is U-shaped. As shown in Figure 2.2, it can be seen that firms with low CSR scores which are characterised by Kinder, Lydenberg, and Domini (KLD) scores possess stronger financial performance than firms with moderate CSR, but firms with high KLD scores have the highest financial performance.

KLD scores are indexes published by a neutral organisation, which employs Delphi methodology, expert panel third-party assessment to rate firms' CSR involvement in areas such as community relations, employee relations, environment, women and minority issues, quality programs, and product safety.

A U-shaped curve effectively captures all three posited relationships between CSR and financial performance. First, firms with a low CSR score experience negative financial returns if they are to improve their CSR rating (as evidenced by the negative slope in the profile). Second, firms with moderate CSR scores experience no financial benefit if they are to improve their CSR rating. Third, firms with a high CSR score experience positive financial returns if they are to improve their CSR rating. Barnett and Salomon (2012) attributed this phenomenon to a firm's stakeholder influence capacity (SIC), which was defined as 'the ability of a firm to identify, act on, and profit from opportunities to improve stakeholder relationships through CSR'.

Firms with a poor CSR rating have a low SIC, or a weak history of social responsibility and are not credible with stakeholders. As a result, the cost of practising CSR outweighs its benefits. On the contrary, a firm with high CSR rating or SIC is more likely to benefit from its investment in CSR. Its attempt to improve CSR is in

consonance with the firm's good history or reputation of being socially responsible. Therefore, stakeholders are more likely to perceive the firm as being credible and reward it accordingly. Overall, the study of Barnett and Salomon (2012) suggested that the relationship between CSR and financial performance is contingent on the SIC of a firm, which supports the tenet of this thesis.



**Figure 2.1 The Relationship between CSR (i.e. KLD score) and Net Income**

Source: Barnett and Salomon (2012)

Apart from SIC, there is growing evidence in the literature supporting the thesis's argument that the benefits of CSR are contingent rather than universal. For instance, Aguinis and Glavas (2012) categorised studies that introduced moderators to examine the relationship between CSR and financial performance into three themes: institutional, organisational, and individual level.

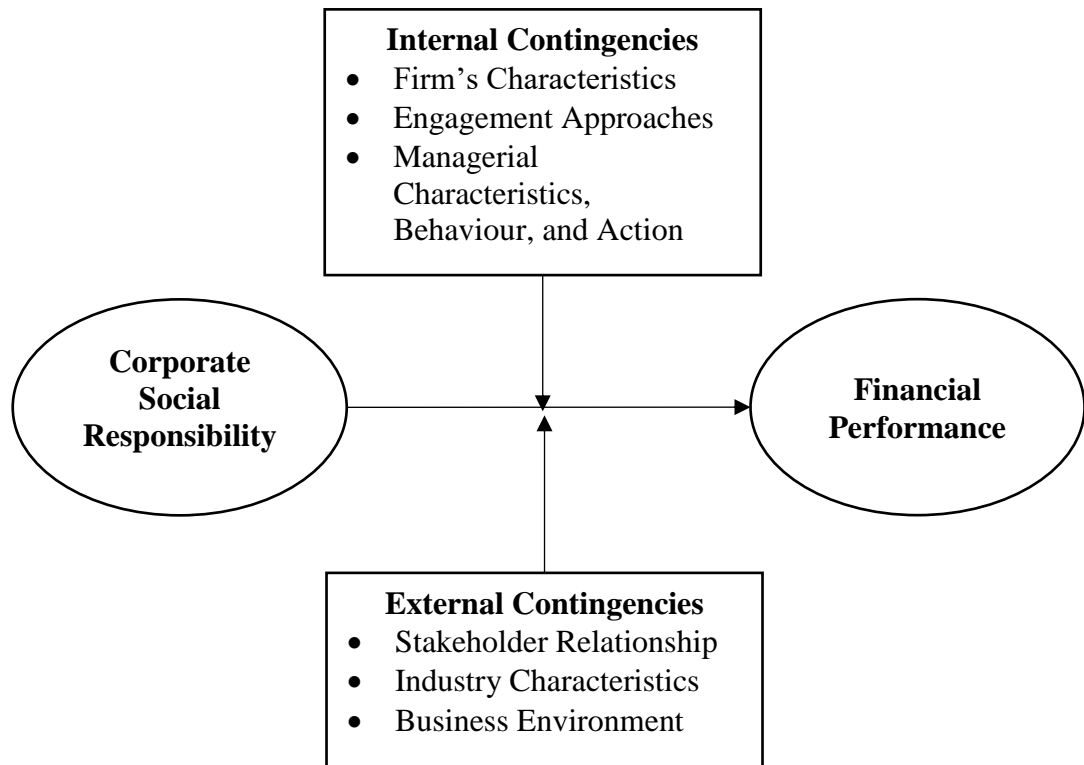
At the institutional level, some of variables that were found to moderate the relationship between CSR and financial performance include consumer information intensity (Schuler and Cording, 2006), public perception of firm CSR (Lev et al., 2010),

consumer beliefs and support for CSR (Sen and Bhattacharya, 2001), sensitivity to consumer perceptions (Lev et al., 2010), and firm's reputation and goodwill with external stakeholders (Orlitzky et al., 2003).

At the organisational level, some of the moderators include firm's size (Lee, 2015), research and development investment (Waldman et al., 2006), slack resources (Waddock and Graves, 1997), proximity of firm to CSR issue (Jong and Meer, 2015), level of innovation in the firm (Hull and Rothenberg, 2008), adoption stage of CSR (Arya and Zhang, 2009), and product quality (Luo and Bhattacharya, 2006).

Finally, at the individual level, some of the moderators include effective social accounts (Rupp et al., 2006), equity sensitivity of supervisors (Mudrack et al., 1999), supervisor's commitment to ethics (Muller and Kolk, 2010), individual employee's discretion (Bansal, 2013), and salience of CSR issue to employee (Bansal and Roth, 2000).

The thesis collapsed the aforementioned themes into two underlying dimensions; internal and external. This further aligns with contingency theory, which views internal and external conditions of a firm as factors influencing the effectiveness of a firm's strategic behaviour. Figure 2.3 summarises the internal and external contingencies that moderate the relationship between CSR and financial performance.



**Figure 2.2 Internal and External Contingencies of CSR-Financial Performance Link**

### 2.5.1 Internal Contingency Factors

Internal contingency factors are firm-specific moderators which can dampen or augment the effectiveness of CSR. The factors can be organised into (1) firm characteristics, (2) CSR practice approaches, and (3) managerial characteristics, behaviour, and action. The specific variables for each factor are summarised in Table 2.1.

**Table 2-1 Factors and Variables of Internal Contingencies**

<b>Factors</b>	<b>Variables</b>
Firm characteristics	<ul style="list-style-type: none"> <li>• Firm size (+/-)</li> <li>• Ownership structure i.e. private (-) vs public (+)</li> <li>• Innovation (+/-)</li> </ul>

CSR Implementation approaches	<ul style="list-style-type: none"> <li>• Proactive (+) vs reactive approach (-)</li> <li>• Product-driven (+) vs process-driven CSR approach (-)</li> </ul>
Managerial characteristics, behaviour, and action	<ul style="list-style-type: none"> <li>• Personal support for CSR (+)</li> <li>• Managers' and employees' commitment towards CSR (+)</li> </ul>

Notes: (+) indicates that the variable augments the effect of CSR and financial performance. (-) indicates that the variable dampens the effect of CSR and financial performance. (+/-) indicates uncertainty on the direction of the effect.

### 2.5.1.1 Firm's Characteristics

Under the theme of firm's characteristics, it was found that firm's size, ownership structure, and innovation influence the amount of financial benefits that a firm can gain from implementing CSR.

Existing results pertaining to firm's size were found to be mixed. For instance, Aguinis and Glavas (2012) found that large firms experience more financial benefits from implementing CSR for the following reasons. First, large firms possess the economies of scale or capacities to recruit specialists to be responsible for its CSR strategy and to participate in demanding social accounting schemes. The financial ability to recruit relevant expertise would have positive implications on the effectiveness of a firm's CSR policies (Lepoutre and Heene, 2006). In addition, a large diversified firm can spread its CSR cost over many different products and services (Williamson et al., 2006). For example, the goodwill generated from firm-level CSR-related advertising can be leveraged across a variety of a firm's brands (McWilliams and Siegel, 2000). The second reason is that large firms have more incentives to practise CSR. According to Williamson et al. (2006), CSR is widely used as an instrument to ward off government regulations to guard against threats to the firm's autonomy. In that regard, large firms were found to be more proactively involved in CSR or be self-regulated whereas small firms favour external forms of regulation (i.e. meeting the minimum political or legal requirements to operate). The primary reason for this observation is that large firms value autonomy and this would mean staying ahead of the current legal or political requirements in their place of operations or trade.

On the contrary, there are studies supporting that small firms experience greater financial benefits from implementing CSR. They argued that small firms are better positioned and equipped for socially responsible behaviour as they are often celebrated for providing social benefits such as creating jobs, inducing economic growth and introducing innovations (Lepoutre and Heene, 2006). In addition, many small businesses attract clients and employees in the local community. As having a good reputation is of paramount importance to their competitiveness, small businesses would naturally engage in practices that are aligned with their stakeholders' wishes and behave in a socially responsible manner (Davies and Crane, 2010).

Ownership structure was also found to moderate the relationship between CSR and financial performance. Dixon-Fowler et al. (2013) found that public firms are subjected to higher public interest and greater pressure and scrutiny from the media and stakeholders. Therefore, there are greater benefits or incentives for public firms to practise CSR than private firms.

The degree of innovation of a firm was also noted to affect the financial benefits of CSR. Hull and Rothenberg (2008) argued that companies producing innovative products need to offer little other reasons (including being socially responsible) for their customers to purchase their products. Conversely, less innovative firms may benefit more from practising CSR by using it to differentiate their products. However, the results are not consistent; indeed, Aguinis and Glavas (2012) found that the higher the research and development investment, which is an indicator of innovation, the greater is the effect of CSR on financial performance.

#### *2.5.1.2 CSR Practice Approaches*

Under this theme on CSR practice approaches, it was suggested that the manner of CSR engagement has an effect on the financial benefits of CSR. Brammer and Millington (2008) demonstrated that adopting a proactive approach rather than a reactive approach to practising CSR results in stronger financial performance.

Adopting a reactive approach limits the practice of CSR to solve environmental or social issues only after a crisis has occurred. This may convey a certain amount of hypocrisy to the stakeholders and result in lesser commitment or buy-in (Wagner et al., 2009). On the contrary, a proactive approach often aligns a firm's business operations with CSR concerns and expectations of stakeholders. It also conveys positive information to stakeholders that the firm is genuine, consistent, and committed towards its cause.

The facets on CSR were also observed to have a varying effect on financial performance. Jayachandran et al. (2013) distinguished the effect of product-driven and process-driven CSR initiatives on stakeholders' value perception of CSR. The authors reported that the former type of CSR initiatives has a stronger influence on financial performance. One of the reasons is that there is greater visibility in the communication of CSR values to customers when CSR is embedded in or integrated with a product or service. On the contrary, it is difficult to describe and communicate the business processes where CSR is incorporated and practised, which may be less relevant to stakeholders.

### *2.5.1.3 Managerial Characteristics, Behaviour, and Action*

The third group of internal contingency theory studies analysed individuals' characteristics, behaviour, and actions as moderating variables. These studies acknowledged that personal CSR values influence the amount of financial benefits that can be gained from practising CSR. In general, managers and employees who find CSR to be relevant or congruent with their personal values are more committed to supporting their firm's cause of promoting and practising CSR, which results in stronger financial performance (Kim and Statman, 2012).

Next, managers' or employees' commitment towards CSR and sensitivity to equity were also noted to have a moderating effect on the relationship between CSR and financial performance (Aguinis and Glavas, 2012). The effective delivery of corporate

social and environmental responsibility initiatives is dependent on employee's responsiveness. In order for employees to deliver on CSR requirements, they have to be motivated, and committed to overcoming the challenges and attaining the goals of responsible corporate behaviour (Collier and Esteban, 2007).

### 2.5.2 External Contingency Factors

External contingency factors refer to external moderators which can dampen or augment the effectiveness of CSR. The factors can be classified into (1) stakeholder relationship, (2) industry characteristics, and (3) general business environment (See Table 2.2).

**Table 2-2 Factors and Variables of External Contingencies**

Factors	Variables
Stakeholder relationship	<ul style="list-style-type: none"> <li>• Stakeholders' attribution of a firm's motive for CSR engagement as self-interest (-) or altruistic (+)</li> <li>• Effectiveness of advertising (+)</li> <li>• Effectiveness of CSR reporting and disclosure (+)</li> <li>• Consistent and equity treatment of stakeholders over time (+)</li> </ul>
Industry characteristics	<ul style="list-style-type: none"> <li>• Pollution index of industry (+/-)</li> <li>• Industry growth (+)</li> </ul>
Business environment	<ul style="list-style-type: none"> <li>• External norms (-)</li> <li>• Regulations (-)</li> <li>• Governmental subsidies (-)</li> <li>• Tax incentives (-)</li> <li>• Interest rates (-)</li> <li>• Uncertainty of business environment (+)</li> <li>• Complexity of business environment (+)</li> <li>• Hostility of business environment (+)</li> </ul>

Notes: (+) indicates that the variable augments the effect of CSR and financial performance. (-) indicates that the variable dampens the effect of CSR and financial performance. (+/-) indicates uncertainty on the direction of the effect.

### *2.5.2.1 Stakeholder Relationship*

Good stakeholder relationships are a source of competitive advantage (Wang and Choi, 2013). Accordingly, the financial benefits of CSR are dependent on stakeholders' attribution of a firm's motive for practising CSR activities. That is whether a firm attributes a firm's motive for practising CSR as a sporadic self-interest or as being genuine (Grewatsch and Kleindienst, 2015).

Due to information asymmetry (Van der Laan et al., 2008), firms need to establish strong CSR reputation and communication, as well as symbolic management. These can be achieved through advertising (Servaes and Tamayo, 2013), high qualitative CSR reporting (Schreck, 2009), and consistent good treatment of different stakeholders over time (Wang and Choi, 2013). It was shown that firms which can effectively execute any of the above experience greater success in transforming CSR into tangible financial benefit (Jayachandran et al., 2013).

### *2.5.2.2 Industry Characteristics*

The financial benefits of CSR differ across industries. Schreck (2009) argued that each industry operates in a different context with distinct environment, social, and financial concerns. Stakeholders' expectations of a firm's level of CSR practice could differ between 'clean' and 'dirty' industries. For instance, firms operating in an industry which is classified as more pollution-intensive are subjected to greater scrutiny from the media and pressures from regulators and other stakeholders (Dixon-Fowler et al., 2013). While previous research showed that clean industries experience more financial benefits from the implementation of CSR (Klassen and McLaughlin, 1996), more recent researches found that dirty industries experience more benefits from the practise of CSR due to greater legitimacy (Schreck, 2009; Baird et al., 2012).

The speed of industry growth also moderates the relationship between CSR and financial performance (Brammer and Millington, 2008). High growth industries are

associated with fast growth rates and are generally more profitable than low growth industries, which makes them more attractive to new entrants. The rules and regulations of competition in high growth industries are in flux, and firms are generally more receptive to riskier investments such as CSR and the promotion of intangible resources, such as CSR reputation to differentiate from competitors, including new entrants (Russo and Fouts, 1997). In addition, the environment of a high growth industry will be more munificent and allows firms to obtain more benefits from practising CSR.

### *2.5.2.3 Business Environment*

The characteristics of a business environment also moderate the relationship between CSR and financial performance. This includes external norms governing CSR, regulations, governmental subsidies, tax incentives, and interest rates (Aragon-Correa and Sharma, 2003; Flammer, 2013). These external pressures impact the institutionalisation of CSR and subsequently its financial returns. In general, the more CSR becomes an institutional norm, the more firms are punished for a bad CSR behaviour, and the less they are rewarded for their CSR engagement (Flammer, 2013).

Apart from the aforementioned characteristics, it was found that uncertainty, complexity and hostility of the business environment influence the amount of benefits a firm can gain from CSR (Aragon-Correa and Sharma, 2003). For instance, in an environment which is uncertain, complex, and hostile, firms can benefit more from CSR since it is difficult for competitors to obtain CSR information about a firm and imitate the firm's CSR strategies and capabilities as it is constantly changing to fit the dynamic environment.

## **2.6 Gaps in Current Contingency Theory Research and Corporate Social Responsibility**

In the previous section, contingency variables that moderate the relationship between CSR and financial performance are reviewed and synthesised. The contingency variables are further grouped into internal and external contingencies. Internal contingencies comprise three sub-categories, namely, (1) firm characteristics, (2) engagement approach, and (3) managerial characteristic, behaviour, and action. External contingencies comprise three sub-categories, namely, (1) stakeholder relationship, (2) industry characteristics, and (3) business environment.

Although existing contingency theory research has provided a broad coverage of situations moderating the financial benefits of implementing CSR, there remain several gaps in the current literature which this thesis will address.

First, regarding internal contingencies, most of the proposed contingency variables are exogenous i.e. variables that are not influenced by other variables in a model (Tang et al., 2012). The question of whether the financial benefits of CSR are underpinned by the existing resources and capabilities of a firm has been largely ignored.

Herein, path dependence theory can provide an appropriate theoretical lens to establish a relationship between the financial benefits of CSR and the existing resources and capabilities of a firm. Path dependence theory is an organisational learning theory which states that ‘history matters’ in how well a company can absorb and retain new knowledge. By accumulating similar knowledge, building complementary assets, and internal consistency, a firm can gain extra efficiency from related activities or behaviour (Sydow et al., 2009; Garud et al., 2010). Based on this theory, it can be expected that the amount of benefits gained from practising CSR is underpinned by the compatibility of a firm’s existing resources and capabilities, which

could be complementary or conflicting. This relationship will be further explored, discussed, and tested in the first study of the thesis in Chapter 4.

Next, regarding external contingencies, most research is conducted on end consumers whereas very little research has been conducted on customers which are business entities such as maritime shippers (Hietbrink et al., 2010). Furthermore, there is a lack of explanation for the differences in shippers' attitude and response to a shipping firm's involvement in CSR. This difference can be explained using the theory of planned behaviour. The theory of planned behaviour asserts that individuals are likely to engage a specific type of behaviour such as repurchasing or paying a premium price for a product or service if they believe that the behaviour is congruent with their values or will result in a favourable outcome (Ajzen, 1991). This belief stemmed from: (1) an individual's attitudes toward the behaviour, (2) subjective norms, and (3) perceived behavioural control (Kim and Han, 2010). Applying the theory of planned behaviour to a B2B setting, the second study of this thesis sets out to explain the differences in shippers' willingness to pay for CSR. This will be further explored, discussed, and tested in Chapter 5.

Finally, most contingency theory research assumes a static relationship between CSR and financial performance (Freeman, 2015). According to Brooks and Trifts (2008), the relative importance of shippers' requirements might change according to market conditions. Their requirements may also include their expectations of a firm's CSR. For instance, during an economic recession, certain CSR attributes, which are related to philanthropy, are viewed as 'expendable' to customers as they retrench to other pertinent attributes such as price and quality (Green and Pelozo, 2011). This implies that shipping firms have to constantly adjust and align their CSR activities to match the changing expectations of shippers. Furthermore, CSR is viewed as an intangible resource (Surroca et al., 2010). Like other organisational resources, CSR is subjected to asset erosion (Dietrich and Krafft, 2012) and will deteriorate in the absence of constant investments. The presented evidences suggest that the interaction

between CSR and its environment is dynamic rather than static. The third study of this thesis proposes that firms with high continuous improvement capacities will experience greater benefits from CSR as compared to their counterparts. This proposition will be further explained and tested in Chapter 6.

## **2.7 Summary**

This chapter begins with a review of the definitions and motivations of CSR. It defines CSR as ‘a concept whereby companies integrate social and environmental concerns in their interaction with their stakeholders on a voluntary basis’ (Commission of the European Communities, 2014). A firm could be motivated to practise CSR for altruistic or strategic reasons. A firm’s motive is altruistic if its intentions are to genuinely correct a negative externality and have no expectations of profiting from contributing to the environment or society. On the contrary, a firm’s motive is strategic if its intentions are to profit from implementing CSR. For instance, a firm’s may practise CSR for personal agenda such as to appease its stakeholders, entice customers to select or purchase its services, improve satisfaction and productivity of employees, attract investors, and reduce its risk in operations.

A firm may be involved in a wide array of CSR activities. These activities are not exhaustive. However, they can be categorised into (1) philanthropy activities, (2) business practices, and (3) product-related. Examples of philanthropy activities include cause-related marketing where donations are tied to a commercial transaction, sponsorships, and community involvement. Examples of CSR activities that are related to business practices include emission reduction, fair trade, labour diversity, and equitable treatment of customers, suppliers, and employees. Examples of CSR activities that are product-related are producing products that are sustainable, durable, organic, or biodegradable.

Most CSR research is conducted on firms operating in a B2C environment. There are arguments that CSR is less relevant to B2B environments such as the maritime transport sector which is situated further from end-consumers and is subjected to less scrutiny and stakeholders' pressures. Furthermore, shippers which are business entities themselves are seemingly more rationale in their evaluation and selection of a carrier, focusing on basic performance measures such as cost and service performance above other criteria.

Despite the arguments that CSR is less pertinent to the maritime transport sector, the practice of CSR has sharply increased both in terms of its scope and intensity as compared to the situation ten years ago. The commonly cited reasons for practising CSR are to improve the reputation of shipping firms and their standing with their stakeholders. Many shipping firms see the benefits of CSR, especially in securing large transport tenders whereby discretionary criteria such as shipping firms' involvement in CSR are taken into consideration. Another cited reason for practising CSR is to reduce shipping firms' operating cost. In view of rising bunker cost, investing in fuel efficient engines reduces fuel consumption and subsequently, the operating cost of shipping firms.

In general, CSR entails an outlay of financial investments and incurs opportunity costs for shipping firms. The question of whether the benefits of CSR outweigh its costs remains uncertain. Numerous empirical analyses on the relationship between CSR and financial performance were conducted but yielded mixed results. Increasingly, it has been accepted that the correlation between CSR and financial performance is dependent on contextual variables. These variables influence the favourableness of implementing CSR, or in other words, how much a firm can benefit from practising CSR. They can be categorised into internal and external contingencies. Internal contingencies comprise firm-specific variables which relate to a firm's characteristics, CSR engagement approach, and managers' characteristics. External contingencies

consist of variables that are external to a firm. They relate to a firm's relationships with its stakeholders, industries' characteristics, and the general business environment.

There remain several gaps in the current contingency theory literature on CSR which this thesis aims to address. Concerning research on internal contingencies, there seems to be a lack of attention towards the interaction between CSR and the existing resources and capabilities of a firm. Path dependency theory suggests a possible interaction between both concepts. The amount of benefits that a firm can benefit from CSR is underpinned by the presence and amount of complementary resources and capabilities that a firm possesses. This proposition will be tested in the first study of the thesis. Next, concerning research on external contingencies, there is little research that examines customers' attitude and response towards a firm's involvement in CSR in a B2B context. The second study of this thesis introduces the theory of planned behaviour to predict shippers' willingness to pay for CSR. Finally, most contingency theory research assumes a static relationship between CSR and a firm's environment. However, a static assumption does not accurately reflect the true phenomenon where a firm's CSR capability is constantly subjected to asset erosion and customers' expectations of a firm's CSR are dynamically changing. Like other organisational resources, CSR is subjected to asset erosion (Dietrich and Krafft, 2012) and will deteriorate in the absence of constant investments. The presented evidences suggest that the interaction between CSR and its environment is dynamic rather than static. The third study of this thesis addresses this limitation by incorporating dynamism into its analysis. In particular, it introduces the concept of continuous improvement to capture the dynamic state of continual maintenance and alignment between a firm's CSR and its changing environment.

## CHAPTER 3

# METHODOLOGY

*This chapter highlights the overall research approach of the thesis. The approach comprises three components which are to be conducted in a sequential manner. They are the literature review approach, inductive qualitative approach, and deductive quantitative approach. Accordingly, the subsequent sections discuss each approach.*

### **3.1 Overall Research Approach**

The research methodologies that are applicable to management studies can be categorised into (1) inductive qualitative approach, (2) deductive quantitative approach, and (3) balanced approach (Golicic et al., 2005). The suitability of each approach is dependent on the research objective and the phenomenon of interest. Table 3.1 highlights the differences between qualitative and quantitative approaches (Lussier, 2011).

The inductive qualitative approach is adopted when the research topic is new, dynamic or complex. It is also used when extant theories or measures are not developed or available in the literature (Domegan and Fleming, 2007). This approach generally requires researchers to approach the research topic without any preconceived ideas. The purpose is to generate a new theory or perspective based on the available data (Thomas, 2006).

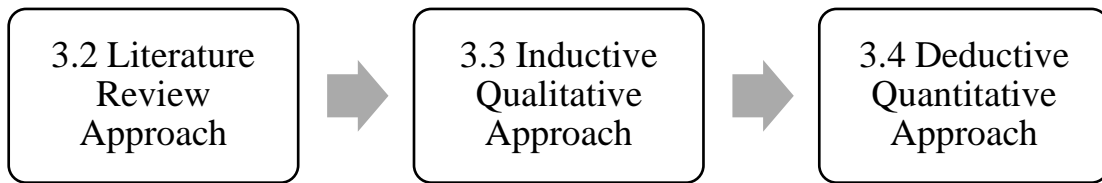
The deductive quantitative approach is applied when the research objectives are aimed at explaining causation (Golicic et al., 2005). In most cases, researchers have an underlying theory to explain a phenomenon which makes the approach confirmatory in nature (Zikmund et al., 2012). It usually begins with the development of hypotheses. Subsequently, data are collected to test the hypotheses and its underlying theory.

The thesis adopts the balanced approach, which combines both inductive qualitative and deductive quantitative approaches. This balanced approach begins with (1) reviewing the literature, followed by (2) adopting the qualitative approach, and then (3) applying the quantitative approach. The subsequent sub-sections discuss each of the components in sequence (Figure 3.1).

**Table 3-1 Quantitative versus Qualitative Research**

<b>Quantitative Research</b>	<b>Qualitative Research</b>
1. Seeks to explain phenomena.	1. Seeks to understand phenomena.
2. Tests research questions (hypotheses).	2. Uses critical thinking to understand, rather than test.
3. Uses closed-ended, brief questions.	3. Uses open-ended, in-depth questions.
4. Uses a large sample size.	4. Uses a small sample size.
5. Data are collected, then analysed once (questionnaire completed once).	5. Data are collected and analysed as an ongoing process (may include multiple interviews with the same person).
6. There is a clear end to the data-collection process.	6. There is no clear end to the data-collection process.
7. Uses statistics to analyse data.	7. Does not use statistics to analyse data.
8. Results are objectively determined.	8. Results are subjectively determined.
9. Conclusions are reported to be generalised to population.	9. Conclusions are reported to help understand phenomena.

Source: Lussier (2011)



**Figure 3.1 The Three-Step Research Approach**

### **3.2 Literature Review Approach**

The literature presented in this thesis can be separated into three distinct categories, which serve different purposes. The first category provides an overview of key concepts such as CSR, its effect on business performance, and contingency theory, which lay the theoretical foundation for this thesis. It is mainly presented in Chapter 2.

The second category concentrates on scale development. Since this thesis involves the study of latent constructs, the development of scales (or measures) to operationalise the constructs is necessary. Specific research articles relating to measurement or scale development are reviewed and discussed in this chapter i.e. Chapter 3.

The last category focuses on hypothesis development. Relevant research articles are reviewed and organised to support the hypotheses proposed in each study. This portion of the literature can be found in Chapters 4, 5, and 6 where hypotheses are introduced into the thesis.

Throughout all of the aforementioned chapters, previous works are synthesised. The synthesis of previous works includes an identification of gaps. These works are obtained through a scan of the academic literature on CSR, as well as from the grey literature published recently from year 2012 to 2016. The search for relevant academic articles was conducted on Scopus and Google Scholar whereas the search for the most recent works from the grey literature was conducted on Google Search. Grey literature are materials and research produced by organisations outside the traditional commercial

or academic publishing channels such as annual reports, dissertations, research bulletins, newspapers, and research reports. Scopus was used as the primary search tool for academic literature as it is the largest abstract and citation database of peer-reviewed literature. Google scholar was used to supplement the search for academic literature as it has an estimated 80-90% coverage of all articles published in English.

The keywords used to narrow the search for relevant research articles were ‘corporate social responsibility’, ‘corporate social performance’, ‘sustainability’, ‘business performance’, ‘financial performance’, ‘contingency’, ‘interaction’, ‘moderator’, ‘contextual variables’, ‘shipping’, and ‘maritime transport’. Various combinations (i.e. one to several combinations) were attempted to search for relevant academic papers.

### **3.3 Inductive Qualitative Approach**

The inductive qualitative approach generally entails the use of interviews (Zikmund et al., 2012). The main task of an interview is to obtain relevant and in-depth information about the experiences of interviewees by directly questioning or talking to them.

Preliminary interviews can be conducted prior to the administration of survey questionnaires whereby researchers approach the topic without any preconceived theories or ideas (Silverman, 2010). The purposes are to gain additional insights on the topic and to validate the readability and interpretability (i.e. face validity) of the survey questionnaires. Alternatively, follow-up interviews can be conducted after the administration of survey questionnaires and when data are collected and analysed (Patton, 2005). The purpose of such interviews is to seek assistance from interviewees to explain or confirm the results. For this research, preliminary interviews were conducted to ascertain the business case of CSR in the maritime transport sector as well as to establish face validity of the developed measures, which are to be used for the survey administration.

In-depth interviews with seven managers from shipping firms located in Singapore were conducted. The interviewees were acquainted with the author and his main supervisor, who was then, Dr. Van Vinh Thai. All of the interviewees possessed at least five years of managerial experiences in their respective firm, and were directly involved in strategic planning or CSR implementation. Four of the interviewees were working in container shipping lines and the rest were working in bulk shipping firms.

Semi-structured interviews were employed. This means that the flow and structure of the interviews are predetermined by a fixed set of questions planned by the author. However, certain degree of flexibility is incorporated into the interviews, which allows the author to diverge from the questions and to probe and request for further elaboration on the comments that were made by the interviewees (Berg et al., 2004).

Face-to-face interviews were conducted at the work premises of the interviewees. Prior to the meeting, the questions (Appendix A) and survey questionnaires were sent to the interviewees by e-mails. The questions inquire about interviewees' understanding of CSR, their motivation for engaging or not practising CSR, their views on the effectiveness of CSR in contributing to operational performance and financial performance, their opinions on shippers being receptive or unreceptive to CSR, and their stance towards adopting a contingency view on practising CSR. Their responses were combined, tabulated, and presented in Appendix A. At the end of the interview, the interviewees were requested to comment on the readability, clarity, and interpretability of the survey questionnaires.

### **3.4 Deductive Quantitative Approach**

While the inductive qualitative approach or the use of interviews can assist researchers in obtaining new insights on a research topic, the information obtained from interviews is descriptive. Furthermore, due to the nature of interviews which are generally conducted on a limited sample size, any interpretation or inference based on the

information is not generalisable to a population. Since the objectives of this thesis centre upon the examination of the contingency fit between CSR and a firm's environment, the inductive qualitative approach is not sufficient to meet the research objectives.

The deductive quantitative approach generally entails large, elaborated data collection and statistical analysis for the purpose of hypothesis testing (Golicic et al., 2005). This approach can provide strong empirical evidence in building and advancing contingency theory in the context of CSR, and achieving the research objectives of this thesis. The subsequent sections review and present the methods used for data collection, sampling frame selection, measure and scale development. This is followed by a review of the methods for ascertaining reliability and validity as well as examining contingency fit.

### **3.4.1 Data Collection Method**

There are two primary methods for gathering data: secondary and primary data collection (Lussier, 2011). Secondary data collection methods obtain data from published work and historical statistical records.

This is to be contrasted with primary data collection methods whereby new data are obtained either through observations or surveys. Observation is related to qualitative research design and entails observing behaviours and patterns of people and objects (Zikmund, 2007). According to Zikmund (2007), researchers often use two kinds of observation methods, human and mechanical observation to gather information on human behaviour or action, verbal behaviour, spatial relations, temporal patterns, physical objects, verbal and pictorial records and expressive behaviour. Alternatively, researchers can obtain new data through surveys, which can take the form of both online or written questionnaires (Zikmund, 2007; Ketchen et al., 2008). The purpose of a survey is to collect facts or information from a target population. The data collected enables the identification of inherent trends and patterns, provision of a measurement

of attitudes or an explanation to behavioural characteristics. Surveys provide a flexible and efficient way of collecting data from a population, especially when the sample is geographically wide-spread.

For this thesis, employing secondary data collection method is not feasible because most of the required information is not complete, available, or published. Therefore, the primary data collection method is employed. A survey is used since it is the most convenient and direct method for obtaining relevant information from the target population.

Online surveys were chosen over written surveys on account of cost, speed, flexibility, prevention of missing data, and the possibility of higher response rate. First, there are clear advantages in terms of cost from the use of online surveys. It eliminates cost associated with printing, purchasing stamps and envelopes, and hiring manpower to prepare, distribute, collect, and record the surveys. Second, there is greater speed in reaching out to the target population with the use of online surveys. Traditional deliveries by posts take an average of three days whereas invitations via e-mail are almost instant. Consequently, any rebound e-mails can be checked, amended, and sent out immediately to the intended recipient again. Third, there is greater flexibility in the use of online surveys. Very often, the recipients of the surveys who are usually working at the front desk of the company may not be qualified enough to answer the questionnaires. The use of online surveys offers convenience and allows the recipients to forward the e-mail to suitable person in the company. Fourth, the use of online surveys eliminates the risk of incomplete survey questionnaires. Online surveys can be programmed to notify the respondents of any incomplete questions before submission. This prevents the need to perform interpolation of missing data, which could affect the accuracy or reliability of the results. Finally, higher response rate can be expected from the use of online surveys. Most online surveys are integrated and compatible with mobile platforms which offer more alternatives and greater convenience to respondents for the completion of the questionnaire. Furthermore, a unique Uniform Resource

Locator (URL) is provided in each e-mail. This identifies the respondents and allows them to save their progress and complete the questionnaire at a later time.

### **3.4.2 Sampling Frame Selection**

As depicted in Figures 1.1 and 1.2, the thesis involves the study of CSR from both the perspectives of shipping companies and shippers. To test the hypotheses presented in all three studies, a survey administration on both shipping companies and shippers is required. The survey was targeted at companies registered in Singapore. For this thesis, a shipping company is defined as a ship-operating company. Shipping agents are not considered as shipping companies since they do not operate ships.

The sampling frame for shipping companies was constructed from three online directories: (1) Green Book Directory, (2) Singapore Maritime Industry, Products and Services Directory, and (3) Lloyd's List. After eliminating duplicated entries, a total of 1,583 unique entries were consolidated.

The sampling frame for shippers, which comprise both manufacturers and freight forwarding companies, was constructed from Green Book Directory. A total of 2,433 unique entries were consolidated.

### **3.4.3 Measures and Response Anchors**

Tables 3.2 and 3.3 present all the constructs, measures, and response anchors that are required for the survey of shipping companies and shippers respectively. The measures for the constructs are derived from the existing literature, and refined based on feedback from the interviewees.

Table 3-2 Construct, Measures, and Response Anchors for Shipping Companies

Construct	Scales / Measures
1. Corporate Social Responsibility	<p align="center"><b>1.1 Staff and Suppliers Responsibility</b></p> <p align="center"><i>To an extremely small extent (1) / To an extremely large extent (7)</i></p>
Source: Schreck (2009), Turker (2009), Lu et al. (2009), Lai et al. (2013a), and Shin and Thai (2015)	<p>My company practises equal employment opportunities</p> <p>My company promotes work-life balance</p> <p>My company provides training and education to develop employees' skillsets</p> <p>My company pays employees according to industry standards</p> <p>My company ensures occupational health and safety according to industry standards</p> <p>My company uses social and environmental criteria in selecting and appraising suppliers</p> <p>My company attains our social and environmental goals collectively with suppliers</p>
	<p align="center"><b>1.2 Society and Community Responsibility</b></p> <p align="center"><i>To an extremely small extent (1) / To an extremely large extent (7)</i></p>
	<p>My company donates to charitable organisations*</p> <p>My company offers educational scholarships and internships</p> <p>My company provides jobs and employment to local community</p> <p>My company encourages partnerships with local businesses and schools</p> <p>My company participates in community development</p>
	<p align="center"><b>1.3 Governance and Business Ethics (Legal)</b></p> <p align="center"><i>To an extremely small extent (1) / To an extremely large extent (7)</i></p>
	<p>My company adheres to a comprehensive code of conduct</p> <p>My company provides full transparency of its activities, structure, financial situation, and performance to the public</p> <p>My company applies high standards for disclosure, accounting, auditing, and social and environmental reporting</p> <p>My company complies with the tax laws and regulations in all operating countries</p>

Note: A charitable organisation centres on philanthropic goals as well as social well-being, and involves in charitable, educational, or religious activities that serve the public interest or common good.

Table 3.2 Construct, Measures, and Response Anchors for Shipping Companies – continued

Construct	Scales / Measures
1. Corporate Social Responsibility	<p><b>1.4 Customer and Service Responsibility</b></p> <p><i>To an extremely small extent (1) / To an extremely large extent (7)</i></p>
Source: Schreck (2009), Turker (2009), Lu et al. (2009), Lai et al. (2013a), and Shin and Thai (2015)	<p>My company provides complete and accurate information about our services</p> <p>My company protects the personal data of our customers</p> <p>My company has a system that captures and handles customers' feedback and complaints</p> <p>My company responds promptly and fairly to consumer disputes without undue cost or burden</p> <p>My company makes promises that are fulfilled</p>
	<p><b>1.5 Environmental Management and Eco-efficiency</b></p> <p><i>To an extremely small extent (1) / To an extremely large extent (7)</i></p>
	<p>My company adopts optimal vessel speed practice and routing system</p> <p>My company uses environmental-friendly materials and equipment (e.g. nontoxic paint, electric deck machine, ballast water system)</p> <p>My company handles transactions, documentations, and notifications electronically</p> <p>My company uses clean and low-sulphur fuels for our ships' engines</p> <p>My company adopts environmental-friendly shipbuilding designs (e.g. improved engine design and waste heat recovery systems)</p>
2. Customer Satisfaction	<p><i>Strongly disagree (1) / Strongly agree (7)</i></p>
Source: Gronholdt et al. (2000)	<p>Overall, customers are satisfied with my company's services</p> <p>My company's services have exceeded the expectations of our customers</p> <p>My company's services are comparable to the ideal services that our customers have in mind</p>

Table 3.2 Construct, Measures, and Response Anchors for Shipping Companies – continued

Construct	Scales / Measures
3. Service Quality Source: Thai et al. (2014)	<p style="text-align: right;"><i>Strongly disagree (1) / Strongly agree (7)</i></p> <p>My company offers on-time-delivery of shipments</p> <p>My company maintains the condition and quality of shipments</p> <p>My company provides fast delivery of shipments</p> <p>My company shows promptness, empathy, and reliability while communicating with customers</p> <p>My company ensures its claim handling procedures are user-friendly and fast</p>
4. Job Satisfaction Source: Nagy (2002)	<p style="text-align: right;"><i>Strongly disagree (1) / Strongly agree (7)</i></p> <p>Our employees are satisfied with their present work</p> <p>Our employees are satisfied with the present compensation and benefits</p> <p>Our employees are satisfied with the current opportunities for promotion</p> <p>Our employees are satisfied with working with their superiors</p> <p>Our employees are satisfied with working with their co-workers</p>
5. Competitive Strategy Source: Yamin et al. (1999), Ortega (2010), Panayides (2003), and Lagoudis and Theotokas (2007)	<p style="text-align: center;"><b>5.1 Low-cost Strategy</b></p> <p style="text-align: right;"><i>Not at all important (1) / Extremely important (7)</i></p> <p>Optimising capacity utilisation</p> <p>Achieving economies of scale</p> <p>Competitive pricing</p> <p>Negotiating the best price when procuring supplies and services</p> <p>Decreasing the number of service features</p> <p>Minimising debt financing</p>

Table 3.2 Construct, Measures, and Response Anchors for Shipping Companies – continued

Construct	Scales / Measures
5. Competitive Strategy	<b>5.2 Differentiation Strategy</b> <i>Not at all important (1) / Extremely important (7)</i>
Source: Yamin et al. (1999), Ortega (2010), Panayides (2003), and Lagoudis and Theotokas (2007)	Providing extensive logistics and customer services Innovation in marketing techniques and methods Building and improving brand identification Spending on advertisements Providing high quality services Improving frequency, speed, and reliability of voyage Improving safety and security of shipments Focusing on customer relationship management
6. Continuous Improvement Capacity	<i>Strongly disagree (1) / Strongly agree (7)</i> My company introduces a continuous improvement or an equivalent formal improvement system to involve all employees in ongoing improvement My company is oriented towards customers in their improvement activities My company uses measurement to shape its improvement process Before embarking on an initial investigation and before implementing changes, individuals and groups assess the improvements they proposed against strategic objectives to ensure consistency My company articulates and consolidates (captures and shares) the learning of individuals and groups
7. Pace	<i>Very rapid (1) / Very gradual (7)</i> My company adopts a ___ pace in sourcing new information and acquiring knowledge to improve corporate social performance My company adopts a ___ pace in the design of continuous improvement programmes for corporate social performance My company adopts a ___ pace in the implementation of continuous improvement programmes for corporate social performance

Table 3.2 Construct, Measures, and Response Anchors for Shipping Companies – continued

Construct	Scales / Measures
8. Consistency	<i>Very irregular (1) / Very regular (7)</i>
Source: Vermeulen and Barkema (2002) and Aloini et al. (2011)	<p>My company obtains feedback from customers regarding its corporate social performance on a ___ basis</p> <p>My company measures and reviews corporate social performance on a ___ basis</p> <p>My company implements continuous improvement programmes for corporate social performance on a ___ basis</p> <p>Our employees provide suggestions or ideas to improve current processes, systems, and structures supporting corporate social performance on a ___ basis</p>
9. Financial Performance	<i>Much worse (1) / Much better (7)</i>
Source: Spanos and Lioukas (2001), Brik et al. (2011), and Maletič et al. (2015)	<p>Sales growth</p> <p>Profit growth</p> <p>Market share growth</p> <p>Return on assets</p> <p>Return on investment</p>

Table 3-3 Construct, Measures, and Response Anchors for Shippers

Construct	Scales / Measures
1. Corporate Social Responsibility	<b>1.1 Staff and Suppliers Responsibility</b>
Source: Schreck (2009), Turker (2009), Lu et al. (2009), Lai et al. (2013a), and Shin and Thai (2015)	<i>Not at all important (1) / Extremely important (7)</i>
	<p>A shipping company practises equal employment opportunities</p> <p>A shipping company promotes work-life balance</p> <p>A shipping company provides training and education to develop employees' skillsets</p> <p>A shipping company pays employees according to industry standards</p> <p>A shipping company ensures occupational health and safety according to industry standards</p> <p>A shipping company uses social and environmental criteria in selecting and appraising suppliers</p> <p>A shipping company attains its social and environmental goals collectively with suppliers</p>
	<b>1.2 Society and Community Responsibility</b>
	<i>Not at all important (1) / Extremely important (7)</i>
	<p>A shipping company donates to charitable organisations</p> <p>A shipping company offers educational scholarships and internships</p> <p>A shipping company provides jobs and employment to local community</p> <p>A shipping company encourages partnerships with local businesses and schools</p> <p>A shipping company participates in community development</p>
	<b>1.3 Governance and Business Ethics (Legal)</b>
	<i>To an extremely small extent (1) / To an extremely large extent (7)</i>
	<p>A shipping company adheres to a comprehensive code of conduct</p> <p>A shipping company provides full transparency of its activities, structure, financial situation, and performance to the public</p> <p>A shipping company applies high standards for disclosure, accounting, auditing, and social and environmental reporting</p> <p>A shipping company complies with the tax laws and regulations in all operating countries</p>

Table 3.3 Construct, Measures, and Response Anchors for Shippers - continued

Construct	Scales / Measures
1. Corporate Social Responsibility	<p><b>1.4 Customer and Service Responsibility</b>  <i>Not at all important (1) / Extremely important (7)</i></p>
Source: Schreck (2009), Turker (2009), Lu et al. (2009), Lai et al. (2013a), and Shin and Thai (2015)	<p>A shipping company provides complete and accurate information about our services  A shipping company protects the personal data of our customers  A shipping company has a system that captures and handles customers' feedback and complaints  A shipping company responds promptly and fairly to consumer disputes without undue cost or burden  A shipping company makes promises that are fulfilled</p>
	<p><b>1.5 Environmental Management and Eco-efficiency</b>  <i>Not at all important (1) / Extremely important (7)</i></p>
	<p>A shipping company adopts optimal vessel speed practice and routing system  A shipping company uses environmental-friendly materials and equipment (e.g. nontoxic paint, electric deck machine, ballast water system)  A shipping company handles transactions, documentations, and notifications electronically  A shipping company uses clean and low-sulphur fuels for our ships' engines  A shipping company adopts environmental-friendly shipbuilding designs (e.g. improved engine design and waste heat recovery systems)</p>
2. Customer Satisfaction	<p><i>Strongly disagree (1) / Strongly agree (7)</i></p>
Source: Gronholdt et al. (2000)	<p>Overall, we are satisfied with the service of our shipping company  The shipping company's service has exceeded our expectations  The shipping company's service is comparable to the ideal service we have in mind</p>

Table 3.3 Construct, Measures, and Response Anchors for Shippers - continued

Construct	Scales / Measures
3. Service Quality Source: Thai et al. (2014)	<p style="text-align: center;"><i>Not at all important (1) / Extremely important (7)</i></p> A shipping company offers on-time-delivery of shipments A shipping company maintains the condition and quality of shipments A shipping company provides fast delivery of shipments A shipping company shows promptness, empathy, and reliability while communicating with customers  A shipping company ensures its claim handling procedures are user-friendly and fast
4. Willingness to Pay For CSR Source: Zeithaml et al. (1996), Lee et al. (2010), and Hazen et al. (2012)	<p style="text-align: center;"><i>Extremely unlikely (1) / Extremely likely (7)</i></p> We are willing to pay a price premium to reward the shipping company's involvement in CSR We will continue to engage the shipping company for their involvement in CSR even if its price was increased We will continue to engage the shipping company for their involvement in CSR even if its price was higher than its competitors
5. Customer Loyalty Source: Zeithaml et al. (1996)	<p style="text-align: center;"><i>Extremely unlikely (1) / Extremely likely (7)</i></p> We consider the shipping company as our first choice We would recommend the shipping company's service to other companies We would encourage others to use the service of the shipping company We have positive things to say about the shipping company
6. CSR Beliefs Source: Kim and Han (2010)	<p style="text-align: center;"><i>Strongly disagree (1) / Strongly agree (7)</i></p> My company views contributions to the society or environment as desirable My company views contributions to the society or environment as pleasant My stakeholders would want us to engage in corporate social responsibility activities My company has the resources, time, and opportunities to implement and pay for corporate social responsibility activities

### *3.4.3.1 Measures and Scales Development for Shipping Companies*

For the operationalisation of CSR, the thesis followed the recommendations of Schreck (2009) and Turker (2009) by dividing CSR into 5 sub-constructs which represent a firm's responsibilities toward its employees, customers, corporate governance, the general community, and the environment. Subsequently, measures were adapted from the studies of Lu et al. (2009), Lai et al. (2013a), Shin and Thai (2015) to operationalise the sub-constructs of CSR. The aforementioned studies were chosen since the validity and reliability of their CSR measures have been tested and shown to be applicable to maritime transport. The measures were scored on a 7-point scale with 1 equals to 'an extremely small extent' and 7 equals 'to an extremely large extent'.

The measures for customer satisfaction and service quality were adopted from the studies of Gronholdt et al. (2000) and Thai et al. (2014). The measures have been shown to be valid and reliable in the context of maritime transport. Three measures were used to operationalise customer satisfaction. They relate to (1) customers' overall satisfaction, (2) whether the company's shipping services have exceeded their expectations, and (3) whether the company's shipping services are comparable to the ideal services that shippers have in mind. Five measures were used to operationalise service quality. This includes the shipping company's ability to: (1) offer on-time deliveries, (2) maintain the condition and physical quality of shipments, (3) provide fast delivery of shipments, (4) show promptness, empathy, and reliability while communicating with customers, and (5) ensure the shipping company's claim handling procedures are user-friendly and fast. All the measures for customer satisfaction and service quality were scored on a 7-point scale with 1 equals to 'strongly disagree' and 7 equals 'strongly agree'.

The measures for job satisfaction were adopted from the study of Nagy (2002). The study suggested using five measures which include employees' satisfaction with (1) their present work, (2) the present compensation and benefits, (3) the current opportunities for promotions, (4) working with their superiors, and (5) working with

their colleagues. The measures were scored on a 7-point scale with 1 equals to 'strongly disagree' and 7 equals 'strongly agree'.

The construct 'competitive strategy' was divided into two sub-constructs, namely 'low-cost strategy' and 'differentiation strategy'. Thereafter, generic measures drawn from the studies of Yamin et al. (1999) and Ortega (2010) were used to operationalise the sub-constructs. Subsequently, measures that are applicable to maritime transport were drawn from the studies of Panayides (2003) and Lagoudis and Theotokas (2007). For 'low-cost strategy', its measures include (1) optimising capacity utilisation, (2) achieving economies of scale, (3) competitive pricing, (4) negotiating the best price when procuring supplies and services, (5) decreasing the number of service features, and (6) minimising debt financing. For 'differentiation strategy', its measures include (1) providing extensive logistics and customer services, (2) innovation in marketing techniques and methods, (3) building and improving brand identification, (4) spending on advertisements, (5) providing high quality services (e.g. schedule reliability, short transit-time, security and safety of shipment), and (6) focusing on customer relationship management. All measures were scored on a 7-point scale with 1 equals to 'not at all important' and 7 equals 'extremely important'.

The measures for continuous improvement capacity were directly adopted from the study of Aloini et al. (2011) and Huang et al. (2011). Five measures were used to operationalise the construct. They were scored on a 7-point scale with 1 equals 'strongly disagree' and 7 equals 'strongly agree'.

There are no available measures to operationalise the constructs relating to pace and consistency of continuous improvement. Therefore, their conceptual meanings were first comprehended by reviewing the work of Vermeulen and Barkema (2002). Thereafter, measures were adapted from Aloini et al. (2011) to operationalise the constructs. To operationalise the pace of continuous improvement, three measures relating to the pace of sourcing new information, and designing and implementing

continuous improvement programmes for CSR were developed. A 7-point scale with 1 equals 'very rapid' and 7 equals 'very gradual' was used. For consistency of continuous improvement, four measures were developed. They relate to the regularity of obtaining feedback from customers, measuring and reviewing CSR, implementing continuous improvement programmes for CSR, and receiving ideas and suggestions from employees to improve CSR. A 7-point scale with 1 equals 'very irregular' and 7 equals 'very regular' was used.

Lastly, financial performance was operationalised by five measures. They were obtained from the study of Spanos and Lioukas (2001), Brik et al. (2011), and Maletič et al. (2015). The respondents were requested to rate each measure, relative to their competitors in the industry over the past three years, on a 7-point Likert scale where 1 equals 'much worse' and 7 equals 'much better'. Although objective performance data would have been more reliable, prior research has shown that perceptual or subjective performance measures could be reasonable substitutes for objective measures of performance and are noted to have significant correlations with objective measures of performance (Spanos and Lioukas, 2001).

#### *3.4.3.2 Measures and Scales Development for Shippers*

The same measures were used to operationalise CSR, customer satisfaction, and service quality for the survey questionnaire targeted at shippers. However, the response anchors used for CSR and service quality are different. A 7-point scale with 1 equals 'not at all important' and 7 equals 'extremely important' was used for both CSR and service quality.

Willingness to Pay for CSR was operationalised by three measures which were adapted from the study of Zeithaml et al. (1996), Lee et al. (2010), and Hazen et al. (2012). The measures relate to shippers' willingness to (1) pay a price premium to reward the service of the shipping company, (2) continue engaging the shipping company for their involvement in CSR even if its price was increased, and (3) continue

engaging the shipping company for their involvement in CSR even if its price was higher than its competitors. They were scored on a 7-point scale with 1 equals 'extremely unlikely' and 7 equals 'extremely likely'.

The measures for customer loyalty were adopted from the study of Zeithaml et al. (1996). The measures consider the likelihood of which shippers (1) would consider the shipping company they engage as their first choice, (2) would recommend the shipping company's services to other companies, (3) would encourage others to use the services of the shipping company, and (4) have positive things to say about the shipping company. They were scored on a 7-point scale with 1 equals 'extremely unlikely' and 7 equals 'extremely likely'.

Finally, measures for CSR beliefs were adapted from the study of Kim and Han (2010). The measures consider the extent to which shippers agree that (1) their company views contributions to the society or environment as desirable, (2) their company views contributions to the society or environment as pleasant, (3) their stakeholders would want them to practise corporate social responsibility activities, and (4) their company has the resources, time, and opportunities to implement and pay for corporate social responsibility activities. They were scored on a 7-point scale with 1 equals 'strongly disagree' and 7 equals 'strongly agree'.

#### **3.4.4 Survey Administration and Demographics of Respondents**

The aforementioned constructs and measures were incorporated into the survey questionnaires for shipping companies and shippers. Prior to the main survey administration, a pilot test was carried out on shipping companies because new measures were developed for constructs such as pace and consistency of continuous improvement. The pilot test for shippers was omitted as the measures employed are standard and are commonly used in the existing literature.

A pilot test was conducted on 103 working professionals in the maritime transport industry. They were acquainted with the author, supervisor, or had attended maritime public lectures organised at the Nanyang Technological University over the past years. E-mails were sent to them for the completion of the questionnaire. The respondents represent 56 shipping firms. Multi-responses from a single firm are allowed since the purpose of the pilot test is to provide a preliminary assessment of the (1) reliability and validity of the measures, and (2) the hypotheses of the thesis. Pilot tests were omitted for shippers as no new measures were developed

Subsequently, a full population sampling was conducted on both shipping companies and shippers in Singapore. The main survey administration was performed over a period of 13 months from February 2015 to March 2016. Prior to the survey administration, the survey questionnaires for both shipping companies (Appendix B) and shippers (Appendix C) were created using Survey Monkey™. It is an online software that designs, administers, manages, and collects survey questionnaires. Thereafter, invitation e-mails with unique identifiers were sent to the addresses of the sampling frames via Survey Monkey™. Each e-mail was customised and addressed to a specific person in the company to improve response rate. In the event of rebound emails, the email addresses were replaced by searching for alternatives from the online directories or companies' websites. Monthly reminders were sent to the recipients who had not responded. At every interval of four months, the recipients of the companies which had not responded were replaced and their email addresses were updated accordingly.

The survey administration on shipping companies yields 223 usable responses, resulting in a response rate of approximately 14%. The demographics of the respondents are summarised in Table 3.4. The majority (82%) of the respondents held at least a managerial title in their company. In addition, they (80%) possessed at least 5 years of experience working for the shipping companies that they were representing.

This indicates that the respondents were fairly qualified to answer the questionnaires on behalf of their companies.

**Table 3-4 Demographic Profile of Respondents (Shipping Companies)**

<b>Demographic information</b>	<b>Number of respondents (n = 223)</b>	<b>Percentage (%)</b>
<i>Job title</i>		
Director and above	63	28
Manager	120	54
Non-management or specialist	40	18
<i>Function</i>		
Operations or Logistics	88	39
Technical including health, safety and environment	39	17
Marketing	44	20
Others	52	23
<i>Years of experience</i>		
Above 10	53	24
5 to 10	125	56
Less than 5	44	20
<i>Type of firm</i>		
Dry and liquid bulk shipping <sup>1</sup>	124	56
Container shipping <sup>2</sup>	99	44

Note: <sup>1</sup> dry and liquid bulk shipping firms are ship operators that transport unpackaged commodity cargo in large quantities. The cargo could be in liquid or granular form such as petroleum, crude oil, grain, coal, or gravel. <sup>2</sup> container shipping firms are ship operators that transport containerised cargoes. The types of containers include dry freight, flat rack, reefer, bulk, tank, open top, and ventilated containers.

The survey administration on shippers yields 212 usable responses, resulting in a response rate of approximately 8.7%. The profiles and characteristics of the sample are summarised in Table 3.5. Of the 212 responses, 59.4% were manufacturers and 40.6% were freight forwarders. A majority of the survey respondents were working in the logistics department (41%) and held managerial titles (67.9%). In addition, 58% of the respondents possessed at least five years of working experience in the industry. This

indicates that they were fairly qualified to answer the survey questionnaires on behalf of their companies.

**Table 3-5 Demographic Profile of Respondents (Shippers)**

<b>Demographic information</b>	<b>Number of respondents (n = 212)</b>	<b>Percentage (%)</b>
<i>Job title</i>		
Director and above	31	15
Manager	113	53
Non-management or specialist	68	32
<i>Function</i>		
Logistics	87	41
Strategy or Quality	46	22
Trading	23	11
Others (e.g. procurement or marketing)	56	26
<i>Years of experience</i>		
Above 10	56	26
5 to 10	67	32
Less than 5	89	42
<i>Type of firm</i>		
Manufacturers	126	59
Freight forwarders	86	41

### 3.4.5 Statistical Analyses

The central tenet of the thesis centres on the study of contingency fit, which is discussed next. This section is divided into two parts. The first part of this section reviews the statistical methods for ascertaining the reliability and validity of the measures. Establishing reliability and validity of the measures is a precursor to analysing contingency fit. The second part of this section reviews the methods that are commonly adopted by existing studies to analyse contingency fit. It should be noted that there is no best method in the study of contingency fit. Instead, the choice of the

method is influenced by the complexity of the analysis (e.g. the number of contingency variables to be analysed) or the nature of the hypothesis.

#### *3.4.5.1 Reliability and Validity of Measures*

The aim of the thesis is to develop measures that are both reliable and valid. The subsequent sub-sections provide an in-depth review of the concept of reliability and validity. This includes justifying the methods which are adopted by this thesis to control and test the reliability and validity of the developed measures presented in Tables 3.3 and 3.4.

#### *3.4.5.2 Methods for Analysing Reliability of Measures*

Reliability refers to the degree to which test scores are free from errors of measurement (Pedhazur and Schmelkin, 2013). Two kinds of errors may occur in the process of measurement: unsystematic and systematic. Unsystematic errors are random errors that vary upon repeated measurements whereas systematic errors are constants that recur upon repeated measurements. As far as systematic errors are concerned, results of repeated measurements will be consistent and hence, contributing to reliability of measurements. It is, however, important to recognise that systematic errors have offsetting effects on validity, which will be discussed later.

In general, an observed score is conceived of as consisting of two components – a true component and an error component, which is expressed in Equation 3.1:

$$X = T + E \quad (3.1)$$

where X is the fallible, observed score; T is the true score; and E is the random error. Conceptually, the true score can be thought of as the score that would be obtained under ideal or perfect conditions of measurement. For this equation, it is assumed that

the traits measured are constant (i.e. the true score does not change upon repeated measurement of a single subject) and the measurement errors are random.

Given that a set of observed scores were obtained from a population, the observed variance can be expressed as the variance of the sum of true and error scores (Pedhazur and Schmelkin, 2013):

$$\begin{aligned}\sigma_x^2 &= \sigma_{(t+e)}^2 \\ &= \sigma_t^2 + 2\sigma_{te} + \sigma_e^2\end{aligned}\quad (3.2)$$

where  $\sigma_t^2$  = the variance of true scores;  $\sigma_e^2$  = the variance of errors;  $\sigma_{te}$  = covariance of true and error scores. However, the correlation between true and error scores is zero due to the latter being random. Therefore,

$$\sigma_x^2 = \sigma_t^2 + \sigma_e^2 \quad (3.3)$$

The properties of the correlation between observed scores and true scores ( $r_{xt}$ ) can be expressed as follow (Pedhazur and Schmelkin, 2013):

$$\begin{aligned}r_{xt} &= \frac{\sum(t+e)t}{N\sigma_x\sigma_t} \\ &= \frac{\sum t^2 + \sum te}{N\sigma_x\sigma_t} \\ &= \frac{\sigma_t^2 + \sigma_{te}}{\sigma_t\sigma_x}\end{aligned}$$

[because  $\sigma_{te} = 0$ ]

$$= \frac{\sigma_t^2}{\sigma_t \sigma_x} = \frac{\sigma_t}{\sigma_x} \quad (3.4)$$

where  $t = T - \bar{T}$ ;  $e = E - \bar{E}$ ;  $N$  = number of observations. As shown in equation 3.4, the correlation between observed scores and true scores is equal to the ratio of the standard deviation of true scores to the standard deviation of observed scores. Accordingly, the squared correlation is (Pedhazur and Schmelkin, 2013):

$$r_{xt}^2 = r_{xx} = \frac{\sigma_t^2}{\sigma_x^2} \quad (3.5)$$

where  $r_{xx}$  = reliability of measure X. This equation reflects the definition of reliability of a measure which is the ratio of true score variance to observed score variance. Substituting Equations (3.3) into (3.5), an alternative expression of reliability is:

$$\begin{aligned} r_{xt}^2 = r_{xx} &= \frac{\sigma_x^2 - \sigma_e^2}{\sigma_x^2} \\ &= 1 - \frac{\sigma_e^2}{\sigma_x^2} \end{aligned} \quad (3.6)$$

From the equation, it can be seen that the reliability can range from 0 to 1. A value of 1 indicates that all of the observed variance is due to true score variance i.e. no random errors of measurement. At the other extreme, when all the observed variance is due to random errors, the reliability is 0. It should be noted that the equation does not distinguish between true variance and systematic error variance. In other words, reliability is the proportion of observed variance that is systematic. For instance,  $r_{xx} = 0.80$  means that 80% of the variance of the observed scores is systematic, whereas 20% of the variance is due to random errors. Therefore, it is important for researchers to ensure that the instrument or measure is free from systematic error during the calibration or measurement stage.

The equations discussed above cannot be used for the estimation of reliability because they include an element that refers to an unobservable i.e. true score variance. In general, the methods that can be used to estimate reliability can be summarised into three broad categories; test-retest, equivalent form, and internal consistency.

The simplest approach to estimate reliability is the test-retest method. According to this approach, a group of subjects is measured twice using the same measure. Subsequently, the two sets of scores are correlated. The estimated correlation coefficient is then taken as the estimate of the reliability of the measure. The assumption underlying this approach is that the unobservable true scores are constant and the correlation is not a perfect estimate of reliability since random errors are unaccounted for by this approach. Clearly, these assumptions are unrealistic as measuring subjects twice in a row with the same measure is particularly prone to biases due to carry-over effects, where the mere act of responding to a set of items the first time influences the responses given the second time. This results in an overestimation of reliability. In addition, the use of the test-retest method to estimate reliability will not be appropriate as repeated measurement of the same participants may create fatigue and could lead to survey attrition.

The second method (i.e. Parallel-forms method) that can be adopted to estimate reliability is the use of equivalent measures. This involves the creation of equivalent measures that are designed to 'measure the same phenomenon' (Sperle et al., 1997). In this case, reliability equates to the correlation between the equivalent measures. The direct advantage over the test-retest method is that this method eliminates the need to conduct repeated tests or surveys on subjects or participants; two equivalent measures of an attribute can be included in a single survey. However, this doubles the length of the survey which again, results in potential fatigue and attrition. In addition, the assumption of measures being parallel is rarely met i.e. measures can only be considered equivalent if they have identical true scores and equal error variances. In

this case, the estimate of reliability reflects not only the reliability but also the extent to which the measures are equivalent.

The last and most common method used to estimate reliability is the test of internal consistency. Internal consistency refers to the degree of interrelatedness among measurement items (Schmitt, 1996). It involves the use of a composite of measures to operationalise a concept. This overcomes the issues of contacting the same individual twice to complete the same measure (in the case of test retest method) or to complete a similar or parallel measure that they have responded earlier (in the case of parallel form test). Three methods are available to estimate internal consistency. They are (1) Spearman-Brown formula, (2) Kuder-Richardson 20, and (3) Cronbach's alpha. Among the three methods, Cronbach's alpha is most commonly-used (Schmitt, 1996). Its formula is presented as follows.

$$\alpha = \frac{k}{k-1} \left[ 1 - \frac{\sum_{i=1}^K \sigma_{Y_i}^2}{\sigma_X^2} \right] \quad (3.7)$$

$k$  = number of measures used to operationalise construct  $X$

$\sigma_{Y_i}^2$  = variance of measure  $i$

$\sigma_X^2$  = variance of sum of all measures

The values of Cronbach's alpha could range from 0 to 1.0. In general, the higher the value, the more reliable are the measures. The widely agreed upon lower limit for Cronbach's alpha is 0.70 (Robinson et al., 1991).

With the increased use of structural equation modelling in management studies, composite reliability (CR) which is another measure of internal consistency has grown in popularity in the recent years. Composite reliability estimates the extent of

commonalities to which a set of measures shares with a construct (Hair et al., 2010). Its formula is presented as follows.

$$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum var(e_i)} \quad (3.8)$$

$\lambda_i$  = correlation between measure  $i$  and the loaded construct  
 $var(e_i)$  = error term of measure  $i$

Similar to Cronbach's alpha, the values of composite reliability could range from 0 to 1.0 (Hair et al., 2010). The widely agreed upon lower limit for composite reliability is 0.70. In this thesis, either Cronbach's alpha or composite reliability will be used to evaluate the reliability of measures or constructs. The choice is driven by the main statistical method that is chosen. In the event where structural equation modelling is employed, composite reliability will be used. In the event where regression analysis is adopted, Cronbach's alpha will be used.

#### 3.4.5.3 Methods for Analysing Validity of measures

Construct validity is defined as the extent to which a set of measures accurately represent its construct. Testing construct validity involves the examination of face validity, convergent validity, and discriminant validity (Zikmund et al., 2012). Table 3.6 provides a short description of each type of validity and the methods that could be used to ascertain them.

Face validity is defined as the extent to which the content of the measures is consistent with the construct definition. Such judgement is usually based on the researcher's own knowledge and opinion. Face validity is to be ascertained during the design of the survey instrument, which occurs prior to the survey administration (Hair

et al., 2010). In addition to relying on the author's own judgement in determining face validity, this thesis draws on the existing literature that has analysed the constructs presented in Appendices B and C. Furthermore, it seeks validation from the users of the survey questionnaires i.e. shipping companies during the interviews.

**Table 3-6 Components of Construct Validity**

<b>Component</b>	<b>Description</b>	<b>Methods</b>
Face validity	The extent to which the content of the measures is consistent with the construct definition, based solely on the researcher's judgement.	Researcher's judgement Literature review Interviews
Convergent Validity	The extent to which indicators of a specific construct converge or share a high proportion of variance in common.	Size of factor loading Average variance extracted
Discriminant Validity	The extent to which a construct is truly distinct from other constructs both in terms of how much it correlates with other constructs and how distinctly measured variables represent only this single construct.	Fornell-Larcker test

Convergent validity refers to the extent to which measures of a specific construct converge or share a high proportion of variance in common (Kline, 2010). There are two ways to test convergent validity. One way is by analysing the size of factor loadings. The size of a factor loading represents the correlation between the measure and its construct. High loadings on a construct would indicate that the measures converge on a common point, i.e. the construct. When standardised, the values of factor loadings could range from -1.0 to 1.0. At the very minimum, the loadings should be statistically significant, or in other words, significantly greater or lesser than zero to show convergent validity (Anderson and Gerbing, 1988). For stronger proofs of convergent

validity, the size of the loadings should be at least 0.5, or ideally higher than 0.7. The square of a standardised factor loading represents how much variance in a measure is explained by the latent construct and is termed the *variance extracted* of the item (Hair et al., 2010). Thus, the variance extracted of a measure with a loading of 0.71 equals 0.50. In short, having a loading of more than 0.70 would indicate that the construct is explaining more than half of the variance in the items with the remaining being error variance.

The other way to test convergent validity is to evaluate the average variance extracted (AVE). It is the mean variance extracted for the factor loadings on a construct and is a summary indicator of convergence validity (Fornell and Larcker, 1981). Its formula is presented below. For strong proof of convergence, AVEs should be higher than 0.5. This would indicate that on average, the construct explains for more than half of the variance in its measures.

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n} \quad (3.9)$$

$\lambda_i$  = correlation between measure  $i$  and the loaded construct

$n$  = number of measures loaded on the construct

Discriminant validity refers to the extent to which a construct is truly distinct from other constructs. High discriminant validity shows evidence that the measures of a construct are unique and capture some phenomena that other measures do not. This thesis employs Fornell-Larcker test to ascertain discriminant validity (Fornell and Larcker, 1981). This test involves comparing the AVEs for any two constructs with the square of the correlation estimate between the two constructs. There is strong evidence of discriminant validity if the AVEs are greater than the squared correlation estimates. The logic is that a latent construct should explain more of the variance in its measures than it shares with other constructs.

### 3.4.5.2 Methods for Studying Contingency Fit

Having ascertained the reliability and validity of measures, studies can proceed with the main analysis which involves the assessment of contingency fit. A synthesis of the literature reveals that the quantitative assessment of contingency fit is linked to the study of interaction or moderation (Hull and Rothenberg, 2008; Brik et al., 2011; Wong et al., 2011; Lai et al., 2013b).

Interaction or moderation exists when the effect of an independent variable (X) on a dependent variable (Y) varies with the magnitude of another variable (Z). Three possible outcomes can be expected from such statistical interactions (Aiken et al., 1991; Cohen et al., 2013). The equation for each outcome is presented as follows.

$$\text{Addictive Model: } Y = b_0 + b_1X + b_2Z + \varepsilon \quad (3.10.1)$$

$$\text{Compensatory Model: } Y = b_0 + b_1X + b_2Z - b_3XZ + \varepsilon \quad (3.10.2)$$

$$\text{Synergistic Model: } Y = b_0 + b_1X_1 + b_2X_2 + b_3XZ + \varepsilon \quad (3.10.3)$$

The first equation (3.10.1) presents a situation whereby the effect of X on Y does not vary with Z due to the lack of an interaction term (XZ). Therefore, it can be inferred that there is no significant interaction between Z and X. Such equation is commonly labelled as an additive model whereby the sum of the individual effects of X and Z on Y equals to their joint (i.e. actual) effect on Y.

The second equation (3.10.2) presents a situation whereby the effect of X on Y diminishes with increasing value of Z. It is referred to as a compensatory model since the marginal contribution of X decreases for every unit increase in Z. Due to the introduction of a negative interaction term in the equation ( $-b_3XZ$ ), the total effect of X and Z on Y is lesser than the sum of their individual effects on Y.

The third equation (3.10.3) presents a situation whereby the effect of X on Y increases with increasing value of Z. Due to the presence of a positive interaction term ( $+b_3XZ$ ) in the equation, the total effect of X and Z on Y is greater than the sum of their individual effects on Y. The interaction is described as synergistic since the interaction between X and Y produces a surplus effect on Y.

Applying these equations to the context where X equates to CSR, Y equates to financial performance, and Z equates to a contingency variable, the fit between X and Z can be determined by the sign of their interaction term. There is neutral fit if no significant interaction is found. There is poor fit if the interaction is negative. Finally, there is good fit if the interaction is positive.

The most common method to estimate the sign and magnitude of an interaction term is by hierarchical regression analysis (Baron and Kenny, 1986; Frazier et al., 2004). The results are often complemented with simple slope analysis to illustrate the interaction effect. The less common method is the use of structural equation modelling multi-sampling approach (Vandenberg and Lance, 2000). Although this method more accurately estimates the parameters by accounting for measurement error, it has limited applications. For example, multi-sampling approach does not have the capability to analyse interactions that is complex (e.g. three-way interactions). Furthermore, unlike hierarchical regression analysis, the interaction effect cannot be illustrated using simple slope analysis.

In this thesis, both methods will be employed. However, the choice of the method will be based on the author's judgement. In the case of complex interactions (i.e. interactions involving more than two first-order variables), hierarchical regression analysis will be used. Otherwise, multi-sampling analysis will be adopted.

### **3.5 Summary**

A three-step approach consisting of literature review, inductive qualitative approach, and deductive quantitative approach was adopted to meet the objectives of this thesis.

The literature review serves three purposes. The first purpose is to provide a review of key topics that are pertinent to this topic. These topics, which are presented in Chapter 2, include CSR, the relationship between CSR and financial performance, and contingency theory. The second purpose is to identify measures to operationalise the constructs for measurement purposes. This is discussed in Chapter 3. The third purpose is for hypotheses development. In this case, more specific topics are reviewed to support the hypotheses of each study which can be found in Chapters 4, 5, and 6.

The inductive qualitative approach comprises preliminary interviews with experts from the maritime transport industry to gain additional insights on the topic and to validate the readability and interpretability of the developed measures, which were to be used for subsequent survey administration. Face-to-face, semi-structured interviews with seven managers from shipping companies were conducted. The structure of the interviews followed a fixed set of questions that are prepared by the author. Additional questions were asked spontaneously when the interviewees mentioned an interesting point.

The deductive quantitative approach adopts a broader, survey-based method to test the hypotheses of this thesis. This includes a discussion of the data collection method, measures selection, survey administration method, demographics of survey respondents, and statistical analysis method for testing reliability, validity, and contingency fit.

First, constructs' measures were selected or adapted from the existing literature. Next, based on the measures, survey questionnaires for shipping companies and shippers were designed. Subsequently, a pilot-test was conducted on 103 maritime professionals who were acquainted with the author or his supervisor, or had attended

past maritime public lectures in Nanyang Technology University. The purpose was to provide a preliminary assessment of the validity or reliability of the measures, and initial testing of the hypotheses. Thereafter, the main survey administration using online surveys was conducted. Accordingly, the survey administration yields 223 and 212 usable responses from shipping companies and shippers. Finally, the methods available for testing contingency fit were reviewed. They are hierarchical regression modelling and multi-sampling analysis. Each method has its own strengths and weaknesses. The former method is more suitable for complex analysis but has weaker estimation accuracy whereas the latter is more suitable for simple analysis but has stronger estimation accuracy. The method employed for each study will be determined by the complexity of its hypotheses.

## CHAPTER 4

# CORPORATE SOCIAL RESPONSIBILITY AND CLASSICAL COMPETITIVE STRATEGIES IN MARITIME TRANSPORT

*This chapter<sup>1</sup> analyses the fit between CSR and the competitive strategies of shipping firms. It proposes that the financial benefits of CSR are contingent on the competitive strategy of shipping firms. Drawing on path dependence theory, this chapter rationalises that there are greater financial synergies when CSR is implemented by a shipping firm that employs a differentiation rather than a low cost competitive strategy. This chapter begins by establishing the background of the research. It then reviews the literature and proposes hypotheses to support its arguments. Thereafter, it draws measures from the survey questionnaire designed for shipping companies (Appendix B). It then analyses the data using confirmatory factor analysis, hierarchical regression analysis, and simple slope analysis. The results are then presented and discussed. Finally, conclusions are drawn.*

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<sup>1</sup> The following conference paper, journal paper, and manuscript are developed from this chapter:

1. Yuen, K.F. & Thai, V.V. (2015) “Corporate social responsibility, competitive strategies, and financial performance in container shipping”, Proceedings of International Association of Maritime Economists Conference, Kuala Lumpur, Malaysia.

2. Yuen, K.F. & Thai, V.V. (2017), “Corporate social responsibility and service quality provision in shipping firms: Financial synergies or trade-offs?”, *Maritime Policy & Management*, Vol. 44, No.1, pp. 131-146. [SSCI]

3. Yuen, K.F., Thai, V.V. & Wong, Y.D. (2017), “Corporate social responsibility and classical competitive strategies in maritime transport: A contingency fit perspective”, *Transportation Research Part A: Policy and Practice*, Vol. 98, pp. 1-13. [SSCI]

## **4.1 Background**

As discussed in Chapter 2, it is no longer justifiable to adopt a universalistic view on the relationship between CSR and firms' profitability (Wood, 2010). In line with this premise, recent research has adopted a contingency approach to study the relationship between CSR and firms' profitability (Lai et al., 2013b; Gunasekaran et al., 2015). Contingency theory opposes universalistic theory (Donaldson, 2001), with the former asserting that a firm's financial performance is attributable to the fit between its strategic behaviour, which in this case refers to CSR, and its internal and external environmental conditions. However, an important question of whether the effect of CSR on financial performance is contingent on the configuration of a firm's existing resources and capabilities has been largely ignored.

To address this question, this chapter anchors its arguments on the theoretical grounding of path dependence theory. Stemming from the theory of absorptive capacity, path dependence theory highlights that 'history matters' in how well a company can benefit from engaging new activities (Tang et al., 2012). Through accumulating similar knowledge, building complementary assets, and internal consistency, a firm can gain synergies from related behaviours (Barnett and Salomon, 2012). Drawing on this theory, this chapter proposes that the existing configuration and amount of complementary resources that a shipping firm possesses underpin the amount of financial benefits that a shipping firm can gain from practising CSR. While existing resources of a firm can be configured or bundled into cost or differentiation capabilities (Thompson et al., 2012), this chapter hypothesises that the differentiation strategy synergises better with CSR on account of greater internal (operational) and external (customers) consistencies in their approaches.

To test the hypotheses, this chapter begins by reviewing and synthesising contemporary literature on the link between classical competitive strategies and CSR in maritime transport. Thereafter, the fit between both concepts is reviewed. Measures

were then selected from the survey questionnaire designed for shipping companies. Subsequently, the obtained data were analysed using hierarchical regression modelling and simple slope analysis. Finally, the chapter describes and discusses the results and concludes with the implications, limitations, and recommendations for future research.

## **4.2 Conceptual Framework**

### **4.2.1 Classical Competitive Strategies in Maritime Transport**

According to the resource-base-view framework, the basis for achieving competitive advantage lies in the application or configuration of a bundle of valuable tangible or intangible resources (Thompson et al., 2012).

To obtain a competitive advantage, there are two broad strategies that can be adopted by shipping firms to bundle or configure their resources, capabilities, or value chain activities, and compete in the maritime transport sector (Panayides, 2003; Lindstad et al., 2015). They are cost leadership and differentiation strategies. Although both strategies are important and should be pursued simultaneously by a firm, Porter (1996) stressed that there should be a dominant strategy that takes priority over the other. This is because value chain activities supporting both strategies are to some extent conflicting, and trade-offs are often necessary for a firm to gain a sustainable competitive position in the market. As a result, any firm that is unable to clearly select and execute either low cost or differentiation as its primary competitive strategy is considered 'stuck in the middle', which leads to mediocre performance.

A shipping firm that pursues low cost strategy competes on price, i.e. freight rate or other equivalences. In this case, it adopts a low cost position by achieving economies of scale in operations, centralising facilities and functions, adopting tight financial accounting, minimising service features, adopting lean supply chain management, and minimising expenditures in areas such as advertising, research and development, and

brand-building (Acquaah and Yasai-Ardekani, 2008). Low cost strategy has been widely adopted by the maritime transport sector which is characterised by aggressive mergers and acquisitions, outsourcing of non-core competencies such as ship management activities, integrating with the hinterland transport operators, building larger ships, and adopting fuel efficient engines and ship designs (Brooks, 1993; Van de Voorde and Vanelslander, 2008).

Alternatively, a shipping firm can employ differentiation strategies by incorporating buyer-desired attributes into its service (Kotler and Armstrong, 2010). The attributes must be unique, sustainable, and set the service apart from its rivals. In general, shipping firms can differentiate by improving: (1) time performances such as reliability, speed, and frequency of shipments, (2) customer relationships through brand-building activities, advertising, and providing responsive customer services, or (3) quality such as safety and security of shipments (Lagoudis and Theotokas, 2007; Thai et al., 2014; Shin and Thai, 2015). Successful differentiation allows a firm to charge a premium for its services, increase sales by attracting potential customers, and build customer loyalty.

In general, the aforementioned classical competitive methods or strategies have been shown to positively influence the financial performance of a firm (Panayides, 2003; Lindstad et al., 2015).

#### **4.2.2 Corporate Social Responsibility in Maritime Transport**

In view of the rising competition and stakeholders' growing concerns over issues on sustainability, the maritime transport sector has turned to CSR as a possibility to complement their existing competitive strategies and enhance their financial performance (Pawlik et al., 2012).

There are reasons to believe that CSR offers positive financial returns and complements the aforementioned classical competitive methods. Classical competitive

methods in the maritime transport sector are related to corporate ability which is a measure of a shipping firm's efficiency and effectiveness in producing and delivering its outputs (Brown and Dacin, 1997). On the other hand, CSR reflects a shipping firm's status and activities with respect to its perceived societal and environmental obligations.

In general, the classical competitive strategies are customer-oriented that chiefly focus on satisfying the functional needs of customers. Although contributions from customers constitute the main stream of revenue for maritime transport businesses, other stakeholders may also contribute, at least indirectly, to financial performance (Reuter et al., 2010).

CSR can be viewed as a stakeholder-oriented strategy that is not restricted to satisfying customers (Brik et al., 2011). Stakeholder theory posits that all stakeholders matter, and that a firm should embed their concerns into its operations (Jamali, 2008). It suggests that the needs of shareholders cannot be met without satisfying to some degree the needs of other stakeholders. Satisfying ethical, social, and environmental needs of stakeholders helps garner allegiance, commitment, and support to the cause of a shipping firm which improve financial performance. For example, CSR can be used as a strategy to enhance employee performance (Korschun et al., 2014). Particularly for the maritime transport sector which is experiencing a shortage of qualified seafarers, responsible human resource management policies can attract, motivate, and retain good employees, improve their productivity, and reduce absenteeism (Dahalan et al., 2012). From the institutional perspective, the practice of CSR may also allow shipping firms to enjoy tax rebates. Lastly, CSR disclosure and CSR reporting enhance firms' image and can be used to attract potential green or socially responsible customers and investors (Mackey et al., 2007). It can also boost customers' confidence, loyalty, and commitment towards a shipping firm (Schniederjans and Starkey, 2014).

There is sufficient evidence in the literature to support the business case of CSR in the maritime transport sector. Pruzan-Jorgensen and Farrag (2010) noted that many shippers or global manufacturers are practising CSR. This has important downstream implications for the maritime transport sector which is compelled to improve their corporate social performance. This finding is consistent with several recent studies which noted an increased use of ISO 14000 and 26000, which encompass the voluntary implementation of environmental and social practices as carrier selection criteria in addition to price and logistics performance (Celik, 2009; Matthews, 2010; Yuen and Thai, 2015b).

In summary, the above discussion suggests that there are additional financial benefits from the implementation of CSR regardless of the existing classical competitive methods pursued by a shipping firm.

### **4.2.3 Contingencies in Corporate Social Responsibility**

According to path dependence theory, which is a concept deeply rooted in organisational learning, the amount of benefits that a firm can realise from engaging in an activity is underpinned by the amount of complementary resources and capabilities the firm possesses (Sydow et al., 2009). This theoretical lens thus provides an anchor for the present chapter to propose that the financial benefits of practising CSR could be contingent on a firm's existing capabilities, which are shaped by its strategic orientation towards either low cost or differentiation. In the following subsections, the compatibility of CSR with the strategic orientations of firms is discussed from both the operational and customers' perspectives.

#### *4.2.3.1 Operational fit*

The operational fit between CSR and competitive strategies can be analysed based on the compatibility of value chain activities. Yamin et al. (1999) stated that value chain activities supporting the low cost strategy are qualitatively different from those

supporting the differentiation strategy. The former focuses on lowering cost whenever possible whereas the latter emphasises delivering (even at considerable cost) non-price value to customers. In general, CSR activities which encompass cash donations, usage of cleaner engine fuels, improved employees' benefits, community involvement, and CSR advertisement and disclosure, etc. are costly and increase the non-operational costs of a firm (Barnett and Salomon, 2012; Seo et al., 2015). As a result, practising CSR activities seems to contradict the principles of the low cost strategy (Lueg et al., 2015). Furthermore, practising CSR would require a radical shift from a firm's existing method of competition, which concentrates on improving operational efficiency. This misalignment may erode a firm's cost advantage due to incongruent resources and capabilities, which subsequently lead to a disproportionate increase in costs (Nidumolu et al., 2009).

Comparatively, practising CSR is more likely to synergise with value chain activities that focus on differentiation. First, there are greater similarities in both approaches which involve being responsive to customers' needs at the expense of cost. Moreover, a common yet important component that is linked with CSR or existing differentiation methods is advertisement, which serves to generate positive image and responses from informing customers about the distinct features of a service or firm (Wagner, 2010). Building from the theory of absorptive capacity which is defined as a function of a firm's prior knowledge and its ability to recognise the value of new, external information, assimilate it, and apply it to commercial ends (Lane et al., 2006), this chapter contends that a firm which competes on differentiation has a larger absorptive capacity relating to advertising or communicating its performances to stakeholders. With a larger base of existing, complementary resources, the firm can effectively leverage and transfer its knowledge and capabilities on communicating and advertising the distinct features of its products or services to develop related CSR capabilities such as CSR communication and disclosure.

From the given example, it can be inferred that there are greater opportunities for a firm to capitalise on similarities in their operations and find synergies from combining both types of value chain activities. Therefore, from the operational perspective, greater synergy or fit in operations can be expected from practising CSR for firms employing differentiation as compared to low-cost strategies.

#### *4.2.3.2 Customer fit*

From the customers' perspective, the fit between CSR and competitive strategies can be explained using competitive signalling theory, which is a customer behaviour theory. The theory holds that inconsistent (consistent) information about a firm may signal inferior (superior) competitiveness to customers, which entails subsequent negative (positive) impact on a customer's attitude and behaviour towards a firm and its services (Luo and Bhattacharya, 2006). Applying competitive signalling theory to this context, this chapter proposes that implementing CSR concurrently with low cost strategies may convey conflicting information to customers about a firm that it is compromising its cost advantage. On the other hand, CSR portrays an image that is more consistent with a firm that is employing differentiation strategy.

While there are lack of equivalent case studies from the shipping industry, findings from Kang et al. (2012) provide anecdotal evidence for the above mentioned proposition. The authors conducted their study on the hotel industry. They found that luxury and mid-price hotel guests are more willing to pay premiums for hotels' CSR initiatives as compared to economy hotel guests, after accounting for their incomes. Their findings highlight two groups of individuals with distinct value orientations (Golob et al., 2008). There is a group of individuals who favours their overall satisfaction and experience, and another group who shows preference to price.

According to Chen et al. (1994), price-sensitive customers appraise a service chiefly on its price. As a result, they may ignore peripheral features or attributes including CSR in their appraisal and selection of a service, even though these features

may be personally-relevant to the customers (Golob et al., 2008). This argument concurs with Seo et al. (2015) who observed that high passenger complaint rate, which is an indicator of poor customer satisfaction, has negligible impact on the profitability of budget airlines. It can therefore be inferred that attributes that are not essential to the completion of a service, such as CSR, possess little economic value to price-sensitive customers. Furthermore, an over-investment in CSR may signal inferiority about the firm and that it is sacrificing its cost advantage for corporate social performance.

On the contrary, customers who seek differentiated services value their overall experience and satisfaction with a firm's services rather than price. Their overall experience and satisfaction can be enhanced by CSR. Vlachos (2012) argued that practising CSR positively influences consumers' emotional attachment towards a firm. In addition, it portrays a positive image that customers can identify (i.e. develop a sense of connection), and creates a halo-effect that augments customers' evaluation of a service (Lichtenstein et al., 2004). Consistent with this argument, He and Li (2011) found that CSR positively interacts with service quality, which is a method of differentiation in the maritime transport sector. Their joint effect on financial performance was noted to be greater than the sum of their individual effects which suggests synergies or good contingency fit.

Based on the above discussion from both operational and customers' perspective, the following hypotheses are proposed.

*H<sub>1</sub>: Low cost strategies negatively moderate the effect of CSR on financial performance of a shipping firm.*

*H<sub>2</sub>: Differentiation strategies positively moderate the effect of CSR on financial performance of a shipping firm.*

### 4.3 Measures Selection

The constructs that are to be analysed include CSR, low cost strategy, differentiation strategy, and financial performance. Table 4.1 presents the measures that were drawn from the survey designed for shipping companies (Appendix B).

**Table 4-1 Constructs, Measures, and Response Anchors**

<b>Constructs and Measurement Items</b>	<b>Sources</b>
<i>Corporate Social Responsibility (CSR)</i>	
To an extremely small extent (1) / To an extremely large extent (7)	Chen and Delmas (2011)
CSR1. My company practises equal employment opportunities	
CSR2. My company promotes work-life balance	Lu et al. (2009)
CSR3. My company provides training and education to develop employees' skillsets	
CSR4. My company donates to charitable organisations	
CSR5. My company offers educational scholarships and internships	
CSR6. My company participates in community development	
CSR7. My company provides full transparency of its activities, structure, financial situation, and performance to the public	
CSR8. My company applies high standards for disclosure, accounting, auditing, and social and environmental reporting	
CSR9. My company complies with the tax laws and regulations in all operating countries	
CSR10. My company responds promptly and fairly to consumer disputes without undue cost or burden	
CSR11. My company provides complete and accurate information about our services	
CSR12. My company has a system that captures and handles customers' feedback and complaints	
CSR13. My company uses environmental-friendly materials and equipment (e.g. nontoxic paint, electric deck machine, ballast water system)	
CSR14. My company uses clean and low-sulphur fuels for our ships' engines	
CSR15. My company adopts environmental-friendly shipbuilding designs (e.g. improved engine design and waste heat recovery systems)	
<i>Low Cost Strategy (LCS)</i>	
<i>Not at all important (1) / Extremely important (7)</i>	Yamin et al. (1999)

- LCS1. Optimising capacity utilisation  
 LCS2. Achieving economies of scale  
 LCS3. Competitive pricing  
 LCS4. Decreasing the number of service features  
 LCS5. Negotiating the best price when procuring supplies and services

*Differentiation Strategy (DFS)*

*Not at all important (1) / Extremely important (7)*

- DFS1. Focusing on customer relationship management  
 DFS2. Innovation in marketing techniques and methods  
 DFS3. Building and improving brand identification  
 DFS4. Improving frequency, speed, and reliability of voyage  
 DFS5. Improving safety and security of shipments

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<i>Financial Performance (FPE)</i>	Brik et al.
Much worse (1) / Much better (7)	(2011)
FPE1. Return on investment	
FPE2. Sales growth	Maletič et al.
FPE3. Profit growth	(2015)

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## 4.4 Results

### 4.4.1 Construct Reliability and Validity

Confirmatory factor analysis was performed on the survey data to establish construct reliability and validity. The standardised factor loadings ( $\lambda$ ), t-values, average variance extracted (AVE), and composite reliability (CR) of the constructs and measures are presented in Table 4.2. The AVE, correlations, and squared correlations of the constructs are presented in Table 4.3.

As shown in Table 4.2, the CR of the constructs are above the recommended guideline of 0.7 which suggests that the measures are reliable. Next, the standardised factor loadings are all significant and the AVE of the constructs are above 0.50. This indicates that the measures are interrelated and converged on their loaded constructs, which suggests convergent validity. As shown in Table 4.3, the AVE of the constructs are greater than the squared correlations of the constructs. This indicates that the measures are better explained by their loaded constructs than the others. This suggests

distinctiveness of constructs and provides evidence of discriminant validity. The above analysis suggests that the measurement items are valid and reliable. Therefore, this chapter can proceed to test its hypotheses.

**Table 4-2 Confirmatory Factor Analysis**

Construct	Measure	$\lambda$	t-value	AVE	CR
CSR	CSR1	0.71	-	0.51	0.94
	CSR2	0.72	10.93		
	CSR3	0.69	10.69		
	CSR4	0.70	10.76		
	CSR5	0.73	11.32		
	CSR6	0.69	10.71		
	CSR7	0.71	11.01		
	CSR8	0.70	10.78		
	CSR9	0.71	10.92		
	CSR10	0.71	11.02		
	CSR11	0.70	10.86		
	CSR12	0.76	11.56		
	CSR13	0.76	11.74		
	CSR14	0.74	11.46		
	CSR15	0.72	11.07		
LCS	LCS1	0.72	-	0.56	0.86
	LCS2	0.75	10.94		
	LCS3	0.72	10.63		
	LCS4	0.82	11.83		
	LCS5	0.72	10.56		
DFS	DFS1	0.72	-	0.56	0.86
	DFS2	0.73	10.69		
	DFS3	0.71	10.37		
	DFS4	0.82	11.38		
	DFS5	0.75	11.04		
FPE	FPE1	0.84	-	0.65	0.85
	FPE2	0.81	13.37		
	FPE3	0.77	12.84		

Notes: Model fit statistics:  $\chi^2 = 458.97$ ,  $df = 344$ ,  $\chi^2/df = 1.33$ ,  $p < 0.01$ ; CFI = 0.97, TLI = 0.97, SRMR = 0.04, RMSEA = 0.036,  $0.027 < RMSEA < 0.045$  at 90% confidence interval.

**Table 4-3 Average Variance Extracted, Correlations, and Squared Correlations of Constructs**

	1	2	3	4
1. CSR	<b>0.51<sup>a</sup></b>	0.28 <sup>c</sup>	0.14	0.26
2. LCS	0.53 <sup>b*</sup>	<b>0.56</b>	0.20	0.45
3. DFS	0.38*	0.45*	<b>0.56</b>	0.53
4. FPE	0.51*	0.67*	0.73*	<b>0.65</b>

Notes: \* significant at 95% confidence level,

<sup>a</sup> average variance extracted values are along the main diagonal,

<sup>b</sup> correlations between constructs are below the main diagonal,

<sup>c</sup> squared correlations between constructs are above the main diagonal.

#### 4.4.2 Hierarchical Regression Analysis

This chapter hypothesises that there is poor fit between CSR and low cost strategies, whereas there is good fit between CSR and differentiation strategy in driving financial performance. The assessment of contingency fit is commonly linked to the study of interactions (Hull and Rothenberg, 2008; Brik et al., 2011; Lai et al., 2013b). There is poor fit when the interaction between CSR and a competitive strategy is negative. On the other hand, there is good fit when such an interaction is positive.

Hierarchical regression modelling has been widely used by existing research to test contingency or interaction effects (Frazier et al., 2004; Field, 2013; Yuen and Thai, 2015a). It involves a systematic, stepwise entry of independent variables into the regression model. This allows the model to control for endogeneity and the main effects of the core variables prior to the examination of their interaction effects.

Three models were developed to systematically test the hypotheses of this chapter. Accordingly, the statistical equations of the models are

$$\text{Model 1: } FP_i = B_0 + B_1\text{Size}_i + B_2\text{Sector}_i + e_i \quad i = 1, \dots, 223 \quad (1)$$

$$\begin{aligned} \text{Model 2: } FP_i = B_0 + B_1\text{Size}_i + B_2\text{Sector}_i \\ + B_3\text{Cost}_i + B_4\text{Diff}_i + B_5\text{CSR}_i + e_i \quad i = 1, \dots, 223 \end{aligned} \quad (2)$$

$$\begin{aligned} \text{Model 3: } FP_i = B_0 + B_1\text{Size}_i + B_2\text{Sector}_i + B_3\text{Cost}_i + B_4\text{Diff}_i + B_5\text{CSR}_i \\ + B_6\text{CSR}_i\text{Cost}_i + B_7\text{CSR}_i\text{Diff}_i + e_i \quad i = 1, \dots, 223 \end{aligned} \quad (3)$$

where subscript  $i$  represents the  $i^{\text{th}}$  observation,  $B_0$  is the regression constant,  $B_i$  is the regression coefficient, and  $e$  is the residual.

The purpose of Model 1 is to control for endogeneity or misspecification. It comprises control variables which include firm size ( $\text{Size}_i$ ) and sector ( $\text{Sector}_i$ ). Both variables are commonly used by past research to control for endogeneity and demonstrated to significantly influence financial performance (Hull and Rothenberg, 2008; Schreck, 2009; Youn et al., 2015). Model 2 extends Model 1 by including the three core variables, which are low cost strategy ( $\text{Cost}_i$ ), differentiation strategy ( $\text{Diff}_i$ ), and CSR ( $\text{CSR}_i$ ). The purpose of Model 2 is to account for the main linear effects of the core variables. Finally, Model 3 extends Model 2 by including two interaction variables i.e. the interaction between cost strategy and CSR ( $\text{CSR}_i\text{Cost}_i$ ), and the interaction between differentiation strategy and CSR ( $\text{CSR}_i\text{Diff}_i$ ). The purpose of Model 3 is to test  $H_1$  and  $H_2$  which involve assessing the contingency fit between a firm's CSR and its strategic orientation.

Table 4.4 presents the results generated from hierarchical regression analysis. Model 1 shows that the control variables accounted for 22% ( $R^2=0.22$ ) of the variance

in financial performance. Accordingly, both firm size ( $B_1=0.34$ ,  $p<0.05$ ) and sector ( $B_2=0.31$ ,  $p<0.05$ ) have a positive, significant effect on financial performance. The  $R^2$  of the model is considered acceptable and comparable to other studies. For instance, the  $R^2$  of the control models of Brik et al. (2011) and Schreck (2009) are 0.13 and 0.04 respectively. The  $R^2$  of Model 1 is considerably larger than those in Brik et al. (2011) and Schreck (2009), probably because firm size (i.e. achieving economies of scale) explains for financial performance more in the shipping industry.

**Table 4-4 Hierarchical Regression Analysis using Financial Performance as Outcome Criterion**

Predictor	Model 1		Model 2		Model 3		Hypothesis
	$\beta$	t-value	$\beta$	t-value	$\beta$	t-value	
<b>Control Variables</b>							
Firm size <sup>a</sup>	0.34	4.78	0.16	3.62	0.16	3.77	
Sector <sup>b</sup>	0.31	4.44	0.15	3.63	0.13	3.22	
<b>Main Effects</b>							
Cost			0.30	5.57	0.36	6.02	
Differentiation			0.48	10.08	0.50	10.28	
CSR			0.16	2.95	0.11	1.99	
<b>Interaction Effects</b>							
CSR x Cost					-0.10	-2.11	H <sub>1</sub> accepted
CSR x Differentiation					0.12	2.82	H <sub>2</sub> accepted
$R^2$	0.22		0.74		0.76		
$\Delta R^2$			0.52		0.02		
$\Delta F$	22.60		103.20		5.67		
Sig. $\Delta F$	<0.01		<0.01		<0.01		

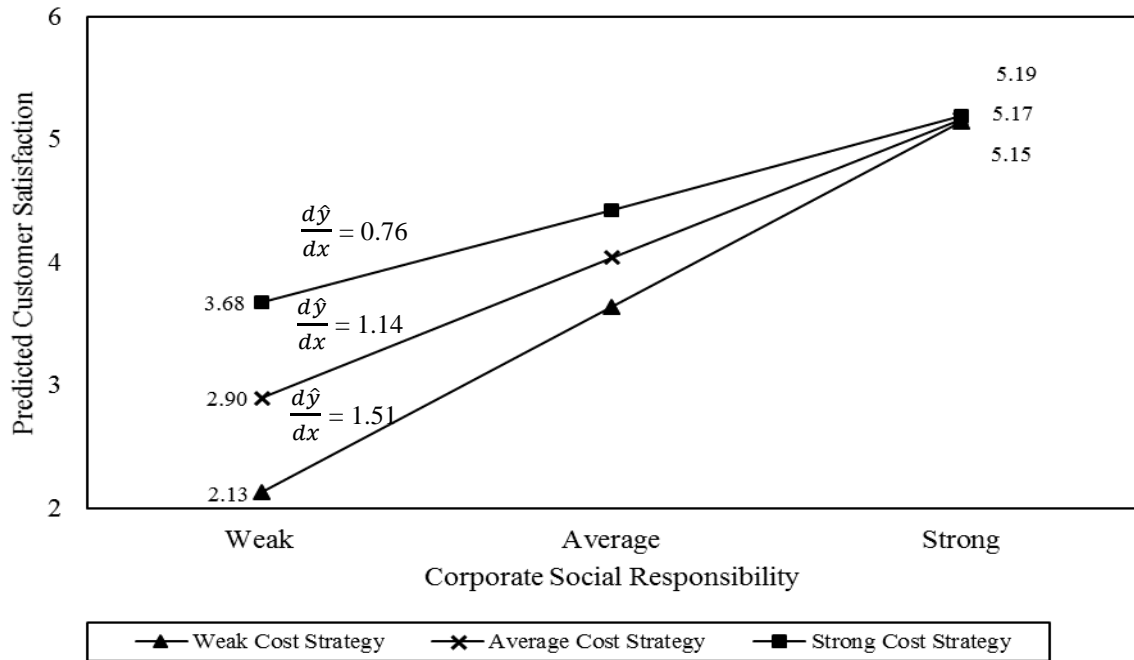
Note: <sup>a</sup> firm size is a dichotomous variable with '1' representing large firms and '0' representing small firms. Firms with less than or equal to 200 employees are classified as small firms whereas firms with more than 200 employees are classified as large firms (Tordesillas, 2011). <sup>b</sup> sector is a dichotomous variable with '1' representing bulk shipping firms and '0' representing container shipping firms.

Comparing between Model 1 and Model 2, wherein the former is nested in the latter, the inclusion of low cost strategy, differentiation strategy, and CSR significantly reduces the unexplained variance of financial performance (Sig.  $\Delta F<0.01$ ). Therefore, Model 2 is accepted. Collectively, the variables in Model 2 accounted for 74% ( $R^2=0.74$ ) of the variance in financial performance. The effects of low cost ( $B_3=0.30$ ,  $p<0.05$ ) and differentiation strategies ( $B_4=0.48$ ,  $p<0.05$ ) on financial performance are

considered large. Comparatively, the effect of CSR on financial performance is considered small ( $B_5=0.16$ ,  $p<0.05$ ).

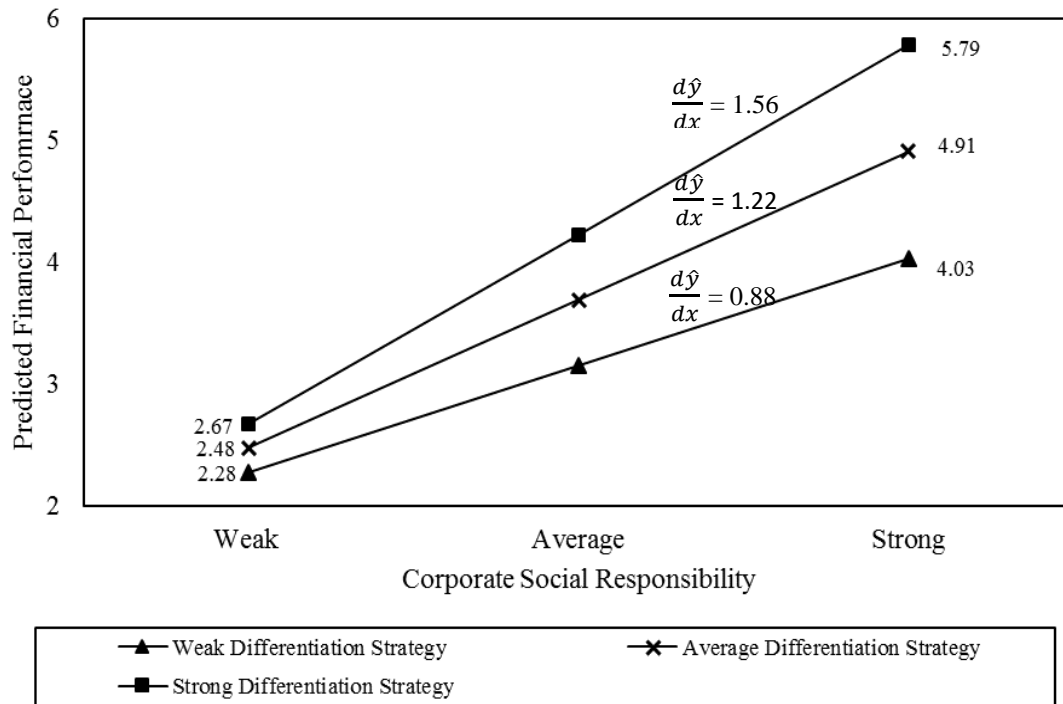
The addition of two interaction variables in Model 3 increases the  $R^2$  of financial performance by 0.02. The change in F-value is significant ( $p<0.01$ ) which indicates a significant reduction in the unexplained variance of financial performance. The interaction between cost strategy and CSR is negative and significant ( $B_6=-0.10$ ,  $p<0.05$ ) which suggests financial trade-offs or poor contingency fit. Therefore,  $H_1$  is accepted. On the other hand, the interaction between differentiation strategy and CSR is positive and significant ( $B_7=0.12$ ,  $p < 0.05$ ), which indicates financial synergies or good contingency fit. Therefore,  $H_2$  is accepted.

Simple slope analyses were conducted to further illustrate the contingency effect of a shipping firm's strategic orientation on the relationship between CSR and financial performance (Figures 4.1 and 4.2). As shown in both figures, all variables were converted into categorical variables with the scale 'weak' representing observations that are one standard deviation below their means, 'average' representing those that are within one standard deviation of their means, and 'strong' representing those that are one standard deviation above their means. Subsequently, regression lines were plotted for each level of low cost and differentiation strategy.



**Figure 4.1 Regression of Financial Performance on CSR at Three Levels of Cost Strategy**

In both figures, the correlation between CSR and financial performance ( $d\hat{y}/dx$ ) varies with the strength of a firm's strategic orientation. All correlations are positive which suggest that CSR contributes positively to financial performance regardless of the strategic orientation of a firm. However, Figure 4.1 shows that the correlation weakens when a shipping firm increases its focus towards building cost capabilities ( $d\hat{y}/dx$  decreases from 1.51 to 0.76). This suggests negative interactions or trade-offs, which support H<sub>1</sub>. The trade-off effect is most noticeable at high levels of CSR. In this case, a weak or strong strategic orientation towards building cost capabilities only make a slight difference in the predicted financial performance ( $\hat{y}_{WS} = 5.15$  versus  $\hat{y}_{SS} = 5.19$ ).



**Figure 4.2 Regression of Financial Performance on CSR at Three Levels of Differentiation Strategy**

On the other hand, Figure 4.2 shows that the correlation strengthens when a shipping firm increases its focus towards building differentiation capabilities ( $d\hat{y}/dx$  increases from 0.88 to 1.56). This suggests positive interactions or synergies, which support H<sub>2</sub>. Synergies are most noticeable at high levels of CSR. In this case, a shipping firm with strong strategic orientation towards differentiation experiences a sharp increase in financial benefits as compared to another with a weak orientation ( $\hat{y}_{WS} = 4.03$  versus  $\hat{y}_{SS} = 5.79$ ).

## 4.5 Discussion

The results present several interesting findings which are worthy of further discussion. First, the classical competitive strategies in the maritime transport sector, which have been classified into low cost or differentiation dimensions in this chapter, can be

considered to be the key contributors of financial performance. This finding corroborates with previous studies which have obtained similar results (Lagoudis et al., 2006; Lindstad et al., 2015). From the resource-based perspective, this chapter suggests that developing resources and capabilities related to cost, and differentiation by customer relationship, time performance, and quality should be the key priorities of shipping firms.

Apart from these classical competitive strategies, it was found that a shipping firm's involvement in CSR further strengthens financial performance. This suggests that CSR complements rather than dilutes the existing cost and differentiation capabilities of shipping firms. This new finding reinforces stakeholder theory which posits a positive relationship between the management of stakeholder groups and profitability (Donaldson and Preston, 1995). Contrary to classical competitive strategy which focuses primarily on meeting customer needs, CSR adopts a broader perspective that emphasises satisfying stakeholders' needs (Orlitzky and Swanson, 2008). As supported by this research, addressing social and environmental concerns of stakeholders strengthens relationships and commitment, and builds goodwill and a positive image which subsequently leads to improved financial outcomes.

However, the financial impact of CSR is considerably smaller as compared to the classical competitive strategies. This finding suggests a staggered approach to competing in the maritime transport sector. Shipping firms should sequentially develop and improve existing resources and capabilities supporting their core competitive strategy followed by CSR. As shown in both Figures 4.1 and 4.2, practising CSR when a strong low cost ( $\hat{y} = 5.19$ ) or differentiation strategy ( $\hat{y} = 5.79$ ) is in place results in the highest predicted financial performance amongst all other combinations.

The results also indicate that the effect of CSR on financial performance is contingent on the competitive strategy of a shipping firm. As depicted in Figure 4.1, CSR has an average effect of 1.14 on financial performance when a shipping firm is

employing a low cost strategy. On the other hand, as illustrated in Figure 4.2, CSR has an average effect of 1.22 on financial performance when a shipping firm is employing a differentiation strategy. The higher value in the latter implies that there are more financial benefits for firms employing differentiation as its primary competitive strategy to practise CSR.

Drawing on contingency theory which states that the level of fit determines performance, this chapter attributes the additional financial benefits to greater congruency or fit between CSR and differentiation strategy. Firstly, from the operational perspective, there is greater compatibility between CSR and differentiation strategy since they focus on configuring value chain activities that are responsive to customers' needs and at the expense of cost. On the contrary, there are less compatibility between CSR and a low cost strategy since the latter focuses on improving operational efficiency and offering the lowest price in the market. In general, CSR increases the non-operating cost of shipping firms, which contradicts the principle of low cost strategy (Barnett, 2007; Seo et al., 2015). Secondly, aligned with competitive signalling theory, CSR conveys to customers a more consistent image when firms are competing based on differentiation rather than low cost. Customers who seek differentiated services value their overall experience and satisfaction with a service, and these can be enhanced through CSR. On the contrary, customers who seek low cost services are price-sensitive and may find CSR less relevant in their evaluation and selection of a service. Furthermore, practising CSR may signal negative information to customers that a firm is sacrificing its cost advantage for better corporate social performance.

Consistent with the above arguments, it was found that the utility of CSR diminishes when a shipping firm increases its strategic orientation towards building cost capabilities. On the other hand, the utility of CSR increases when a shipping firm increases its strategic orientation towards building differentiation capabilities. This reinforces path dependence theory which states that the amount of financial benefits

that can be realised from engaging an activity is underpinned by the amount of complementary resources and capabilities of a firm. Firms with a strong focus on differentiation have a large pool of complementary resources, capabilities, and capacities to leverage on in the implementation of CSR. However, firms with a strong focus on building low cost capabilities possess a large pool of resources that is inconsistent with CSR. This explains the synergistic interaction or positive fit between CSR and differentiation strategy and trade-offs or negative fit between CSR and cost strategy.

Overall, the results showing that CSR negatively moderates the relationship between cost strategies and financial performance ( $H_1$ ), and CSR positively moderates the relationship between differentiation strategies and financial performance ( $H_2$ ) are consistent with CSR research conducted on the fashion and apparel industry. Lueg et al. (2015) found that most apparel firms adopting a low-cost business model are not practising CSR. Similarly, in the study of (Doorey, 2011), the author investigated the reasons why the fashion and apparel company Nike introduced CSR, which included, e.g., disclosing most of its suppliers. The author explained that Nike's reputational business model focuses not on low costs, but on creating value for customers i.e. differentiation through brand awareness and identification with international sports stars, whom Nike sponsors with multi-million dollar contracts. The author also explains that CSR has less appeal for fashion companies with low cost business models. These companies aim at providing inexpensive products to customers who care little about sustainability, impressive brand names or premium prices.

The results are also consistent with CSR research conducted on passenger airlines. Seo et al. (2015) reported that high passenger complaint rate, which is an indicator of poor customer satisfaction, has negligible impact on the profitability of budget airlines. In addition, their results indicate a positive synergistic financial effect of service quality (i.e. a form of differentiation) and CSR on full-service carrier. On the other hand, their

results indicate a trade-off financial effect of service quality and CSR on low-cost carriers. To some extent, the results support the chapter's hypotheses.

## **4.6 Conclusion**

This chapter analyses the contingency effect of a shipping firm's competitive strategy on the relationship between CSR and financial performance. Drawing on contingency and path dependence theories, this chapter hypothesises that firms adopting differentiation as their primary competitive strategy receive greater financial benefits as compared to others adopting a low cost strategy. An internet survey was distributed to 223 shipping firms operating in Singapore and the obtained data were analysed using hierarchical regression modelling and simple slope analysis. The results showed that classical competitive methods in maritime transport, which can be categorised into low cost or differentiation strategies, are strong contributors of financial performance. The practice of CSR further contributes to financial performance, but its effect on financial performance is modest in comparison with the classical competitive strategies. The results also revealed that the effect is stronger when firms are employing differentiation strategies rather than low cost strategies. In addition, the effect is augmented when a firm increases its strategic orientation towards differentiation, which suggests synergies. However, the effect is dampened when a firm increases its strategic orientation towards low cost, which suggests trade-offs.

This results contribute to theory in several ways. Firstly, they support the business case of CSR in the maritime transport sector. Specifically, findings from this research shed some light to the on-going debate of whether the practice of CSR contributes financially to a shipping firm. The results reinforce stakeholder theory which suggests a positive connection between profitability and the management of stakeholder relationships through practising CSR.

Secondly, the results of this chapter complement and enrich previous research that introduces moderators to explain the differential effect of CSR on financial performance. Grewatsch and Kleindienst (2015) noted a lack of theory in the current development of moderators regarding the relationship between CSR and financial performance. In addition, most research has built their arguments on stakeholder theory and resource-based view, which are presently inadequate in explaining the effect of specific moderators. This chapter provides an alternative or extended view of the relationship between CSR and financial performance through the theoretical lens of contingency theory. In addition, it draws on path dependence theory to reinforce the theoretical framework of contingency theory in the context of CSR.

Thirdly, this chapter also highlights the importance of achieving fit between CSR and the underlying competitive strategy of a firm, which ultimately, drives profitability. This argument corresponds to the concept of centrality whereby firms should evaluate the congruency of their mission, markets, customer needs, resources, and competitive advantage prior to the design and practice of CSR activities (Porter and Kramer, 2006; Galbreath, 2009). To a large extent, the aforementioned dimensions are shaped by a firm's competitive strategy, which could be oriented towards low cost or differentiation. This chapter further contributes to the literature by explaining that there are greater benefits for firms employing differentiation as their primary competitive strategy to practise CSR on the theoretical basis of compatibility in value chain activities (operational fit) and competitive signalling theory (customer fit).

This chapter also has managerial implications for the maritime transport sector. Findings from this chapter suggest that CSR is not a one-size-fit-all strategy. The financial benefits that can be obtained from CSR differ across firms and are underpinned by or contingent on the existing amount of complementary resources they possess. Nevertheless, CSR should be actively pursued by shipping companies. As supported by this research, firms with strong CSR have the strongest predicted financial performance regardless of their strategic orientation. However, to maximise

financial performance, firms should first amass resources and capabilities that strengthen their classical competitive strategy such as low cost, and differentiation via time performance, customer relationships, and quality prior to implementing CSR. In addition, shipping firms which compete primarily on differentiation should place greater emphasis on CSR due to good contingency fit or financial synergies. On the other hand, shipping firms which compete primarily on cost should place less emphasis on CSR due to poor contingency fit or financial trade-offs.

In spite of the contributions, there are a few limitations. Firstly, this chapter has limited its analysis to two-way interactions between CSR and a chosen competitive strategy due to insufficient power of sample size. Future research could consider three-way interactions by considering the joint moderating effect of a firm's low cost and differentiation strategy on the relationship between CSR and financial performance. This will provide stronger managerial implications for shipping firms. Secondly, this chapter has not validated its findings with other sectors or industries. The current findings may only be applicable to the maritime transport sector. Therefore, additional research on the link between CSR and existing competitive strategies of firms can be extended to other industries or sectors for the cross-validation of results. Lastly, this chapters argues on both operational and customer fit to explain the differences in the benefits of implementing CSR for shipping firms employing low-cost and differentiation strategies. While both operational and customer fit have been substantiated theoretically and based on relevant industry case studies, they have not been empirically tested in the current paper. Future studies could validate and test these constructs. For instance, for the assessment of operational fit, shipping firms' perceived compatibility of their adopted competitive strategy and implementation of CSR can be tested. For the assessment of customer fit, shippers' perceived compatibility of their engaged shipping firm's competitive strategy and its involvement in CSR can be evaluated.

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## CHAPTER 5

# SHIPPERS' WILLINGNESS TO PAY FOR CORPORATE SOCIAL RESPONSIBILITY

*In the previous chapter, the internal fit between a shipping firm's involvement in CSR and its competitive strategies was investigated. This chapter<sup>2</sup> analyses the fit between a shipping firm's involvement in CSR and its external environment. In particular, it investigates whether shippers are willing to pay for CSR through the theoretical lens of planned behaviour. This chapter begins by providing background information about the topic. Thereafter, the literature pertinent to the topic is reviewed and hypotheses are proposed. Based on the hypotheses, theoretical and alternative models are developed. Measures are then drawn from the questionnaire designed for shippers (Appendix C). The results are then presented and discussed. Finally, conclusions are drawn based on the results and discussion.*

### 5.1 Background

The intensification of competition in the maritime transport sector and the growing call for sustainability by shippers have motivated a growing number of shipping firms to

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<sup>2</sup> The following conference proceeding and journal papers are developed from this chapter:

1. Yuen, K.F. & Thai, V.V. (2015), "Are customers willing to pay for corporate social responsibility? A study of individual-specific mediators", Proceedings of 18th International Conference in Quality Management and Organisational Development, Seoul, South Korea. [Best Paper Award]
2. Yuen, K.F., Thai, V.V. & Wong, Y.D. (2016), "Are customers willing to pay for corporate social responsibility? A study of individual-specific mediators", Total Quality Management & Business Excellence, Vol. 27, No. 7-8, pp. 912-926. [SSCI]
3. Yuen, K.F., Thai, V.V. and Wong, Y.D. (under review), "An investigation of shippers' satisfaction and behaviour towards corporate social responsibility in maritime transport", Transportation Research Part A: Policies and Practices. [SCI/SSCI]

practise CSR (Hargett and Williams, 2009; Matthews, 2010). Shipping firms' involvement in CSR has been actively disclosed or marketed to customers in an attempt to elicit favourable intentions or behaviours such as increased loyalty, willingness to pay (WTP) premium prices, and decreased attribution of blame in the face of a crisis (Pelozo and Shang, 2011; Pawlik et al., 2012). However, existing results pertaining to customers' WTP for CSR, have been equivocal. While some studies showed that CSR has a positive, statistically significant effect on WTP (Lee et al., 2010; Nielsen, 2014), others argued that in reality, customers are not always prepared to pay a premium for CSR (Manaktola and Jauhari, 2007; Pruzan-Jorgensen and Farrag, 2010; Forbes, 2011).

Attributing to the equivocal results, the existing literature has introduced customer-specific moderators to explain the diversity in customers' responses and attitudes toward CSR. For instance, Sen and Bhattacharya (2001) showed that the effect of CSR on purchase intention is positively moderated by personal support for CSR. More recently, Vecchio and Annunziata (2015) found that certain demographic factors such as age cohort (older), gender (female), and household income (high) have a moderating effect on customers' WTP for CSR. Overall, these highlighted studies are consistent with Wood (2010) who argued that the benefits of CSR are contingent rather than universal.

However, most of the studies have focused on end-consumers; very limited research has examined the relationship between a firm's involvement in CSR and customers' WTP for CSR in a business-to-business (B2B) setting, such as the maritime transport sector (Walker and Phillips, 2008). B2B transactions differ from business-to-consumer (B2C) transactions with the former being more complex since most decisions, including paying a premium to reward a firm's involvement in CSR, are usually made by a group of representatives of an organisation (Tai, 2011). In addition, customers' decision to pay premium prices for CSR is also influenced by its corporate philosophy and strategy (Philipp and Militaru, 2011), and the demands of their stakeholders (Hietbrink et al., 2010). According to Leek and Christodoulides (2012), B2B's decision

process is also more rational than B2C's decision process. Therefore, the emotional and social value provided by CSR may be less relevant in a B2B setting (Lohtia et al., 2003). Table 5.1 shows establish the reasons for emotional and social value being less relevant in a B2B setting.

**Table 5-1 Emotional and Social Value and Their Relevance to B2B Settings**

<b>Value</b>	<b>Description</b>
Emotional	Emotional value is measured by the net positive feelings from the purchase of a product or service. In B2B purchasing processes, buyers require tangible features that they can use to justify their purchase decision (Leek and Christodoulides, 2012). These features are often functional such as performance and quality of the product or service (Doyle and Stern, 2006). In addition, when competing product or service offerings differ greatly, business buyers are more accountable for their choices. Therefore, they tend to pay more attention to functional values and less attention to emotional and social value (Kotler and Armstrong, 2010).
Social	Social value comprises perceived benefits to the environment and community from the purchase or use of a chosen product or service. From a buyer's perspective, the benefits can be measured in relative terms based on forgoing the best alternative. Similar to emotional values, social values are de-emphasised by business buyers as they are held accountable by the management for their choices (Peloza and Shang, 2011). Social value is only recognised by business buyers when products or service offerings such as price and quality are homogeneous in a market (Pruzan-Jorgensen and Farrag, 2010).

Within the studies that examine the relationship between CSR and WTP for CSR in a B2B setting, a majority of them have analysed the conditions or situations where CSR will lead to positive behavioural intentions (Hietbrink et al., 2010; Lee, 2012; Govindan et al., 2014). However, very little attention has been paid to examining the causal factors that trigger the formation of positive behavioural intentions as a result of firms' involvement in CSR. There is growing evidence indicating that the relationship between a company's CSR action and customers' response is indirect (He and Lai, 2014). Recent studies suggest that customers' WTP for CSR is to a large extent

influenced by their beliefs and attitudes towards CSR (Han et al., 2010; Schniederjans and Starkey, 2014). Drawing on the theory of planned behaviour, this chapter aims to contribute to this stream of literature by introducing mediators including customer satisfaction, customer loyalty, and CSR beliefs to analyse the relationship between CSR and WTP for CSR in a B2B setting.

This research can potentially contribute to the marketing literature and practices in a few ways. First, the study of mediators of the relationship between CSR (i.e. a stimulus) and WTP for CSR (i.e. a buyer's response) in the context of maritime transport contributes in filling the gaps pertaining to the lack of attention towards industrial consumption of CSR and can provide B2B marketers with some insights into customers' black box or their decision-making process. Consequently, appropriate strategies can be formulated to elicit positive responses from customers. Next, the results have potential implications for shipping firms' pricing strategies. In general, the implementation and maintenance of CSR activities entail costs (Sprinkle and Maines, 2010). The findings will be valuable for decision-makers to determine whether such costs can be recuperated or profited from customers in the form of price premiums.

## **5.2 Conceptual Framework**

This subchapter reviews the existing literature and presents a network of hypotheses that form the theoretical model of this chapter. Subsequently, an alternative model which comprises a distinct network of hypotheses is introduced. The purpose is to add rigour in the examination of the theoretical model by testing it against another theoretically plausible model.

### **5.2.1 CSR and Customer Satisfaction**

According to the satisfaction-profit chain model, a customer has to be satisfied with a service prior to exhibiting positive behavioural intentions such as WTP a premium for a service (Anderson and Mittal, 2000). Customer satisfaction is defined as a customer's

overall evaluation of a service based on his or her total purchase and consumption experience with the company. Particularly for service firms, customer satisfaction is improved through the management of service quality attributes (Ažman and Gomišček, 2015). However, in recent years, the emphasis is gradually shifting towards the holistic management of customer experiences (Grønholdt et al., 2015). The management of customer experiences provides sensory, emotional, cognitive, behavioural, and relational values which are more memorable and sustainable than functional values that are provided from the traditional management of service quality attributes (Hartono and Raharjo, 2015).

Increasingly, there are studies suggesting that customers are also appraising a firm's contribution to the environment and society in their purchasing or consumption decision. This alternative form of corporate association has been recently linked to customer satisfaction (Galbreath and Shum, 2012). While previous studies discuss how CSR results in customer satisfaction, this chapter focuses its discussion on the unique benefits or values that CSR can contribute to customer satisfaction in addition to service quality or experience. In other words, this chapter argues that the practice of CSR and service quality simultaneously results in greater customer satisfaction.

From synthesising the relevant literature, this chapter identifies four theories to support the positive association between CSR and customer satisfaction. They are perceived value theory, equity theory, institutional theory, and corporate identity theory. A summary of these theories is presented in Table 5.1.

**Table 5-2 Theories Linking CSR to Customer Satisfaction**

<b>Theory</b>	<b>Description</b>	<b>Reference articles</b>
Perceived value theory	A customer derives satisfaction from appraising a composite of value-adding attributes that is attached to a service. Firms' participation in good causes provides functional, emotional, and social values to customers. In addition, the process of	Green and Pelozza (2011) Sen and Bhattacharya

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	identifying, implementing, and communicating CSR activities to customers enhances customer-specific knowledge, and can subsequently result in greater customer satisfaction. Furthermore, values created from CSR can augment customers' evaluation of a product or service.	(2001)
Equity theory	Stemming from social exchange theory, equity theory posits that individuals become satisfied when they are fairly treated. An aspect of CSR relates to equity or fairness. Customers can become more satisfied when a firm engages in socially responsible practices such as ethical treatment of employees, which has positive downstream implications for the fair treatment of customers.	Galbreath and Shum (2012)
Institutional theory	A customer is not only an economic being but also a member of a greater community. As such, customers are not only concerned with their consumption experience but also the impacts of business operations on the environment and the society. Therefore, fulfilling customers' expectations of a firm's contribution to the environment and the society should result in greater customer satisfaction.	Polonsky et al. (2005)
Corporate identity theory	A positive brand creates an identity that enhances customers' evaluation of a firm's service. Apart from service quality, CSR can be viewed as an alternative form of branding in which customers can identify (i.e. develop a sense of connection). Creating a brand that is associated with CSR is particularly effective in satisfying B2B customers that are subjected to greater pressures from stakeholders to practise CSR.	Golob et al. (2008)

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In general, the aforementioned theories indicate that CSR contributes positively to customer satisfaction. Specifically, it appeals to customers' psychosocial needs and seeks to satisfy their moral and social obligations. Therefore, the following hypothesis is proposed.

*H<sub>1</sub>: Corporate social responsibility has a positive direct effect on customer satisfaction in shipping*

As mentioned earlier, service quality has been found to be a strong predictor of customer satisfaction (Yuen and Thai, 2015b). This could potentially distort the effect of CSR on customer satisfaction. As a result, the following hypothesis has been put forward to control for endogeneity.

*H<sub>2</sub>: Service quality has a positive direct effect on customer satisfaction in shipping*

### **5.2.2 Customer Satisfaction and Willingness to Pay for CSR**

Although there has been no prior study that specifically examines the link between customer satisfaction and WTP for CSR, existing research seems to suggest that a satisfied customer may be willing to pay more as a result of a firm's service performance, but not necessarily for corporate social or environmental performance (Manaktola and Jauhari, 2007; Kim and Han, 2010). This indicates that the effect of customer satisfaction on WTP for CSR could be mediated by stronger predictors which have not, to date, been considered by existing studies.

From reviewing the extant literature, this chapter proposes two factors that could potentially mediate the link between customer satisfaction and WTP for CSR. They are customer loyalty and CSR beliefs. The basis for proposing these factors is discussed in the following sub-sections.

#### *5.2.2.1 The Mediating Role of Customer Loyalty*

This chapter posits that the effect of customer satisfaction on WTP for CSR is mediated by customer loyalty. Customer loyalty is defined as a 'deeply held commitment to rebuy or re-patronise a preferred product or service consistently in the future, thereby

causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour (Oliver, 2010 p.434)'.

The marketing literature has provided strong evidence supporting that customer satisfaction has a positive effect on customer loyalty (Shin and Thai, 2015). It has been acknowledged that repeated satisfaction is a key condition, or at least for the initial formation of loyalty (Oliver, 2010). Satisfied customers possess a higher tendency to exhibit loyalty which can be measured from the behavioural or attitudinal perspective (Yao et al., 2015). Behavioural measurements comprise positive, tangible actions such as repurchase or recommendation of products or services to others. On the other hand, attitudinal measurements reflect the emotional and psychological attachment to a brand. They encompass a sense of commitment, engagement, and allegiance to the brand. Based on evidence from the previous literature, the following hypothesis is developed.

*H<sub>3</sub>: Customer satisfaction has a positive direct effect on customer loyalty in shipping*

Previous research has shown that loyal customers are less price sensitive and may overlook minor dissatisfaction or poor service performances (Hazen et al., 2012). The reduced price sensitivity suggests a wider range of price tolerance. As a result, loyal customers are more likely to accept an increase in price to maintain membership or continue engagement with their preferred service provider.

According to Marshall (2010), true loyalty could be irrational or biased. This biasness towards a specific brand is described as a halo effect whereby a consumer's positive attitude towards a brand creates a spill-over effect on his or her assessment of a specific feature of a service or product (Klein and Dawar, 2004). Specifically, the impact of undesirable features such as an increase in price may be under-estimated or neglected, and the positive effect of desirable features such as a firm's involvement in

CSR may be over-estimated. From the discussion, it can be inferred that customers could be willing to pay for CSR given that a strong sense of loyalty or commitment has been developed with the service provider. Therefore, the following relationship is hypothesised.

*H4: Customer loyalty has a positive direct effect on WTP for CSR in shipping*

#### *5.2.2.2 The Mediating Role of CSR beliefs*

This chapter also proposes that CSR beliefs mediate the link between customer satisfaction and WTP for CSR. This assertion is derived from the theory of planned behaviour which predicts and explains human intention and behaviour on a specific context (Ajzen, 1991). According to this theory, individuals are likely to exhibit a specific type of behaviour if they believe that the behaviour will result in a favourable outcome. This belief stemmed from: (1) an individual's attitudes toward the behaviour, (2) subjective norms, and (3) perceived behavioural control (Kim and Han, 2010). These determinants are further elaborated in the next paragraph.

An individual's attitude towards a behaviour represents his or her overall evaluation of a specific behaviour. It is influenced by the perceived favourableness and consequence of engaging the behaviour. Subjective norms refer to an individual's estimate of the social pressures exerted on him or her to engage or not engage a specific behaviour. Finally, perceived behavioural control refers to an individual's perception of the ease or difficulty of conducting the behaviour. In general, these beliefs have been demonstrated to reasonably predict a specific intention or behaviour (Han et al., 2010).

Applying the theory of planned behaviour to the context of CSR and B2B settings, the present study suggests that a customer's CSR belief is an immediate antecedent of WTP for CSR. The decision to pay for CSR is predicated on a customer's attitude towards or management philosophy on CSR, perceived pressures exerted by significant

referents such as its stakeholders or top management, and perceived ease or difficulty of performing the behaviour. Therefore, the following hypothesis is developed.

*H5: CSR beliefs have a positive direct effect on WTP for CSR in shipping*

Customers' CSR beliefs can be influenced by both intrinsic and extrinsic factors. For instance, concerning the latter, Wagner et al. (2009) found that the perceived corporate hypocrisy, which is an outcome of inconsistent CSR information, has a negative impact on CSR beliefs.

This chapter posits that customer satisfaction and loyalty are two of the extrinsic factors that reinforce a customer's CSR beliefs. This is based on the argument that customers who are satisfied or loyal are more likely to hold favourable attitudes towards their service providers, and overcome the perceived obstacles that prevent them from exhibiting positive behaviours than their less-satisfied counterparts. Such argument is consistent with the theory of cognitive dissonance where individuals constantly seek consistent cognitions to align with their beliefs. To maintain internal consistency, customers could use cognitions such as satisfaction or loyalty to reinforce their CSR beliefs. Therefore, the following hypotheses are proposed.

*H6: Customer satisfaction has a positive direct effect on CSR beliefs in shipping*

*H7: Customer loyalty has a positive direct effect on CSR beliefs in shipping*

### **5.2.3 Theoretical and Alternative Models**

There are 30 possible cause and effect relationships between the six constructs. For pragmatic reasons, the chapter has adopted a theory-driven approach to narrow its discussion to 10 possible relationships. This allows the chapter to focus on discussing and testing key relationships.

As depicted in Figure 5.1, this chapter identifies and illustrates two models which are to be empirically tested. The first model, which is the theoretical model ( $M_T$ ), consists of all the proposed hypotheses. CSR and service quality were not correlated. Service quality relates to a firm's corporate abilities. Existing research suggests there is no direct correlation between both corporate associations (i.e. CSR and corporate abilities) (Brown and Dacin, 1997).

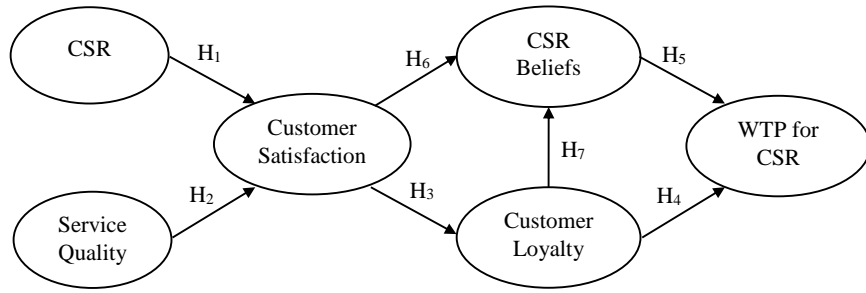
The second model, which represents the alternative model ( $M_A$ ), proposes three additional links which have been noted to be uncertain and worthy of further investigation. The first link ( $H_{A1}$ ) which emanates from CSR to WTP for CSR was incorporated to replicate existing studies that found statistically significant relationship. The second link ( $H_{A2}$ ) proposes an indirect relationship where the effect of CSR on WTP for CSR is mediated by CSR beliefs. Both links bypass customer satisfaction suggesting that it is not a necessary condition for the formation of positive behavioural intention. The third link ( $H_{A3}$ ) suggests a direct relationship between customer satisfaction and WTP for CSR. This inclusion is based on the notion that solely being satisfied with the corporate social performance of a firm is sufficient to elicit WTP for CSR. The link between service quality and customer loyalty was not hypothesised as existing research suggests that the link is mediated by customer satisfaction (Anderson and Mittal, 2000).

### **5.3 Measures Selection**

As shown in Figure 5.1, the constructs that are to be analysed include CSR, service quality, customer satisfaction, customer loyalty, CSR beliefs, and WTP for CSR. Table 5.2 presents the measures that were drawn from the survey designed for shippers (Appendix C).

<b>Model</b>	<b>Graphical Illustration</b>
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Theoretical Model (M<sub>T</sub>)



Alternative Model (M<sub>A</sub>)

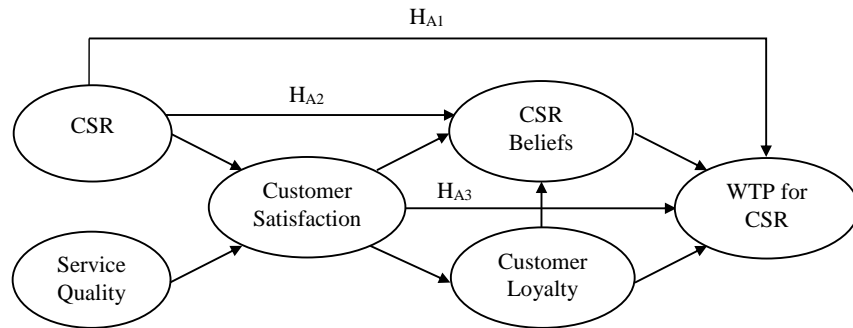


Figure 5.1 Graphical Illustrations of Theoretical and Alternative Models

**Table 5-3 Constructs, Measures, and Response Anchors**

Constructs and scale items	Sources
<i>Corporate Social Responsibility (CSR)</i>	
Not at all important (1) / Extremely important (7)	
CSR1. The shipping company donates to charitable organisations	Turker (2009)
CSR2. The shipping company practises equal employment opportunities	Shin and Thai (2015)
CSR3. The shipping company applies high standards for disclosure, accounting, auditing, and social and environmental reporting	
CSR4. The shipping company provides complete and accurate information about its services	
CSR5. The shipping company uses clean and low-sulphur fuels for its ship engines	
<i>Service Quality (SQ)</i>	
Not at all important (1) / Extremely important (7)	
SQ1. The shipping company offers on-time-delivery of shipments	Thai et al. (2014)
SQ2. The shipping company maintains the condition and quality of shipments	
SQ3. The shipping company provides fast delivery of shipments	
SQ4. The shipping company shows promptness, empathy, and reliability while communicating with us	
SQ5. The shipping company ensures its claim handling procedures are user-friendly and fast	
<i>Customer Satisfaction (SAT)</i>	
Strong disagree (1) / Strongly agree (7)	
SAT1. The shipping company's service has exceeded our expectations	Gronholdt et al. (2000)
SAT2. Overall, my company is satisfied with the service of our shipping company	
SAT3. The shipping company's service is comparable to the ideal service my company has in mind	
<i>Corporate Social Responsibility Beliefs (CBE)</i>	
Strong disagree (1) / Strongly agree (7)	
CBE1. My company views contributions to the society or environment as desirable	Kim and Han (2010)
CBE2. My company views contributions to the society or environment as pleasant	
CBE3. My stakeholders would want us to engage in corporate social responsibility activities	

CBE4. My company has the resources, time, and opportunities to implement and pay for corporate social responsibility activities

*Customer Loyalty (CL)*

Extremely unlikely (1) / Extremely likely (7)

CL1. We consider the shipping company as our first choice

Zeithaml et al.  
(1996)

CL2. We would recommend the shipping company's service to other companies

CL3. We would encourage others to use the service of the shipping company

CL4. We have positive things to say about the shipping company

*Willingness to Pay for Corporate Social Responsibility (WTP for CSR)*

Extremely unlikely (1) / Extremely likely (7)

Zeithaml et al.  
(1996)

WTP1. We are willing to pay a price premium to reward the shipping company's involvement in CSR

WTP2. We will continue to engage the shipping company for their involvement in CSR even if its price was increased

Lee et al. (2010)

WTP3. We will continue to engage the shipping company for their involvement in CSR even if its price was higher than its competitors

## 5.4 Results and Discussion

### 5.4.1 Data Analysis Tools

Structural equation modelling (SEM) was employed to analyse the collected data since this chapter involves the examination and comparison of latent models. Based on the recommendations of Anderson and Gerbing (1988), a confirmatory factor analysis (CFA) was first conducted to examine the fit, reliability, and validity of the measurement model. Thereafter, SEM was performed for model evaluation, comparison, and hypotheses testing. LISREL 8.80 was used to analyse the data.

### 5.4.2 Measurement Model Results

The measurement model was estimated using the maximum-likelihood. Table 5.3 presents the model fit indices, standardised factor loadings ( $\lambda$ ), average variance extracted (AVE), and reliabilities (CR and  $\alpha$ ) of each measurement item. Table

5.4 shows a matrix consisting of the AVE, correlations, and squared correlations of the latent constructs.

As shown at the bottom of Table 5.3, the model fit statistics are within the cut-off criteria recommended by Hu and Bentler (1999). This indicates adequate fit between the observed and implied covariance matrix of the manifest variables. Cronbach alpha ( $\alpha$ ) and composite reliability (CR) of each construct are above the general guideline of 0.70 which indicates a high level of reliability or internal consistency in the measurement items (Nunnally, 1994). The AVE for each construct is above the cut-off point of 0.50 which suggests convergent validity (Hair et al., 2010). In addition, as presented in Table 5.4, the squared correlation between a pair of constructs is less than the AVE of each construct. Therefore, discriminant validity was also supported (Fornell and Larcker, 1981).

**Table 5-4 Confirmatory Factor Analysis and Scale Reliability**

Construct	Item	$\lambda$	t-value	$\alpha$	AVE	CR
CSR	CSR1	0.90	-	0.95	0.73	0.93
	CSR2	0.86	18.12			
	CSR3	0.78	15.00			
	CSR4	0.93	21.45			
	CSR5	0.78	14.73			
SQ	SQ1	0.71	-	0.88	0.60	0.88
	SQ2	0.80	10.70			
	SQ3	0.83	11.09			
	SQ4	0.76	10.24			
	SQ5	0.75	10.07			
SAT	SAT1	0.72	-	0.83	0.55	0.78
	SAT2	0.72	8.93			
	SAT3	0.78	9.35			
CBE	CBE1	0.77	-	0.87	0.56	0.83
	CBE2	0.71	9.79			
	CBE3	0.76	10.46			
	CBE4	0.74	10.21			
CL	CL1	0.78	-	0.92	0.68	0.89
	CL2	0.77	11.81			
	CL3	0.88	13.66			

	CL4	0.85	13.18			
	WTP1	0.78	-			
WTP	WTP2	0.77	10.29	0.85	0.59	0.81
	WTP3	0.76	10.18			

Notes: Model fit statistics:  $\chi^2 = 373.35$ ,  $df = 237$ ,  $\chi^2/df = 1.58$ ,  $p < 0.01$ ; CFI= 0.97, TLI= 0.96, SRMR= 0.03, RMSEA= 0.034,  $0.018 < RMSEA < 0.046$  at 90% confidence interval.

In general, the CFA results indicate that the measurement model possesses adequate fit, and its associated measurement items are valid and reliable. The study can thus proceed with the formal comparison of the models and hypotheses testing.

**Table 5-5 Average Variance Extracted, Correlations, and Squared correlations of Constructs**

	CSR	SQ	SAT	CBE	CL	WTP
CSR	<b>0.73<sup>a</sup></b>	0.04 <sup>c</sup>	0.13	0.01	0.01	0.00
SQ	0.20 <sup>b</sup>	<b>0.60</b>	0.25	0.01	0.01	0.01
SAT	0.36	0.50	<b>0.55</b>	0.21	0.10	0.06
CBE	0.08	0.09	0.46	<b>0.56</b>	0.10	0.34
CL	0.08	0.08	0.31	0.31	<b>0.68</b>	0.24
WTP	0.06	0.09	0.25	0.58	0.49	<b>0.81</b>

Notes: <sup>a</sup> average variance extracted values are along the main diagonal, <sup>b</sup> correlations between constructs are below the main diagonal, <sup>c</sup> squared correlations between constructs are above the main diagonal.

### 5.4.3 Structural Model Results

Table 5.5 shows the fit indices of the baseline, alternative, and theoretical model. They are arranged and presented in ascending order of degrees of freedom (df). The baseline model is essentially a congeneric model (i.e. a measurement model). It can be viewed as a model that is void of theory since each construct is specified to influence or be influenced by all other constructs in the model. The baseline model serves as a basis for comparison with other meaningful models which, in this chapter, refer to the alternative and theoretical models as depicted in Figure 5.1.

**Table 5-6 Nested-Model Comparison**

Model	df	$\chi^2$	CFI	RMSEA	$\Delta df$	$\Delta \chi^2$	p-value	Decision
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Baseline (M <sub>B</sub> )	237	373.35	0.97	0.034	-	-	-	-
Alternative (M <sub>A</sub> )	241	378.71	0.97	0.033	4	5.36	> 0.05	Reject M <sub>B</sub> Accept M <sub>A</sub>
Theoretical (M <sub>T</sub> )	244	380.75	0.97	0.032	3	2.04	> 0.05	Reject M <sub>A</sub> Accept M <sub>T</sub>

Since the three models are nested, a special property whereby the reduced model (i.e. the model with higher df) is a subset of the full model, chi-square ( $\chi^2$ ) difference test can be employed to evaluate and compare the superiority of the models (Diamantopoulos and Siguaw, 2000). Specifically, the comparison was performed in pairs, between the alternative and baseline model, and then between the theoretical and alternative model. The decision to reject and accept the models in each comparison is based on the significance change in  $\chi^2$ , after adjusting for the change in df ( $\Delta df$ ).

Comparing the baseline model with the alternative model, the change in  $\chi^2$  ( $\Delta\chi^2 = 5.36$ ,  $\Delta df = 4$ ) is non-significant ( $p > 0.05$ ). This finding indicates that reducing the baseline model to the alternative model does not result in a significant loss in model fit. Based on the principle of parsimony, the alternative model was accepted whereas the baseline model was rejected. The outcome is expected since the baseline model offers no theoretical meaning.

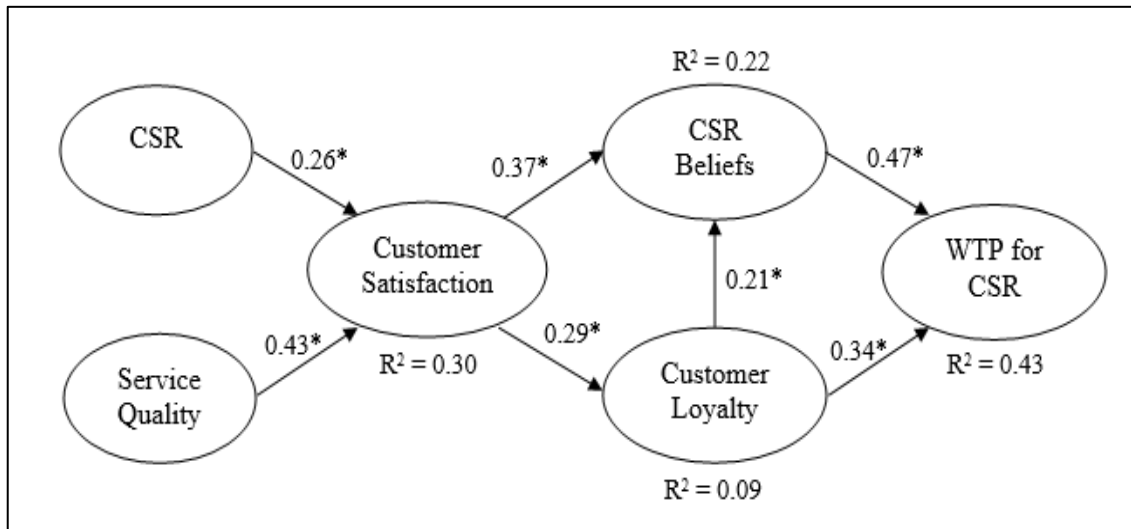
Comparing the theoretical model with the alternative model, the change in  $\chi^2$  ( $\Delta\chi^2 = 2.04$ ,  $\Delta df = 3$ ) is also non-significant. The theoretical model was thus accepted whereas the alternative model was rejected. From the model comparisons, it can be concluded that the theoretical model provides the most accurate and parsimonious account of the interrelationships between its latent constructs.

A few key findings are noted from the rejection of the alternative model, and the acceptance of the theoretical model. Firstly, contrary to numerous studies, it is noted that CSR activities have no direct link with WTP for CSR when the model is properly

specified and accounts for other key variables such as customer satisfaction, CSR beliefs, and customer loyalty. Accordingly, Feldman and Vasquez-Parraga (2013), Fatma and Rahman (2016), Tian et al. (2011), and Deng and Xu (2015) researched on consumer response towards CSR in the shoe sector, banking sector, and on shopping mall visitors, and fast-moving product consumers. They found that CSR has a direct link with consumer behaviour (e.g. WTP for CSR or purchase intention). The rejection of  $H_{A1}$  suggests the omission of key mediating variables as being a reason for the differences in the results.

Secondly, practising CSR does not directly reinforce a customer's CSR beliefs. Instead, CSR practices have to be implemented to the satisfaction of the customers prior to the reinforcement of positive CSR beliefs, which ultimately drive desirable behaviour such as WTP for CSR. Thirdly, the lack of a direct relationship between customer satisfaction and WTP for CSR indicates that merely being satisfied with the CSR activities of a service provider is not a strong motive for CSR-related behaviour. Instead, loyalty and CSR beliefs, which are to some extent influenced by customer satisfaction, are the direct predictors of WTP for CSR.

Figure 5.2 illustrates the structural estimates of the theoretical model. All of the structural paths are positive and significant ( $p < 0.05$ ) which led to the acceptance of all the hypotheses of this chapter. The r-square ( $R^2$ ) values of the endogenous variables, with the exception of customer loyalty, range from 0.22 to 0.43. These values are considered acceptable in studies relating to consumer psychology and behaviour because the study of human psychology is complex. Explanations for the low  $R^2$  of customer loyalty will be provided in the subsequent paragraphs.



Notes: \* p-value < 0.05. Model fit statistics:  $\chi^2 = 380.75$ ,  $df = 244$ ,  $\chi^2/df = 1.56$ ,  $p < 0.01$ ; CFI = 0.97, TLI = 0.97, SRMR = 0.04, RMSEA = 0.032,  $0.017 < RMSEA < 0.045$  at 90% confidence level.

**Figure 5.2 Structural Estimates of the Theoretical Model**

As depicted in Figure 5.2, CSR positively contributes to customer satisfaction ( $\beta = 0.26$ ). The preceding statement holds true even after controlling for the effects of service quality ( $\beta = 0.43$ ) which is a strong predictor of customer satisfaction. The finding corroborates previously discussed theories that link CSR with customer satisfaction (Table 5.1). They are perceived value theory, equity theory, institutional theory, and corporate identity theory. The finding also accurately reflects consumers' appraisal of a service today, which is not solely based on a firm's service performance but also its commitment towards the society and environment.

Customer satisfaction has positive effects on both CSR beliefs ( $\gamma = 0.37$ ) and customer loyalty ( $\gamma = 0.29$ ). Since customer satisfaction has no direct influence on WTP for CSR, the relationship can be viewed to be fully-mediated by CSR beliefs and customer loyalty. It is noted that customer satisfaction only explained for nine percent of the variances in customer loyalty ( $R^2 = 0.09$ ), which is considerably low. This chapter attributes this to the omission of other key predictors of customer loyalty in the model. The reason for the omission is because predicting customer loyalty is not the

core focus of this research. According to Oliver (2010), satisfaction is a necessary step in loyalty formation but become less significant as loyalty begins to set through other mechanisms. These mechanisms or predictors include the role of personal determinism and social bonding at the institutional and personal level, which have been omitted in this chapter. Nevertheless, the positive chain of relationships (CSR – Customer satisfaction – Customer loyalty) implies that CSR can be a sustainable firm or service attribute that customers can identify and subsequently, become loyal to a firm through successive satisfaction.

Collectively, customer satisfaction and loyalty explained 22% of the variance in CSR beliefs ( $R^2 = 0.22$ ). This indicates that consumers' attitudes towards CSR, perceived CSR norms, or behavioural control over CSR can be augmented by positive extrinsic factors such as customer satisfaction ( $\gamma = 0.37$ ) and loyalty ( $\gamma = 0.21$ ).

Finally, WTP for CSR was jointly explained by CSR beliefs and customer loyalty. Both variables explained 43% of the variance in WTP for CSR ( $R^2 = 0.43$ ). This finding offers new insights into the immediate antecedents of WTP for CSR. In addition, it provides answers to whether customers are willing to pay for CSR. Contrary to some studies which suggested that customers are not willing to pay for CSR, but rather, using it as a service selection criteria (Manaktola and Jauhari, 2007), the result of this chapter shows that customers are capable of paying a higher price for firms' involvement in CSR. The behaviour is jointly influenced by their CSR beliefs ( $\gamma = 0.47$ ) as well as their loyalty towards the firm ( $\gamma = 0.34$ ).

## **5.5 Conclusion**

In summary, the results obtained from the comparison of the theoretical and alternative models show that CSR is a service or company attribute that shippers can identify (i.e. develop a sense of connection). When successfully implemented to the expectations of the shippers, CSR can result in satisfaction. However, customer satisfaction is a

necessary but insufficient condition for shippers to be willing to pay for CSR. Instead, the effect is fully mediated by variables such as CSR beliefs and loyalty.

This chapter contributes to the literature on CSR on both theoretical and managerial fronts. On the theoretical front, this chapter positions CSR as an attribute that complements the SQ of a firm in driving customer satisfaction. Based on perceived value, equity, institutional, and corporate identity theory, this chapter suggests that customer satisfaction can be enhanced from the joint implementation of SQ and CSR. This chapter also extends the theory of planned behaviour to explain shippers' decision to pay for CSR. In addition, the hypothesised chain of relationships enriches the current literature on consumer behaviour by uncovering the immediate and lagging antecedents of WTP for CSR. First, it highlights the critical role of customer satisfaction in linking CSR with the immediate predictors of WTP for CSR which are customer loyalty and CSR beliefs. Second, it provides explanations for the erroneous results found between CSR and WTP for CSR. In other words, the erroneous results could be caused by the omission of important mediators by existing studies. This implies that future research should consider the mediating role of customer satisfaction, loyalty and CSR beliefs in their analyses in addition to examining the direct link between CSR and WTP for CSR.

The findings of this chapter also have implications for business practitioners in the maritime transport sector. Since customer satisfaction is a necessary condition for WTP for CSR, this chapter advocates the proactive management of CSR to manage shippers' expectations of CSR. While the corporate social performance of a product-based firm can be more readily identified by customers due to its ability to attach to or bundle with product features and performances, for instance, in the use of green labels and packaging materials for manufactured goods, or in the sales of energy efficient vehicles that deliver tangible fuel-savings to users, corporate social performance in the maritime transport sector are often decoupled with service performance, and has to be explicitly communicated to customers. This is attributed to the peculiarities of shipping services which are associated with intangibility, perishability, inseparability, and variability

(Ladhari, 2009). This implies that CSR disclosures, advertisements and reporting in the service industries are crucial in informing shippers, and managing their expectations and perceptions of a shipping company's involvement in CSR. As supported by this research, successful management of shippers' expectations and perceptions of CSR leads to satisfaction, which ultimately elicits WTP for CSR. This grants firms the opportunity to raise prices which increases their revenues.

A limitation of this chapter is that it has not specifically examined the extent, or percentage of the original freight that shippers are willing to pay for CSR. This amount should vary across firms since it could be influenced by shippers' profiles, such as firm size and the types and value of the products shipped. Therefore, such research is recommended to be conducted at the firm's level. Another limitation of this chapter relates to the scope of the research, which only focuses on three mediators, namely, customer satisfaction, loyalty, and CSR beliefs. These are key attributes discussed in the literature which influence customers' decision-making process and WTP for a product or service. Future studies can consider examining other mediators of the relationship between CSR and WTP for CSR. The mediators that could be considered include shippers' perceived value of CSR, management philosophy towards CSR, and perceived trade-offs between quality, price, and CSR.

## CHAPTER 6

# CONTINUOUS IMPROVEMENT OF CORPORATE SOCIAL RESPONSIBILITY

*In the previous chapters (i.e. Chapter 4 and 5), the fit between CSR and a shipping firm's internal and external environment was analysed. In both chapters, the interaction between a shipping firm's CSR and its environment was analysed on the assumption of stasis. This chapter<sup>3</sup> incorporates dynamism into the analysis of fit. It argues that the CSR of a shipping firm has to be constantly maintained, adjusted, and improved to achieve congruency or fit with its dynamic environment. This chapter first introduces the background and motivation of the topic. It then reviews the literature and proposes hypotheses to capture the dynamic interaction between a shipping firm's CSR and its environment. Subsequently, measures are drawn from the questionnaire designed for shipping companies (Appendix B). The obtained data were then analysed using multi-sampling analysis, hierarchical regression analysis, and simple slope analysis to test the hypotheses of this chapter. Finally, the results are discussed and conclusions are drawn.*

### **6.1 Background**

At present, most contingency theory research on CSR has focused exclusively on identifying the situations or conditions where implementing CSR is favourable (or unfavourable) and will lead to stronger (or weaker) business performance. However,

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<sup>3</sup> The following journal paper is developed from this chapter:

1. Yuen, K.F., Thai, V.V. & Wong, Y.D. (2016), "The effect of continuous improvement capacity on the relationship between of corporate social performance and business performance in maritime transport in Singapore", Transportation Research Part E: Logistics and Transportation Review, Vol. 95, pp. 62-75. [SCI/SSCI]

very little research has examined the strategies for implementing CSR (Tang et al., 2012). Much less attention has been paid to the subsequent maintenance and improvement of corporate social performance (CSP). CSP is the measurable outcome of practising CSR and is defined as ‘a construct that emphasises a company’s responsibilities to multiple stakeholders, such as employees and the community at large, in addition to its traditional responsibilities to economic shareholders’ (Turban and Greening, 1997 p. 658). CSP is multi-dimensional in nature and comprises organisational behaviours encompassing a wide variety of social and environmental inputs, processes, and outputs (Wood, 2010).

Most studies have assumed a static relationship between CSP and a firm’s environment. Similar to all other value chain activities performed by a shipping firm, the activities and processes supporting CSP require continual monitoring, control, and improvement to better satisfy shippers, or achieve operational efficiency through the elimination of non-value adding CSP elements or the alignment of CSP with a shipping firm’s core competitive strategy.

Motivated by the punctuated equilibrium theory of change whereby any advantage gained by an organisation will be eroded over time without continual maintenance and support (Kofoed et al., 2002), this chapter aims to advance the current literature on contingencies by examining the effect of CSR on business performance through a dynamic lens. The word ‘dynamic’ implies the ability to reconfigure a firm’s resources in response to its changing environment (Fawcett et al., 2012). In the business context, dynamism considers the forces of change which include magnitude, pace, and consistency, and their impact on business performance (Hodges and Gill, 2014). Two empirical studies are presented in this chapter. The first study examines the effect of a shipping firm’s continuous improvement capacity on the relationship between CSR and business performance. Continuous improvement is a core principle of Total Quality Management which emphasises ‘a company-wide commitment towards focused and continuous incremental changes’ (Bessant et al., 1994 p.18). It adopts a dynamic rather

than static approach (Chang, 2005) which fits the aim of this chapter. As an extension of the first study, the second study investigates two key parameters that define the dynamics of continuous improvement. They are pace (i.e. speed) and consistency. Using business performance as the outcome criterion, the interactions between these parameters and CSR are analysed.

## **6.2 Conceptual Framework**

### **6.2.1 Continuous Improvement of Corporate Social Responsibility**

The facets of CSR can be categorised into product-related (e.g. hybrid cars), philanthropy-related (e.g. charity donations), and business practices-related (e.g. fair treatment of employees) dimensions (Peloza and Shang, 2011). Existing research suggests that these facets provide different types and amount of value to consumers, and thus do not deserve equal attention from firms. Peloza and Shang (2011) proposed that consumers prioritise product-related CSR over other facets such as philanthropy and business practices in their evaluation. Similarly, Green and Peloza (2011) found that the facets of CSR providing functional value are more highly rated by consumers than those offering social and emotional values. The highlighted studies suggest the self-orientation of consumers. Therefore, a value-driven approach should be adopted by firms in their selection of CSR facets to maximise business performance.

More recent works demonstrated that the value generated from each CSR facet differs across context. Deng and Xu (2015) argued on the basis of relevancy and showed that the level of congruency between a firm's scope of business and the facets of CSR practised has a positive influence on consumers' responses. For instance, there is greater relevancy or congruency when a shipping company engages in reducing greenhouse emissions rather than donation to schools. Overall, the highlighted studies support the business case of CSR where there are benefits when CSR is strategically managed by firms (Carroll and Shabana, 2010). In addition, the studies reinforce

contingency theory (Donaldson, 2001) whereby a firm should align its CSR with its environment to maximise business performance.

However, a limitation of existing contingency research on CSR is the assumption of stasis which excludes the dynamic interplay between a firm's CSR and its environment (or customer expectations) (Freeman, 2015). First, assets erosion theory states that any tangible or intangible resources alike deteriorate unless effort and expenditure are committed to maintaining them (Dietrich and Krafft, 2012). Assets erosion theory applies to CSR which is viewed as an intangible resource (Surroca et al., 2010) that improves stakeholders' relationships, firms' image, human capital, cost efficiency, and innovative and differentiation capabilities (Brammer and Millington, 2008; Margolis et al., 2009). Second, customers' expectations of a firm's various involvements in CSR are constantly evolving due to changes in the political, economic, social, technological, legal, and environmental landscape. For example, during an economic recession, certain CSR attributes, which are related to philanthropy, are viewed as 'expendable' to consumers as they retrench to other attributes such as price and quality (Green and Peloza, 2011).

Based on the above discussion, a firm's CSR requires constant maintenance, adjustment, improvement, and realignment. This phenomenon can be understood using continuous improvement. Continuous improvement is a core principle deeply entrenched in Total Quality Management and is contrasted with the concept of dynamic homeostasis in open systems theory which views changes as disruptions to firms' survival (Ledford, 2015). The system negates changes and returns a firm to its equilibrium state that preserves its original structure. By contrast, continuous improvement suggests that there is no state of dynamic equilibrium. Instead, firms operate in a manner whereby employees constantly strive to improve their daily activities and performances. The concept of continuous improvement is more fitting of describing the dynamic state of firms in view of assets erosion and changing environmental factors.

Drawing on organisational learning theory, in particular the theory of absorptive capacity, this chapter posits that firms with high continuous improvement capacities are more capable of maintaining congruency with their CSR and the environment, and therefore achieve better success in transforming CSR into business performance. Absorptive capacity refers to a firm's ability to recognise and understand new knowledge, assimilate the knowledge within the organisation, and apply it to commercial ends (Cohen and Levinthal, 1990).

To a large extent, absorptive capacity is connected to continuous improvement since the former highlights the role of learning in the latter (Locke and Jain, 1995; Cole, 2002). Continuous improvement emphasises adaptive and generative learning (Aloini et al., 2011) by reflecting on customers' feedback, systems thinking, sharing of knowledge, ideas, and suggestions for improvements, and problem solving with the use of quality circles, process improvement and benchmarking tools (Kaye and Anderson, 1999; Kofoed et al., 2002).

Firms with high continuous improvement capacities are more capable of exploring innovative ideas or solutions to improve the effectiveness and efficiency of the processes supporting CSR, and exploiting CSR to their advantage (Maletič et al., 2014). For instance, they are more capable of capturing feedback from their customers. Acting on the feedback, facets of CSR that are viewed favourably by customers can be improved whereas those that customers are indifferent to are treated as waste, and can be reduced or eliminated. This would result in greater customer satisfaction, cost-savings, and profits for the firms. Therefore, the following hypothesis is proposed.

*H<sub>1</sub>: Corporate social performance impacts business performance more positively in shipping firms with high continuous improvement capacities than it does in shipping firms with low continuous improvement capacities.*

### **6.2.2 Dynamics of Continuous Improvement**

According to Hodges and Gill (2014), the parameters that define the dynamics of organisational change are related to the magnitude, pace, and consistency of change.

In terms of magnitude of change, continuous improvement focuses on incremental (small) changes. This is to be contrasted with radical changes which are linked to concepts such as business process reengineering or breakthrough improvement (Duffy, 2013). While these concepts often attribute incremental changes with trivial ones, they often underestimate the cumulative power of incremental changes (Ledford, 2015). In most cases, radical changes are the culmination of small changes in an organisation (Bhuiyan and Baghel, 2005). In addition, Boer (2015) argued that incremental changes have advantages over radical changes as they can be easily implemented in quick successions which build momentum. On the contrary, a pause for consolidation is often required for successive radical changes (Vermeulen, 2009). Notwithstanding their differences, existing studies held that both types of improvements are instrumental in driving business performance, and firms should implement a right mix of continuous and radical improvements on their processes, systems, and structures (Plowman et al., 2007).

There is currently a lack of attention on the other dynamic parameters (i.e. pace and consistency) when implementing continuous improvement programmes. Although these parameters have been briefly mentioned and specified in a few studies on continuous improvement, there appears to be little empirical evidence supporting such claims (Bhuiyan and Baghel, 2005; Boer, 2015). This is further exacerbated by the lack of a theoretical framework to support how continuous improvement programmes should be implemented on the premise of pace and consistency.

### *6.2.2.1 Pace of Continuous Improvement*

The pace of continuous improvement is a time-based measure which refers to the speed of CSR improvements. Drawing on diseconomies of time compression, this chapter proposes adopting a slow pace in implementing continuous improvement programmes for CSR. Diseconomies of time compression refer to the trade-off between time and cost in the accumulation of resources (Pacheco and Zemsky, 2007). In general, trade-offs occur because of bounded rationality and limited cognitive scope in learning and decision-making, which require time (Vermeulen and Barkema, 2002). Therefore, a slow pace of improvement will offer more time for firms to obtain feedback from stakeholders in relation to their CSR, evaluate the obtained information, and assimilate and apply it to commercial ends (Cohen and Levinthal, 1990).

Recent evidence of time compression diseconomies can be found in the work of Cool et al. (2015) who reported that doubling investments over a specific period of time yields fewer benefits as compared to maintaining half the investments over a period which is twice as long. The additional costs (or diseconomies), which are incurred by firms when they compress their effort into a short period of time, are required to compensate the loss in productivity, cycle time, and absorption capacities. Similarly, Lannelongue et al. (2015) showed that firms which assimilate their environmental management system into their daily operations over a short period of time experience poor environmental performances.

Based on the presented evidence, the current chapter proposes that business performance is maximised when continuous improvement programmes targeted at CSR are implemented at a gradual pace. A slow pace of continuous improvement is more economical due to small trade-offs between cost and time, and allows CSR knowledge to be better consolidated, absorbed, and applied. On the contrary, a fast pace may incur an unreasonable amount of costs and suboptimal absorption of CSR knowledge, which affect a firm's ability to financially benefit from CSR. Therefore, the following hypothesis is proposed.

*H<sub>2</sub>: Corporate social performance impacts business performance more positively in shipping firms which employ a slow pace in implementing continuous improvement programmes.*

For the hypothesis, the pace of continuous improvement programmes is specified in relative terms i.e. slow vs fast pace.

#### *6.2.2.2 Consistency of Continuous Improvement*

The consistency of continuous improvement refers to the regularity or rhythm of CSR improvements. This chapter argues that firms employing a regular pace of continuous improvement on CSR, which is characterised by regulated peaks of improvements and short period of inactivity (Lin, 2012), are less likely to experience time compression diseconomies.

First, regulated peaks of improvements mitigate the risk of overstretching a firm's absorptive capacity. On the contrary, unregulated or high variability improvements could create large peaks which are associated with unexpected influx of information and activities. This may overload a firm's absorptive capacity (Tang et al., 2012) which results in diseconomies since additional time or costs are required to expand a firm's existing structures and systems to interpret and manage the large volume of information and activities (Vermeulen and Barkema, 2002).

Second, short periods of inactivity act as pauses for knowledge consolidation, and references where firms can easily relate to their existing knowledge and recent experiences for subsequent improvements (Vermeulen and Barkema, 2002). Conversely, long or erratic periods of inactivity may result in loss of accumulated knowledge and momentum (Eisenhardt and Brown, 1998). Consequently, additional time or costs are needed to reacquire them.

Apart from reducing the impact of time compression diseconomies, a consistent approach to implementing continuous improvement programmes for CSR portrays an image that a firm is committed to and proactive in its cause towards good citizenship. This could result in greater buy-in from stakeholders, and subsequently, stronger business performance. For instance, Groza et al. (2011) demonstrated that firms which were perceived to be proactive rather than reactive in managing CSR received stronger positive behavioural responses from consumers. In a similar vein, Wagner et al. (2009) found that corporate hypocrisy, which is a potential outcome of inconsistent CSR information or implementation that creates doubt on the genuine of a firm's involvement in CSR, has a negative impact on consumers' attitudes and purchase intentions.

The above discussion suggests that adopting a consistent pace in the continuous improvement of CSR maximises business performance. Therefore, the following hypothesis is proposed.

*H<sub>3</sub>: Corporate social performance impacts business performance more positively in shipping firms which employ a consistent pace in implementing continuous improvement programmes.*

### **6.3 Measures Selection**

The constructs that are to be analysed include CSR, continuous improvement capacity, pace, consistency, and business performance. Table 6.1 presents the measures that were drawn from the survey designed for shipping companies (Appendix B).

**Table 6-1 Constructs, Measures, and Response Anchors**

<b>Constructs and Measurement Items</b>	<b>Sources</b>
<i>Corporate Social Responsibility (CSR)</i>	
To an extremely small extent (1) / To an extremely large extent (7) CSR1. My company provides training and education to develop	Chen and Delmas (2011)

employees' skillsets

CSR2. My company donates to charitable organisations

CSR3. My company applies high standards for disclosure, accounting, auditing, and social and environmental reporting

Lu et al. (2009)

CSR4. My company uses environmental-friendly materials and equipment (e.g. nontoxic paint, electric deck machine, and ballast water system)

Lai et al.  
(2013a)

CSR5. My company handles transactions, documentations, and notifications electronically

*Continuous Improvement Capacity (CIC)*

Strongly disagree (1) / Strong agree (7)

CIC1. My company introduces a continuous improvement or an equivalent formal improvement system to involve all employees in ongoing improvement

Aloini et al.  
(2011)

CIC2. My company is oriented towards customers in their improvement activities

CIC3. My company uses measurement to shape its improvement process □

Huang et al.  
(2011)

CIC4. Before embarking on an initial investigation and before implementing changes, individuals and groups assess the improvements they proposed against strategic objectives to ensure consistency □

CIC5. My company articulates and consolidates (captures and shares) the learning of individuals and groups

*Pace (PAC)<sup>1</sup>*

Very rapid (1) / Very gradual (7)

PAC1. My company adopts a \_\_\_ pace in sourcing new information and acquiring knowledge to improve corporate social performance

Vermeulen and  
Barkema  
(2002)

PAC2. My company adopts a \_\_\_ pace in the design of continuous improvement programmes for corporate social performance

Aloini et al.  
(2011)

PAC3. My company adopts a \_\_\_ pace in the implementation of continuous improvement programmes for corporate social performance

*Consistency (CON)<sup>2</sup>*

Very irregular (1) / Very regular (7)

CON1. My company obtains feedback from customers regarding its corporate social performance on a \_\_\_ basis

Vermeulen and

CON2. My company measures and reviews corporate social performance on a ___ basis	Barkema (2002)
CON3 My company implements continuous improvement programmes for corporate social performance on a ___ basis	Aloini et al. (2011)
CON4. Our employees provide suggestions or ideas to improve current processes, systems, and structures supporting corporate social performance on a ___ basis	
 <i>Business Performance (BPE)</i> <sup>3</sup>	
Much worse (1) / Much better (7)	
BPE1. Return on investment	Brik et al. (2011)
BPE2. Sales growth	
BPE3. Profit growth	
Strongly disagree (1) / Strongly agree (7)	
BPE4. Customer satisfaction*	Maletič et al. (2015)
BPE5. Employee satisfaction*	

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Notes: <sup>1</sup> Pace is determined by the speed of implementing continuous improvement programmes on CSP. A rapid (or gradual) pace is equivalent to a fast (or slow) pace. <sup>2</sup> Consistency is determined by the regularity of implementing continuous improvement programmes on CSP. An irregular pace is determined by fluctuating peaks of improvements and breaks in between improvements whereas a regular pace is determined by regulated peaks of improvement and breaks in between improvements. <sup>3</sup> Business performance is determined relative (worse or better) to the respondent's competitors in the industry over the past three years \* Customer satisfaction and employee satisfaction are aggregated scores drawn from the survey designed for shipping companies

## 6.4 Construct Reliability and Validity

The measurement model comprising the constructs and measures shown in Table 6.1 was evaluated for reliability, convergent, and discriminant validity. Table 6.2 shows the results generated from confirmatory factor analysis. The composite reliability (CR) of the constructs are above 0.7 which indicates that their measures are fairly reliable (Hair et al., 2010).

Convergent validity was ascertained by analysing the factor loadings and average variance extracted (AVE) values (Hair et al., 2010). As shown in Table 19, all factor loadings ( $\lambda$ ) are significant and above the recommended value of 0.5. The AVE values are also above 0.5, which indicates good convergent validity.

Discriminant validity was assessed by comparing the AVE values with the squared correlations (Hair et al., 2010). Ideally, the AVE values should exceed the squared correlations values. As shown in Table 6.3, this criterion was met. Therefore, discriminant validity is supported.

Since self-reported survey questionnaires were used, common method bias could be an issue in this research. Harman’s single factor test was adopted to assess the severity of common method bias. Confirmatory factor analysis was conducted on a single factor model, where all 22 measures shown in Table 6.2 were loaded on a construct. The fit indices of the single factor model are  $\chi^2= 3279.48$ ,  $df= 230$ ,  $\chi^2/df= 14.26$ ,  $p< 0.01$ ; CFI= 0.25, TLI= 0.25, SRMR= 0.28, RMSEA= 0.29,  $0.28 < RMSEA < 0.30$  at 90% confidence interval. They are considerably worse than those of the measurement model (Table 2). This indicates that common method bias is not a major issue in this study.

**Table 6-2 Confirmatory Factor Analysis and Scale Reliability**

<b>Construct</b>	<b>Measure</b>	<b><math>\lambda</math></b>	<b>t-value</b>	<b>AVE</b>	<b>CR</b>
CSR	CSR1	0.79	-	0.70	0.92
	CSR2	0.89	15.20		
	CSR3	0.82	13.56		
	CSR4	0.87	14.81		
	CSR5	0.81	13.34		
CIC	CIC1	0.73	-	0.59	0.88
	CIC2	0.79	11.21		
	CIC3	0.81	11.36		
	CIC4	0.77	10.81		
	CIC5	0.74	10.46		
PAC	PAC1	0.71	-	0.53	0.77
	PAC2	0.74	9.11		
	PAC3	0.73	9.02		
CON	CON1	0.79	-	0.56	0.84
	CON2	0.69	9.80		
	CON3	0.78	11.05		
	CON4	0.73	10.46		

	BPE1	0.77	-		
	BPE2	0.81	12.70		
BPE	BPE3	0.86	13.71	0.66	0.91
	BPE4	0.83	13.01		
	BPE5	0.79	12.31		

Notes: Model fit statistics:  $\chi^2= 321.68$ ,  $df= 199$ ,  $\chi^2/df= 1.62$ ,  $p< 0.01$ ; CFI= 0.97, TLI= 0.97, SRMR= 0.03, RMSEA= 0.04,  $0.02 < RMSEA < 0.05$  at 90% confidence interval.

**Table 6-3 Discriminant Validity Analysis**

	Mean	SD	1	2	3	4	5
1. CSR	20.38	10.79	<b>0.70<sup>a</sup></b>	0.04 <sup>c</sup>	0.02	0.02	0.14
2. CIC	18.45	9.88	0.20 <sup>b</sup>	<b>0.59</b>	0.01	0.26	0.06
3. PAC	11.39	5.96	0.15	0.09	<b>0.53</b>	0.05	0.03
4. CON	15.63	7.73	0.14	0.51	0.23	<b>0.56</b>	0.25
5. BPE	17.55	9.07	0.37	0.24	0.17	0.50	<b>0.66</b>

Notes: <sup>a</sup> average variance extracted values are along the main diagonal, <sup>b</sup> correlations between constructs are below the main diagonal, <sup>c</sup> squared correlations between constructs are above the main diagonal.

## 6.5 Results and Discussion

Two empirical studies are presented to test the proposed hypotheses. The first study tests H<sub>1</sub>. It determines whether the continuous improvement capacity of a firm augments the effect of CSR on business performance. The second study tests H<sub>2</sub> and H<sub>3</sub>. It investigates whether a slow and consistent pace of improvement on CSR has a stronger influence on business performance as compared to a fast and inconsistent pace of improvement.

In both studies, firm characteristics including firm size (i.e. small versus large firms) and sector (i.e. container versus bulk shipping firms) were used as control variables. The size of a firm is determined by the number of employees. Firms with less than or equal to 200 employees are classified as small firms whereas firms with more than 200 employees are classified as large firms. Both variables i.e. firm size and sector have been reported to moderate the relationship between CSP and business performance in

previous research on maritime transport, and could potentially distort the correlation between CSP and business performance if omitted.

### **6.5.1 Study 1: The Influence of Continuous Improvement Capacity on the Relationship between CSR and Business Performance**

The first study adopts the multi-sampling analysis method proposed by Vandenberg and Lance (2000) to compare the effect of CSR on business performance between firms with low continuous improvement capacities and those with high continuous improvement capacities. Multi-sampling analysis method is applied since it is most suitable for the analysis of latent constructs. It accounts for measurement errors which provides greater precision in estimating and comparing the links between CSP and business performance across sample groups.

Prior to running the analysis, the mean score of the variable ‘continuous improvement capacity’ was calculated and used to split the data into two sample groups. The first group represents firms with low continuous improvement capacities (observation score < mean score) and the other represents firms with high continuous improvement capacities (observation score > mean score). Thereafter, a series of invariance (or equivalence) tests were performed to compare both sample groups (Table 6.4). This includes performing configural, measurement, and structural invariance test on a two-factor model consisting of CSR and business performance.

First, configural invariance was examined. The results reveal that the combined model fit of both sample groups is adequate ( $\chi^2/df = 1.61$ , TLI=0.97 CFI=0.97), which indicates configural invariance. The adequacy of the model (M1) warrants the test of measurement invariance.

To test measurement invariance, equality constraints were added to the factor loadings in the model (M2). Comparing M2 with M1, the  $\chi^2$  difference test shows that the more constrained model, which is M2, did not result in a deterioration of model fit

( $\chi^2_{M2} - \chi^2_{M1} = 7.12$  with 8 degrees of freedom,  $p > 0.05$ ). The result suggests equivalence in the conceptual meanings of CSP and business performance between both sample groups. Therefore, measurement invariance is supported.

According to Kline (2010), establishing measurement invariance is the prerequisite to testing structural invariance. In this context, both CSP and business performance have to convey similar meaning to the sample groups before the comparison of the correlation between CSP and business performance in both sample groups can be meaningful. To test structural invariance, an equality constraint was added to the link between CSP and business performance. The  $\chi^2$  difference test is significant ( $\chi^2_{M3} - \chi^2_{M2} = 5.05$  with 1 degree of freedom,  $p < 0.05$ ). Therefore, structural invariance is not supported. This suggests that the correlation between CSP and business performance differs significantly between both sample groups. The correlation is significantly stronger in shipping firms with high continuous improvement capacities (0.41) than those with low continuous improvement capacities (0.08). Hence,  $H_1$  is accepted.

**Table 6-4 Results of Multi-sampling Analysis**

Models	$\chi^2$	df	$\chi^2/df$	TLI	CFI	Nested Models	$\Delta\chi^2$	$\Delta df$	$\chi^2$ difference test	Low Continuous Improvement	High Continuous Improvement	Hypothesis
<i>Configural invariance</i>												
M1. Baseline	170.74	106	1.61	0.97	0.97							
<i>Measurement Invariance</i>												
M2. Equal loadings	177.86	114	1.56	0.97	0.97	2-1	7.12	8	Insignificant			
<i>Structural Invariance</i>												
M3. Equal loadings & structural estimate	182.91	115	1.59	0.97	0.97	3-2	5.05	1	p < 0.05	0.08 <sup>a</sup> (0.76) <sup>n.s.</sup>	0.41 <sup>a</sup> (3.52)*	H <sub>1</sub> accepted

t-values are in brackets

<sup>a</sup> standardised path coefficient (CSP → Business Performance), after controlling for the effects of ‘sector’ and ‘firm size’.

\* p < 0.05

n.s. p > 0.05

The results support the chapter's argument that shipping firms with high continuous improvement capacities have better success in transforming CSP into business performance. Firms with high continuous improvement capacities which are linked to larger absorptive or learning capacities are more effective in exploring new methods to improve CSP and exploiting CSP to their advantage (Maletič et al., 2014). For instance, they are more capable of using improvement tools to control and manage the activities and processes supporting CSP (Aloini et al., 2011). The overall cost of performing these activities and processes can be reduced from implementing six sigma or using benchmarking tools (Timans et al., 2016). In addition, firms with high continuous improvement capacities are also more capable of learning new CSP information from stakeholders. Based on the obtained information, facets of CSP which are viewed less favourably by customers can be scaled down whereas those that are viewed as important by customers can be enhanced or emphasised in a firm's CSR disclosure or marketing efforts. Firms possessing high continuous improvement capacities are more effective at eliminating waste (i.e. non-value adding CSP facets), increasing social and environmental value for stakeholders and the organisation, which improves business performance.

### **6.5.2 Study 2: The influence of Pace and Consistency of Improvement on the Relationship between CSR and Business Performance**

The second study utilises hierarchical regression modelling to test interactions between CSP and the dynamic parameters of continuous improvement relating to pace and consistency. Using business performance as the dependent variable, both two-way and three-way interactions were analysed. Hierarchical regression modelling is applied in favour of multi-sampling analysis method due to greater complexities in the analysis, which involves the estimation of multiple, higher-order interaction effects. In addition, it allows these effects to be illustrated on graphs with the use of simple slope analysis.

Prior to performing hierarchical regression modelling, the raw scores of the variables were centralised based on their means. This procedure, which is also known as grand mean centralisation, is necessary to overcome multicollinearity which is perpetual in the study of interactions using regression modelling (Field, 2013; Yuen and Thai, 2015a). The variance inflation factors of the centralised variables range from 1.05 to 1.53, which are acceptable.

Three models were introduced to systematically test interaction effects (Table 6.5). The first model captures the effects of the control variables as well as the main effects of CSP, pace, and consistency on business performance. The model is significant ( $\Delta F = 35.66$ ,  $p < 0.05$ ) and accounts for 45% of the variance in business performance.

The second model captures two-way interaction effects. The explanatory power of the second model is significantly better than the first model ( $\Delta F = 21.43$ ,  $p < 0.05$ ) and accounts for another 13% of the variance in business performance. It was found that the pace and consistency of continuous improvement positively interact with CSP, which suggests synergies. On average, the interaction between CSP and pace generates a surplus effect of 0.30 ( $p < 0.05$ ) on business performance whereas the interaction between CSP and consistency generates a surplus effect of 0.13 ( $p < 0.05$ ). Therefore, both  $H_2$  and  $H_3$  are accepted. In general, the slower or more consistent is the pace of continuous improvement, the greater is the effect of CSP on business performance.

The results presented in the second model support the chapter's tenet that the manner in which shipping firms implement continuous improvement programmes influences the amount of benefits they can gain from CSP. First, a fast pace of continuous improvement runs the risk of exceeding the absorptive capacity of a firm and loss in productivity and cycle time (Cool et al., 2015). As a result, additional cost has to be incurred to increase its capacity or compensate for the loss in productivity or cycle time. These additional costs reduce the benefits of CSP. On the contrary, such costs can be minimised when a slow pace is adopted whereby the acquisition of CSP

knowledge, and planning and implementation of continuous improvement programmes are spread out over a longer period of time. The result is consistent with Lannelongue et al. (2015) who conducted their research on manufacturing plants. They found that implementing ISO 14000 in a shorter time leads to time compression diseconomies.

**Table 6-5 Hierarchical Regression Results using Business Performance as Dependent Variable**

Predictors	Model 1		Model 2		Model 3		Hypothesis
	<i>B</i>	t-value	<i>B</i>	t-value	<i>B</i>	t-value	
<i>Control Variables</i>							
Firm size <sup>a</sup>	0.21*	4.04	0.16*	3.58	0.16*	3.54	
Sector <sup>b</sup>	0.21*	4.04	0.15*	3.11	0.14*	3.09	
<i>Main effects</i>							
CSR	0.29*	5.70	0.30*	5.97	0.31*	5.58	
PAC	0.02	0.45	0.05	1.09	0.06	1.14	
CON	0.45*	8.71	0.49*	10.21	0.50*	10.19	
<i>Two-way interactions</i>							
CSR x PAC			0.30*	5.70	0.29*	5.43	H <sub>2</sub> accepted
CSR x CON			0.13*	2.41	0.13*	2.44	H <sub>3</sub> accepted
PAC x CON			0.04	0.76	0.04	0.85	
<i>Three-way interaction</i>							
CSR x PAC x CON					-0.02	-0.43	
R <sup>2</sup>	0.45		0.58		0.58		
ΔR <sup>2</sup>	0.45		0.13		0.00		
ΔF	35.66*		21.43*		0.18		

Note: <sup>a</sup> firm size is a dummy variable with '1' representing large firms and '0' representing small firms. <sup>b</sup> sector is a dummy variable with '1' representing bulk shipping firms and '0' representing container shipping firms. \* indicates p < 0.05.

Next, it was found that firms employing a consistent pace of improvement, which is characterised by regulated peaks of improvements and short periods of inactivity (Lin, 2012), benefit more from CSR. A consistent pace spreads CSR improvements evenly across time and avoids large peaks of improvements which could overstretch the

absorptive capacity of a firm, resulting in sub-optimal decisions or poor implementation. In addition, short periods of inactivity, which is a result of employing a consistent pace in continuous improvement, allow employees to better relate to and build on their existing knowledge and recent experiences on CSR improvements. This creates momentum (Vermeulen and Barkema, 2002). In addition, a consistent pace portrays an image that a firm is proactive rather than reactive towards its cause for CSR (Tang et al., 2012). This has a positive effect on customers' attribution of a firm's CSR motives and their subsequent evaluation of its products and services (Kim and Lee, 2012).

The third model examines the three-way interaction concerning the following variables, CSP, pace, and consistency. The purpose is to test for differences in the interaction effect of any two variables across various levels of the third variable. The explanatory power of the third model is not significantly better than the second model ( $\Delta F=0.18$ ,  $p>0.05$ ) and does not increase the  $R^2$  of business performance. In addition, the three-way interaction effect is not significant ( $\beta=-0.02$ ,  $p>0.05$ ). Therefore, it can be inferred that the two-way interaction effects on business performance are additive.

To further illustrate interaction effects, simple slope analysis was conducted (Figures 6.1 and 6.2). First, the independent variables which include CSR, pace, and consistency are dichotomised based on their mean scores. Subsequently, the data were split into two sample groups: high consistency and low consistency. Thereafter, for each sample group, regression lines representing the relationship CSR (x-axis) and business performance (y-axis) were plotted for each level of pace (i.e. slow and fast).

As shown in Figure 6.1, adopting a combination of fast and inconsistent pace to improve CSR is detrimental to business performance, causing it to decrease from 15.54 to 7.05. The remaining three combinations, which were depicted in either Figure 6.1 or 6.2, strengthen business performance. Among the combinations, business performance is maximised ( $\hat{y}=30.80$ ) when a slow and consistent pace of improvement is adopted.

This implies that both dynamic parameters are crucial and should be simultaneously applied in the implementation of continuous improvement programme for CSR.

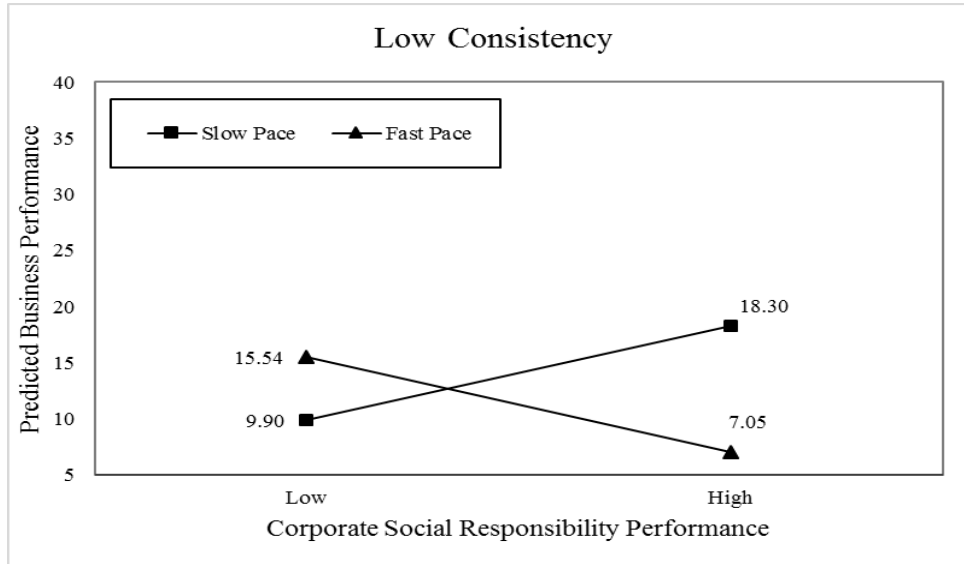
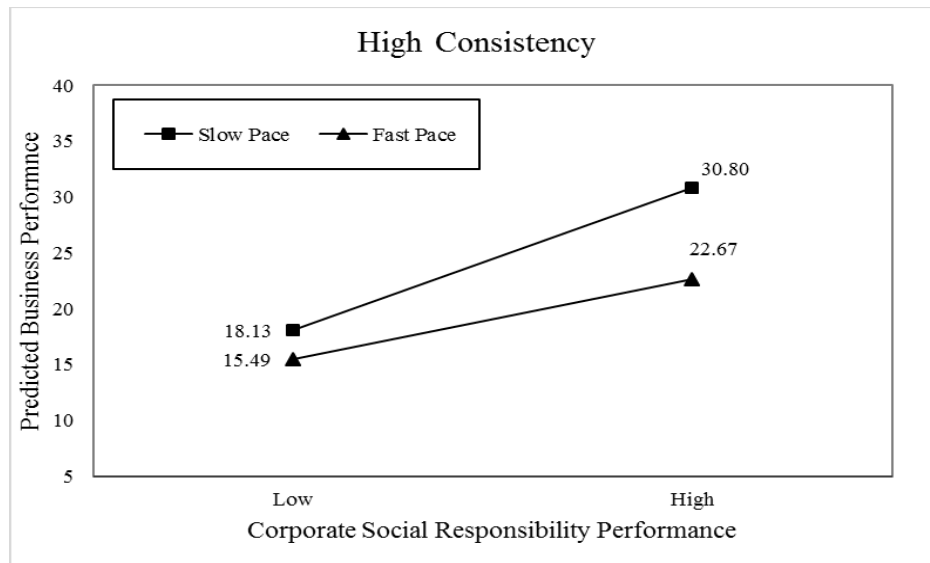


Figure 6.1 Regression of Business Performance on CSR at Two Levels of Pace for Firms with Low Consistency



**Figure 6.2 Regression of Business Performance on CSR at Two Levels of Pace for  
Firms with High Consistency**

## **6.6 Conclusion**

### **6.6.1 Summary of Findings**

The current chapter aims to analyse the relationship between CSR and business performance through a dynamic lens. It argues that CSR has to be actively maintained and adjusted to achieve congruency with a shipping firm's internal and external environment. First, it hypothesises that shipping firms' ability to maintain congruency between CSR and their environment is underpinned by their continuous improvement capacities. Second, it hypothesises that a relatively gradual and consistent pace of improvement strengthens the link between CSR and business performance.

To test the hypotheses, survey data were successfully collected from 223 shipping firms in Singapore. The analysis of the data reveals that shipping firms with high continuous improvement capacities experience greater success in transforming CSR into business performance as compared to their counterparts. In addition, the results support a gradual and consistent pace in implementing continuous improvement programmes for CSR which maximises business performance.

### **6.6.2 Theoretical Implications**

The results reported in this chapter contribute to theory in several ways. This chapter extends contingency theory to the context of CSR and business performance. Contingency theory opposes universalistic theory and highlights the importance of achieving fit or congruency between a firm's CSR and its internal and external environment. As supported by this research, the amount of organisational benefits that can be obtained from implementing CSR is contingent on the continuous improvement

capacities of a firm as well as the pace and consistency of continuous improvement programmes being implemented.

This chapter further incorporates dynamism into existing contingency research concerning the relationship between CSR and business performance. It provides a more accurate account of the interaction between CSR and a shipping firm's environment which is dynamic rather than static. First, CSR is an organisational resource that is subjected to assets erosion and has to be constantly invested and maintained by a shipping firm. Second, shippers' expectations of a shipping firm's CSR are constantly changing with respect to the political, environmental, social, technology, and economic landscape. For instance, in the event of an economic recession, shippers have less expectations of a firm's CSR and place more emphasis on price and quality. Due to the aforementioned reasons, shipping firms have to actively maintain, adjust, and align their CSP with the environment to maximise business performance. This chapter links this dynamic approach of constant maintenance, adjustment, and improvement of CSR with continuous improvement, which is a concept deeply entrenched in Total Quality Management.

Furthermore, this chapter analyses the concept of continuous improvement through the theoretical lens of organisational learning theory. There is currently a lack of a theoretical framework that explains the concept of continuous improvement. This chapter provides a timely contribution to the quality management literature by associating the continuous improvement capacity of a shipping firm with its absorptive capacity. The latter highlights the role of learning and the ability of a firm to acquire, assimilate, and apply new knowledge to improve and align its CSR with the environment.

This chapter also enriches the literature by specifying the dynamic parameters in which continuous improvement programmes should be implemented to maximise the benefits of CSR. Diseconomies of time compression imply that time is required for

shipping firms to acquire, assimilate, and apply new knowledge to their advantage due to bounded rationality and limited cognitive scope in learning. Therefore, any attempts to compress time to improve CSR will incur additional costs, resulting in diseconomies. The results of this chapter imply that trade-offs between time and cost can be mitigated when a relatively gradual and consistent pace is employed in the implementation of continuous improvement programmes for CSR. A gradual pace of implementation provides more time for CSR knowledge to be optimally absorbed by a shipping firm. In addition, a consistent pace of implementation, which is associated with regulated peaks of improvements and short periods of inactivity (refer to footnote of Table 6-1 for explanation), builds momentum and prevents shipping firms from overstretching their absorptive capacities.

### **6.6.3 Managerial Implications**

The findings of this study provide a timely contribution to the management and improvement of CSP in maritime transport, which are currently inadequate in the current literature. Maritime transport differs from product industries since CSP is decoupled with transport performance (Yuen et al., 2016). While manufacturers can bundle their CSP with their products, for example, from the use of labels to communicate their CSR involvement or from producing energy-efficient products that transfer tangible cost-savings to customers, there is lesser visibility in service industries such as maritime transport. While it can be argued that some shipping companies provide carbon footprint data for shippers which increases the visibility of the shipping companies' involvement in CSR, such data are not readily attached to shipping services. Shippers have to proactively search for such data on the website of the shipping companies to access the data.

The inability of CSR to attach to shipping services is attributed to the peculiarities of transport services which are associated with intangibility, perishability, inseparability, and variability (i.e. inconsistencies in the provision of services). As a result, CSP has to

be explicitly communicated and emphasised to shippers. In addition, maritime transport operates in a business-to-business environment. Unlike end-consumers, shippers are more rational in their evaluation of shipping firms' performance, focusing on business cost and quality while showing relatively lesser emphasis on CSP (Skovgaard, 2014). These factors differentiate the maritime transport from most mainstream consumer product industries, which have been the core focus of existing CSR research, and highlight the importance of conducting a study on maritime transport.

Besides the initial implementation of CSR, the results imply that shipping firms should also focus on its subsequent maintenance and improvement. In particular, a dynamic, value-driven strategy to improving CSP should be adopted. This indicates the need to constantly obtain, reflect, and act on feedback concerning the current and future customers' expectations of CSP. Shipping firms should also recognise that not all facets of CSP provide the same amount of value and deserve equal attention. Therefore, business practitioners should place greater emphasis on improving relevant facets that provide value to shippers or contribute to business performance. On the other hand, they should place less emphasis on improving facets that do not deliver value to shippers or contribute to business performance.

Although no significant difference has been found in the level of CSP engagement between bulk and container shipping firms, the nature of operations in bulk and container shipping suggests a differentiated approach to CSP improvement in both sectors. In general, bulk shipping firms operate on charters where each ship serves the transportation needs of a single shipper. To some extent, this provides flexibility for bulk shipping firms to adapt, customise, and improve their CSP to meet the expectations of their shippers. On the other hand, container shipping firms operate as common carriers which serve a large number of shippers in multiple shipping routes. As compared to bulk shipping firms, there is lesser flexibility and greater difficulty in the improvement CSP since container shipping firms need to satisfy a diverse range of shippers' requirements and expectations of CSP. Although it may seem virtually

impossible to fulfil all of the shippers' requirements and expectations of CSP, container shipping firms can focus on the CSP facets that are pertinent to the majority of their existing customers. Alternatively, they can consider decentralising the improvement of CSP at the regional or local level. According to Su et al. (2014), the importance and expectations of CSR differ across geographical factors such as national culture. Decentralising the management of CSP allows container shipping firms to better suit the locals' social and environmental needs.

Whilst the importance of the CSP facets may differ across shipping firms, depending on the majority of their existing shippers' preferences, a review of the literature on shippers' carrier selection behaviour suggests that there are commonalities in shippers' expectations of CSP facets (Kunnaala et al., 2013). In general, they favour environmental facets over other CSP facets. For instance, Kunnaala et al. (2013) found that the main focus of most shipping companies is on environmental issues such as engine emissions or marine pollution, and to a lesser extent social issues. Their findings provide some general directions for shipping firms with respect to prioritising their CSP improvements i.e. to focus their attention on improving economic-driven CSP if they wish to improve their business performance.

### **6.6.3 Limitations and Recommendations**

In spite of the contributions, there are a few limitations of this research. First, the data are collected based on the perception of shipping companies, which may suffer from common method bias. Even though common method bias has been tested and found to be not a major issue in this research, it may invariably affect the accuracy of the results. Therefore, this chapter recommends the use of objective data such as accounting-based financial measures to supplement the measurement of business performance in future research. Attempts to supplement financial performance with accounting-based measures were not successful since some of the respondents did not disclose the

identity of their firms. There would be a considerable amount of missing data if accounting-based financial measures were used in this study.

Second, the results and conclusion drawn from this research is only limited to Singapore's maritime transport sector, which handles mainly local or regional shipments. Contextual factors such as national cultures, nature of transactions (i.e. business-to-business versus business-to-consumer), and the pollution class index of an industrial sector play significant roles in influencing customers' expectations of CSP (Grewatsch and Kleindienst, 2015). This would have direct implications on a firm's attitude towards practising CSR as well as their continuous improvement strategies on CSP. It is recommended that future research conducts cross-national, cross-industry, or cross-maritime transport sector analysis to evaluate the generalisability of the results.

In addition, the conclusions drawn from this research represent an aggregated view of a maritime transport sector in Singapore (refer to Table 3-4 for subgroups). In the current chapter, models combining the responses from bulk and container shipping firms, and small and large firms were developed and estimated. Differences may be expected in the effects of continuous improvement, its pace and consistency on the relationship between CSP and business performance if sub-group analyses were performed. Unfortunately, the hypotheses of this chapter already involve moderation. As a result, there is insufficient sample size to further segregate the analysis into various sub-groups. Further research could consider extending the main hypotheses of this research by performing sub-group analysis based on firm size, sector, ownership structure, and shipping firms' scope of operations (i.e. short sea versus deep sea operations).

Finally, the survey data were obtained from shipping companies, which provide insights into the strategies that shipping companies can employ to improve their CSP and maximise business performance. This chapter recommends validating these strategies against the shippers. For instance, their reactions and buy-in to these

strategies could be analysed. Future research on shippers' expectations of CSP facets with changing economic and other external environmental factors could also be investigated.

## CHAPTER 7

# CONCLUSION

*This chapter restates the key arguments of the thesis, describes the methodology employed, summarises the objectives and results of each study, pinpoints the major contributions of the thesis, addresses the limitations of the thesis, and recommends directions for future research.*

### **7.1 Key Arguments**

This thesis argues that the benefits of CSR is contingent on the favourableness of the internal and external conditions of a shipping firm. Contingency theory asserts that the fit between CSR and a firm's internal and external conditions influences performance. Three studies were developed to advance existing contingency theory research that examines the relationship between CSR and financial performance.

### **7.2 Methodology**

The literature, both academic and grey, was first reviewed to identify contemporary research trends and gaps in the current literature, formulate research hypotheses, and develop scales for survey administration. Interviews with industry experts from the maritime transport sector were then conducted to gain additional insights on the business case of CSR, build the case of contingency by viewing the correlation between CSR and business performance to be influenced by the internal and external conditions of a shipping firm, and validate the readability, clarity, and interpretability of the scales for subsequent survey administrations. An online survey was administered to shipping firms and shippers in Singapore. Subsequently, the collected data were analysed to test the hypotheses as propositioned within a number of studies in this thesis.

### **7.3 Results**

Drawing on path dependence theory, the first study proposed that the amount of benefits that a shipping firm can gain from practising CSR was contingent on its competitive strategy. Regardless of whether a shipping firm employed a low-cost or differentiation strategy as its dominant competitive strategy, it was found that practising CSR contributed positively to its financial performance. However, there was greater financial synergies or contingency fit for shipping firms that employ differentiation strategies to practise CSR. The synergy was attributed to greater mass of complementary resources (operational fit) and greater congruency in the delivery of a consistent image to customers (customer fit).

The second study proposed that the relationship between shipping firm's involvement in CSR and shippers' willingness to pay (WTP) for CSR was indirect and contingent on factors related to customer satisfaction, customer loyalty, and customers' CSR beliefs. The results showed that when CSR was implemented to a level that exceeds the expectations of shippers, it had a positive influence on customer satisfaction, which subsequently led to customer loyalty. Customer loyalty and customer satisfaction jointly reinforced customers' CSR beliefs. It was also found that CSR beliefs predicted shippers' WTP for CSR. This finding corroborated the theory of planned behaviour, which asserted that an individual's or entity's belief system comprising attitudes, subjective norms, and behavioural control motivated an intention or behaviour. In other words, shippers were willing to pay for CSR if they view the action is congruent with their beliefs.

Drawing on organisational learning theory, the third study argued that shipping firms with high continuous improvement capacities were more capable of improving and aligning their CSR capabilities to fit their dynamically changing internal and external environment. The results revealed that shipping firms which possessed high continuous improvement capacity experienced greater business performance from

practising CSR than their counterparts. In addition, it was found that a relatively slow and consistent pace in improving a shipping firm's CSR capability maximised business performance. The finding was consistent with time compression diseconomies which stated that any attempts to improve a capability by compressing time will incur additional cost due to lost in productivity, cycle time, and absorptive capacities.

## **7.4 Theoretical Contributions**

The findings of this thesis contribute to theory in several ways. First, the results advance current contingency theory research by demonstrating that the benefits of CSR are contingent on the competitive strategy of a shipping firm, CSR beliefs of shippers, the continuous improvement capacity of a shipping firm, and the pace and consistency of CSR improvement.

Next, the findings strengthen the case of contingency by supporting it with other complementary theories such as path dependence theory, theory of planned behaviour, and organisational learning theory. For instance, path dependence theory asserts that the effectiveness of an activity is underpinned by the amount of complementarily resources or capability that a firm possess. This assertion aligns with contingency theory which adopts a differentiated view on the effectiveness of an activity, which could decrease due to poor fit or increase due to good fit.

Third, the thesis analyses contingency theory through a dynamic lens. It questions the assumption of stasis in the interaction between CSR and a firm's environment. Instead, it proposes that the interaction is dynamic. As such, the performance of a firm is maximised when a firm constantly adjust and align its CSR activities with the dynamic environment. To some extent, this thesis finds evidence to support the proposition by demonstrating that a firm's continuous improvement capacity augments the benefits of practising CSR.

Last, the findings of the thesis contribute to the literature on implementing CSR at the operational level. On the account of time compression diseconomies, CSR should be practised and improved in a slow and consistent pace to maximise its returns.

## **7.5 Managerial Contributions**

The findings of this thesis also contribute to practice, in particular, on the management of CSR in the maritime transport sector. Managers should acknowledge that CSR is not a one-size-fits-all strategy. Numerous situations that are internal or external to a shipping firm influence the effectiveness or benefits of CSR. For instance, a shipping firm that employs differentiation strategies should place greater emphasis on practising CSR due to the presence and larger mass of complementary resources.

The results of the second study also imply the proactive review and management of shipper's expectations of CSR. From the shipping company's perspective, implementing CSR to a level that meets or exceeds shippers' expectations results in customer satisfaction and consequently, customer loyalty through successive satisfaction. This reinforces shippers' CSR beliefs and can have a positive effect on shippers' WTP for CSR, which contributes to the financial performance of a shipping company.

Finally, the results of the last study indicate that managers should adopt a dynamic, value-driven approach to improving their CSR performance. Customers' expectations of CSR are constantly evolving in view of changing political, economic, social, legal, technological, and environmental landscape. For example, during an economic recession, philanthropy-related CSR activities become less relevant for shippers as they focus on other pertinent criteria such as cost and quality. As a result, shipping firms should reduce their expenditures on philanthropy-related CSR activities and focus on other activities that are relevant to shippers.

## 7.6 Limitations and Recommendations

In spite of the contributions, there are a several limitations concerning this research. Firstly, the survey data are perceptual i.e. developed based on respondents' opinion, which may be biased. Future research could consider supplementing data with objective measures.

Secondly, another limitation is the low responses rate for data collected from shipping companies and shippers in Singapore. Despite several reminders and updates of contact personnel, the response rates for shipping companies and shippers are 14% and 8.7% respectively. Thus, the results may not be fully representative of the full population of the maritime transport industry in Singapore.

Thirdly, the results may only be applicable to the maritime transport sector which operates in a B2B, service market. Therefore, the results may not necessarily apply to mainstream research which focuses on B2C and product markets. Future research could perform cross-industry comparison by analysing the differences in the management of CSR, and customers' perception and reaction to CSR.

The results may also be limited within the context of Singapore. National cultures play a role in influencing the philosophy and perception of CSR at the corporate or firm level and individual level (i.e. employees). As a result, the benefits of CSR may be to some extent influenced by cultural contexts, which is a relatively unexplored area in the literature.

Future research could consider collecting additional sub-group information of shipping companies such as their scope of operations (e.g. shipping companies versus shipping agencies, short sea versus deep sea shipping, and public versus private companies). Such information was not collected in this research. Conducting sub-group analysis based on this information will yield more interesting results and implications for the maritime transport industry.

The thesis also recommends additional CSR research from the shippers' perspective. This area of research is relatively unexplored. Future research can analyse the effects of communications or advertisements on the relationship between CSR and business performance. As mentioned in Chapter 5, CSR is decoupled with shipping services and should be explicitly communicated to shippers to elicit positive behavioural intentions. This highlights the importance of advertisement and communication in managing the CSR of shipping firms.



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## REFERENCES

- Acciaro, M. (2014), "A real option application to investment in low-sulphur maritime transport", International Journal of Shipping and Transport Logistics, Vol. 6, No. 2, pp. 189-212.
- Acquaah, M. and Yasai-Ardekani, M. (2008), "Does the implementation of a combination competitive strategy yield incremental performance benefits? A new perspective from a transition economy in Sub-Saharan Africa", Journal of Business Research, Vol. 61, No. 4, pp. 346-354.
- Aerts, W. and Cormier, D. (2009), "Media legitimacy and corporate environmental communication", Accounting, Organizations and Society, Vol. 34, No. 1, pp. 1-27.
- Aguinis, H. and Glavas, A. (2012), "What we know and don't know about corporate social responsibility: a review and research agenda", Journal of Management, Vol. 38, No. 4, pp. 932-968.
- Aiken, L. S., West, S. G. and Reno, R. R. (1991), Multiple Regression: Testing and Interpreting Interactions, Sage Publications Limited.
- Ajzen, I. (1991), "The theory of planned behavior", Organizational Behavior and Human Decision Processes, Vol. 50, No. 2, pp. 179-211.
- Aloini, D., Martini, A. and Pellegrini, L. (2011), "A structural equation model for continuous improvement: a test for capabilities, tools and performance", Production Planning & Control, Vol. 22, No. 7, pp. 628-648.
- Anderson, E. W. and Mittal, V. (2000), "Strengthening the satisfaction-profit chain", Journal of Service Research, Vol. 3, No. 2, pp. 107-120.
- Anderson, J. C. and Gerbing, D. W. (1988), "Structural equation modeling in practice: A review and recommended two-step approach", Psychological Bulletin, Vol. 103, No. 3, pp. 411.
- Aragon-Correa, J. A. and Sharma, S. (2003), "A contingent resource-based view of proactive corporate environmental strategy", Academy of Management Review, Vol. 28, No. 1, pp. 71-88.
- Arya, B. and Zhang, G. (2009), "Institutional reforms and investor reactions to CSR announcements: evidence from an emerging economy", Journal of Management Studies, Vol. 46, No. 7, pp. 1089-1112.

Ažman, S. and Gomišček, B. (2015), "Functional form of connections between perceived service quality, customer satisfaction and customer loyalty in the automotive servicing industry", Total Quality Management & Business Excellence, Vol. 26, No. 7-8, pp. 888-904.

Baird, P. L., Geylani, P. C. and Roberts, J. A. (2012), "Corporate social and financial performance re-examined: Industry effects in a linear mixed model analysis", Journal of Business Ethics, Vol. 109, No. 3, pp. 367-388.

Ball, A. and Craig, R. (2010), "Using neo-institutionalism to advance social and environmental accounting", Critical Perspectives on Accounting, Vol. 21, No. 4, pp. 283-293.

Bansal, A. (2013), "Implications of corporate social responsibility: Towards a sustainable business", International Journal of Management Research and Reviews, Vol. 3, No. 9, pp. 3524.

Bansal, P. and Roth, K. (2000), "Why companies go green: A model of ecological responsiveness", Academy of Management Journal, Vol. 43, No. 4, pp. 717-736.

Barnett, M. L. (2007), "Stakeholder influence capacity and the variability of financial returns to corporate social responsibility", Academy of Management Review, Vol. 32, No. 3, pp. 794-816.

Barnett, M. L. and Salomon, R. M. (2012), "Does it pay to be really good? Addressing the shape of the relationship between social and financial performance", Strategic Management Journal, Vol. 33, No. 11, pp. 1304-1320.

Baron, R. M. and Kenny, D. A. (1986), "The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations", Journal of Personality and Social Psychology, Vol. 51, No. 6, pp. 1173.

Beach, L. R. and Mitchell, T. R. (1978), "A contingency model for the selection of decision strategies", Academy of Management Review, Vol. 3, No. 3, pp. 439-449.

Beddow, M. (2011), *Twists & Turns, Containerisation International*. Vol. 5, No. 2, pp. 48-49.

Berg, B. L., Lune, H. and Lune, H. (2004), Qualitative Research Methods for The Social Sciences, Pearson Boston, MA.

Bessant, J., Caffyn, S., Gilbert, J., Harding, R. and Webb, S. (1994), "Rediscovering continuous improvement", Technovation, Vol. 14, No. 1, pp. 17-29.

Bhattacharya, C., Sen, S. and Korschun, D. (2012), "Using corporate social responsibility to win the war for talent." MIT Sloan Management Review, Retrieved

18-Jan-2016, from <http://sloanreview.mit.edu/article/using-corporate-social-responsibility-to-win-the-war-for-talent/>.

Bhuiyan, N. and Baghel, A. (2005), "An overview of continuous improvement: from the past to the present", Management Decision, Vol. 43, No. 5, pp. 761-771.

Boer, H. (2015), Continuous Improvement. Wiley Encyclopedia of Management, John Wiley & Sons, Ltd. Vol., No.

Boston Consultant Group (2011), Charting a New Course: Restoring Profitability to Container Shipping.

Brammer, S. and Millington, A. (2008), "Does it pay to be different? An analysis of the relationship between corporate social and financial performance", Strategic Management Journal, Vol. 29, No. 12, pp. 1325-1343.

Brammer, S., Millington, A. and Rayton, B. (2007), "The contribution of corporate social responsibility to organizational commitment", The International Journal of Human Resource Management, Vol. 18, No. 10, pp. 1701-1719.

Brik, A. B., Rettab, B. and Mellahi, K. (2011), "Market orientation, corporate social responsibility, and business performance", Journal of Business Ethics, Vol. 99, No. 3, pp. 307-324.

Brooks, M. R. (1993), "International competitiveness-assessing and exploring competitive advantage by ocean container carriers", Logistics and Transportation Review, Vol. 29, No. 3.

Brooks, M. R. and Trifts, V. (2008), "Short sea shipping in North America: understanding the requirements of Atlantic Canadian shippers", Maritime Policy & Management, Vol. 35, No. 2, pp. 145-158.

Brown, T. J. and Dacin, P. A. (1997), "The company and the product: Corporate associations and consumer product responses", The Journal of Marketing, Vol., No., pp. 68-84.

Burke, L. and Logsdon, J. M. (1996), "How corporate social responsibility pays off", Long range planning, Vol. 29, No. 4, pp. 495-502.

Carroll, A. B. and Shabana, K. M. (2010), "The business case for corporate social responsibility: a review of concepts, research and practice", International Journal of Management Reviews, Vol. 12, No. 1, pp. 85-105.

Celik, M. (2009), "Designing of integrated quality and safety management system (IQSMS) for shipping operations", Safety Science, Vol. 47, No. 5, pp. 569-577.

Chang, H. H. (2005), "The influence of continuous improvement and performance factors in total quality organization", Total Quality Management and Business Excellence, Vol. 16, No. 3, pp. 413-437.

Chen, C. M. and Delmas, M. (2011), "Measuring corporate social performance: An efficiency perspective", Production and Operations Management, Vol. 20, No. 6, pp. 789-804.

Chen, I. J., Gupta, A. and Rom, W. (1994), "A study of price and quality in service operations", International Journal of Service Industry Management, Vol. 5, No. 2, pp. 23-33.

Child, J. (1972), "Organizational structure, environment and performance: The role of strategic choice", Sociology, Vol. 6, No. 1, pp. 1-22.

Cohen, J., Cohen, P., West, S. G. and Aiken, L. S. (2013), Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences, Routledge.

Cohen, W. M. and Levinthal, D. A. (1990), "Absorptive capacity: a new perspective on learning and innovation", Administrative Science Quarterly, Vol., No., pp. 128-152.

Cole, R. E. (2002), "From continuous improvement to continuous innovation", Total Quality Management, Vol. 13, No. 8, pp. 1051-1056.

Collier, J. and Esteban, R. (2007), "Corporate social responsibility and employee commitment", Business Ethics: A European Review, Vol. 16, No. 1, pp. 19-33.

Commission of the European Communities (2014), Green Paper: Promoting a European Framework for Corporate Social Responsibility, Office for Official Publications of the European Communities.

Cool, K., Dierickx, I., Costa, L. A., Cool, K., Dierickx, I. and Costa, L. A. (2015), Diseconomies of time compression, The Palgrave Encyclopedia of Strategic Management, Basingstoke, Palgrave Macmillan: 6.

Cullinane, K. and Bergqvist, R. (2014), "Emission control areas and their impact on maritime transport", Transportation Research Part D: Transport and Environment, Vol. 28, No. 1, pp. 1-5.

Dahalan, W., Zainol, Z. A., Yaa'kub, N. I. and Kassim, N. M. (2012), "Corporate social responsibility (CSR) from shipping companies in the Straits of Malacca and Singapore", International Journal of Business and Society, Vol. 13, No., pp. 197-208.

Dahlsrud, A. (2008), "How corporate social responsibility is defined: an analysis of 37 definitions", Corporate Social Responsibility and Environmental Management, Vol. 15, No. 1, pp. 1-13.

- Davies, I. A. and Crane, A. (2010), "Corporate social responsibility in small- and medium-size enterprises: investigating employee engagement in fair trade companies", Business Ethics: A European Review, Vol. 19, No. 2, pp. 126-139.
- Davis, K. (1973), "The case for and against business assumption of social responsibilities", Academy of Management Journal, Vol. 16, No. 2, pp. 312-322.
- Deng, X. and Xu, Y. (2015), "Consumers' Responses to Corporate Social Responsibility Initiatives: The Mediating Role of Consumer-Company Identification", Journal of Business Ethics, Vol., No., pp. 1-12.
- Diamantopoulos, A. and Siguaw, J. A. (2000), Introducing LISREL: A Guide for the Uninitiated, SAGE Publications Limited.
- Dietrich, M. and Krafft, J. (2012), Handbook on the Economics and Theory of the Firm. [electronic resource], Cheltenham ; Northampton, Mass. : Edward Elgar, 2012.
- Dixon-Fowler, H. R., Slater, D. J., Johnson, J. L., Ellstrand, A. E. and Romi, A. M. (2013), "Beyond "does it pay to be green?" A meta-analysis of moderators of the CEP-CFP relationship", Journal of Business Ethics, Vol. 112, No. 2, pp. 353-366.
- Domegan, C. and Fleming, D. (2007), Marketing Research in Ireland: Theory and Practice, Gill & Macmillan.
- Donaldson, L. (2001), The Contingency Theory of Organizations, Sage Publications Limited.
- Donaldson, T. and Preston, L. E. (1995), "The stakeholder theory of the corporation: Concepts, evidence, and implications", Academy of Management Review, Vol. 20, No. 1, pp. 65-91.
- Doorey, D. J. (2011), "The transparent supply chain: From resistance to implementation at Nike and Levi-Strauss", Journal of Business Ethics, Vol. 103, No. 4, pp. 587-603.
- Doyle, P. and Stern, P. (2006), Marketing management and strategy, Pearson Education, New Jersey, United States.
- Drobetz, W., Merikas, A., Merika, A. and Tsionas, M. G. (2014), "Corporate social responsibility disclosure: The case of international shipping", Transportation Research Part E: Logistics and Transportation Review, Vol. 71, No., pp. 18-44.
- Duffy, G. L. (2013), Modular Kaizen: Continuous and Breakthrough Improvement, ASQ Quality Press.

- Eisenhardt, K. M. and Brown, S. L. (1998), "Time pacing: competing in markets that won't stand still", Harvard Business Review, Vol., No. 2, pp. 59.
- Fatma, M. and Rahman, Z. (2016), "The CSR's influence on customer responses in Indian banking sector", Journal of Retailing and Consumer Services, Vol. 29, No., pp. 49-57.
- Fawcett, S. E., Fawcett, A. M., Watson, B. J. and Magnan, G. M. (2012), "Peeking inside the black box: toward an understanding of supply chain collaboration dynamics", Journal of Supply Chain Management, Vol. 48, No. 1, pp. 44-72.
- Feldman, M. P. and Vasquez-Parraga, A. Z. (2013), "Consumer social responses to CSR initiatives versus corporate abilities", Journal of Consumer Marketing, Vol. 30, No. 2, pp. 100-111.
- Field, A. (2013), Discovering statistics using IBM SPSS statistics, Sage Publications Limited.
- Fielder, F. (1978), "The contingency model and the dynamics of the leadership process", Advances in Experimental Social Psychology, Vol. 11, No., pp. 59-112.
- Flammer, C. (2013), "Corporate social responsibility and shareholder reaction: The environmental awareness of investors", Academy of Management Journal, Vol. 56, No. 3, pp. 758-781.
- Forbes (2011), "No, Consumers Will Not Pay More for Green." The Forbes CSR blog, Retrieved 18-Jan-2016, from <http://www.forbes.com/sites/csr/2011/07/28/no-consumers-will-not-pay-more-for-green/#2715e4857a0b1ac0ba2b7584>.
- Forgang, W. G. and Einolf, K. W. (2015), Management Economics: An Accelerated Approach, Routledge.
- Fornell, C. and Larcker, D. F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", Journal of Marketing Research, Vol. 18, No. 1, pp. 39-50.
- Frazier, P. A., Tix, A. P. and Barron, K. E. (2004), "Testing moderator and mediator effects in counseling psychology research", Journal of Counseling Psychology, Vol. 51, No. 1, pp. 115.
- Freeman, J. (2015), Contingency Theory. Wiley Encyclopedia of Management. New York City, United States, John Wiley & Sons, Ltd. Vol. 11, No.
- Freeman, R. E. (2010), Strategic management: A Stakeholder Approach, Cambridge University Press.

Frey, R.-V., Bayón, T. and Totzek, D. (2013), "How customer satisfaction affects employee satisfaction and retention in a professional services context", Journal of Service Research, Vol. 16, No. 4, pp. 503-517.

Friedman, M. (2007), The Social Responsibility of Business is to Increase its Profits, Springer.

Fu, G. and Jia, M. (2012), "On the reasons for the vexing csp-cfp relationship: methodology, control variables, stakeholder groups, and measures. The review of 63 studies from 1990s", International Journal of Business and Management, Vol. 7, No. 12, pp. 130-137.

Galbreath, J. (2009), "Building corporate social responsibility into strategy", European Business Review, Vol. 21, No. 2, pp. 109-127.

Galbreath, J. and Shum, P. (2012), "Do customer satisfaction and reputation mediate the CSR–FP link? Evidence from Australia", Australian Journal of Management, Vol. 37, No. 2, pp. 211-229.

Gallego-Álvarez, I., Prado-Lorenzo, J. M. and García-Sánchez, I.-M. (2011), "Corporate social responsibility and innovation: a resource-based theory", Management Decision, Vol. 49, No. 10, pp. 1709-1727.

Garriga, E. and Melé, D. (2013), Corporate Social Responsibility Theories: Mapping the Territory. Citation Classics from the Journal of Business Ethics. New York City, United States, Springer. Vol., No., pp. 69-96.

Garud, R., Kumaraswamy, A. and Karnøe, P. (2010), "Path dependence or path creation?", Journal of Management Studies, Vol. 47, No. 4, pp. 760-774.

Golicic, S., Davis, D. and McCarthy, T. (2005), A Balanced Approach to Research in Supply Chain Management. Research Methodologies in Supply Chain Management, H. Kotzab, S. Seuring, M. Müller and G. Reiner, Physica-Verlag HD. Vol., No., pp. 15-29.

Goll, I. and Rasheed, A. A. (2004), "The moderating effect of environmental munificence and dynamism on the relationship between discretionary social responsibility and firm performance", Journal of Business Ethics, Vol. 49, No. 1, pp. 41-54.

Golob, U., Lah, M. and Jančič, Z. (2008), "Value orientations and consumer expectations of corporate social responsibility", Journal of Marketing Communications, Vol. 14, No. 2, pp. 83-96.

Gonzalez-Benito, J. and Gonzalez-Benito, Ó. (2006), "A review of determinant factors of environmental proactivity", Business Strategy and The Environment, Vol. 15, No. 2, pp. 87-102.

- Govindan, K., Kannan, D. and Shankar, K. M. (2014), "Evaluating the drivers of corporate social responsibility in the mining industry with multi-criteria approach: A multi-stakeholder perspective", Journal of Cleaner Production, Vol. 84, No., pp. 214-232.
- Green, T. and Peloza, J. (2011), "How does corporate social responsibility create value for consumers?", Journal of Consumer Marketing, Vol. 28, No. 1, pp. 48-56.
- Grewatsch, S. and Kleindienst, I. (2015), "When does it pay to be good? Moderators and mediators in the corporate sustainability–corporate financial performance relationship: a critical review", Journal of Business Ethics, Vol., No., pp. 1-34.
- Grønholdt, L., Martensen, A., Jørgensen, S. and Jensen, P. (2015), "Customer experience management and business performance", International Journal of Quality and Service Sciences, Vol. 7, No. 1, pp. 90-106.
- Gronholdt, L., Martensen, A. and Kristensen, K. (2000), "The relationship between customer satisfaction and loyalty: cross-industry differences", Total Quality Management, Vol. 11, No. 4-6, pp. 509-514.
- Groza, M. D., Pronschinske, M. R. and Walker, M. (2011), "Perceived organizational motives and consumer responses to proactive and reactive CSR", Journal of Business Ethics, Vol. 102, No. 4, pp. 639-652.
- Gunasekaran, A., Subramanian, N. and Rahman, S. (2015), "Green supply chain collaboration and incentives: Current trends and future directions", Transportation Research Part E: Logistics and Transportation Review, Vol. 74, No., pp. 1-10.
- Haddock, J. F. and Fraser, I. (2008), "Assessing corporate environmental reporting motivations: differences between 'close - to - market' and 'business - to - business' companies", Corporate Social Responsibility and Environmental Management, Vol. 15, No. 3, pp. 140-155.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L. (2010), Multivariate Data Analysis, Prentice Hall Upper Saddle River, NJ.
- Han, H., Hsu, L.-T. J. and Sheu, C. (2010), "Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities", Tourism Management, Vol. 31, No. 3, pp. 325-334.
- Hargett, T. R. and Williams, M. F. (2009), "Wilh. Wilhelmsen Shipping Company: moving from CSR tradition to CSR leadership", Corporate Governance, Vol. 9, No. 1, pp. 73-82.
- Hart, S. L. (1995), "A natural-resource-based view of the firm", Academy of Management Review, Vol. 20, No. 4, pp. 986-1014.

Hartono, M. and Raharjo, H. (2015), "Exploring the mediating role of affective and cognitive satisfaction on the effect of service quality on loyalty", Total Quality Management & Business Excellence, Vol. 26, No. 9-10, pp. 971-985.

Hazen, B. T., Wu, Y., Cegielski, C. G., Jones-Farmer, L. A. and Hall, D. J. (2012), "Consumer reactions to the adoption of green reverse logistics", The International Review of Retail, Distribution and Consumer Research, Vol. 22, No. 4, pp. 417-434.

He, H. and Li, Y. (2011), "CSR and service brand: The mediating effect of brand identification and moderating effect of service quality", Journal of Business Ethics, Vol. 100, No. 4, pp. 673-688.

He, Y. and Lai, K. K. (2014), "The effect of corporate social responsibility on brand loyalty: the mediating role of brand image", Total Quality Management & Business Excellence, Vol. 25, No. 3-4, pp. 249-263.

Hietbrink, J. J. C., Berens, G. and van Rekom, J. (2010), "Corporate social responsibility in a business purchasing context: The role of CSR type and supplier product share size", Corporate Reputation Review, Vol. 13, No. 4, pp. 284-300.

Hodges, J. and Gill, R. (2014), Sustaining Change in Organizations, Sage Publications Limited.

Hu, L. t. and Bentler, P. M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives", Structural Equation Modeling: A Multidisciplinary Journal, Vol. 6, No. 1, pp. 1-55.

Huang, X., Rode, J. C. and Schroeder, R. G. (2011), "Organizational structure and continuous improvement and learning: Moderating effects of cultural endorsement of participative leadership", Journal of International Business Studies, Vol. 42, No. 9, pp. 1103-1120.

Hull, C. E. and Rothenberg, S. (2008), "Firm performance: The interactions of corporate social performance with innovation and industry differentiation", Strategic Management Journal, Vol. 29, No. 7, pp. 781-789.

Husted, B. W. (2000), "A contingency theory of corporate social performance", Business & Society, Vol. 39, No. 1, pp. 24-48.

Jamali, D. (2008), "A stakeholder approach to corporate social responsibility: A fresh perspective into theory and practice", Journal of Business Ethics, Vol. 82, No. 1, pp. 213-231.

Jayachandran, S., Kalaiganam, K. and Eilert, M. (2013), "Product and environmental social performance: Varying effect on firm performance", Strategic Management Journal, Vol. 34, No. 10, pp. 1255-1264.

Jong, M. and Meer, M. (2015), "How does it fit? exploring the congruence between organizations and their corporate social responsibility (CSR) activities", Journal of Business Ethics, Vol., No., pp. 1-13.

Kang, K. H., Stein, L., Heo, C. Y. and Lee, S. (2012), "Consumers' willingness to pay for green initiatives of the hotel industry", International Journal of Hospitality Management, Vol. 31, No. 2, pp. 564-572.

Kaye, M. and Anderson, R. (1999), "Continuous improvement: the ten essential criteria", International Journal of Quality & Reliability Management, Vol. 16, No. 5, pp. 485-509.

Ketchen, D. J., Boyd, B. K. and Bergh, D. D. (2008), "Research methodology in strategic management: Past accomplishments and future challenges", Organizational Research Methods, Vol., No.

Kilbourne, W. E., Beckmann, S. C. and Thelen, E. (2002), "The role of the dominant social paradigm in environmental attitudes: A multinational examination", Journal of Business Research, Vol. 55, No. 3, pp. 193-204.

Kim, S. and Lee, Y.-J. (2012), "The complex attribution process of CSR motives", Public Relations Review, Vol. 38, No. 1, pp. 168-170.

Kim, Y. and Han, H. (2010), "Intention to pay conventional-hotel prices at a green hotel—a modification of the theory of planned behavior", Journal of Sustainable Tourism, Vol. 18, No. 8, pp. 997-1014.

Kim, Y. and Statman, M. (2012), "Do corporations invest enough in environmental responsibility?", Journal of Business Ethics, Vol. 105, No. 1, pp. 115-129.

Klassen, R. D. and McLaughlin, C. P. (1996), "The impact of environmental management on firm performance", Management Science, Vol. 42, No. 8, pp. 1199-1214.

Klein, J. and Dawar, N. (2004), "Corporate social responsibility and consumers' attributions and brand evaluations in a product-harm crisis", International Journal of Research in Marketing, Vol. 21, No. 3, pp. 203-217.

Kline, R. B. (2010), Principles and Practice of Structural Equation Modeling, The Guilford Press.

Knapp, S. and Franses, P. H. (2007), "A global view on port state control: econometric analysis of the differences across port state control regimes", Maritime Policy & Management, Vol. 34, No. 5, pp. 453-482.

Kofoed, L. B., Gertsen, F. and Jørgensen, F. (2002), "The role of CI and learning in an organisational change process: experiences from a longitudinal study of organisational change", Integrated Manufacturing Systems, Vol. 13, No. 3, pp. 165-175.

Korschun, D., Bhattacharya, C. B. and Swain, S. D. (2014), "Corporate social responsibility, customer orientation, and the job performance of frontline employees", Journal of Marketing, Vol. 78, No. 3, pp. 20-37.

Kotler, P. J. and Armstrong, G. M. (2010), Principles of Marketing, Pearson Education.

Kunnaala, V., Rasi, M. and Storgård, J. (2013), Corporate social responsibility and shipping: views of baltic sea shipping companies on the benefits of responsibility, The Centre for Maritime Studies, University Of Turku.

Ladhari, R. (2009), "A review of twenty years of SERVQUAL research", International Journal of Quality and Service Sciences, Vol. 1, No. 2, pp. 172-198.

Lagoudis, I. N., Lalwani, C. S. and Naim, M. M. (2006), "Ranking of factors contributing to higher performance in the ocean transportation industry: a multi-attribute utility theory approach", Maritime Policy & Management, Vol. 33, No. 4, pp. 345-369.

Lagoudis, I. N. and Theotokas, I. (2007), "The competitive advantage in the Greek shipping industry", Research in Transportation Economics, Vol. 21, No., pp. 95-120.

Lai, K.-H., Lun, Y. V., Wong, C. W. and Cheng, T. (2013a), "Measures for evaluating green shipping practices implementation", International Journal of Shipping and Transport Logistics, Vol. 5, No. 2, pp. 217-235.

Lai, K.-h., Wong, C. W., Lun, Y. V. and Cheng, T. (2013b), "Shipping design for compliance and the performance contingencies for shipping firms", Transportation Research Part E: Logistics and Transportation Review, Vol. 55, No., pp. 74-83.

Lam, J. S. L. (2015), "Designing a sustainable maritime supply chain: A hybrid QFD–ANP approach", Transportation Research Part E: Logistics and Transportation Review, Vol. 78, No., pp. 70-81.

Lam, J. S. L. and Lai, K.-h. (2015), "Developing environmental sustainability by ANP-QFD approach: the case of shipping operations", Journal of Cleaner Production, Vol. 105, No., pp. 275-284.

Lam, J. S. L. and Lim, J. M. (2016), "Incorporating corporate social responsibility in strategic planning: Case of ship-operating companies", International Journal of Shipping and Transport Logistics, Vol. 8, No. 3, pp. 273-293.

Lane, P. J., Koka, B. R. and Pathak, S. (2006), "The reification of absorptive capacity: A critical review and rejuvenation of the construct", Academy of Management Review, Vol. 31, No. 4, pp. 833-863.

Lannelongue, G., Gonzalez-Benito, J., Gonzalez-Benito, O. and Gonzalez-Zapatero, C. (2015), "Time compression diseconomies in environmental management: The effect of assimilation on environmental performance", Journal of Environmental Management, Vol. 147, No., pp. 203-212.

Ledford, G. E. (2015), Continuous Improvement. Wiley Encyclopedia of Management, John Wiley & Sons Ltd. Vol., No.

Lee, H.-L. (2012), "Applying fuzzy and grey theory to multi-criteria decision-making model for supplier selection: A corporate social responsibility perspective", African Journal of Business Management, Vol. 6, No. 29, pp. 8504.

Lee, J.-S., Hsu, L.-T., Han, H. and Kim, Y. (2010), "Understanding how consumers view green hotels: how a hotel's green image can influence behavioural intentions", Journal of Sustainable Tourism, Vol. 18, No. 7, pp. 901-914.

Lee, K.-H. (2015), "Does size matter? Evaluating corporate environmental disclosure in the Australian mining and metal industry: a combined approach of quantity and quality measurement", Business Strategy and The Environment, Vol., No.

Leek, S. and Christodoulides, G. (2012), "A framework of brand value in B2B markets: The contributing role of functional and emotional components", Industrial marketing management, Vol. 41, No. 1, pp. 106-114.

Lepoutre, J. and Heene, A. (2006), "Investigating the impact of firm size on small business social responsibility: A critical review", Journal of Business Ethics, Vol. 67, No. 3, pp. 257-273.

Lev, B., Petrovits, C. and Radhakrishnan, S. (2010), "Is doing good good for you? How corporate charitable contributions enhance revenue growth", Strategic Management Journal, Vol. 31, No. 2, pp. 182-200.

Levitt, T. (1958), "The dangers of social responsibility", Harvard Business Review, Vol. 36, No. 5, pp. 41-50.

Lichtenstein, D. R., Drumwright, M. E. and Braig, B. M. (2004), "The effect of corporate social responsibility on customer donations to corporate-supported nonprofits", Journal of Marketing, Vol. 68, No. 4, pp. 16-32.

Lii, Y.-S. and Lee, M. (2012), "Doing right leads to doing well: when the type of CSR and reputation interact to affect consumer evaluations of the firm", Journal of Business Ethics, Vol. 105, No. 1, pp. 69-81.

- Lin, S. and Wong, Y. D. (2013), "Greenhouse gas mitigation strategies for container shipping industry", American Journal of Engineering and Applied Sciences, Vol. 5, No. 4, pp. 310.
- Lin, W.-T. (2012), "Family ownership and internationalization processes: Internationalization pace, internationalization scope, and internationalization rhythm", European Management Journal, Vol. 30, No. 1, pp. 47-56.
- Lindstad, H., Asbjørnslett, B. E. and Strømman, A. H. (2015), "Opportunities for increased profit and reduced cost and emissions by service differentiation within container liner shipping", Maritime Policy & Management, Vol., No., pp. 1-15.
- Lirn, T.-C., Lin, H.-W. and Shang, K.-C. (2014), "Green shipping management capability and firm performance in the container shipping industry", Maritime Policy & Management, Vol. 41, No. 2, pp. 159-175.
- Locke, E. A. and Jain, V. K. (1995), "Organizational learning and continuous improvement", The International Journal of Organizational Analysis, Vol. 3, No. 1, pp. 45-68.
- Lohtia, R., Donthu, N. and Hershberger, E. K. (2003), "The impact of content and design elements on banner advertising click-through rates", Journal of Advertising Research, Vol. 43, No. 04, pp. 410-418.
- Lu, C.-S., Lin, C.-C. and Tu, C.-J. (2009), "Corporate social responsibility and organisational performance in container shipping", International Journal of Logistics: Research and Applications, Vol. 12, No. 2, pp. 119-132.
- Lueg, R., Pedersen, M. M. and Clemmensen, S. N. (2015), "The role of corporate sustainability in a low-cost business model—A case study in the Scandinavian fashion industry", Business Strategy and The Environment, Vol. 24, No. 5, pp. 344-359.
- Lun, Y. V., Lai, K.-h., Wong, C. W. and Cheng, T. (2015), "Environmental governance mechanisms in shipping firms and their environmental performance", Transportation Research Part E: Logistics and Transportation Review, Vol., No.
- Luo, X. and Bhattacharya, C. B. (2006), "Corporate social responsibility, customer satisfaction, and market value", Journal of Marketing, Vol. 70, No. 4, pp. 1-18.
- Lussier, R. N. (2011), Research Methods and Statistics for Business, Waveland Pr Inc.
- Mackey, A., Mackey, T. B. and Barney, J. B. (2007), "Corporate social responsibility and firm performance: Investor preferences and corporate strategies", Academy of Management Review, Vol. 32, No. 3, pp. 817-835.

Maletič, M., Maletič, D., Dahlgaard, J. J., Dahlgaard-Park, S. M. and Gomišček, B. (2014), "Sustainability exploration and sustainability exploitation: From a literature review towards a conceptual framework", Journal of Cleaner Production, Vol. 79, No., pp. 182-194.

Maletič, M., Maletič, D., Dahlgaard, J. J., Dahlgaard-Park, S. M. and Gomišček, B. (2015), "Effect of sustainability-oriented innovation practices on the overall organisational performance: an empirical examination", Total Quality Management & Business Excellence, Vol., No., pp. 1-20.

Manaktola, K. and Jauhari, V. (2007), "Exploring consumer attitude and behaviour towards green practices in the lodging industry in India", International Journal of Contemporary Hospitality Management, Vol. 19, No. 5, pp. 364-377.

Mankiw, N. G. (2012), Principles of Microeconomics, Cengage Learning.

Margolis, J. D., Elfenbein, H. A. and Walsh, J. P. (2009), "Does it pay to be good and does it matter? A meta-analysis of the relationship between corporate social and financial performance", Working Paper, Cambridge, MA: Harvard University, Vol., No., pp. 1-68.

Margolis, J. D. and Walsh, J. P. (2003), "Misery loves companies: Rethinking social initiatives by business", Administrative Science Quarterly, Vol. 48, No. 2, pp. 268-305.

Marshall, N. W. (2010), "Commitment, loyalty and customer lifetime value: investigating the relationships among key determinants", Journal of Business & Economics Research, Vol. 8, No. 8.

Matthews, S. (2010), "Shipping sees the broader benefits of acting responsibly", Lloydslist.com, Vol., No.

McWilliams, A. and Siegel, D. (2000), "Corporate social responsibility and financial performance: correlation or misspecification?", Strategic Management Journal, Vol. 21, No. 5, pp. 603-609.

McWilliams, A. and Siegel, D. (2001), "Corporate social responsibility: A theory of the firm perspective", Academy of Management Review, Vol. 26, No. 1, pp. 117-127.

McWilliams, A. and Siegel, D. S. (2011), "Creating and capturing value strategic corporate social responsibility, resource-based theory, and sustainable competitive advantage", Journal of Management, Vol. 37, No. 5, pp. 1480-1495.

McWilliams, A., Siegel, D. S. and Wright, P. M. (2006), "Corporate social responsibility: Strategic implications", Journal of Management Studies, Vol. 43, No. 1, pp. 1-18.

Mudrack, P. E., Mason, E. S. and Stepeanski, K. M. (1999), "Equity sensitivity and business ethics", Journal of Occupational and Organizational Psychology, Vol. 72, No. 4, pp. 539-560.

Muller, A. and Kolk, A. (2010), "Extrinsic and intrinsic drivers of corporate social performance: Evidence from foreign and domestic firms in Mexico", Journal of Management Studies, Vol. 47, No. 1, pp. 1-26.

Nagy, M. S. (2002), "Using a single-item approach to measure facet job satisfaction", Journal of Occupational and Organizational Psychology, Vol. 75, No. 1, pp. 77-86.

Nidumolu, R., Prahalad, C. K. and Rangaswami, M. (2009), "Why sustainability is now the key driver of innovation", Harvard Business Review, Vol. 87, No. 9, pp. 56-64.

Nielsen (2014), "Global consumers are willing to put their money where their heart is when it comes to goods and services from companies committed to social responsibility." Retrieved 17-Jun-2014, from <http://www.nielsen.com/us/en/press-room/2014/global-consumers-are-willing-to-put-their-money-where-their-heart-is.html>.

Nunnally, J. C. (1994), Bernstein: Psychometric theory, McGraw-Hill.

Oliver, R. L. (2010), Satisfaction: A Behavioral Perspective on the Consumer, M.E. Sharpe, INc.

Orlitzky, M., Schmidt, F. L. and Rynes, S. L. (2003), "Corporate social and financial performance: A meta-analysis", Organization Studies, Vol. 24, No. 3, pp. 403-441.

Orlitzky, M. and Swanson, D. L. (2008), Corporate Social and Financial Performance: An Integrative Review. Toward Integrative Corporate Citizenship, Springer. Vol., No., pp. 83-120.

Ortega, M. J. R. (2010), "Competitive strategies and firm performance: Technological capabilities' moderating roles", Journal of Business Research, Vol. 63, No. 12, pp. 1273-1281.

Pacheco, G. d. A. and Zemsky, P. (2007), "The timing of resource development and sustainable competitive advantage", Management Science, Vol. 53, No. 4, pp. 651-666.

Panayides, P. M. (2003), "Competitive strategies and organizational performance in ship management", Maritime Policy & Management, Vol. 30, No. 2, pp. 123-140.

Patton, M. Q. (2005), Qualitative Research, Wiley Online Library.

Pawlik, T., Gaffron, P., Dewes, P., Song, D. and Panayides, P. (2012), Corporate social responsibility in maritime logistics, Emerald Group Publishing, Bradford, United Kingdom.

- Pedhazur, E. J. and Schmelkin, L. P. (2013), Measurement, design, and analysis: An integrated approach, Psychology Press.
- Peloza, J. and Shang, J. (2011), "How can corporate social responsibility activities create value for stakeholders? A systematic review", Journal of the Academy of Marketing Science, Vol. 39, No. 1, pp. 117-135.
- Philipp, B. and Militaru, D. (2011), "Shippers' ecological buying behaviour towards logistics services in France", International Journal of Logistics Research and Applications, Vol. 14, No. 6, pp. 413-426.
- Pivato, S., Misani, N. and Tencati, A. (2008), "The impact of corporate social responsibility on consumer trust: the case of organic food", Business Ethics: A European Review, Vol. 17, No. 1, pp. 3-12.
- Plowman, D. A., Baker, L. T., Beck, T. E., Kulkarni, M., Solansky, S. T. and Travis, D. V. (2007), "Radical change accidentally: The emergence and amplification of small change", Academy of Management Journal, Vol. 50, No. 3, pp. 515-543.
- Polonsky, M. J., Daub, C.-H. and Ergenzinger, R. (2005), "Enabling sustainable management through a new multi-disciplinary concept of customer satisfaction", European Journal of marketing, Vol. 39, No. 9/10, pp. 998-1012.
- Porter, M. E. (1996), What is strategy?, Harvard Business Review (November-December). Sage.
- Porter, M. E. and Kramer, M. R. (2006), "The link between competitive advantage and corporate social responsibility", Harvard Business Review, Vol. 84, No. 12, pp. 78-92.
- Progoulaki, M. and Roe, M. (2011), "Dealing with multicultural human resources in a socially responsible manner: a focus on the maritime industry", WMU Journal of Maritime Affairs, Vol. 10, No. 1, pp. 7-23.
- Pruzan-Jorgensen, P. M. and Farrag, A. (2010), Sustainability trends in the container shipping industry: A future trends research summary, Business for Social Responsibility: 1-17.
- Pugh, D. S., Hickson, D. J., Hinings, C. R. and Turner, C. (1969), "The context of organization structures", Administrative Science Quarterly, Vol., No., pp. 91-114.
- Reuter, C., Foerstl, K. A. I., Hartmann, E. V. I. and Blome, C. (2010), "Sustainable global supplier management: The role of dynamic capabilities in achieving competitive advantage", Journal of Supply Chain Management, Vol. 46, No. 2, pp. 45-63.

- Robinson, J. P., Shaver, P. R. and Wrightsman, L. S. (1991), "Criteria for scale selection and evaluation", Measures of personality and social psychological attitudes, Vol. 1, No. 3, pp. 1-16.
- Rokka, J. and Uusitalo, L. (2008), "Preference for green packaging in consumer product choices—do consumers care?", International Journal of Consumer Studies, Vol. 32, No. 5, pp. 516-525.
- Rupp, D. E., Ganapathi, J., Aguilera, R. V. and Williams, C. A. (2006), "Employee reactions to corporate social responsibility: An organizational justice framework", Journal of Organizational Behavior, Vol. 27, No. 4, pp. 537-543.
- Russo, M. V. and Fouts, P. A. (1997), "A resource-based perspective on corporate environmental performance and profitability", Academy of Management Journal, Vol. 40, No. 3, pp. 534-559.
- Schmitt, N. (1996), "Uses and abuses of coefficient alpha", Psychological assessment, Vol. 8, No. 4, pp. 350.
- Schniederjans, D. G. and Starkey, C. M. (2014), "Intention and willingness to pay for green freight transportation: An empirical examination", Transportation Research Part D: Transport and Environment, Vol. 31, No., pp. 116-125.
- Schreck, P. (2009), The Business Case for Corporate Social Responsibility: Understanding and Measuring Economic Impacts of Corporate Social Performance, Springer.
- Schuler, D. A. and Cording, M. (2006), "A corporate social performance—corporate financial performance behavioral model for consumers", Academy of Management Review, Vol. 31, No. 3, pp. 540-558.
- Sen, S. and Bhattacharya, C. B. (2001), "Does doing good always lead to doing better? consumer reactions to corporate social responsibility", Journal of Marketing Research, Vol. 38, No. 2, pp. 225-243.
- Seo, K., Moon, J. and Lee, S. (2015), "Synergy of corporate social responsibility and service quality for airlines: The moderating role of carrier type", Journal of Air Transport Management, Vol. 47, No., pp. 126-134.
- Servaes, H. and Tamayo, A. (2013), "The impact of corporate social responsibility on firm value: The role of customer awareness", Management Science, Vol. 59, No. 5, pp. 1045-1061.
- Shin, Y. and Thai, V. V. (2015), "The impact of corporate social responsibility on customer satisfaction, relationship maintenance and loyalty in the shipping industry",

Corporate Social Responsibility and Environmental Management, Vol. 22, No. 6, pp. 381-392.

Silverman, D. (2010), Qualitative research, Sage Publication Limited.

Skovgaard, J. (2014), "European Union's policy on corporate social responsibility and opportunities for the maritime industry", International Journal of Shipping and Transport Logistics, Vol. 6, No. 5, pp. 513-530.

Slack, N., Chambers, S. and Johnston, R. (2009), Operations Management, Pearson Education, London, United Kingdom.

Sousa, R. and Voss, C. A. (2008), "Contingency research in operations management practices", Journal of Operations Management, Vol. 26, No. 6, pp. 697-713.

Spanos, Y. E. and Lioukas, S. (2001), "An examination into the causal logic of rent generation: contrasting Porter's competitive strategy framework and the resource-based perspective", Strategic Management Journal, Vol. 22, No. 10, pp. 907-934.

Sperle, P. A., Ottenbacher, K. J., Braun, S. L., Lane, S. J. and Nochajski, S. (1997), "Equivalence reliability of the functional independence measure for children administration methods", American Journal of Occupational Therapy, Vol. 51, No. 1, pp. 35-41.

Sprinkle, G. B. and Maines, L. A. (2010), "The benefits and costs of corporate social responsibility", Business Horizons, Vol. 53, No. 5, pp. 445-453.

Su, W., Peng, M. W., Tan, W. and Cheung, Y.-L. (2014), "The signaling effect of corporate social responsibility in emerging economies", Journal of Business Ethics, Vol., No., pp. 1-13.

Surroca, J., Tribó, J. A. and Waddock, S. (2010), "Corporate responsibility and financial performance: The role of intangible resources", Strategic Management Journal, Vol. 31, No. 5, pp. 463-490.

Sydow, J., Schreyögg, G. and Koch, J. (2009), "Organizational path dependence: Opening the black box", Academy of Management Review, Vol. 34, No. 4, pp. 689-709.

Tai, J. (2011), B2B : Give your Business the Staying Power and Transform it into a Successful Brand Today, Marshall Cavendish.

Tang, Z., Hull, C. E. and Rothenberg, S. (2012), "How corporate social responsibility engagement strategy moderates the CSR-financial performance relationship", Journal of Management Studies, Vol. 49, No. 7, pp. 1274-1303.

- Thai, V. V., Balasubramanyam, L., Yeoh, K. K. L. and Norsofiana, S. (2013), "Revisiting the seafarer shortage problem: the case of Singapore", Maritime Policy & Management, Vol. 40, No. 1, pp. 80-94.
- Thai, V. V., Tay, W. J., Tan, R. and Lai, A. (2014), "Defining service quality in tramp shipping: conceptual model and empirical evidence", The Asian Journal of Shipping and Logistics, Vol. 30, No. 1, pp. 1-29.
- Thomas, D. R. (2006), "A general inductive approach for analyzing qualitative evaluation data", American journal of evaluation, Vol. 27, No. 2, pp. 237-246.
- Thompson, A. A., Peteraf, M. A., Gamble, J. E. and Strickland, A. (2012), Crafting and Executing Strategy: The Quest for Competitive Advantage: Concepts and Cases, McGraw-Hill/Irwin.
- Tian, Z., Wang, R. and Yang, W. (2011), "Consumer Responses to Corporate Social Responsibility (CSR) in China", Journal of Business Ethics, Vol. 101, No. 2, pp. 197-212.
- Timans, W., Ahaus, K., van Solingen, R., Kumar, M. and Antony, J. (2016), "Implementation of continuous improvement based on Lean Six Sigma in small- and medium-sized enterprises", Total Quality Management & Business Excellence, Vol. 27, No. 3-4, pp. 309-324.
- Tordesillas, C. (2011), "Govt sets new parameters to define SMEs." Retrieved 20-July, from <http://sbr.com.sg/retail/more-news/govt-sets-new-parameters-define-smes>.
- Trudel, R. and Cotte, J. (2009), "Does it pay to be good?", MIT Sloan Management Review, Vol. 50, No. 2, pp. 61.
- Turban, D. B. and Greening, D. W. (1997), "Corporate social performance and organizational attractiveness to prospective employees", Academy of Management Journal, Vol. 40, No. 3, pp. 658-672.
- Turker, D. (2009), "Measuring corporate social responsibility: A scale development study", Journal of Business Ethics, Vol. 85, No. 4, pp. 411-427.
- Tzannatos, E. and Stournaras, L. (2015), "EEDI analysis of Ro-Pax and passenger ships in Greece", Maritime Policy & Management, Vol. 42, No. 4, pp. 305-316.
- Van de Voorde, E. and Vanelslander, T. (2008), Market Power and Vertical and Horizontal Integration in the Maritime Shipping and Port Industry, OECD/ITF Joint Transport Research Centre Discussion Paper.

Van der Laan, G., Van Ees, H. and Van Witteloostuijn, A. (2008), "Corporate social and financial performance: An extended stakeholder theory, and empirical test with accounting measures", Journal of Business Ethics, Vol. 79, No. 3, pp. 299-310.

Vandenberg, R. J. and Lance, C. E. (2000), "A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research", Organizational Research Methods, Vol. 3, No. 1, pp. 4-70.

Vecchio, R. and Annunziata, A. (2015), "Willingness-to-pay for sustainability-labelled chocolate: an experimental auction approach", Journal of Cleaner Production, Vol. 86, No., pp. 335-342.

Vermeulen, F. (2009), "Slow and Steady Wins the Growth Race." Harvard Business Review.

Vermeulen, F. and Barkema, H. (2002), "Pace, rhythm, and scope: Process dependence in building a profitable multinational corporation", Strategic Management Journal, Vol. 23, No. 7, pp. 637-653.

Vlachos, P. A. (2012), "Corporate social performance and consumer-retailer emotional attachment: The moderating role of individual traits", European Journal of marketing, Vol. 46, No. 11/12, pp. 1559-1580.

Vlachos, P. A., Tsamakos, A., Vrechopoulos, A. P. and Avramidis, P. K. (2009), "Corporate social responsibility: attributions, loyalty, and the mediating role of trust", Journal of the Academy of Marketing Science, Vol. 37, No. 2, pp. 170-180.

Waddock, S. A. and Graves, S. B. (1997), "The corporate social performance-financial performance link", Strategic Management Journal, Vol. 18, No. 4, pp. 303-319.

Wagner, M. (2010), "The role of corporate sustainability performance for economic performance: A firm-level analysis of moderation effects", Ecological Economics, Vol. 69, No. 7, pp. 1553-1560.

Wagner, T., Lutz, R. J. and Weitz, B. A. (2009), "Corporate hypocrisy: Overcoming the threat of inconsistent corporate social responsibility perceptions", Journal of Marketing, Vol. 73, No. 6, pp. 77-91.

Waldman, D. A., Siegel, D. S. and Javidan, M. (2006), "Components of CEO transformational leadership and corporate social responsibility", Journal of Management Studies, Vol. 43, No. 8, pp. 1703-1725.

Walker, H. and Phillips, W. (2008), "Sustainable procurement: emerging issues", International Journal of Procurement Management, Vol. 2, No. 1, pp. 41-61.

- Wang, H. and Choi, J. (2013), "A new look at the corporate social–financial performance relationship the moderating roles of temporal and interdomain consistency in corporate social performance", Journal of Management, Vol. 39, No. 2, pp. 416-441.
- White, K. and Willness, C. (2009), "Consumer reactions to the decreased usage message: The role of elaborative processing", Journal of Consumer Psychology, Vol. 19, No. 1, pp. 73-87.
- Williamson, D., Lynch-Wood, G. and Ramsay, J. (2006), "Drivers of environmental behaviour in manufacturing SMEs and the implications for CSR", Journal of Business Ethics, Vol. 67, No. 3, pp. 317-330.
- Wong, C. Y., Boon-Itt, S. and Wong, C. W. (2011), "The contingency effects of environmental uncertainty on the relationship between supply chain integration and operational performance", Journal of Operations Management, Vol. 29, No. 6, pp. 604-615.
- Wood, D. J. (2010), "Measuring corporate social performance: A review", International Journal of Management Reviews, Vol. 12, No. 1, pp. 50-84.
- Yamin, S., Gunasekaran, A. and Mavondo, F. T. (1999), "Relationship between generic strategies, competitive advantage and organizational performance: an empirical analysis", Technovation, Vol. 19, No. 8, pp. 507-518.
- Yang, C. C. (2012), "The effect of environmental management on environmental performance and firm performance in Taiwanese maritime firms", International Journal of Shipping and Transport Logistics, Vol. 4, No. 4, pp. 393-407.
- Yao, C.-Y., Tsai, C.-C. and Fang, Y.-C. (2015), "Understanding social capital, team learning, members' e-loyalty and knowledge sharing in virtual communities", Total Quality Management & Business Excellence, Vol. 26, No. 5-6, pp. 619-631.
- Youn, H., Hua, N. and Lee, S. (2015), "Does size matter? Corporate social responsibility and firm performance in the restaurant industry", International Journal of Hospitality Management, Vol. 51, No., pp. 127-134.
- Youn, S. and Kim, H. (2008), "Antecedents of consumer attitudes toward cause-related marketing", Journal of Advertising Research, Vol. 48, No. 1, pp. 123-137.
- Yuen, K. F. and Thai, V. (2015a), "Service quality appraisal: a study of interactions", Total Quality Management & Business Excellence, Vol., No., pp. 1-16.
- Yuen, K. F. and Thai, V. V. (2015b), "Service quality and customer satisfaction in liner shipping", International Journal of Quality and Service Sciences, Vol. 7, No. 2/3, pp. 170-183.

Yuen, K. F., Thai, V. V. and Wong, Y. D. (2016), "Are customers willing to pay for corporate social responsibility? A study of individual-specific mediators", Total Quality Management & Business Excellence, Vol. 27, No. 7-8, pp. 912-926.

Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", Journal of Marketing, Vol. 60, No. 2.

Zhu, Q. and Sarkis, J. (2007), "The moderating effects of institutional pressures on emergent green supply chain practices and performance", International Journal of Production Research, Vol. 45, No. 18-19, pp. 4333-4355.

Zikmund, W. (2007), Business Research Methods, South-Western College Publisher, Mason, Ohio.

Zikmund, W. G., Carr, J. C. and Griffin, M. (2012), Business Research Methods, CengageBrain.com.

## Appendix A Interview Questions and Transcripts



### A Study of Corporate Social Responsibility in Shipping

Dear Sir/Madam,

Thank you for agreeing to participate in the interview.

Our research is titled “The relationship between corporate social responsibility and performance: a contingency assessment”. We strongly believe that your participation in this research could potentially contribute to new theories and practice on sustainability and strategic management in maritime transport.

Your participation in the interview will provide us with valuable insights on (1) the types of CSR activities that are practised by shipping firms, (2) the possible link between CSR and organisational performance, and (3) if the benefits of CSR are contingent on the internal and external environment of shipping firms.

We recognise that you have to set aside valuable time from your busy schedule for this interview. Therefore, to facilitate the flow of our interview, we have enclosed a list of questions for you to read or prepare in advance. The interview will take about 45 minutes. We have also enclosed a survey questionnaire in this e-mail. We would like to seek your expert opinion on the readability, clarity, and interpretability of the questionnaire.

We would also like to assure the anonymity of your personal and company identity. Such information is only recorded for academic purpose and will not be disclosed in any circumstances. For verification or enquiry purpose, you can contact me at 96516841 or my supervisor, Dr. Thai Van Vinh at 67905331.

We thank you for your support and we look forward to seeing you.

Yours sincerely,

A handwritten signature in black ink that reads "Yuen".

Yuen, Kum Fai

1. How is CSR defined by your company? What are the CSR activities that are practiced by your company?

R1	CSR means meeting the triple bottom line (economic / social / environment). Our company focuses on three priorities in our CSR strategies; enabling trade through economic growth, investing in education for skilled workers, and achieving energy efficiency and cost savings from CO <sub>2</sub> reduction. We are also actively involved in other activities relating to health and safety, anti-corruption, diversity, human rights and labour conditions, responsible procurement, logistics support in humanitarian crises, and CSR reporting.
R2	CSR is interpreted as the proactive management of the environment such as reducing greenhouse gases emissions from ships and proper treatment and discharge of waste and ballast water.
R3	CSR is defined as being responsible to the environment and stakeholders. Unfortunately, we do not have a formal department that handles CSR. We also do not have a formal plan of actions to participate in CSR activities.
R4	CSR is about compliance to the relevant regulations on pollution prevention, maritime safety, and security. Basically, our CSR activities involve adhering to these prescribed regulations. We are also involved in charities and community services.
R5	CSR is about being responsible to the society and environment. We see CSR as practices that are voluntary and exceeds regulatory requirements. Some of the activities that are practised by our company include charity and scholarship donations, proper treatment of employees, and investments in green technologies.
R6	We view CSR as proper management of the environment. We constantly invest in R&D in relation to green management. This includes green logistics, packaging, reverse logistics, and carbon footprint.
R7	CSR refers to the long-term sustainability of a firm's financial performance. To remain financially sustainable, short-term costs such as environmental, society, and stakeholder costs have to be expended.

2. How active is your company's participation in CSR? What is your company's justification for *participating or not participating* in CSR?

R1	Very active. We believe that practicing CSR contribute to our long-term goal of sustainability. Being sustainable is not always about making short-term profits. We have to invest in future-returns that could come from training our employees to build a talented management team, reporting our economic activities responsibly to boost shareholders' confidence in our organisation, and investing in energy efficient technologies to reduce cost.
R2	Quite active. CSR is a must in all organisations today. There are some benefits from practicing CSR. For example, we see CSR as a preventive measure against future flag state or port state intervention. Investing in greener ships or

	engines can also help to reduce our fuel cost and at the same time, we can boast to our customers that we are a responsible shipping company.
R3	Not active at all. I believe that my company is fairly profit-driven and we view CSR as unnecessary cost to our organisation. We need to reduce our cost to compete. We feel that complying with the regulatory requirements is sufficient and the rest of our effort should focus on saving cost or bringing in revenue for our company.
R4	Fairly active. We feel that CSR is good publicity to our company. However, whether it generates positive returns is not known to us.
R5	Quite active. Practising CSR portrays a good image for our company which may be necessarily for us to clinch some business deals.
R6	Not active. Our company does not believe that practising CSR can provide any advantages for our business.
R7	Quite active. CSR contributes to our branding. It also portrays us as a responsible supplier for our customers.

3. Does your company view CSR as a preventive measure to avoid regulatory or governmental intervention or as an activity that brings potential growth and opportunities to your business?

R1	Both.
R2	Both.
R3	To avoid non-compliance cost
R4	To avoid non-compliance cost
R5	Both.
R6	Both.
R7	For growth and opportunities

4. Presented below contains a list of competitive advantages that can be pursued by shipping firms. What are the competitive advantages that are currently pursued by your company?

Competitive advantages	Tick here
Operational efficiency	6
Service reliability	2
Service speed / transit time	2
Service frequency	1
Customer responsiveness	2
Branding and marketing	1
Global network coverage	4
Technology leadership	
Human resource / knowledge management	1

Speciality in niche trade routes	1
Leader in technological innovation	
Leader in corporate social responsibility	1
Ability to handle specialised or project cargoes	1
Maintaining and developing close relationships with customers	1

5. Do you view CSR as a source of competitive advantage itself or as an activity to achieve other sources of competitive advantages?

R1	CSR can be a competitive advantage which our company is actively striving to achieve. Increasingly, as part of their evaluation process, major shippers are scrutinising our environmental performances and other CSR-related performances. And of course, it can also help reduce our operating cost which can contribute to our cost competitiveness.
R2	I am more inclined to support the notion that CSR is a means to achieve other sources of competitive advantages. What performances can it lead to if you can perform CSR activities better than your rivals? To a large extent, I see it as internal activity to reduce cost by improving productivity of our employees and energy efficiency. It is an internal activity that is also pitched to external stakeholders such as our shareholders, customers, and regulators to improve their confidence or satisfaction with our services.
R3	I see it as the latter because it contributes to a firm's cost competitiveness due to improved efficiency and productivity.
R4	We don't think it contributes to any competitiveness or performances.
R5	I don't think it is a competitive advantage at all. Even though it is something that shippers may desire. Shippers are more concerned with tangibles features of a service such as cost, reliability, and frequency.
R6	-
R7	We view it as a source of competitive advantage but not a competitive advantage.

6. Do you think practicing CSR can improve the operational performance of your business?

R1	Yes. From both productivity and energy efficiency perspective. Larger ships with cleaner and more energy efficient engines result in huge financial savings on our operating cost. Furthermore, our ships are designed for slow-steaming which provides additional cost-savings and can result in more reliable shipping services.
R2	Yes. Mainly from the environmental aspect. Conservation of energy or fuel

	means greater savings for our company.
R3	Yes.
R4	Maybe, if we view it from the energy efficiency perspective.
R5	It depends. Some activities would no doubt increase our operational performance while others would reduce our performance.
R6	Yes. Given that bunker costs are rising and more stringent regulations on environment protection being put into place, investing in cleaner engines may reduce our operating cost and allow us to compete in the market.
R7	Yes, primarily if we look at the green perspective. There is also a possibility of reduced tax from our participation in philanthropic activities as well as from improved productivity from our employees.

7. Do you think that practising CSR is an effective marketing strategy to draw potential customers to your business?

R1	Yes. As mentioned earlier, our shippers are increasingly evaluating our performances based on other aspect such as CSR.
R2	No. Shippers are still quite conservative and they largely evaluate our services based on more tangible performances that benefit them. For example, freight charges, comprehensiveness of our service, overall quality of our services.
R3	Yes, it can be. However, it should be viewed as a complementary strategy. I don't see it as something that can work on itself. Logistical performance is still the central focus for our shippers.
R4	No.
R5	To a small extent. As mentioned earlier, shippers are primarily concerned with more tangible service features rather than company involvement in CSR.
R6	It depends. Certain customer groups are more concerned with CSR than the others.
R7	Yes.

8. Do you think that practicing CSR can improve the financial performance of your business?

R1	Yes. We believe that every CSR activity has its role in improving our financial performance, one way or another. Of course, CSR is something that requires investment in the short run but if we look at it in the long run, our investments on green shipping, education and training, ensuring diversity in job scope and ethnicity, safety work environment will pay off financially.
R2	Maybe. And it largely depends on the activities that we are practicing. I do see some possible returns from investing in green technologies in shipping but not much on other activities such as charities, scholarships, and education.
R3	I think that it does not guarantee improvement in financial performance. CSR is something that is voluntary and we probably should not expect any returns from

	such investments. However, if we are looking at making it strategic or trying to market our involvement in CSR to our customers or potential investors, it is really difficult to quantify the financial returns. In addition, measuring our involvement in CSR is so subjective. On the one hand, we could be ‘less’ involved in CSR than our counterpart but we could be spending more money on marketing our company as being socially responsible. Perhaps the latter could help us generate more businesses.
R4	No. Practising CSR above what is required by law and regulation is probably excess cost to the company.
R5	No. CSR is an activity that provides no tangible benefits. Therefore, it is voluntary and only practised when our company has excess cash. In fact, CSR should be viewed as an activity where business organisations expect zero returns on investments.
R6	The link is quite remote. I believe there are many intervening factors at play here. I would suggest that there is no relationship between the two. Some of the intervening factors are the receptivity of customers. In other words, whether they are willing to pay for CSR.
R7	There might a possible relationship, provided that the investments on CSR are compensated by higher freight charges. However, given that customers today are value-driven, I feel that the relationship is weak.

9. While some shipping firms view CSR as additional cost, others view it as a competitive strategy. In your opinion, what are some of the factors that could explain for the perceptual differences on the relationship between CSR and performance?

R1	Culture is one. This is probably related to the founder’s and management philosophy. Also, we always based our decisions on our stakeholders. Are the really benefiting from CSR? Are they receptive to CSR? Therefore, probably, the receptivity of CSR by our stakeholders is another reason.
R2	Customer’s willingness to pay could be a reason. We do have a group of customers that are cost-conscious. We also have customers that are willing to pay more for quality services which may include CSR.
R3	At which stage of the economic or shipping cycle could influence this perception. When shipping is blooming where we have excess cash, we wouldn’t mind investing on CSR to gain some possible or future financial returns. However, when we are in a recession period, I believe it is all about surviving through the recession and we will probably view CSR and performance as trade-offs.
R4	Size of the firm could be a reason. Larger firm has more resources and can afford to have a basket of strategies to compete in a market.
R5	Shippers’ selection criteria; whether it includes CSR. Also, management philosophy of the shipping company
R6	Many factors are at play here. It depends on the culture of the shipping company, culture of the shippers, size of firm, and phase of the shipping cycle.

R7	The perception of CSR by the employees.
----	---

10. With reference to the previous question, we are proposing that the relationship between CSR and performance is dependent on several contingency variables, which can be classified into internal and external factors. In your opinion, how does each of the contingency variable impact firm's view on the relationship between CSR and the following performance measures?

### CSR and Operational Performance

Contingency	Relationship	
	Positive	Negative
Firm size	4	
Internal stakeholder pressures	4	
Innovation	4	
CSR marketing	4	
Value-orientation of customers	4	
Competition	2	2
External stakeholder pressures	4	

### CSR and Market Performance

Contingency	Relationship	
	Positive	Negative
Firm size	4	
Internal stakeholder pressures	4	

Innovation	4	
CSR marketing	4	
Value-orientation of customers	4	
Competition	2	2
External stakeholder pressures	4	

**CSR and Financial Performance**

Contingency	Relationship	
	Positive	Negative
Firm size	4	
Internal stakeholder pressures	4	
Innovation	4	
CSR marketing	4	
Value-orientation of customers	4	
Competition	2	2
External stakeholder pressures	4	

## Appendix B Survey Questionnaire (Shipping Companies)

SUBJECT:

A Survey on Corporate Social Responsibility in Shipping Companies

MESSAGE: Edit ▾

### Corporate Social Responsibility in Shipping Companies

Dear [Salutation] [Last Name],

We are researchers from Nanyang Technological University, Singapore. We would like to invite you to represent [Company] to participate in the following research titled 'The relationship between corporate social responsibility (CSR) and performance: a contingency assessment'.

Given the increasing importance of CSR in shipping businesses today, conducting a research on this topic is beneficial to our industry. We strongly believe that your participation in this research could potentially contribute to new theories and practices on sustainability and strategic management in shipping. The results of this study will also benefit your company by recommending appropriate strategies to improve its performances.

This survey is targeted at personnel who manages the CSR, strategies, or operations of your company. Therefore, we greatly appreciate your assistance to forward the e-mail to a suitable personnel in your company if you feel that the topic is not within your area of expertise.

We would like to assure that your responses will be treated strictly confidential and no information about yourself or your company will be released or published. We highly appreciate your sincere answers and opinions to make this research meaningful.

If you have any questions regarding this research, please contact:

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Thank you very much for your assistance. Click on the button below to proceed with the survey.

Yours sincerely,  
Yuen Kum Fai & Thai Van Vinh

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## Corporate Social Responsibility in Shipping Companies

### Corporate Social Responsibility

1. Please indicate the extent to which the following CSR activities have been practised by your company.

	To an extremely small extent	To a very small extent	To a small extent	To a moderate extent	To a large extent	To a very large extent	To an extremely large extent
My company practises equal employment opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company promotes work-life balance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company provides training and education to develop employees' skillsets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company pays employees according to industry standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company ensures occupational health and safety according to industry standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company uses social and environmental criteria in selecting and appraising suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company attains our social and environmental goals collectively with suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company donates to charitable organisations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company offers educational scholarships and internships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company provides jobs and employment to local community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	To an extremely small extent	To a very small extent	To a small extent	To a moderate extent	To a large extent	To a very large extent	To an extremely large extent
My company encourages partnerships with local businesses and schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company participates in community development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company adheres to a comprehensive code of conduct	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company provides full transparency of its activities, structure, financial situation, and performance to the public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company applies high standards for disclosure, accounting, auditing, and social and environmental reporting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company complies with the tax laws and regulations in all operating countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company provides complete and accurate information about our services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company protects the personal data of our customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company has a system that captures and handles customers' feedback and complains	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company responds promptly and fairly to consumer disputes without undue cost or burden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company makes promises that are fulfilled	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company adopts optimal vessel speed practice and routing system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	To an extremely small extent	To a very small extent	To a small extent	To a moderate extent	To a large extent	To a very large extent	To an extremely large extent
My company uses environmental-friendly materials and equipment (e.g. nontoxic paint, electric deck machine, ballast water system)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company handles transactions, documentations, and notifications electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company uses clean and low-sulphur fuels for our ships' engines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company adopts environmental-friendly shipbuilding designs (e.g. improved engine design and waste heat recovery systems)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Corporate Social Responsibility in Shipping Companies

### Competitive Strategy

2. Please rate the importance of the following competitive methods in meeting your company's business strategy.

	Not at all important	Low importance	Slightly important	Neutral	Moderately important	Very important	Extremely important
Optimising capacity utilisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Achieving economies of scale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competitive pricing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Negotiating the best price when procuring supplies and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decreasing the number of service features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimising debt financing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing extensive logistics and customer services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Innovation in marketing techniques and methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building and improving brand identification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spending on advertisements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing high quality services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving frequency, speed, and reliability of voyage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving safety and security of shipments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focusing on customer relationship management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Corporate Social Responsibility in Shipping Companies

### Continuous Improvement

**Continuous improvement, is a long-term approach to work that systematically seeks to achieve small, incremental changes in processes in order to improve efficiency and quality.**

3. Please indicate how much you agree with the following statements on your company's philosophy towards continuous improvement.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
My company introduces a continuous improvement or an equivalent formal improvement system to involve all employees in ongoing improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company is oriented towards customers in their improvement activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company uses measurement to shape its improvement process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Before embarking on an initial investigation and before implementing changes, individuals and groups assess the improvements they proposed against strategic objectives to ensure consistency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company articulates and consolidates (captures and shares) the learning of individuals and groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please indicate the pace of your company's continuous improvement programmes.

	Very rapid	Rapid	Slightly rapid	Neutral	Slightly gradual	Gradual	Very gradual
My company adopts a ___ pace in sourcing new information and acquiring knowledge to improve corporate social performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company adopts a ___ pace in the design of continuous improvement programmes for corporate social performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company adopts a ___ pace in the implementation of continuous improvement programmes for corporate social performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Please indicate the consistency of your company's continuous improvement programmes.

	Very irregular	Irregular	Slightly irregular	Neutral	Slightly regular	regular	Very regular
My company obtains feedback from customers regarding its corporate social performance on a ___ basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company measures and reviews corporate social performance on a ___ basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company implements continuous improvement programmes for corporate social performance on a ___ basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees provide suggestions or ideas to improve current processes, systems, and structures supporting corporate social performance on a ___ basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Corporate Social Responsibility in Shipping Companies

### Business Performance

5. Please indicate how much you agree with the following statements on your company's service quality and customer satisfaction performance.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Overall, customers are satisfied with my company's services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company's services have exceeded the expectations of our customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company's services are comparable to the ideal services that our customers have in mind	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company offers on-time-delivery of shipments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company maintains the condition and quality of shipments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company provides fast delivery of shipments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company shows promptness, empathy, and reliability while communicating with customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company ensures its claim handling procedures are user-friendly and fast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Please indicate how much you agree with the following statements on job satisfaction.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Our employees are satisfied with their present work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees are satisfied with the present compensation and benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees are satisfied with the current opportunities for promotion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees are satisfied with working with their superiors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our employees are satisfied with working with their co-workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Please indicate how well your firm has performed over the last 3 years as compared to your major competitors.

	Much worse	Moderately worse	Slightly worse	Equal	Slightly better	Moderately better	Much better
Sales growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Profit growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market share growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Return on assets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Return on investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**Corporate Social Responsibility in Shipping Companies**

**Demographic Information**

**8. Shipping Sector**

- Tramp (Liquid & dry bulk)
- Liner (Container)

**9. Total number of employees**

- Less than or equal to 200
- More than 200

**10. Your functional area**

- Operations or logistics
- Technical including health, safety, and environment
- Marketing
- Other (please specify)

**11. Your designation**

- Director and above
- Manager
- Non-management or specialist

**12. Years of experience working for the firm**

- Above 10 years
- 5 to 10 years
- less than 5 years

13. Gender

Female

Male

14. Would you like to receive a summary of the results?

No

Yes

Please provide your email address

15. Are there any comments that you would like to make regarding this study?

Thank you for very much for your valuable time and contribution to this study.



## Appendix C Survey Questionnaire (Shippers)

SUBJECT:

A Study of Corporate Social Responsibility in Shipping

MESSAGE: Edit ▼

### A Study of Corporate Social Responsibility in Shipping

Dear [Salutation] [LastName],

We are researchers from Nanyang Technological University, Singapore. We would like to invite you to represent [Company] to participate in the following research titled "The relationship between corporate social responsibility and performance: a contingency assessment".

Given the increasing importance of CSR in businesses today, conducting a research on this topic is beneficial to the shipping industry. We strongly believe that your participation from the perspective of shippers could lead to the adoption of appropriate CSR policies by shipping companies that will, in turn, benefit shippers like you, and potentially contribute to new theories on sustainability and strategic management in shipping.

This study is targeted at manufacturers and freight forwarders who engage a shipping company for the transportation of cargoes. We greatly appreciate your assistance to forward the e-mail to a suitable personnel in your company if you feel that the topic is not within your area of expertise.

We would like to assure you that your responses will be treated strictly confidential and no information about yourself or your company will be released or published. We highly appreciate your sincere answers and opinions to make this research meaningful.

If you have any questions regarding this research project or the questionnaire, please contact:

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Thank you very much for your assistance. Click on the button below to proceed with the survey.

Yours sincerely,  
Yuen Kum Fai & Thai Van Vinh

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## CSR Survey (Shippers)

## Corporate Social Responsibility and Service Quality

1. Please indicate the importance of each criterion when your company evaluates the corporate social responsibility of a shipping company.

	Not at all important	Low importance	Slightly important	Neutral	Moderately important	Very important	Extremely important
A shipping company practises equal employment opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company promotes work-life balance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company provides training and education to develop employees' skillsets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company pays employees according to industry standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company ensures occupational health and safety according to industry standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company uses social and environmental criteria in selecting and appraising suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company attains its social and environmental goals collectively with suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company donates to charitable organisations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company offers educational scholarships and internships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all important	Low importance	Slightly important	Neutral	Moderately important	Very important	Extremely important
A shipping company provides jobs and employment to local community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company encourages partnerships with local businesses and schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company participates in community development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company adheres to a comprehensive code of conduct	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company provides full transparency of its activities, structure, financial situation, and performance to the public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company applies high standards for disclosure, accounting, auditing, and social and environmental reporting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company complies with the tax laws and regulations in all operating countries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company provides complete and accurate information about our services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company protects the personal data of our customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company has a system that captures and handles customers' feedback and complains	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company responds promptly and fairly to consumer disputes without undue cost or burden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company makes promises that are fulfilled	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all important	Low importance	Slightly important	Neutral	Moderately important	Very important	Extremely important
A shipping company adopts optimal vessel speed practice and routing system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company uses environmental-friendly materials and equipment (e.g. nontoxic paint, electric deck machine, ballast water system)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company handles transactions, documentations, and notifications electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company uses clean and low-sulphur fuels for our ships' engines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company adopts environmental-friendly shipbuilding designs (e.g. improved engine design and waste heat recovery systems)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Please indicate the importance of each criterion when your company evaluates the service quality of a shipping company.							
	Not at all important	Low importance	Slightly important	Neutral	Moderately important	Very important	Extremely important
A shipping company offers on-time-delivery of shipments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company maintains the condition and quality of shipments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company provides fast delivery of shipments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company shows promptness, empathy, and reliability while communicating with customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A shipping company ensures its claim handling procedures are user-friendly and fast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



### CSR Survey (Shippers)

#### Customer satisfaction, CSR Beliefs, Loyalty, and Willingness to pay for CSR

**For all the questions in this page, please base your response with reference to the shipping company that your company engages regularly. Otherwise, please respond based on your last service encounter.**

3. Please indicate how much you agree with the following statements on your company's satisfaction with the reference shipping company.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Overall, we are satisfied with the service of our shipping company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The shipping company's service has exceeded our expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The shipping company's service is comparable to the ideal service we have in mind	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please indicate how much you agree with the following statements on your company's beliefs regarding corporate social responsibility.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
My company views contributions to the society or environment as desirable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company views contributions to the society or environment as pleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My stakeholders would want us to engage in corporate social responsibility activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company has the resources, time, and opportunities to implement and pay for corporate social responsibility activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Please indicate how likely would your company be to exhibit loyalty towards the reference shipping company.

	Extremely unlikely	Unlikely	Quite unlikely	Neutral	Quite likely	Likely	Extremely likely
We consider the shipping company as our first choice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We would recommend the shipping company's service to other companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We would encourage others to use the service of the shipping company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We have positive things to say about the shipping company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Please indicate how likely would your company be to pay a premium for the reference shipping company's involvement in corporate social responsibility

	Extremely unlikely	Unlikely	Quite unlikely	Neutral	Quite likely	Likely	Extremely likely
We are willing to pay a price premium to reward the shipping company's involvement in corporate social responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We will continue to engage the shipping company for their involvement in corporate social responsibility even if its price was increased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We will continue to engage the shipping company for their involvement in corporate social responsibility even if its price was higher than its competitors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**CSR Survey (Shippers)**

**Demographics**

**7. Sector**

- Manufacturer
- Freight forwarder

**8. Total number of employees**

- Less than or equal to 200
- More than 200

**9. Your functional area**

- Strategic or Quality
- Logistics or Operations
- Trading or Marketing
- Other (please specify)

**10. Your designation**

- Executive
- Manager or department head
- Top management

**11. Years of experience**

- Less than 5 years
- Between 5 to 10 years
- More than 10 years

12. Would you like to receive a summary of the results?

- No
- Yes
- Please provide your email address

13. Are there any comments that you would like to make regarding this study?