

**The Antecedents and Consequences of a  
Customer Value-Oriented Dominant Logic: A  
Dynamic Managerial Capabilities Perspective**

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(Doctoral Thesis)

Submitted in partial fulfilment of the requirements  
for the award of Doctor of Philosophy from  
Loughborough University (22<sup>nd</sup> March 2018)

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“We have it in our power to begin the world over again” (Ronald Reagan, 1979).

**ABSTRACT**

Market orientation has been primarily studied as a set of firm-level behaviours linked to the: generation of, dissemination of, and responsiveness to market intelligence (market-oriented behaviours). However, it has rarely been studied under an organisational culture perspective; the investigations that have conceptualised and operationalised market-oriented organisational cultures have overlooked a market-oriented managerial mind-set dimension. A concept to help address this research gap is the firm's dominant logic, which highlights the degree to which managers' assumptions are manifested into their corporate cultures. The firm's dominant logic is integrated with the market orientation literature to conceptualise and operationalise the customer value-oriented dominant logic (CVODL) construct. The CVODL construct is defined as the extent to which managers assume that creating customer value should drive performance. The CVODL construct contributes to the marketing literature by extending current conceptualisations and operationalisations of market-oriented organisational cultures through a managerial mind-set viewpoint. This doctoral study examines the link between a CVODL and managers making resource investments into the departments of their corporations that they perceive to create value for their customers (an alternative to market-oriented behaviours). Functional resource investments are studied as an alternative form of implementing the marketing concept than market-oriented behaviours. A conceptual framework was developed to conceptualise the antecedents and consequences of the CVODL under the dynamic managerial capabilities perspective. The conceptual framework was tested using a multi-industry and national-level sample of American corporations, through structural equation modelling (SEM). These results show that a CVODL drives different forms of implementing the marketing concept, namely, intelligence responsiveness and CVO functional resource investments, both of which were positively related to sales performance. The results also highlight a new driver of market-oriented behaviours under the dynamic managerial capabilities perspective. This doctoral thesis helps managers to foster a market-oriented organisational culture, as well as investigating the ways in which such corporate cultures can drive sales performance. Limitations and avenues of future research are also discussed.

**Key words:** CVODL; market orientation; firm's dominant logic; dynamic managerial capabilities; CVO functional resource investments; sales performance.

### **ACKNOWLEDGEMENTS**

First and foremost, I would like to acknowledge the help and friendship of my three Doctor of Philosophy (PhD) supervisors: John Cadogan, Anne Souchon, and Belinda Dewsnap. Your guidance (both academically and pastorally) during this journey has been wonderful across every stage. As well as the financial assistance from my three-year studentship, you have helped me develop my own learning and critical skills and input them into my academic career. I could not have completed this doctoral study without you and will look back on our supervision meetings with fond memories. The helpful and insightful comments of Vicky Story during my annual reviews, as well as the feedback from the Marketing and Retailing group at PhD symposiums are also highly-appreciated. I appreciate the support and feedback provided at external PhD symposiums. I would also like to thank Tracey Preston and Aly Howells-Chivers for their kindness and support during my postgraduate studies. I will continue to support the School of Business and Economics in my new role as a Lecturer in Marketing. I would like to acknowledge the support from my friends at Loughborough University, especially: Alasdair Booth, Jamie Ferrill, Becca Coates, Hazwan Haini, and Jessica Peixinho. We had some great laughs along the way at our own expenses – this also made the PhD journey a fun experience. I would like to thank my close family (particularly, my mother and father, Michelle and David Crick, as well as Kiki the dog) for their support before and during my PhD studies. This also includes my Aunty Nicky for her supportive comments during our breakfasts in Leicester. I am also grateful to my good friend Shiv Chaudhry for his support during my academic studies, as well as being someone to talk to when things got tough. Lastly, I am not one to focus on the bad things in life, but sadly I lost two relatives in 2016. Both had different roles in supporting my education, which I cannot overlook. My late Grandma (Barbara “Babs” Crick) kindly let me move in with her after I returned to England, after spending five years in New Zealand. I would like to thank Babs for her support in the early stages of my PhD studies. My late Granddad (Raymond Green) was a key driver in my family’s prioritisation of education. He truly believed that education gives you choices in life. This is a belief that I support and hope that he is proudly looking down on me. I therefore, dedicate this PhD thesis in his honour.

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### **LIST OF DEFINITIONS**

**Market-oriented behaviours** – “three processes, namely, the: generation and dissemination of, and responsiveness to, market intelligence” (Cadogan, Souchon and Procter, 2008, p. 1263).

**Firm’s dominant logic** - “the way in which managers conceptualise the business and make critical resource allocation decisions - be it in: technologies, product development, distribution, advertising, or in human resource management” (Prahalad and Bettis, 1986, p. 490).

**CVODL** - the extent to which managers assume that creating customer value should drive performance (Crick, 2017a).

**Resource-based view** – a strategic management theory (with applications in the marketing literature) used to examine how organisational performance (e.g., sales) is driven by companies’ resources (e.g., tangible equipment and cash) and capabilities (e.g., knowledge and skills) (Wernerfelt, 1984; Barney, 1991).

**Dynamic capabilities** – “the firm’s ability to integrate, build, and reconfigure internal and external competences, to address rapidly-changing environments” (Teece, Pisano and Shuen, 1997, p. 516).

**Dynamic managerial capabilities** - “the capabilities with which managers: create, extend, and modify the ways in which firms make a living - to help explain the relationship between: managerial decisions and actions, strategic change, and corporate performance under conditions of change” (Helfat and Martin, 2015, p. 1282).

**Managerial cognition** - “the belief systems and mental models that managers use for decision-making” (Kor and Mesko, 2013, p. 234).

**Managerial human capital** - “the skills and knowledge repertoire of managers, which are shaped by their education, personal, and professional experiences” (Kor and Mesko, 2013, p. 234).

**Managerial social capital** - “managers’ ability to access resources through relationships and connections” (Kor and Mesko, 2013, p. 234).

**Sales performance** – the extent to which an organisation has performed in its market (via market growth) relative to competitors (Hooley, Greenley, Cadogan and Fahy, 2005).

**LIST OF ABBREVIATIONS**

- AVE** – average variance extracted.
- CEO** – Chief Executive Officer.
- CFA** – confirmatory factor analysis.
- CFI** – comparative fit index.
- CFO** – Chief Financial Officer.
- COO** – Chief Operational Officer.
- CR** – composite reliability.
- CVO** – customer value-oriented.
- CVODL** – customer value-oriented dominant logic.
- df** – degrees of freedom (only used in tables).
- EFA** – exploratory factor analysis.
- EMO** – export market orientation.
- IFI** – incremental fit index.
- KMO** - Kaiser-Meyer-Olkin (test).
- NNFI** - non-normed fit index.
- PhD** – Doctor of Philosophy.
- R&D** – Research and Development (Department).
- RMSEA** – root mean square error of approximation.
- SD** – standard deviation (only used in tables).
- SE** – standard error (only used in tables).
- SEM** – structural equation modelling.
- Sig.** – statistical significance (only used in tables).
- SRMR** – standardised root mean square residual.
- VRIN** – value, rarity, inimitability, and non-substitutability framework.

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## **CHAPTER I – INTRODUCTION**

### **1.1. Chapter introduction**

In this chapter, the background of this Doctor of Philosophy (PhD) thesis is discussed through the following sections. First, a brief history of the framing literature is presented, in which this background information is used to outline the study's research problems. Second, these research problems are used to develop the thesis' objectives, whereby, three questions are asked to make a significant contribution to theory and practice. Third, the thesis' outline is summarised, to indicate the themes of the subsequent chapters of the investigation.

### **1.2. Market orientation and the marketing concept**

The heart of the marketing discipline is the marketing concept, which revolves around the assumption that the purpose of marketing is to create customer value (Homburg, Jozic and Kuehnl, 2017). This customer-centric world view, variously described in the literature as being: “a corporate state of mind” (Felton 1959, p. 55), a “philosophy of business management” (McNamara 1972, p. 51), and an “idealistic policy” (Kohli and Jaworski 1990, p. 3), is built on the principle that “superior performance is the result of providing superior customer value” (Slater 1997, p. 164), since firms can “extract some of that customer value in the form of profit, thereby, creating value for the firm” (Kumar and Reinartz, 2016, p. 36). The logic fuelling this mind-set rests on “the belief that... if the buyer is rational, it follows, seemingly as a truism, that he or she will choose and come to prefer those firms whose market offerings best meet their wants” (Dickinson, Herbst and O’Shaughnessy, 1986, p. 18).

In their field-defining paper in the *Journal of Marketing*, Kohli and Jaworski (1990, p. 1) note that “a market-oriented organisation is one whose actions are consistent with the marketing concept” and explain that “though the literature sheds some light on the philosophy represented by the marketing concept, it is unclear as to the specific activities that translate the philosophy into practice, thereby, engendering a market orientation” (p. 3). For Kohli and Jaworski (1990), not knowing what it means to “be market-oriented” is problematic on several fronts. First, this lack of knowledge impedes firms from purposefully developing a market(ing) orientation. If a firm wishes to transform a mind-set with a strong customer value component

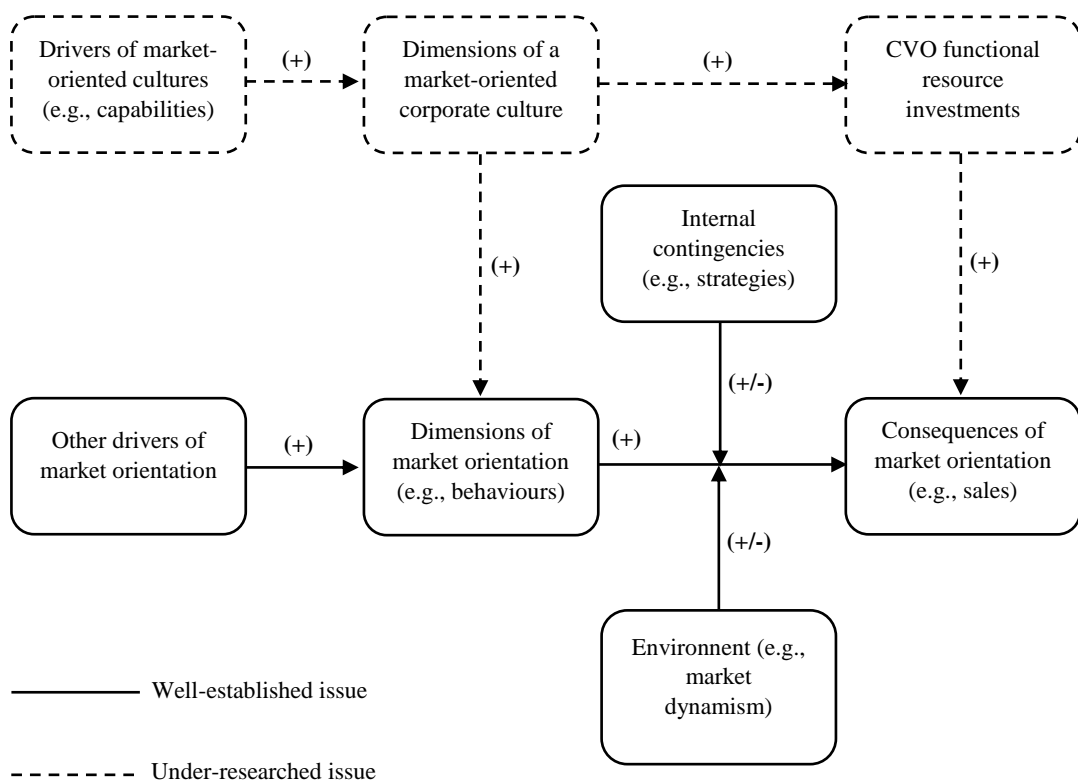
into “customer value-oriented” (CVO) actions, those that influence customers’ perceptions of value and knowledge of the activities required, would help greatly in this respect. Second, the lack of knowledge of what it means to “be market-oriented” means that it is hard to differentiate between firms that have, to greater or lesser degrees, transformed their CVO mind-set into actions, and so consequently, it is also hard to determine the performance consequences of market orientation.

To solve these problems, Kohli and Jaworski (1990) identify what they call market-oriented behaviours, actions that they consider to be consistent with a firm whose core assumptions are grounded in the logic of the marketing concept and are seeking to create superior customer value. Their qualitative work leads them to specify information processing as the core of market-oriented behaviours, and to identify three classes of information processing: market intelligence generation, market intelligence dissemination, and market intelligence responsiveness. In another pivotal paper published in the *Journal of Marketing*, Narver and Slater (1990) also identify information processing activities as fundamental to market orientation. That is, Narver and Slater (1990) conceptualised market orientation, through three factors, namely, a: customer orientation, competitor orientation, and inter-functional coordination. Narver and Slater (1990) considered information processing activities under a corporate cultural perspective, but nevertheless highlighted that market orientation is a set of activities concerning the implementation of the marketing concept and the organisation-wide creation of customer value. Consequently, market orientation, and the implementation of the marketing concept, has been explored under two main viewpoints, namely, Kohli and Jaworski’s (1990) behavioural approach, and Narver and Slater’s (1990) corporate cultural perspective (as well as other, less-referenced viewpoints, like Ruekert, 1992). Yet, information processing activities link these two approaches, as the main forms of implementing the marketing concept (Cadogan and Diamantopoulos, 1995).

Despite much research on the corporate cultural and behavioural forms of the implementing the marketing concept, there are two key under-researched areas surrounding both approaches (as shown in Figure 1.1). Specifically, corporate cultural forms of market orientation have been conceptualised as a set of values, norms, and artefacts concerning the importance of delivering value to customers (Harris and Ogbonna, 1999; Homburg and Pflesser, 2000). While such facets of

market-oriented corporate cultures are elements that need to be managed correctly, managerial mind-sets, a key dimension of organisational cultures have not been incorporated into the extant literature. Consistent with Pettigrew (1979) and Barney (1986), a managerial mind-set - the degree to which a company's management team believe that a certain activity is a driver of their firm's performance - is an integral element of corporate cultures, but has not been investigated in the marketing literature. When studying the implementation of the marketing concept from a corporate cultural viewpoint, there is a need to consider a managerial mind-set. This contribution is critical to strengthening existing studies that have focused on CVO values, norms, and artefacts (and consequently, considering this critical element of market-oriented organisational cultures).

**Figure 1.1. State of knowledge surrounding the implementation of the marketing concept**



Research, to date, has minimally-examined the adoption of the marketing concept (which is where a firm adopts the philosophy of a CVO managerial mind-set – i.e., managers believe the logic is an important driver of organisational performance). Research has focused for the most part on a specific set of information processing activities that are likely (according to Homburg and Pflesser, 2000) to be supported



by/or to emerge from the marketing concept, but that are not the marketing concept (and are not necessarily an appropriate proxy for adoption of the marketing concept). The marketing concept (which essentially pertains to “customer value” creation) is re-emerging as a topic of interest (Payne, Frow and Eggert, 2017). For instance, recent work by Kumar and Reinartz (2016) identifies the concept of “customer value creation” as an important research field that is not governed by the market orientation literature. Indeed, these authors point to the need for urgent research into the critical issue of firms’ resource investments in the context of customer value generation, noting that: “for the firms/decision-makers who allocate resources to: markets, customers, and products, the challenge is to dynamically align resources spent on customers and products to simultaneously generate value both to and from customers” (Kumar and Reinartz 2016, p. 36).

Extending Kumar and Reinartz’s (2016) logic, some questions arise:

1. To what extent is it important that firms identify and allocate resources to those parts of the business that are at the sharp end in terms of generating/creating customer value?
2. What happens to company performance in businesses that do not invest resources in those parts of the firm that are most intimately involved in creating, generating, and delivering customer value?
3. In instances where firms do not allocate resources to their customer value generating areas, why do they not allocate those resource – is it because they do not have a CVO mind-set?

Consequently, in this PhD thesis, these under-researched areas surrounding customer value creation (and the implementation of the marketing concept) are explored. That is, this doctoral study is focused on exploring other forms of implementing the marketing concept than the more conventional behavioural perspective (i.e., information processing) (as per Kohli and Jaworski, 1990). Moreover, CVO functional resource investments are studied to determine whether managers’ market-oriented beliefs (via a market-oriented corporate culture) drive them to invest resources in the departments of their organisations that are perceived to deliver value to customers. As such, CVO functional resource investments are used to strengthen the dated studies surrounding the implementation of the marketing concept (e.g.,

Felton, 1959; McNamara, 1972). The ways in which the marketing concept is investigated in this PhD thesis follow in the next section.

### **1.3. Market orientation and the firm's dominant logic**

To emphasise the themes of the previous section (in respect of the research problems), while there have been studies examining market-oriented corporate cultures, such theory has focused on customer-driven: values, norms, and artefacts (Harris and Ogbonna, 1999; Homburg and Pflesser, 2000). Outside of the marketing literature, certain articles have highlighted that a core dimension of an organisational culture is a managerial mind-set, as managers' beliefs about what factors drive company performance are likely to underpin the firm-level behaviours of an organisation, such as the strategies that they adopt (Pettigrew, 1979; Barney, 1986). However, managerial mind-sets have not been conceptualised (or operationalised) as being part of market-oriented corporate cultures. The reason for the lack of research surrounding managerial mind-sets in such cultures is unclear; yet, it is argued that this research is needed to understand how companies' performance can be improved through other forms of implementing the marketing concept (namely, CVO functional resource investments), as well as more accurate ways of conceptualising and operationalising the: facets, antecedents, and consequences of such cultures.

A concept that has been related to managerial mind-sets is the firm's dominant logic (Bettis and Prahalad, 1995). The firm's dominant logic is based on organisational cultures, with management teams having the mind-set that a certain activity (e.g., a competitive strategy) is an important driver of company performance (Kor and Mesko, 2013). More formally, the firm's dominant logic is defined "the way in which managers conceptualise the business and make critical resource allocation decisions - be it in technologies, product development, distribution, advertising, or in human resource management" (Prahalad and Bettis, 1986, p. 490). In this PhD thesis, the firm's dominant logic is incorporated into the market orientation literature, to develop an improved way of conceptualising and operationalising market-oriented corporate cultures that accounts for a managerial mind-set. The firm's dominant logic has been scarcely studied in the marketing literature (Day, Deighton, Narayandas, Gummesson, Hunt, Prahalad, Rust and Shugan, 2004), whereby, it is a strategic management notion, used to evaluate organisational cultures (Prahalad,

2004). Hence, by linking the firm's dominant logic with the market orientation literature, this doctoral study is designed to strengthen academics' and practitioners' understanding of managing market-oriented corporate cultures - specifically, through a managerial mind-set linked with the implementation of the marketing concept.

To link the firm's dominant logic with market orientation, this study develops a construct positioned at the intersection between these two strands of literature, namely, a customer value-oriented dominant logic (CVODL). The CVODL construct is defined as the extent to which managers assume that creating customer value should drive performance (Crick, 2017a). The CVODL construct incorporates a managerial mind-set into conceptualising and operationalising market-oriented corporate cultures. Dominant logics have scarcely been used in empirical research (see Lampel and Shamsie, 2000; Obloj, Obloj and Pratt, 2010), in which authors have conceptually argued that such a managerial mind-set involves managers believing that a certain activity is an important driver of organisational performance, yet, without testing these assertions (e.g., Goold and Luchs, 1993; Kor and Mesko, 2013). Further, dominant logics are linked with functional resource investments, whereby, managers' assumptions about the importance of a certain activity (like customer value creation) could influence their decision to allocate resources (both financial and non-financial) to the departments of their organisation that are likely to foster their "dominant" assumption(s) (Miller, 1996; Prahalad, 2004). Consequently, in this PhD thesis, the CVODL construct is used to examine whether having a market-oriented corporate culture, which incorporates a managerial mind-set dimension, drives managers to invest customer value-creating resources towards the business functions of their companies (synonymously referred to as CVO functional resource investments).

By exploring the relationship between a CVODL and CVO functional resource investments, this doctoral study makes the following contribution to the marketing literature. Market-oriented corporate cultures are more accurately conceptualised and operationalised as a managerial mind-set (as per Pettigrew, 1979; Barney, 1986). Further, CVO functional resource investments are studied as an alternative behavioural form of implementing the marketing concept, as opposed to the more conventional market-oriented behavioural approach, which revisits the earlier

market orientation literature (see Felton, 1959; McNamara, 1972) and more recent recommendations (Kumar and Reinartz, 2016). Such a contribution is important for practitioners, as the investigation examines a more effective way of assessing market-oriented corporate cultures. This will help managers structure their companies to implement the marketing concept, in terms of making CVO functional resource investments towards the various departments of their companies. This PhD thesis also has the additional value of highlighting the benefits and potential drawbacks of investing resources towards the departments of an organisation that managers perceive to be CVO (to help them make better decisions to drive their business' sales). That is, such potential drawbacks could include managers over-investing resources in CVO functional areas, at the cost of under-investing in non-CVO departments, something that is common for managers with a certain dominant logic (Miller, 1996; Prahalad, 2004). The underpinning theory used to make this contribution is introduced in the next section.

#### **1.4. Dynamic managerial capabilities perspective**

A useful theory to integrate the market orientation literature with the firm's dominant logic is the broader resource-based view of the firm (for which the dynamic managerial capabilities perspective is a sub-set of the theory). "The resource-based view suggests that businesses are able to derive competitive advantages from resources and/or capabilities" (Crick and Crick, 2016, p. 88). The resource-based view is a strategic management theory that takes an internal (i.e., inside the firm) perspective surrounding the ways that managers can drive competitive advantages and other forms of company performance through their resources and capabilities (Barney, 1991). A competitive advantage is the long-term performance that companies obtain, by withstanding the forces of the business environment (Huang, Dyerson, Wu and Harindranath, 2015). As such, a competitive advantage is usually considered as the ideal type of organisational performance that businesses can attain, as it suggests that managers have out-performed key competitors (Kumar, Jones, Venkatesan and Leone, 2011). However, the literature surrounding the resource-based view suggests that a competitive advantage is not the only way of assessing organisational performance (Ray, Barney and Muhanna, 2004). That is, different managers have varied objectives, with some having lifestyle-oriented objectives, and others aiming to out-perform their competitors (see Crick, 2018). Further, Katsikeas,

Morgan, Leonidou and Hult (2016) highlight that sales performance can be a valid assessment of organisational performance under resource-based theory, as it measures the extent to which companies' resources and capabilities drive market-level growth (e.g., market share, revenues, and sales growth). Henceforth, sales performance is used as the performance outcome of the CVODL construct in this PhD thesis.

There are some sub-sets of resource-based theory that have not been linked with the market orientation literature (or broader marketing theory), such as the dynamic managerial capabilities perspective (Bruni and Verona, 2009). This perspective concerns the managerial assets that are intended to drive company performance (e.g., sales), by allowing managers to adapt and reconfigure in rapidly-changing (dynamic) business environments (Kor and Mesko, 2013). The dynamic managerial capabilities perspective (or framework) originates from dynamic capabilities theory (Helfat and Martin, 2015); dynamic capabilities are the organisational assets that allow businesses to adapt in rapidly-changing (dynamic) markets to drive performance (Teece, Pisano and Shuen, 1997). Dynamic capabilities include several types of assets, some of which are generated and fostered by managers, while others are driven by functional-level employees (i.e., non-managers) (Teece, 2012). The dynamic managerial capabilities perspective uses the assumption that managers are integral decision-makers in organisations, and therefore, competitive advantages (and/or sales) are more likely to be driven by management teams, as opposed to non-managers (Andersson and Evers, 2015). Therefore, despite the dynamic capabilities perspective considering the assets that functional-level employees develop, the dynamic managerial capabilities perspective only considers managers' role in such performance outcomes (Bruni and Verona, 2009).

The dynamic managerial capabilities framework evaluates three managerial assets that encapsulate all types of dynamic capabilities: managerial human capital, managerial cognition, and managerial social capital (Kor and Mesko, 2013). Managerial human capital refers to the skills and knowledge (from education and practical experiences) of management teams (Adner and Helfat, 2003), managerial cognition concerns the psychological assumptions managers have about their business environment (Hodgkinson and Healey, 2011), and managerial social capital is how managers access resources and competitive viewpoints (i.e., ways of

understanding their business environment) from their networks (Sirmon and Hitt, 2009). The dynamic managerial capabilities perspective, as the product of managerial human capital, managerial cognition, and managerial social capital, has not been applied to extant marketing theory (Bruni and Verona, 2009). Reasons why this is the case is not clear, as the dynamic managerial capabilities framework has the potential to help scholars and practitioners understand how to create competitive advantages (or sales performance) by utilising their managerial assets (Fainshmidt, Nair and Mallon, 2017).

Linking the dynamic managerial capabilities framework with the marketing (and market orientation) literature is especially important to understand how to best manage managerial assumptions (i.e., mind-set) that a certain activity (e.g., delivering value to customers) drives sales performance. The dynamic managerial capabilities perspective is proposed to help managers foster a CVODL, to develop an understanding on how to ensure that their customer-driven assumptions have the performance consequences they expect (in line with the implementation of the marketing concept) and reduce the chances of a CVODL having any drawbacks for management teams, such as over-investing in customer value-creating activities. Additionally, the dynamic managerial capabilities framework builds upon the work of Payne, Frow and Eggert (2017), in which marketing assets, such as market knowledge and customer relationships, are drivers of a company's customer value provision. The dynamic managerial capabilities framework is a theoretical lens used to explain the antecedents (and consequences) of the CVODL construct. By using the dynamic managerial capabilities perspective as antecedents (and consequences) of the CVODL, this doctoral study develops Kumar and Reinartz's (2016) recommendation to understand the mechanisms, in which customer value can be created for corporations. This PhD study's research objectives and questions (guided by the dynamic managerial capabilities perspective) follow in the next section.

### **1.5. Research objectives and questions**

The objectives of this study are to: define and conceptualise, operationalise, and test the nature of the CVODL construct. Under the dynamic managerial capabilities perspective, three research questions were developed to guide these research objectives:

1. What are the facets of the CVODL?
2. What are the antecedents of the CVODL?
3. What are the consequences of the CVODL?

Asking these three research questions is important for the following reasons. First, in terms of the facets of the CVODL, it is of interest to understand the nature of how market orientation can be integrated with the firm's dominant logic to develop a stronger conceptualisation and operationalisation of market-oriented corporate cultures, through considering a managerial mind-set. By studying market-oriented managerial mind-sets (as a feature of a market-oriented organisational culture), this doctoral-level study builds upon the work of Homburg and Pflesser (2000) and uses the CVODL construct to conceptualise and operationalise market-oriented corporate cultures in a way that they (among other authors) have overlooked. As such, while the marketing (and broader management) literature has never used the term "CVODL", it has been studied tangentially in the form of market-oriented organisational cultures, but such papers have not considered market-oriented managerial mind-sets (see Deshpande and Webster Jr., 1989; Harris and Ogbonna, 1999). A CVODL is proposed to develop market-oriented corporate cultures with the market-oriented managerial mind-set facet and contribute to this under-researched area of market orientation theory. Moreover, the CVODL construct is used to evaluate an organisational culture associated with the implementation of the marketing concept to contribute to the recent literature surrounding customer value creation (e.g., Kumar and Reinartz, 2016; Payne, Frow and Eggert, 2017).

Second, regarding the antecedents of the CVODL, understanding the drivers of this construct allows an improved level of knowledge surrounding the facilitating factors of market orientation to be developed. The dynamic managerial capabilities framework is used as the core antecedents of the CVODL construct in the thesis' conceptual framework. This contribution integrates a different theoretical perspective with market orientation to understand new drivers of a market-oriented organisational culture (i.e., the CVODL). Third, by investigating the consequences of the CVODL (focusing on CVO functional resource investments, as well as intelligence responsiveness as a key market-oriented behaviour), the positive and negative outcomes of having a customer-driven corporate culture can be better understood (as well as helping practitioners manage the implementation of the

marketing concept). Investigating these positive and negative outcomes helps management teams improve their performance and mitigate the potential negative attributes of a CVODL. Mitigating the negative attributes of the CVODL extends to helping managers avoid over-investing resources on market-oriented activities (when they potentially should not). This contribution is especially important, as market orientation is an expensive process for firms to engage in, due to the cost of accessing, understanding, and using information about customers and competitors (Slater and Narver, 1994). If managers invest highly in customer-driven activities, recommendations to convert such resource investments into sales-increasing outcomes are provided (instead of sales-reducing outcomes). The outline of this doctoral-level thesis follows in the next section.

### **1.6. Outline of the PhD thesis**

Please refer to Figure 1.2 for an overview of how this thesis is structured, as well as the themes of the subsequent chapters. After this chapter, Chapter II (Literature Review) examines the underpinning theories this study draws upon and introduces the CVODL (and its antecedents and consequences) into the marketing literature. Chapter III (Conceptual Framework and Hypothesis Development) is used to justify several research hypotheses (and control paths) surrounding the study's conceptual framework. Chapter IV (Methodology) outlines measures and methods (both data collection and analysis tools) to empirically-test the research hypotheses. In Chapter V (Results), the empirical findings are presented. The study's findings are related to the existing body of knowledge (in terms of the contribution they offer) in Chapter VI (Discussion). Also, in the Discussion chapter, explanations are offered (based on the underpinning theory of the dynamic managerial capabilities framework) concerning why certain hypotheses were unsupported. Chapter VII (Conclusions) ends the study, by summarising the PhD thesis, providing recommendations to academics and practitioners, as well as highlighting its limitations and avenues of future research.

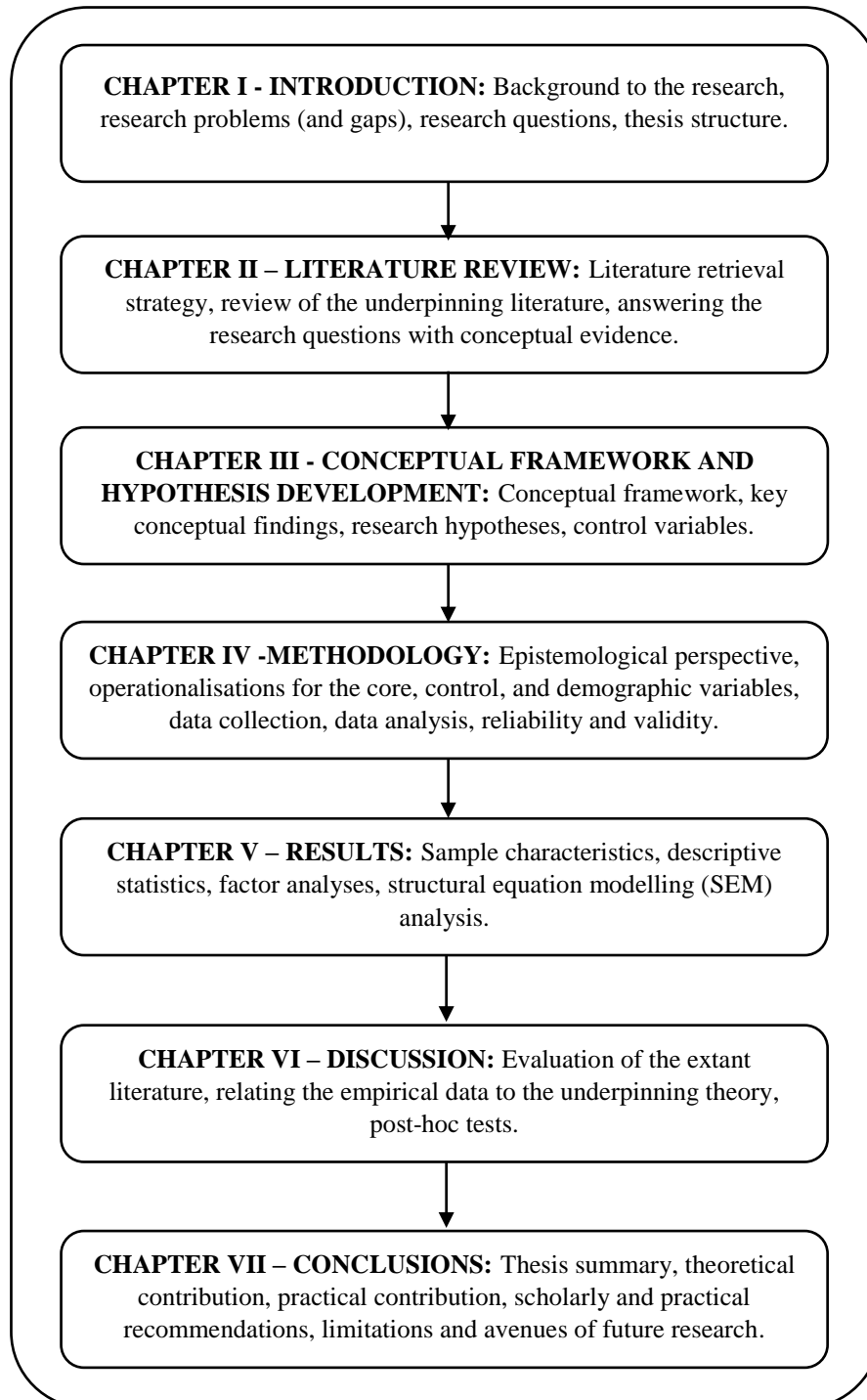
### **1.7. Chapter summary**

In this chapter, the background theory of this investigation was discussed. This background information led to an overview of the key research gaps (and research problems) and how this study will fill such under-researched areas. These gaps were



formulated into three research questions to guide the study's research objectives and an explanation was provided as to why filling these gaps is significant for scholars and practitioners. The structure of the thesis was also described, by presenting the key themes of the following chapters. The literature that underpins the theories and constructs central to the study is presented in the next chapter.

**Figure 1.2. Layout of the PhD thesis and key tasks of each chapter**



## **CHAPTER II – LITERATURE REVIEW**

### **2.1. Chapter introduction**

The: background, objectives, and contribution of this thesis were introduced in the previous chapter. After reviewing how the research questions are answered and the approach used to retrieve literature, this chapter is divided into the following sections. First, the sub-sets of the resource-based view are explored. Second, market orientation is evaluated. Third, theory surrounding the firm's dominant logic is discussed (including its antecedents and consequences). Fourth, the domains of market orientation and the firm's dominant logic are integrated to highlight the facets, antecedents, and consequences of the CVODL.

### **2.2. Answering the research questions**

This chapter answers the thesis' three research questions using the following sections. As noted in section 1.6, the formal development and testing of the research hypotheses linked to the research questions are outlined in the subsequent chapters of this PhD thesis (namely, Chapter IV – Methodology and Chapter V – Results). Please refer to Figure 2.1 for the structure of this PhD thesis.

*What are the facets of the CVODL?* The link between the literature surrounding market orientation and the firm's dominant logic is made in this chapter. The chapter discusses the definition and dimensions of the CVODL construct, with guidance from the dynamic managerial capabilities perspective and the extant literature surrounding dominant logics. The CVODL is proposed to be a construct positioned at the intersection between market orientation and the firm's dominant logic. That is, the CVODL is a market-oriented mind-set surrounding the degree to which managers believe that creating customer value should drive organisational performance (e.g., sales) (Crick, 2017b). The development of the CVODL construct builds upon prior studies that have examined market-oriented corporate cultures, but have overlooked the vital role of market-oriented mind-sets (see Deshpande and Webster Jr., 1989; Homburg and Pflesser, 2000).

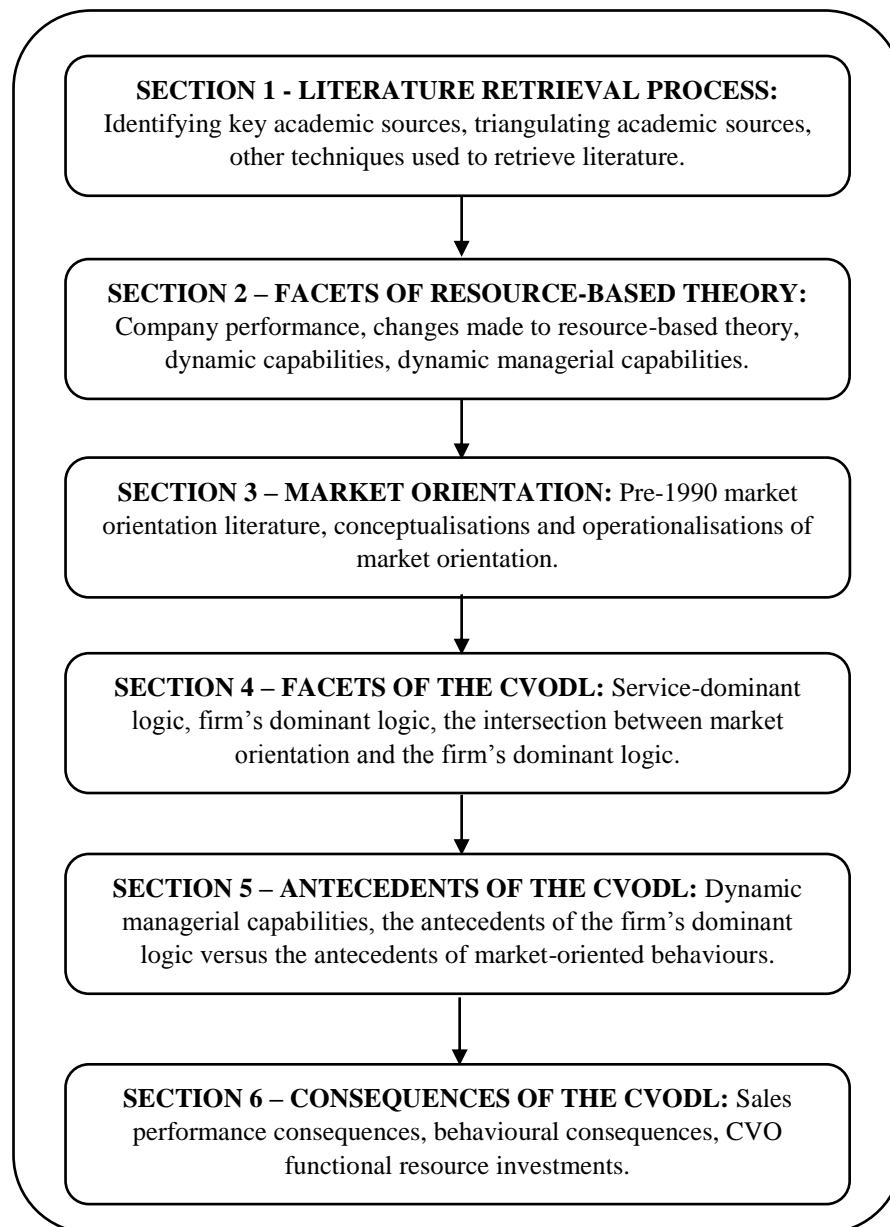
*What are the antecedents of the CVODL?* CVO dynamic managerial capabilities are used as the drivers of the CVODL. The CVO dynamic managerial capabilities framework is comprised of: CVO managerial human capital, CVO managerial

cognition, and CVO managerial social capital. As noted in section 1.4 (in terms of the underpinning theory of this PhD thesis), the dynamic managerial capabilities framework is a sub-set of the resource-based view of the firm which examines the managerial capabilities used to drive company performance (e.g., sales) (Helfat and Martin, 2015). Since the dynamic managerial capabilities perspective is a theoretical framework that has scarcely been linked to broader marketing theory (see Bruni and Verona, 2009), there is scope to use this different theoretical approach when studying the: facets, antecedents and consequences of the CVODL construct. Moreover, Kor and Mesko (2013) highlighted the role of dynamic managerial capabilities as drivers of the firm's dominant logic; this study is developed within this doctoral thesis, by incorporating a customer-focused (i.e., CVO) dimension to the specific drivers of the CVODL construct.

*What are the consequences of the CVODL?* The positive and negative outcomes of the CVODL using the dynamic managerial capabilities framework are outlined in this chapter. Specifically, the consequences of dominant logics are examined (e.g., functional resource investments, sales performance and intelligence responsiveness) (Von Krogh, Erat and Macus, 2000; Kor and Mesko, 2013), and applying such consequences to market orientation theory. That is, there is a debate in the literature surrounding the organisational performance (e.g., sales) consequences of the firm's dominant logic, with some authors suggesting that dominant logics directly drive sales performance (e.g., Obloj, Obloj and Pratt, 2010). However, other authors have argued that because dominant logics are a dimension of organisational cultures, they do not directly drive sales performance, but instead, drive such outcomes through intermediary factors such as functional resource investments and firm-level behaviours (e.g., Crilly and Sloan, 2012). As such, the direct and indirect relationship between a CVODL and sales performance is explored in this component of the thesis to help settle this debate.

In addition to the answering of the above research questions, the over-arching structure of this chapter is to explore the underpinning literature surrounding market orientation and the firm's dominant logic. Further, the: facets, antecedents, and consequences of the CVODL construct are also discussed in this chapter. The literature retrieval process is described in the following section.

Figure 2.1. Structure of the Literature Review



### 2.3. Literature retrieval process

#### 2.3.1. Identifying key academic sources

The Association of Business Schools’ (ABS) (2010; 2015) “Academic Journal Guides” were used in this study to identify scholarly sources to reference (see Table 2.1). Insights from a wide range of: marketing, strategic management, and entrepreneurship journals (due to the nature of the underpinning literature originating from these domains) were used in this PhD study such as the: *Journal of Marketing*, *Journal of Marketing Research*, *Strategic Management Journal*, *Journal of the Academy of Marketing Science*, and *Journal of Business Venturing*. General

management journals were also used (i.e., specific articles linked with the themes of the doctoral thesis). Such journals included the: *Academy of Management Journal*, *Organization Science*, *Administrative Science Quarterly*, *Journal of Management Studies*, and *British Journal of Management*. Purely conceptual outlets such as the: *Academy of Management Review* and *International Journal of Management Reviews* were also used to retrieve literature.

It was deemed important to ensure that any influential articles (both seminal and recent) were included in this doctoral study to guide its theoretical and practical contribution. The work of Jones, Coviello and Tang (2011) was used as a guide to accessing scholarly material.

**Table 2.1. Key top-tier ABS (2010; 2015) journals used to retrieve literature**

<b>Publication</b>	<b>Domain</b>	<b>ABS (2010)</b>	<b>ABS (2015)</b>	<b>Impact factor</b>
Academy of Management Annals	Management	3*	3*	7.769
Academy of Management Journal	Management	4*	4*	6.448
Academy of Management Perspectives	Management	3*	4*	3.354
Academy of Management Review	Management	4*	4*	7.475
Administrative Science Quarterly	Management	4*	4*	3.333
British Journal of Management	Management	4*	4*	1.584
Entrepreneurship Theory and Practice	Entrepreneurship	4*	4*	3.144
European Journal of Marketing	Marketing	3*	3*	1.006
Harvard Business Review	Management	4*	4*	1.270
Industrial Marketing Management	Marketing	3*	3*	1.820
International Journal of Management Reviews	Management	3*	3*	3.857
International Journal of Research in Marketing	Marketing	3*	4*	1.575
International Marketing Review	Marketing	3*	3*	1.865
International Small Business Journal	Entrepreneurship	3*	3*	1.800
Journal of Business Research	Management	3*	3*	1.480
Journal of Business Venturing	Entrepreneurship	4*	4*	3.678
Journal of Consumer Research	Marketing	4*	4*	3.125
Journal of International Business Studies	International business	4*	4*	3.563

Journal of International Marketing	Marketing	3*	3*	3.100
Journal of Management	Management	4*	4*	6.071
Journal of Management Studies	Management	4*	4*	3.763
Journal of Marketing	Marketing	4*	4*	3.900
Journal of Marketing Research	Marketing	4*	4*	2.300
Journal of Product Innovation Management	Innovation	4*	4*	1.696
Journal of Small Business Management	Entrepreneurship	3*	3*	1.353
Journal of the Academy of Marketing Science	Marketing	3*	4*	3.818
Long Range Planning	Strategic management	3*	3*	2.718
Marketing Science	Management	4*	4*	1.860
Organization Science	Management	4*	4*	3.775
Organizational Research Methods	Research methods	4*	4*	4.148
Research Policy	Innovation	4*	4*	3.117
Strategic Management Journal	Strategic management	4*	4*	3.780

While their study was based upon the international entrepreneurship literature, their system of identifying and retrieving scholarly material was applicable to this PhD thesis. Jones, Coviello and Tang (2011) recommended the use of highly-cited authors' work to understand the academics who are prominent names in a certain field. Using highly-cited academics' work helped confirm some of the publications that needed to be referenced, as such scholars had typically published their research in highly-ranked ABS (2010; 2015) journals. This was helpful when assessing sources that did not appear as "top searches" in Loughborough University's library search engines as some articles may have been left out of the literature retrieval process. Another technique involved restricting literature searches to certain points in time (e.g., 1990 to 1999 versus 2000 to 2009). This literature search strategy allowed the study to compare seminal with more recent studies (Tranfield, Denyer and Smart, 2003). Other techniques used to retrieve literature are as follows.

### 2.3.2. Other techniques used to retrieve literature

Lesser-ranked ABS (2010; 2015) journals (as shown in Table 2.2) were referred to in this PhD thesis, as it was noted that some lower-ranked publications have still made substantial contributions to its themes and should not be overlooked.

**Table 2.2. Key lower-ranked ABS (2010; 2015) journals used to retrieve literature**

<b>Publication*</b>	<b>Domain</b>	<b>ABS (2010)</b>	<b>ABS (2015)</b>	<b>Impact factor</b>
Academy of Marketing Science Review	Marketing	2*	2*	N/A
Australasian Marketing Journal	Marketing	1*	1*	.880
Business Horizons	Management	1*	2*	1.163
Canadian Journal of Administrative Sciences	Management	2*	2*	N/A
European Business Review	Management	2*	2*	N/A
European Management Journal	Management	2*	2*	1.222
International Journal of Entrepreneurial Behavior & Research	Entrepreneurship	2*	2*	N/A
Journal of International Entrepreneurship	Entrepreneurship	1*	1*	N/A
Journal of Marketing Management	Marketing	3*	2*	N/A
Journal of Services Marketing	Marketing	2*	2*	.989
Journal of Strategic Marketing	Marketing	2*	2*	N/A
Management Decision	Management	1*	2*	1.429
Qualitative Market Research: An International Journal	Marketing	1*	2*	N/A
Strategic Change	Strategic management	2*	2*	N/A
<b>*Please note that “N/A” refers to such information being unavailable.</b>				

Also, in the most recent Research Excellence Framework’s (REF) results, there was not a high association between the ABS journal rankings and the scores that papers were given (REF, 2015). This indicates that lower-ranked ABS (2010; 2015) journals could still be added to the reference list. In terms of reducing the chances of misunderstanding the underpinning literature of this doctoral thesis, the work of Cummings and Bridgman (2011) was drawn upon to extract recommendations on referencing and on how to process academic literature correctly. These authors examined how critical management theory has been misinterpreted within scholarly papers. Specifically, they provided the example of Max Weber and how different editions of a textbook (that references Weberian theory) have printed continuously varied information over time. Cummings and Bridgman (2011) added that recent editions of this textbook have contradicted Weber’s original work and proposed that

writers should compare their discoveries with the original sources (if possible) to ensure that the literature they have used has referenced the original content appropriately. The literature identified in this PhD study was triangulated with original material (as much as possible) to decrease the chance of miscommunicating theory. Due to the nature of the theories examined within this study, visiting the original sources to compare with more recent literature was usually feasible. This literature-oriented triangulation process is described further in the next section.

### 2.3.3. Triangulation with multiple sources of literature

Scholarly sources were triangulated from multiple areas. First, journal articles (as per sections 2.3.1 and 2.3.2) were cited to follow most literature linked to this study's contribution. Second, textbooks and book chapters were referenced to show additional insights into such themes. Textbooks and book chapters were useful for seeking definitions as well as gaining an indication of the seminal authors in each field (Jones and Gatrell, 2014). Third, conference papers were also read, but were minimally-referenced as in almost all instances, any work that was presented in conference proceedings, was re-written as journal articles at a slightly later time. Doctoral events that accepted work from this PhD thesis has been referenced to guide the investigation's conceptualisations and to show external validations. These papers were presented at the: *Academy of Marketing Science Conference* (Orlando, Florida) (Crick, 2016a), *McGill International Entrepreneurship Conference* (Vaasa, Finland) (Crick, 2016b), *Academy of Marketing Conference* (Hull, United Kingdom) (Crick, 2017a), and the *American Marketing Association's Special Interest Group in Entrepreneurial Marketing* (San Francisco, California) (Crick, 2017b). With this literature retrieval strategy, the best theoretical work linked to the thesis' theoretical contribution was used. In the next section, the resource-based view is explored; that is, the overall theory is described, before the dynamic managerial capabilities framework is discussed.

## 2.4. Facets of resource-based theory

### 2.4.1. Resource-based view of the firm

The resource-based view of the firm is a strategic management theory that suggests that organisations with higher volumes of resources and capabilities have a stronger chance of sustaining competitive advantages than those with lower bundles of



resources and capabilities (Wernerfelt, 1984; Barney, 1991). Resources are tangible assets, such as equipment and cash, while capabilities are intangible assets, such as knowledge and expertise (Eisenhardt and Martin, 2000). The theory has an underpinning assumption that volumes of resources and capabilities are associated with an organisation's size; that is, small firms have less scope to yield sustainable competitive advantages due to fewer resources and capabilities than larger or more established companies (Westhead, Wright and Ucbasaran, 2001). Further, competitive advantages are only one assessment of company performance under the resource-based view, with an alternative outcome being sales performance (Katsikeas, Morgan, Leonidou and Hult, 2016). Company performance under resource-based theory follows in the next section.

#### 2.4.2. Company performance under resource-based theory

Under the resource-based view, a sustainable competitive advantage is a level of superior organisational performance over firms' competitors driven by their resources and capabilities (Huang, Dyerson, Wu and Harindranth, 2015). As outlined in section 2.4.1, the resource-based view examines how companies can obtain a sustainable competitive advantage through their resources and capabilities (Morgan, Vorhies and Mason, 2009). However, a sustainable competitive advantage is not the only assessment of organisational performance under the resource-based view. For instance, another company performance measure is sales performance (i.e., how businesses have performed in their market relative to their key rivals in terms of revenues, market growth and market share (Katsikeas, Morgan, Leonidou and Hult, 2016). As discussed in section 1.4 (regarding the underpinning theory of the PhD study), sales performance is used as the theoretical (and later empirical) assessment of organisational performance under the resource-based view. That said, sustainable competitive advantages are still a prominent element of resource-based theory – some examples of how companies can obtain sustainable competitive advantages are provided in Table 2.3.

**Table 2.3. Sources of how companies can obtain sustainable competitive advantages under the resource-based view**

<b>Source</b>	<b>Publication</b>	<b>Paper type</b>	<b>Description</b>
Barney (1986)	Academy of Management Review	Conceptual	Some large North American corporations have famous cultures that attract a certain calibre of prospective employees. These firm-level cultures have increased their performance, due to being able to recruit and mould a dynamic workforce. While this is likely to be a time-consuming process, firms' goal should be to create an inimitable organisational culture to reduce the risk of competitors copying such performance-enhancing traits.
Murray and Montanari (1986)	Academy of Management Review	Conceptual	In highly-competitive markets, businesses need to implement socially and environmentally-friendly strategies to grow, as some markets expect such activities from certain brands. Marketing orientation concerns companies being customer-focused and having an overall insight into delivering value to their target markets. This allows companies to add a level of value to a corporate social responsibility-based competitive strategy to out-perform competitors.
Barney (1991)	Journal of Management	Conceptual	This article examines the resource-based view as a theory used to assess sustainable competitive advantages based on the strength and volume of companies' resources. A framework is developed to assess the extent to which resources can drive sustainable competitive advantages through four dimensions. The resource-based view minimally considers factors outside of organisations, such as the competitive business environment.
Hunt and Morgan (1995)	Journal of Marketing	Conceptual	The foundations of the resource-based view are based upon the ways that nations can achieve absolute and comparative advantages through efficient trading of goods and/or services. This minimally-applies to the ways in which companies in dynamic markets can secure competitive advantages over their rivals. Market orientation can be a firm-level strategy used to create a customer value provision that is superior to competitors. This can allow companies to distinguish themselves from their rivals, to secure a sustainable competitive advantage.
Woodruff (1997)	Journal of the Academy of	Conceptual	Businesses that have increased competition need to develop firm-level activities that are different (and better) than those of competitors. An

	Marketing Science		organisation's customer value provision is the factor that helps customers decide between using one brand over others. Managers need to understand the wants and needs of their customers before attempting to create a customer value provision that meets such wants and needs. Depending on the size, resources and capabilities of a firm, its ability to secure a sustainable competitive advantage will vary.
Nahapiet and Ghoshal (1998)	Academy of Management Review	Conceptual	Networks and relationships are highly-valuable assets for companies to manage and need to be fostered in a way that yields the highest-level of performance for the firm. Social capital can originate from a wide array of stakeholders and helps companies perform in superior ways to their rivals through accessing resources and capabilities that would be considerably more difficult without such networks.
Luo (2000)	Journal of World Business	Conceptual	Dynamic learning is central to securing competitive advantages as being able to learn from successes and failures allows firms to gain new resources and capabilities used to globalise their operations. This will only yield a sustainable competitive advantage if firms are open-minded in their learning orientation. Dynamic learning is likely to be used differently in domestic versus international competitive strategies.
Hult and Ketchen Jr. (2001)	Strategic Management Journal	Empirical	Market orientation is the main driver of a sustainable competitive advantage, as such business activities and allow firms to develop ways of creating a level of customer value that out-performs competitors. A positional advantage involves firms claiming a level of performance in their market(s) that is benchmarked against their competitors. A sustainable competitive advantage is comparable with this concept.
Westhead, Wright and Ucbasaran (2001)	Journal of Business Venturing	Empirical	The resource-based view is focused on larger firms, as their performance is clearly explained by the volume of resources and capabilities they typically possess compared to smaller entities. Smaller organisations must compete within their means and accept that resource-advantages are unlikely to be obtainable. Competitive advantages are more likely to be secured from the owner/founder's characteristics. This is something that smaller companies are more likely to be able to manage.

Vorhies and Morgan (2005)	Journal of Marketing	Empirical	Marketing capabilities assist companies to employ competitive strategies that create a level of customer value that competitors may struggle to achieve. Marketing capabilities originate from various areas of the firm linked with creating customer value. Sustainable competitive advantages were measured as a three-component variable composed of: customer satisfaction, profitability, and market effectiveness. Market effectiveness (sales-based advantages) was suggested to be the most important dimension of the construct.
Menguc and Auh (2006)	Journal of the Academy of Marketing Science	Empirical	Environmental turbulence can affect the extent to which competitive advantages stand the test of time and can be classified as being sustainable. If companies can overcome such contingencies, a competitive advantage could be secured. This argument was underpinned by the dynamic capabilities subset of the resource-based view and focused on the assets that companies possess that allow them to create product and service offerings that can outperform competitors in rapidly-changing environments.
Maklan and Knox (2009)	European Journal of Marketing	Empirical	By having strong customer value-adding resources and capabilities, management teams can invest such assets into customer relationship management strategies. This helps firms boost their performance, by understanding the wants and needs of customers. The ways in which organisations attempt to create value for their customers will vary as different businesses, industries, and markets need alternative resources and capabilities to create sustainable competitive advantages.
Zhou, Brown and Dev (2009)	Journal of Business Research	Empirical	This article examines the indirect relationship between customer value-adding activities and performance. Except for customer orientation, the other components of market orientation are positively related to performance as having a high degree of a competitor orientation may mean that rivals also possess such intelligence. This lessens the extent to which companies can distinguish themselves from their rivals. This provides counter-intuitive arguments that being customer-oriented is not always a positive driver of a sustainable competitive advantage.
Day (2011)	Journal of Marketing	Conceptual	Marketing capabilities need to be linked to the business' customer value provision. If corporations can develop (i.e., implement into their strategies)

			their marketing capabilities, they maximise their chances of being able to sustain competitive advantages in their market(s). This assumes that rivals are less able to foster their own marketing capabilities and implement weaker competitive strategies. Marketing capabilities originate from multiple areas, affecting the ways in which sustainable competitive advantages are secured.
Kumar, Jones, Venkatesan and Leone (2011)	Journal of Marketing	Empirical	In highly-competitive sectors, market orientation might be an expected activity and not help organisations differentiate themselves from their competitors because such rivals are implementing similar competitive strategies. Sustainable competitive advantages were measured as business performance (sales and profitability), but did not focus on the role of competitors – apart from the role of the environment. It is difficult to articulate how sustainable competitive advantages are related to market orientation without considering how such activities allow firms to out-perform their rivals.
Murray, Gao and Kotabe (2011)	Journal of the Academy of Marketing Science	Empirical	By having strong marketing capabilities, companies are more likely to be able to develop a marketing mix that creates customer value in a way that competitors will struggle to implement. The business environment was considered (as well as internal factors such as firms' strategy type) as a contingency that might affect certain marketing capabilities' ability to obtain competitive advantages. Marketing capabilities allow organisations, from a range of countries and industries, to create a level of customer satisfaction that rivals cannot imitate.
Prange and Verdier (2011)	Journal of World Business	Conceptual	This study outlined four major firm-level capabilities: threshold and consolidation capabilities (used to survive in a firm's industry), as well as value-adding and disruptive capabilities (used to help firms grow and expand in their markets). The latter two capability types are linked to competitive advantages on an international stage. If organisations can extract the maximum value from both their survival and growth-oriented capabilities, they provide themselves with a strong chance of being able to obtain a sustainable competitive advantage. This is dependent on a range of factors, including the strength of a business' competitors and the level of environmental turbulence (e.g., competitiveness and market-level forces).

Sirmon, Hitt, Ireland and Gilbert (2011)	Journal of Management	Conceptual	If management teams are aware of what business functions and competitive strategies are most likely to drive sustainable competitive advantages, resource orchestrations can be made to secure such performance outcomes. The nature of what resource investments are needed to secure sustainable competitive advantages are likely to vary by firm and industry, due to a range of internal and external factors. Resources may also need to be allocated differently during certain times (e.g., economic crises).
Huang, Dyerson, Wu and Harindranath (2015)	British Journal of Management	Empirical	Just because an organisation's activities have out-performed competitors, does not automatically equate to it obtaining a sustainable competitive advantage. A competitive advantage can be temporary, in which companies do not sustain the factors that allowed them to out-perform their rivals. If corporations have the technological resources and capabilities to implement into their competitive strategies, they increase their chances of being able to secure sustainable competitive advantages. This highlights that competitive advantages need to be fostered, so that firms do not lose their superior position in their market(s).
Davcik and Sharma (2016)	Journal of Business Research	Conceptual	Competitive advantages are caused by marketing resources and capabilities due to their ability to maximise the firm's customer value provision. Specifically, resources and capabilities are needed to generate competitive intelligence. Management teams can use this to their advantage by learning what activities rival organisations are employing and attempting implement superior activities as a counter-strategy – thus, developing a competitive advantage.
Crick (2018)	Qualitative Market Research: An International Journal	Empirical	In determining the performance consequences of coepetition (the interplay between competition and cooperation), the role of organisational performance can include multiple outcomes, as performance objectives vary across companies. Some businesses seek to survive in their market(s), while others seek to obtain a sustainable competitive advantage. The latter outcome is typically gained through larger businesses (with more volumes of resources and capabilities) combining the benefits they have obtained from coepetition with their other competitive strategies to maximise their overall performance.

According to Crick and Spence (2005), managers can make decisions to lose sales in the short-term, to obtain more sales (relative to competitors) in the long-term. Thus, when assessing organisational performance, management teams are likely to pursue different performance outcomes (at different times). As such, sustainable competitive advantages may not always be performance targets for managers; hence, this was an additional reason to use sales performance as the assessment of company performance in this PhD study. Sustainable competitive advantages are driven by superior performance over firms' competitors via their resources and capabilities (Day, 2011). Sustainability means to be able to withstand the test of time and the forces of the business environment (e.g., competitors and market-level factors) (Porter, 1985). Temporary competitive advantages are competitive advantages that do not stand the test of time and/or can easily be damaged by competitors and the environment (Huang, Dyerson, Wu and Harindranath, 2015; Girod and Whittington, 2017). Sustainability is also influenced by the extent to which managers invest in extending the value of their assets (Helfat and Peteraf, 2003). A framework used to assess the likelihood of an organisation's resources and capabilities yielding sustainable competitive advantages is outlined in the following section.

#### 2.4.3. Sustainability of resources

Competitive strategies should be formed after managers have analysed internal and external factors relating to their organisation to determine how resources should be allocated to secure competitive advantages (Priem and Butler, 2001). An internal (or situational) analysis consists of assessing the organisation's strengths, weaknesses, opportunities, and threats (Barney, 1991). An external (or environmental) analysis examines the political, economic, social, and technological forces within a firm's environment (Durand and Madsen, 2017). The resource-based view is focused on a firm's internal analysis, in which resources and capabilities are assessed as drivers of sustained competitive advantages (or sales) rather than industry-based factors (Barney, 2001). Moreover, the resource-based view is underpinned by the: "value, rarity, inimitability, and non-substitutability" (VRIN) framework, which encapsulates the internal view of companies' resources and capabilities link with company performance (e.g., sales) (Johnson, Whittington, Scholes, Angwin and Regner, 2014). The changes and additions that have been made to resource-based theory are described in the following section. Further, as the dynamic managerial

capabilities perspective sub-set of the resource-based view is the specific theory used in this PhD study, it is important to follow the evolution of resource-based theory to see how the dynamic managerial capabilities framework fits into the resource-based view of the firm.

#### 2.4.4. Changes and additions to the resource-based view

##### 2.4.4.1. Justifications for changing resource-based theory

Resource-based theory originated from the work of the economist Adam Smith, whose work measured the extent to which one country had an advantage in producing a commodity over another (Matthews, 2003; Peng, Wang and Jiang, 2008). A key limitation was the reference to country-level advantages and the lack of applicability to firm-level performance (Hunt and Morgan, 1995). The resource-based view was a theory (alongside the industry-based view) that emerged from this significant theoretical gap, as it measured multiple aspects of business-level competitiveness that previous literature had ignored (Johnson, Whittington, Scholes, Angwin and Regner, 2014). However, the resource-based view, despite applying to business-level competitiveness, was still a rigid theory, with limited applications to some organisations (e.g., non-commodity firms) (Wernerfelt, 1984; Barney, 1991). Based primarily on a debate between Barney (2001) and Priem and Butler (2001) in an entrepreneurship-driven special issue of the *Academy of Management Review*, the resource-based view was recommended to include four major changes and additions; these are discussed in the following sections. While incremental additions and changes to the perspective have been made since this debate, this was a significant milestone to the theory that addressed the resource-based view's rigid assumptions. Further, these four changes and additions to resource-based theory are important, as they indicate how the perspective has evolved – developing the dynamic managerial capabilities framework.

##### 2.4.4.2. Environmental turbulence

Strategic management research has considered the role of the business environment, in terms of external market-level forces having the scope to limit firms from achieving their objectives (Andersson, Evers and Kuivalainen, 2014). Specifically, the business environment has been explored as a factor that could lessen performance (e.g., sales) through increased competitiveness and/or market dynamism (Slater and



Narver, 1994; Girod and Whittington, 2017). While environmental factors could be categorised as being part of the industry-based view (Murray, Gao and Kotabe, 2011), resource-advantages could also be less-obtainable in highly-competitive and unstable environments (Schilke, 2014). The business environment can affect the sustainability of resources under this major addition to the resource-based view (Barney, 2001; Priem and Butler, 2001).

#### 2.4.4.3. The differentiation of resources and capabilities

Prior to Priem and Butler's (2001) criticisms of resource-based theory, the resource-based view described "resources" as both tangible and intangible assets, whereby, such studies rarely mentioned the term "capabilities" (e.g., Wernerfelt, 1984; Barney, 1991). Resources and capabilities are different types of assets used in competitive strategies and are employed differently to shape performance (Davicik and Sharma, 2016). That is, resources could be used to allow firms to engage in certain competitive strategies, due to providing them with the equipment needed to serve their customers, but capabilities can add a level of dynamic (i.e., adaptable) value, in which intangible processes can enhance resources' performance outcomes (Ngo and O'Cass, 2012). Likewise, if management teams have access to certain resources, but do not have the capabilities to operate them, they are unlikely to contribute to their performance objectives (Morgan, 2012).

#### 2.4.4.4. The differentiation of strategic planning and strategy-as-practice

To emphasise an earlier point made in section 2.4.3, the resource-based view was historically a theory that was objective due to its microeconomic foundations (see Wernerfelt, 1984; Barney, 1991). While some of the adaptations made to the resource-based view are not the core facet of this PhD thesis, they serve as an indication that resource-based theory has been altered to suit changing business practices. As such, another major change made to the resource-based view is the ways in which the strategy literature been divided into two main areas: strategic planning and strategy-as-practice (Durand, Grant and Madsen, 2017). Strategic planning involves managers devising long-term schemes to serve their markets, utilise assets, and to out-perform rivals (Greenley, Hooley, Broderick and Rudd, 2004; Rudd, Greenley, Beatson and Lings, 2008). Strategy-as-practice focuses on emergent strategies linked with changes in the business environment and

unanticipated scenarios (Johnson, Whittington, Scholes, Angwin and Regner, 2014). Seminal resource-based theory grouped the planning and execution of competitive strategies into a single domain (Wernerfelt, 1984; Barney, 1991). This area was added to the resource-based view to account for how strategies in the planning stages are likely to be different when they are executed (i.e., intended and emergent strategies) due to changes in the business environment (Barney, 2001; Priem and Butler, 2001).

#### 2.4.4.5. Empirical research using resource-based theory

Priem and Butler (2001) noted that many of the papers examining the resource-based view in the 1980s and 1990s had only used the theory in a conceptual context. They recommended a strong call for empirical tests of the perspective. More recent studies have empirically-evaluated aspects of the resource-based view through qualitative and quantitative research (e.g., Hooley, Greenley, Cadogan and Fahy, 2005; Crick, 2018); this has contributed to Priem and Butler's (2001) recommendation for more empirical research using resource-based theory. Recent studies have demonstrated the applicability of the resource-based view to a range of practical contexts and situations (Nason and Wiklund, 2018). That said, there are still gaps in resource-based theory – specifically, some of its sub-sets, such as the dynamic managerial capabilities perspective (as per section 1.4). The dynamic capabilities sub-set of the resource-based view is described in the following section. The dynamic capabilities perspective is a pre-cursor to the dynamic managerial capabilities framework (see Adner and Helfat, 2003; Bruni and Verona, 2009). Hence, the dynamic capabilities perspective is explored in the next section before later components of the chapter are used to evaluate the theory surrounding dynamic managerial capabilities.

#### 2.4.5. Dynamic capabilities perspective

As outlined in section 2.4.1 (in terms of an overview of resource-based theory), the resource-based view of the firm is a strategic management theory used to assess how organisational performance (e.g., sales) is driven by firms' resources and capabilities (Helfat and Peteraf, 2003; Hult, Ketchen Jr., and Slater, 2007; Nason and Wiklund, 2018). However, the ways in which resources and capabilities drive sales performance could involve a vast array of possibilities, as some assets originate from marketing divisions (of corporations), some assets are used to out-perform

competitors, and other assets are used to help companies to survive in their market(s) (see Teece, 2014; Davcik and Sharma, 2016). As such, the resource-based view has been divided into multiple sub-theories, a prominent example being the dynamic capabilities perspective (Ambrosini and Bowman, 2009; Girod and Whittington, 2017). However, even the dynamic capabilities perspective is a broad theoretical framework (with several conceptualisations and operationalisations), as well as the fact that an extensive number of capabilities could be classed as being dynamic capabilities, making it a complex perspective in theory-testing research (Lew, Sinkovics and Kuivalainen, 2013; Wilden and Gudergan, 2015). Thus, the purpose of this section is to review the dynamic capabilities literature, before discussing the dynamic managerial capabilities perspective.

Dynamic capabilities are “the firm’s ability to integrate, build and reconfigure internal and external competences to address rapidly-changing [dynamic] environments” (Teece, Pisano and Shuen, 1997, p. 524). If firms can overcome the rapidly-changing threats the market enforces on such assets, they are likely to yield competitive advantages (and/or drive sales) that will stand the test of time (Teece, 2012). Consequently, please note that this doctoral study will cover how dynamic capabilities drive competitive advantages, vis-à-vis, sales performance, due to the multiple outcomes of such assets (Ambrosini and Bowman, 2009). It is stressed that sales performance is the assessment of company performance in this PhD study. An overview of the literature surrounding the dynamic capabilities perspective is presented in Table 2.4. Regardless of the context (markets and industries), dynamic capabilities allow companies to secure competitive advantages, as they allow them to adapt in a vast possibility of environmental contingencies (Teece, 2007).

Not all organisational assets are used to develop sustainable competitive advantages (and/or drive sales) as some capabilities are used to help organisations survive (via threshold capabilities) within their markets (Dixon, Meyer and Day, 2010; Prange and Verdier, 2011; Crick, Chaudhry and Crick, 2016). Threshold capabilities are the “capabilities needed for an organisation to meet the necessary requirements to compete in a market and achieve parity with its competitors in that market” (Johnson, Whittington, Scholes, Angwin and Regner, 2014, p. 73). Like threshold capabilities, ordinary (or zero-level) capabilities have also been examined as basic capabilities that allow organisations to survive in their industry (Winter, 2003).

**Table 2.4. An overview of the dynamic capabilities perspective in the strategy literature**

Source	Publication	Paper type	Description
Teece, Pisano and Shuen (1997)	Strategic Management Journal	Conceptual	Dynamic capabilities are the assets that allow firms to obtain sustainable competitive advantages by being able to adapt and reconfigure in rapidly-changing environments. Some of the benefits of dynamic capabilities include firms out-performing their competitors, while drawbacks include the time and cost involved with creating these assets.
Eisenhardt and Martin (2000)	Strategic Management Journal	Conceptual	While the resource-based theory applies to many micro-level factors, the dynamic capabilities perspective is a capability-specific lens of assessing sustainable competitive advantages in dynamic (rapidly-changing) environments.
Luo (2000)	Journal of World Business	Conceptual	Dynamic capabilities can originate from any area of an organisation's business model, i.e., in the form of distinctive resources, resource allocation activities, or learning processes. The study should have noted that capabilities are strictly intangible assets (e.g., learning processes), not tangible assets, such as distinctive resources.
Helfat and Peteraf (2003)	Strategic Management Journal	Conceptual	Capabilities could yield a short-term surge in performance, but can plateau their effect on sustainable competitive advantages. Managers have the choice of either investing more resources (e.g., cash) into developing the value of a dynamic capability or allowing the asset to decline in value and concentrate on different dynamic capabilities.
Winter (2003)	Strategic Management Journal	Conceptual	Ordinary (or zero-level) capabilities are the assets that allow firms to operate an organisation. Dynamic capabilities are the long-term performance-driving capabilities. These may be expensive to develop and maintain and are only as dynamic as the environment that hosts such capabilities. Managers might witness their capabilities shift from being dynamic into ordinary capabilities.
Menguc and Barker (2005)	European Journal of Marketing	Empirical	The skills and knowledge (i.e., human capital) and relationships and networks (i.e., social capital) of salespeople in large organisations can be a dynamic capability, due to their ability to adapt in competitive environments. Depending on managers' view on maintaining and investing resources into their sales teams' activities, they may be able to create competitive advantages.

Teece (2007)	Strategic Management Journal	Conceptual	Dynamic capabilities can be fostered by multiple individuals within a firm, but primarily managers. Dynamic capabilities allow corporations to develop sustainable competitive advantages across rapidly-changing environments. A truly dynamic capability will have these outcomes in all contexts.
Weerawardena, Mort, Liesch and Knight (2007)	Journal of World Business	Conceptual	Dynamic capabilities allow internationalising companies to develop their marketing capabilities and knowledge-intensive products with learning and knowledge management being central to fostering such assets.
Ambrosini and Bowman (2009)	International Journal of Management Reviews	Conceptual	Dynamic capabilities are shaped by factors internal and external to organisations. Internal factors come from the employees and managers, while external factors might originate from environmental issues that determine the competitive strategies an organisation employs. Resources need to be invested correctly within relevant dynamic environments for management teams to witness the relevant performance-enhancing benefits.
Augier and Teece (2009)	Organization Science	Conceptual	Firms' dynamic capabilities allow managers to create sustainable competitive advantages despite the risk of certain internal problems and contingencies. Managers should be able to develop, enhance, and implement dynamic capabilities to improve the performance of their organisation. These outcomes vary across contexts, such as the firm's industry.
Prange and Verdier (2011)	Journal of World Business	Conceptual	Exploitation-based dynamic capabilities allow managers to capitalise on opportunities in their firm's industry and perform well in such markets. Exploration-based dynamic capabilities allow firms to enhance their performance, but not to the same extent as exploitation-based dynamic capabilities because the firm may be new to such markets, meaning sustainable competitive advantages are less likely to be obtained.
Teece (2012)	Journal of Management Studies	Conceptual	Dynamic capabilities are stored in routines and processes that allow firms to secure sustainable competitive advantages. Dynamic capabilities' performance consequences are related to internal and external times of strategic change. Internal change refers to change management processes; external change refers to the competitive forces within a firm's environment.
Lew, Sinkovics and Kuivalainen (2013)	International Business Review	Empirical	Exploratory (dynamic) capabilities link with performance against key competitors in a market. The authors distinguish between exploratory and exploitative capabilities, as well as examining social capital in

			internationalisation activities. Dynamic capabilities also allow businesses to build upon their asset base and create original operational-level capabilities.
Gnizy, Baker and Grinstein (2014)	International Marketing Review	Empirical	Some organisational cultures are far more suited to gaining and processing business information than others. Some firms can learn from this information and convert it into a sustainable competitive advantage. Dynamic capabilities are influenced by the internal practices of an organisation (e.g., its culture and climate) and times of strategic change.
Schilke (2014)	Strategic Management Journal	Empirical	While dynamic capabilities are positively related to sustainable competitive advantages, this relationship is likely to be contingent on environmental turbulence. Intermediate levels of environmental turbulence are where dynamic capabilities are likely to drive sustainable competitive advantages.
Teece (2014)	Academy of Management Perspectives	Conceptual	Ordinary capabilities are much more able to be copied than dynamic capabilities because there might be an expectation to employ them in firms' markets. If dynamic capabilities allow a firm's to out-perform their rivals, corporations would not be able to imitate such capabilities as easily as ordinary capabilities.
Helfat and Peteraf (2015)	Strategic Management Journal	Conceptual	Dynamic capabilities are comprised of: sensing, seizing and reconfiguring capabilities. These capabilities have an impact on competing within times of strategic change and allow firms to boost its performance. This paper focuses on the cognitive element of the dynamic capabilities perspective from management teams' point-of-view.
Wilden and Gudergan (2015)	Journal of the Academy of Marketing Science	Empirical	Dynamic capabilities are more likely to drive performance in times of high environmental turbulence. Sensing dynamic capabilities can have negative relationships with marketing and technological capabilities in stable environments.
Crick, Chaudhry and Crick (2016)	Strategic Change	Empirical	While some managers might argue that they have obtained a competitive advantage through a certain competitive strategy (e.g., value co-creation), other competitors might implement similar activities, this makes them more like threshold capabilities. Not all organisational capabilities are used to out-perform competitors, as some serve basic purposes for companies.

Threshold capabilities are noted as alternative capabilities that have different performance implications to dynamic capabilities. The key point from the dynamic capabilities perspective is that dynamic capabilities allow managers and employees to adapt and reconfigure in rapidly-changing business environments to drive organisational performance (e.g., sales) (Winter, 2003; Augier and Teece, 2009). However, as noted earlier in this section, the dynamic capabilities perspective is a broad theoretical framework (Teece, 2014). The dynamic managerial capabilities perspective is a sub-set of dynamic capabilities theory that has a managerial focus (Adner and Helfat, 2003; Andersson and Evers, 2015). The dynamic managerial capabilities framework is discussed in the following section.

#### 2.4.6. Dynamic managerial capabilities

##### 2.4.6.1. Definition and conceptualisation

While dynamic capabilities are directly and indirectly related to organisational performance (e.g., sales), they can be so vast that managers may not be able to pinpoint the exact factors that have driven sales performance (Zollo and Winter, 2002). Dynamic managerial capabilities comprise three constructs (managerial human capital, managerial cognition and managerial social capital) used to represent most dynamic capabilities (Adner and Helfat, 2003). Dynamic managerial capabilities take a managerial-specific outlook on the dynamic capabilities perspective and ignore issues that do not link with management teams' role in yielding competitive advantages (and/or driving sales) (Helfat and Martin, 2015). Due to the managerial focus of the dynamic managerial capabilities perspective, the framework overlooks the role of functional-level employees in driving business performance (e.g., sales) (Martin, 2011). By not considering the role of functional-level employees (and just focusing on management teams), the dynamic managerial capabilities perspective differs from the overall dynamic capabilities perspective (which considers organisation-wide capabilities, i.e., managers and employees) (Eisenhardt and Martin, 2000). Arguably, by not considering the role of functional-level employees, the dynamic managerial capabilities perspective could be viewed as having a significant limitation – as functional-level employees could generate performance-driving capabilities (especially in service-oriented markets, where they have face-to-face dealings with customers) (Harris, 2013).

Moreover, when implementing the marketing concept (i.e., market orientation), all employees (both managerial and functional-level employees) have the propensity to drive sales performance (Kohli and Jaworski, 1990; Narver and Slater, 1990). As such, market orientation is suggested to be better suited to the dynamic capabilities perspective, but when examining managerial issues (namely, dominant logics), it is proposed that studies are better positioned towards the dynamic managerial capabilities perspective. That is, when examining dominant logics, it is necessary to take a managerial outlook due to such corporate cultures being implemented by senior management teams (Gentry, Dibrell and Kim, 2016). Thus, despite dynamic managerial capabilities having the potential to be inapplicable for certain studies (i.e., those examining non-managerial issues), they are highly-appropriate for investigating the firm's dominant logic (Kor and Mesko, 2013). In other words, it could be perceived that the dynamic managerial capabilities perspective is an inappropriate theory for non-management research, but when examining the mind-sets of management teams (e.g., via a CVODL), it is proposed that the dynamic managerial capabilities framework is a highly-suitable underpinning theory. The dynamic managerial capabilities framework is summarised in Table 2.5.

Dynamic managerial capabilities are defined as “the capabilities with which managers: create, extend, and modify the ways in which firms make a living — to help explain the relationship between: managerial decisions and actions, strategic change, and corporate performance under conditions of change” (Helfat and Martin, 2015, p. 1282). Dynamic managerial capabilities capture the essence of sustaining competitive advantages in dynamic markets under a managerial lens (Helfat and Peteraf, 2015). As noted in Table 2.5, dynamic managerial capabilities have been an emerging topic in the broader strategy literature, with authors using either the entire or selected components of the framework to extend the dynamic capabilities perspective to other contexts and competitive strategies (see Kaplan, 2008; Andersson and Evers, 2015). For example, Acquaah (2007) examined managerial social capital (i.e., how managers access resources and heuristics from their network members) in an African context, finding that managers might have relationships with a broad range of stakeholders such as: government agencies, competitors, buyers, suppliers, and religious leaders.



**Table 2.5. An overview of the literature surrounding the dynamic managerial capabilities perspective**

<b>Source*</b>	<b>Publication</b>	<b>Paper type</b>	<b>Description</b>
Stubbart (1989)	Journal of Management Studies	Conceptual	Cognitive capabilities refer to the skills and knowledge used to process information about an organisation and its environment. This extends to the psychological thought processes that are inputted into competitive strategies. Managerial cognition is the ways that management teams use information to make decisions. This helps integrate the strategic management and psychology literature.
Adner and Helfat (2003)	Strategic Management Journal	Empirical	The authors introduce the dynamic managerial capabilities framework as a tool to evaluate managers' decision-making and assist developing performance. Using an econometric methodology, they tested downsizing issues rather than the operationalisations of the dynamic managerial capabilities framework.
Acquaah (2007)	Strategic Management Journal	Empirical	Managerial social capital is a multi-dimensional variable comprised of: the extent to which firms have used the relationships with their network members, the information organisations receive from their network members, and the degree to which knowledge that network members have provided has been exploited by an organisation.
Peteraf and Reed (2007)	Strategic Management Journal	Empirical	Dynamic managerial capabilities allow managers to develop their performance under conditions of strategic change. Dynamic managerial capabilities help firms to grow and compete in their industry. Managerial cognition is especially important in allowing senior managers to foster their assumptions in times of strategic change.
Bruni and Verona (2009)	British Journal of Management	Empirical	The authors develop the “dynamic marketing capabilities” framework which is comprised of: “beliefs, human capital, and social capital.” These capabilities can allow firms to become more aware of their internal practices and increase performance. This extends the dynamic managerial capabilities framework, but applies to a marketing context, as well as not being restricted to managers.
Sirmon and Hitt (2009)	Strategic Management Journal	Empirical	Dynamic managerial capabilities are contingent on business' relative resource investments to their competitors – which is needed to shape performance. Resource investments are shaped by the information managers deem as relevant to their competitive strategies. Unfortunately, the paper provided very limited insights into how dynamic managerial capabilities can be operationalised. This framework was used as an underpinning theory – as opposed to a testable construct.

Crilly and Sloan (2012)	Strategic Management Journal	Empirical	The authors examine how managerial cognition helps firms create “social connectedness” with their stakeholders. The paper applies largely to multi-divisional organisations. The dynamic managerial capabilities framework supplements the wider resource-based view, but was minimally operationalised.
Kor and Mesko (2013)	Strategic Management Journal	Conceptual	Dynamic managerial capabilities allow managers to understand the necessary resource allocations of the business and invest across functional areas and strategies. Dynamic managerial capabilities help companies filter information and determine what information is important and shape an organisation-wide dominant logic.
Kleinbaum and Stuart (2014)	Academy of Management Perspectives	Empirical	“Network responsiveness” allows management teams to develop actions in adapting into the conditions of their firm’s competitive environment. The authors examine large entities, with ample resources to help manage adaptation and ambidexterity. This allows managers to adapt their activities, depending on the nature of what contingencies the firm faces. This is likely to be difficult for small businesses with fewer resources.
Andersson and Evers (2015)	Journal of International Entrepreneurship	Conceptual	Managerial human capital, managerial cognition, and managerial social capital are harnessed collectively, despite being separate capabilities. Management teams should implement them within their international competitive strategies. These capabilities are drivers of internationalisation activities used to foster growth.
Helfat and Martin (2015)	Journal of Management	Conceptual	Dynamic managerial capabilities directly drive performance, but are more likely to yield such consequences in times of strategic change. The authors provide different examples of how these capabilities have been conceptualised in the prior literature. The complex nature of managerial social capital makes it a multi-dimensional variable, whereas, managerial human capital and managerial cognition are uni-dimensional constructs.
Helfat and Peteraf (2015)	Strategic Management Journal	Conceptual	Dynamic managerial capabilities allow senior managers to make sense of their environment, adapt in times of strategic change, as well as being able to develop sustainable competitive advantages. This competency of being adaptable allows management teams to improve their performance and is managed by multiple stakeholders.
<b>*The studies presented in this table only refer to the literature on dynamic managerial capabilities, not regular dynamic capabilities. Hence, papers, such as Teece, Pisano and Shuen (1997) were excluded from this table, despite being seminal investigations.</b>			

Acquaah (2007) did not examine the other components of the dynamic managerial capabilities perspective (namely, managerial human capital and managerial cognition), but found that managerial social capital has a positive relationship with sales performance. Moreover, Acquaah (2007) highlighted that the African context influenced the study's results, as some of the network members utilised in Africa are likely to be different to managers operating in Western countries (e.g., religious leaders). More recently, Andersson and Evers (2015) developed a conceptual article surrounding the relationship between dynamic managerial capabilities (i.e., managerial human capital, managerial cognition, and managerial social capital) and international growth (as a form of company performance). Andersson and Evers (2015) proposed that dynamic managerial capabilities allow internationally-oriented management teams to recognise international opportunities, and in turn, drive international growth. Thus, Andersson and Evers' (2015) paper had the advantage of applying the dynamic managerial capabilities perspective to an international business theoretical domain

Further, the examples provided by authors, such as Acquaah (2007) and Andersson and Evers (2015) highlight the different ways that the dynamic managerial capabilities perspective can be applied to the broader management literature. An interesting feature of Andersson and Evers' (2015) paper was that dynamic managerial capabilities were argued to not directly drive company performance (e.g., sales), but indirectly through intermediary factors (in their paper, an ability to recognise international opportunities was considered). The different components of the dynamic managerial capabilities framework (i.e., managerial human capital, managerial cognition, and managerial social capital) are discussed in the following sections.

#### 2.4.6.2. Managerial human capital

Managerial human capital is “the skills and knowledge repertoire of managers, which are shaped by their: education, personal, and professional experiences” (Kor and Mesko, 2013, p. 234). Managerial human capital focuses on the expertise of managers within organisations rather than the more collective term “human capital”, which applies generically to all employees (Helfat and Martin, 2015). Managerial human capital relates to managers' experiences in education and industry and how

they can use such experience in shaping managerial behaviours (Kor and Leblebici, 2005). Managerial human capital could be better assessed via the richness of managers' experience could also be considered, as managers might accumulate a wealth of knowledge and skillsets from a short time in an industry than someone who has spent their entire career working in it (Adner and Helfat, 2003). Managerial human capital can be specific to certain organisations and industries, whereby, skills and experience can be so focused that they become context-specific and redundant if a manager was to leave his/her current role (Helfat and Martin, 2015). Managerial cognition follows in the next section.

#### 2.4.6.3. Managerial cognition

Managerial cognition is “the belief systems and mental models that managers use for decision-making” (Kor and Mesko, 2013, p. 234). Managerial cognition refers to the thought processes that are invested into shaping and executing competitive strategies (Tripsas and Gavetti, 2000). Thought processes concern individuals making decisions about how they perceive the world should operate (Kaplan, Murray and Henderson, 2003). Managerial cognition also applies to a manager's perception of the importance of an activity to shape decision-making processes (Walsh, 1995). Managerial cognition is sometimes referred to as “management cognition”, in which managers use “strategic schemas to make decisions” i.e., “beliefs about ways or strategies to meet objectives” (Combe, Rudd, Leeflang and Greenley, 2012, p. 1323). Furthermore, “empirical work suggests that managerial cognition shapes strategic decisions and outcomes, including responses to changes in the external environment. Together, studies suggest that differences in managerial cognition may lead to different strategic decisions and outcomes” (Adner and Helfat, 2003, pp. 1021-1022). As such, managerial cognition does not just refer to management teams' assumptions, but also how they can make strategic decisions about their firm's adaptability in its competitive environment (Huff, 1982). Managerial social capital is discussed in the following section.

#### 2.4.6.4. Managerial social capital

Managerial social capital is “managers' ability to access resources through relationships and connections” (Kor and Mesko, 2013, p. 234). Social capital is a broad concept and applies to a large distribution of potential networks and

relationships (Nahapiet and Ghoshal, 1998). Relationships are integral to many competitive strategies, as accessing knowledge and resources through people (internal or external to firms) might add value that could not be done without such social capital (Boso, Story and Cadogan, 2013). Managerial social capital allows management teams to access resources and network members' heuristics and lenses to shape their ways of conducting business activities (Acquaah, 2007). Managerial social capital also relates to the use of such resources and information; that is, how resources and information will be employed by managers (Helfat and Martin, 2015). In summary of section 2.4.6, the dynamic managerial capabilities framework is the sub-set of the resource-based view that examines how managerial assets link with sales performance (Martin, 2011). Under the dynamic managerial capabilities perspective, market orientation is discussed in the following section, whereby, it begins with a brief history of the market orientation literature, before discussing market-oriented corporate cultures – paving way for the development of the CVODL construct.

## **2.5. Market orientation**

### **2.5.1. Market orientation research before 1990**

As discussed in section 1.2 (in terms of the history of market orientation research), despite being formally introduced into the literature in 1990, market(ing) orientation had already been explored during the 1950s, 1960s, 1970s, and 1980s (see Bund and Carroll, 1957; Hunt, 1976). See Table 2.6 for an overview of the key findings from such pre-1990 market orientation literature. Table 2.6 also outlines whether these papers were cited by Kohli and Jaworski (1990) and/or Narver and Slater (1990) to measure the extent to which they were used in the formal development of the two seminal market orientation perspectives of market orientation. According to the literature referenced in Table 2.6, studies published before Kohli and Jaworski (1990) and Narver and Slater (1990) discussed market orientation theory, to varying degrees, with some studies only mentioning market(ing) orientation, while others devoted a large proportion of their articles towards market orientation. Further, certain authors explored market(ing) orientation as a somewhat loose term, rather than formally conceptualising it as a construct that could be tested in empirical research (e.g., Saddik, 1968; Trustrum, 1989).

**Table 2.6. A description of market(ing) orientation papers published before 1990**

<b>Source*</b>	<b>Publication</b>	<b>Kohli and Jaworski (1990)</b>	<b>Narver and Slater (1990)</b>	<b>Description</b>
Bund and Carroll (1957)	Journal of Marketing	No	No	The authors define the marketing concept and suggest how marketing is an activity that involves multiple departments. Future research should examine the wider implications of marketing activities within business strategies.
Felton (1959)	Harvard Business Review	Yes	Yes	The marketing concept can be implemented by managers investing resources towards the customer-oriented departments. Marketing activities are organisation-wide, whereby, value can be created by any business function.
Keener (1960)	Journal of Marketing	No	No	Marketing managers in the 1960s (particularly in the United States) had the responsibility of devising strategies to help organisations grow around customer spending and changes to the environment. Marketing activities concerned conducting market research and advertising.
Levitt (1960)	Harvard Business Review	No	Yes	Organisations that have performed well in their markets need to consider expanding in their industry. Past research has recommended the role of sales activities, but marketing has been ignored. The paper focuses on how marketing activities can allow firms to increase their performance.
Hise (1965)	Journal of Marketing	Yes	No	Companies must adopt the critical role of the marketing concept. The paper questions whether manufacturers have adopted the marketing concept as a mechanism to create value for their customers. This involves marketing being different to sales and advertising and is an organisation-wide activity.
Saddik (1968)	European Journal of Marketing	No	No	Larger organisations managing marketing activities have more access to resources (than smaller firms) and can lead to more innovative marketing strategies which less-resourced organisations cannot develop to the same extent.

McNamara (1972)	Journal of Marketing	Yes	Yes	The marketing concept allows managers to understand the facets of customer-driven activities and implement them in their strategies. The marketing concept can be implemented by investing resources towards business functions that create value for customers.
Hunt (1976)	Journal of Marketing	No	No	Marketing is an important activity used to increase business performance, but is an organisation-wide discipline. Marketing has been formed based on economic theory and the sales management literature.
O’Leary and Iredale (1976)	European Journal of Marketing	No	No	Marketing is a microeconomic-charged relationship between buyers and sellers within a market. The marketing concept needs many departments to be implemented in practice.
De La Torre and Toyne (1978)	Academy of Management Review	No	No	When examining managerial interactions across countries, there are numerous factors that help firms integrate into host markets. Internal factors include market orientation; external factors include environmental turbulence.
Kotler (1979)	Journal of Marketing	No	No	This paper extends the marketing concept, to apply it to not-for-profit organisations. The study also highlights a set of strategies that might develop the performance of such entities with a range of business objectives.
Blois (1980)	European Journal of Marketing	No	No	Exploring the link between marketing and manufacturing activities, this study examines how marketing orientation is a competitive strategy (and strategic orientation) that allows production-focused managers to understand the wants/needs of their customers and delivering value accordingly.
Bennett and Cooper (1981)	Business Horizons	Yes	No	The marketing concept has been formed via firms adding value to their customers and in turn, increasing sales. The marketing concept is only one way of implementing successful competitive strategies.
Greenley and Matcham (1986)	European Journal of Marketing	No	No	This study examines the role of customers using the offerings of service-intensive tourism organisations. Marketing orientation is a positive competitive strategy for organisations to adopt in terms of its performance consequences.

Houston (1986)	Journal of Marketing	Yes	No	A large proportion of past research has misconstrued (and/or poorly defined) what the marketing concept is and how managers should implement it.
Murray and Montanari (1986)	Academy of Management Review	No	No	Corporations engaging in corporate social responsibility and ethical practices can use marketing orientation to develop competitive advantages and benefit from the advantages of such strategies. The implementation of the marketing concept is the foundation of marketing orientation.
Morris and Paul (1987)	Journal of Business Venturing	No	No	Entrepreneurial orientation is an operationalisation of entrepreneurial activities. Marketing orientation is the implementation of the marketing concept, which surrounds customer orientation.
Parasuraman (1987)	Journal of Services Marketing	No	No	Customer-oriented organisational cultures concern managers valuing the marketing concept and being competent at creating a level of customer value to boost the performance of the firm. Some of the difficulties of developing a customer-oriented organisational culture include time and cost-related factors.
Ruekert and Walker Jr. (1987)	Journal of Marketing	Yes	Yes	While the marketing concept is useful in delivering customer value, it is important to conceptualise how marketing activities relate to other functional areas. Marketing is a single departmental function and needs to have interactions with other business functions to boost organisational performance.
McGee and Spiro (1988)	Business Horizons	No	No	This literature review criticises the previous definitions of the marketing concept and argues that marketing should aim to create customer satisfaction. This highlights how a range of studies that have examined the marketing concept, have incorrectly defined its meaning.
Payne (1988)	Business Horizons	No	No	This paper draws upon change management theory to make managers more responsive to developments in their business environment. The author explores the broader dimensions of marketing orientation from a customer-driven perspective, i.e., an awareness of rivals' activities.



Shapiro (1988)	Harvard Business Review	Yes	Yes	While it might appear that market orientation concerns being customer-oriented, it also concerns being aware of the entire market via collecting information that allows such a strategic orientation to be developed. The author notes that this is an unconventional conceptualisation, but necessary to drive future research.
Webster Jr. (1988)	Business Horizons	Yes	Yes	Firms in the United States have lost some of their ability to develop their position as world leaders in certain industries by rushing strategic planning and executing their competitive strategies. The paper proposes new ways of researching the marketing concept to overcome such issues.
Deshpande and Webster Jr. (1989)	Journal of Marketing	Yes	Yes	Marketing needs to be further integrated with the organisational behaviour literature in terms of examining the role of company cultures that focus on marketing activities, i.e., management teams being customer-focused.
Trustrum (1989)	European Journal of Marketing	No	No	This study critiques the past definitions of the marketing concept and the role of marketing in organisations. Marketing theory has been too concentrated on the engineering and economics backgrounds of the seminal authors in the field and a more holistic definition of marketing needs to be implemented.
<b>*Please note that the “<i>European Journal of Marketing</i>” was previously entitled the “<i>British Journal of Marketing</i>.”</b>				

As such, despite taking different stances, Kohli and Jaworski (1990) and Narver and Slater (1990) were the first authors to sufficiently define and conceptualise market orientation. Moreover, market(ing) orientation was a concept (rather than a testable construct) that had been explored and linked with other management activities and/or issues before 1990. The volume of market(ing) orientation literature that has been published between 1986 and 2017 using key search terms on Google Scholar, such as: “market(ing) orientation”, “market-oriented”, “Kohli and Jaworski” and “Narver and Slater”<sup>1</sup> is displayed in Figure 2.2.

As noted in section 1.2 (regarding the history of the market orientation literature), earlier studies highlighted that a market-oriented organisation is likely to invest resources into the functional areas that are perceived as being CVO (Felton, 1959; McNamara, 1972). However, the implementation of the marketing concept has more commonly been studied as the: organisation-wide generation of, dissemination of, and responsiveness to market intelligence (see Jaworski and Kohli, 1993; Cadogan, Souchon and Procter, 2008). As such, CVO functional resource investments have been overlooked, despite being flagged as an important form of market orientation in the seminal literature. Consequently, there is ample scope to explore CVO functional resource investments in this doctoral thesis, which follows in due course. The major definitions, conceptualisations, and operationalisations of market orientation are discussed in the following section.

#### 2.5.2. Major definitions, conceptualisations and operationalisations of market orientation

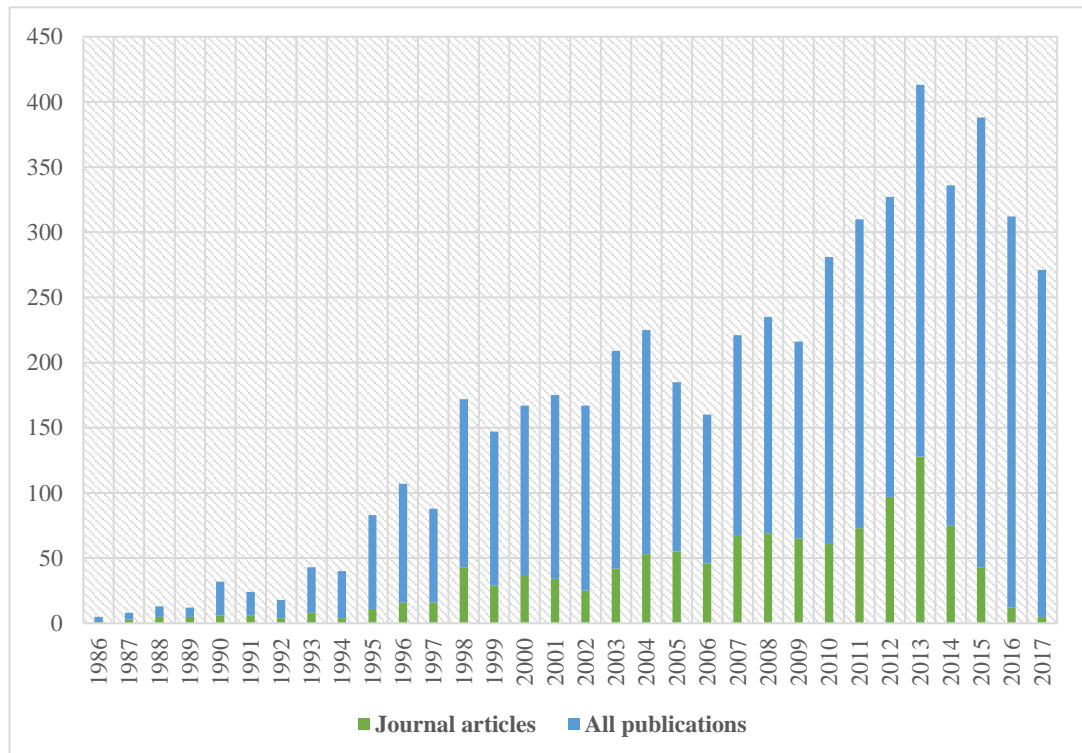
The ways in which market-oriented behaviours and market-oriented organisational cultures (as well as other conceptualisations of market orientation) are different follow in this section. Understanding the differences between the different forms of market orientation in the extant literature, helps evaluate how a CVODL is different from existing stances on market orientation. That is, there have been numerous definitions of market orientation – each having different conceptualisations surrounding the implementation of the marketing concept (e.g., Kirca, Jayachandran and Bearden, 2005). Moreover, as discussed in section 2.5.1, market orientation

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<sup>1</sup> Such data were collected between 1<sup>st</sup> February and 26<sup>th</sup> February 2016 as well as between 7<sup>th</sup> June and 9<sup>th</sup> June 2017.

theory formally began in 1990 with two seminal papers published in the *Journal of Marketing* (see Kohli and Jaworski, 1990; Narver and Slater, 1990). While research existed prior to this key milestone, market orientation was discussed in passing rather than being defined, conceptualised and empirically-evaluated (see Felton, 1959; McNamara, 1972).

**Figure 2.2. Market(ing) orientation studies (1986 to 2017)**



From a behavioural perspective, Kohli and Jaworski (1990, p. 3) defined market orientation as the: “organisation-wide generation of, dissemination of, and responsiveness to market intelligence.” Under Kohli and Jaworski’s (1990) behavioural perspective, market-orientation involves an organisation implementing the marketing concept across all functional boundaries (Jaworski and Kohli, 1996). Kohli and Jaworski (1990) viewed market orientation as a set of behaviours pertaining to how market intelligence can be utilised throughout the business as a mechanism to increase organisational performance (Cadogan and Diamantopoulos, 1995). Kohli and Jaworski (1990) formally introduced market orientation into the marketing literature from the findings of 62 interviews with managers in the United States. Intelligence generation is the collection of market intelligence, intelligence dissemination is how market intelligence is processed through an organisation, and

intelligence responsiveness is the actions firms take in response to market intelligence (Cadogan, Souchon and Procter, 2008). Kohli and Jaworski's (1990) qualitative study was later converted into a scale-development paper which operationalised market orientation using the "MARKOR scale" (Kohli, Jaworski and Kumar, 1993). While the generation and dissemination of market intelligence are important activities in helping managers understand information about customer and competitors (Jaworski and Kohli, 1993), intelligence responsiveness has been suggested to be a key market-oriented behaviour, as it concerns the ways in which management teams and employees act on market intelligence to create value for their customers (see Souchon, Cadogan, Procter and Dewsnap, 2004; Ozturan, Ozsomer and Pieters, 2014).

Narver and Slater (1990, p. 21) stated that "market orientation is the organisation culture (i.e., culture and climate) that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and thus, continuous superior performance for the business." To stress a key point, Narver and Slater's (1990) conceptualisation of market orientation was indeed at the organisational cultural-level, but it is argued in this PhD thesis that their perspective is not the same as the CVODL construct. That is, a CVODL is proposed to be linked with a market-oriented mind-set (i.e., the degree to which CVO assumptions are infused within an organisation's culture). While a market-oriented mind-set is like Narver and Slater's (1990) perspective, a dominant logic angle focuses on the managerial assumption that an activity (e.g., delivering value to customers) is an important driver of sales performance (Crick, 2017a). The market-oriented managerial mind-set dimension of market-oriented corporate cultures was scarcely present in Narver and Slater's (1990) seminal paper, nor has it been included by other studies in the market-oriented organisational culture literature (e.g., Deshpande, Farley and Webster Jr., 1993; Gebhardt, Carpenter and Sherry Jr., 2006). Further, Narver and Slater (1990) focused on information processing as a dimension of market orientation – something that connects their work with Kohli and Jaworski (1990). As such, a CVODL is more than a market-oriented corporate culture, as it is the extent to which a market-oriented managerial mind-set is infused throughout a corporation (Crick, 2016a).

Narver and Slater (1990) comprised market orientation of a: customer orientation, competitor orientation, and interfunctional coordination. A customer orientation is “the sufficient understanding of one's target buyers to be able to create superior value for them continuously”, a competitor orientation is when “a seller understands the short-term strengths and weaknesses and long-term capabilities and strategies of both the key, current and the key, potential competitors”, and interfunctional coordination is the “coordinated utilisation of company resources in creating superior value for target customers” (Narver and Slater, 1990, pp. 21-22). Narver and Slater (1990) viewed market orientation as an organisational culture as opposed to a set of behaviours (Hult, Ketchen Jr., and Slater, 2005). The key point from Narver and Slater's (1990) perspective was that market orientation is more than being a customer-driven corporate culture, as it also concerns firms' awareness of their rivals and internal activities (Slater and Narver, 1998). Narver and Slater (1990) operationalised market orientation through the “MKTOR scale” using survey data from a sample of 113 strategic business units from the United States. As such, Narver and Slater's (1990) seminal article was one of the first studies to measure market orientation.

A slightly later paper was published by Ruekert (1992, p. 228), who defined market orientation as “the degree to which the business unit obtains and uses information from customers, develops a strategy which will meet customer needs, and implements that strategy by being responsive to customers' needs and wants.” As previously-noted, market orientation is more than being customer-focused (Slater and Narver, 1998; 1999). Ruekert (1992) conceptualised market orientation as being just about satisfying customers' wants and needs. While customer satisfaction is an important element of market orientation theory (as it surrounds the nature of implementing the marketing concept) (Jaworski and Kohli, 1996; Hult and Ketchen Jr., 2001), there are other market-level factors that managers must take into consideration when developing market-oriented activities (e.g., competitors). Additionally, Ruekert (1992) focused on information processing (as per Kohli and Jaworski, 1990; Narver and Slater, 1990). Narver and Slater (1990) discussed the importance of customer value creation in a market-oriented corporation, but stressed that an awareness of other stakeholders (e.g., competitors) is a vital aspect of their conceptualisation and operationalisation.

Later in the 1990s, Deng and Dart (1994, p. 726) defined market orientation as “the implementation of a business philosophy, the marketing concept.” Deng and Dart’s (1994) paper was used to synthesise Kohli and Jaworski’s (1990) and Narver and Slater (1990) perspectives. However, Deng and Dart’s (1994) definition (and associated operationalisation) has been minimally used in more recent literature. Deshpande and Farley (1998, p. 213) defined market orientation as “the set of cross-functional processes and activities directed at creating and satisfying customers through continuous needs-assessment.” Deshpande and Farley’s (1998) definition was synthesised from the work of seminal writers in the field and was linked with the implementation of the marketing concept. Deshpande and Farley’s (1998) definition was overly focused on the customer orientation aspect of market orientation and overlooked other issues that market orientation scholars have considered (e.g., a competitor orientation). Moreover, Deshpande and Farley’s (1998) paper has similarities with Ruekert’s (1992) investigation, except for the fact that Deshpande and Farley (1998) viewed market orientation as being uni-dimensional (i.e., comprised of a single component). To stress a key point, most authors have conceptualised and operationalised market orientation as a multi-dimensional construct (i.e., comprised of more than one facet) (e.g., Jaworski and Kohli, 1993). However, the uni-dimensional conceptualisation and operationalisation of market orientation by Deshpande and Farley (1998) has transferred to studies such as Morgan, Anokhin, Kretinin and Frishammar (2015), despite most papers supporting the view that market orientation (as an organisational culture or as a set of firm-level behaviours) is a multi-dimensional construct.

EMO is defined as “the export-focused generation, dissemination, and responsiveness to export market intelligence” (Cadogan, Kuivalainen and Sundqvist, 2009, p. 73). Cadogan, Kuivalainen and Sundqvist’s (2009) definition was based on the earlier conceptualisation and operationalisation of EMO which related market orientation literature with international marketing theory (Cadogan and Diamantopoulos, 1995; Cadogan, Diamantopoulos and de Mortanges, 1999). Understanding the international forms of market orientation is important as it shows not only how the construct has been studied globally (i.e., country contexts), but also how it has been found to help companies out-perform their rivals in their foreign markets (Ruokonen, Nummela, Puumalainen and Saarenketo, 2008). The EMO scale

integrates the MARKOR and MKTOR scales and examines market orientation as a set of internationally-oriented firm-level behaviours (Cadogan, Diamantopoulos and Siguaw, 2002). The EMO scale was initially developed by a conceptual study focused on the similarities between Kohli and Jaworski (1990) (as well as Jaworski and Kohli, 1993) and Narver and Slater (1990) (see Cadogan and Diamantopoulos, 1995). This conceptual paper was reinforced by a qualitative study of British managers (see Diamantopoulos and Cadogan, 1996), before the scale was formally designed in the above-mentioned later studies. Of course, the EMO scale is only applicable to export-oriented companies, but nevertheless provides evidence of how market-oriented behaviours can be investigated in international contexts (as seen with Murray, Gao and Kotabe, 2011).

An agreed issue across most of the market orientation literature (i.e., across the different conceptualisations and operationalisations) is that an entire organisation is needed to support such customer value-creating activities (i.e., employees across all functions and hierarchies); otherwise, it is just a departmental-based marketing strategy and does not fall under the market orientation domain (Carpenter, 2017). The organisation-wide theme of market orientation is a principle applied to both domestic and international forms of market orientation (Murray, Gao and Kotabe, 2011). That said, as mentioned previously, there is some disagreement in the literature surrounding the dimensionality of the market orientation construct. Most authors have conceptualised and operationalised market orientation as being a multi-dimensional variable (e.g., Ellis, 2006), with few authors viewing market orientation as being uni-dimensional (e.g., Deshpande and Farley, 1998; Morgan, Anokhin, Kretinin and Frishammar, 2015).

Building upon the multi-dimensionality of market orientation argument, Cadogan, Souchon and Procter (2008) developed operationalisations for the quality of intelligence: generation, dissemination, and responsiveness activities. Specifically, Cadogan, Souchon and Procter (2008) suggested that there are multiple facets of the quality of market-oriented behaviours, such as the: speed and adequacy, formalisation processes, and overall quality of market intelligence, in which they provided evidence about how uni-dimensional (e.g., Deshpande and Farley, 1998) conceptualisations and operationalisations of market orientation do not represent the full nature of market-oriented behaviours. Further, some authors have argued that

when measuring market-oriented behaviours, intelligence responsiveness is the most critical process for companies implementing the marketing concept (e.g., Souchon, Cadogan, Procter and Dewsnap, 2004; Ozturan, Ozsomer and Pieters, 2014). This is not to say that intelligence generation and dissemination activities are unimportant, but it is intelligence responsiveness that allows firms to create value for their customers and is therefore the most in sync with the major definitions of market orientation (Wei, Lee and Samiee, 2014).

In summary to section 2.5, there have been multiple conceptualisations and operationalisations of the market orientation construct, whereby, some authors have suggested that market orientation is an organisational culture, while others have argued that market orientation is a set of firm-level behaviours. The consensus between such perspectives is that market orientation is the implementation of the marketing concept and the organisation-wide creation of customer value (see Narver and Slater, 1990; Ruekert, 1992; Jaworski and Kohli, 1993). A CVODL is proposed to be linked with market-oriented corporate cultures, but instead of just concentrating on customer-driven: values, norms, and artefacts (as per Homburg and Pflesser, 2000; Harris and Ogbonna, 2001), it is based on the degree to which a market-oriented mind-set is integrated within a company's departments and hierarchies (Crick, 2017a). The CVODL construct is positioned at the intersection between theory surrounding market orientation and the firm's dominant logic (Crick, 2017b).

## **2.6. Facets of the CVODL construct**

### **2.6.1. Service-dominant logic**

In marketing theory, dominant logics often refer to “service-dominant logics” which is the assumption that service-oriented resources and capabilities are fundamental in business exchanges (Vargo and Lusch, 2004). While marketing studies have examined service-oriented contexts (e.g., Chang and Chen, 1998; Harris, 2013), other investigations have explored the marketing of products (Hooley, Piercy and Nicouland, 2008). Service-dominant logic focuses on a sub-set of marketing theory (namely, services marketing) and therefore, is not concentrated on the entire marketing domain (Gummesson, 2008). Day, Deighton, Narayandas, Gummesson, Hunt, Prahalad, Rust and Shugan (2004) took part in an invited commentary on Vargo and Lusch's (2004) seminal paper on service-dominant logic. Some of the



strategy-oriented authors in the commentary suggested that the firm's dominant logic should be implemented into marketing theory. Most of this commentary's authors highlighted that at the time, there were large gaps in services marketing theory and suggested that Vargo and Lusch (2004) had found a mechanism to start addressing such gaps. Therefore, the marketing literature has subsequently focused on service-dominant logic (as opposed to the firm's dominant logic).

Focusing on the link between services marketing and dominant logics meant that dominant logics in a strategy context were overlooked – despite being the community of scholars that introduced the notion of the firm's dominant logic into broader management theory (Prahalad and Bettis, 1986). Hence, marketing research took a different course regarding how it viewed dominant logics. This research problem provides scope to revisit dominant logics (as they were originally conceptualised) in the marketing literature. Furthermore, service is only one part of market orientation (as well as other issues associated with: generating, disseminating, and being responsive to market intelligence) (Lings and Greenley, 2010). Therefore, service-dominant logic is only tangentially associated with market orientation. Moreover, service-dominant logic is not the same as the firm's dominant logic, but was nevertheless important to distinguish these two strands of literature. Consequently, the firm's dominant logic is defined in the next section.

#### 2.6.2. The firm's dominant logic

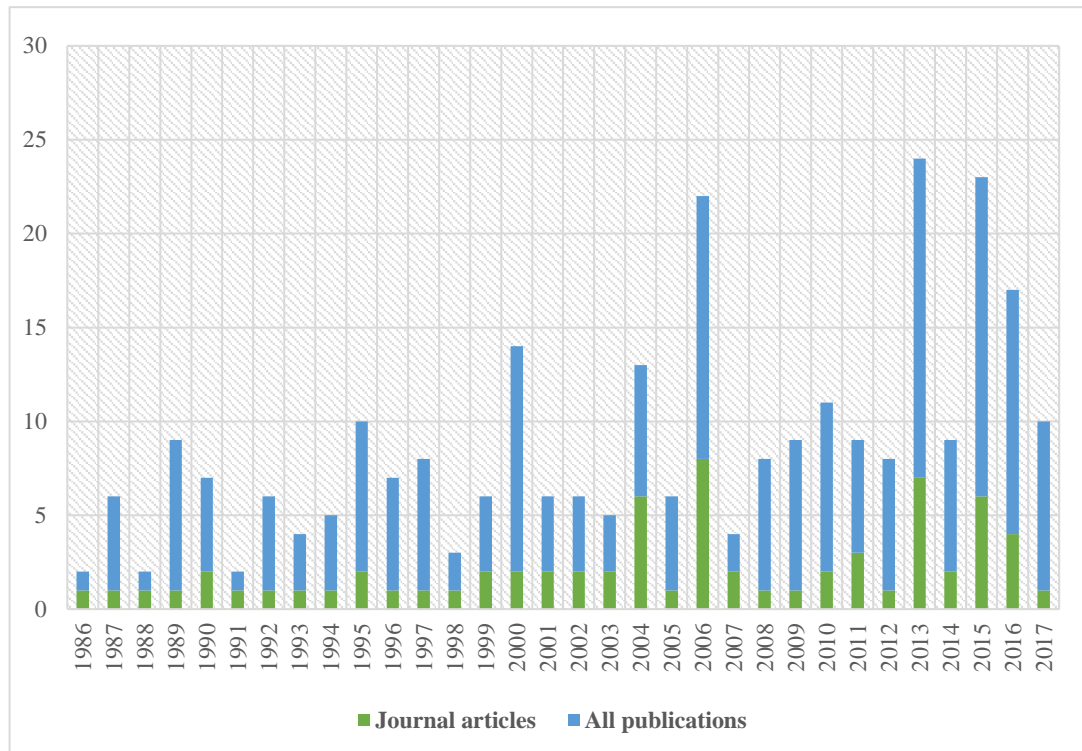
The firm's dominant logic is “the way in which managers conceptualise the business and make critical resource allocation decisions - be it in: technologies, product development, distribution, advertising, or in human resource management” (Prahalad and Bettis, 1986, p. 490). Figure 2.3 displays the volume of studies that have explored the firm's dominant logic between 1986 and 2017<sup>2</sup>. The information in Figure 2.3 was sourced from Google Scholar, considering articles using the specific phrases: “(the) firm's dominant logic”, “dominant logics”, and “Prahalad and Bettis (1986).” Service-dominant logic is vastly different to the firm's dominant logic for a variety of reasons – primarily, the focus and exclusivity towards service (Day, Deighton, Narayandas, Gummerrsson, Hunt, Prahalad, Rust and Shugan,

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<sup>2</sup> Such data were collected between 5<sup>th</sup> March and 10<sup>th</sup> March 2016 as well as between 9<sup>th</sup> June and 10<sup>th</sup> June 2017.

2004). Thus, any studies relating to service-dominant logic were excluded from this literature search, as despite including the term “(the) firm’s dominant logic”, it was of interest to uncover studies that have exclusively explored the notion of the firm’s dominant logic (i.e., nothing related to service-dominant logic).

**Figure 2.3. Firm’s dominant logic studies (1986 to 2017)**



By outlining the volume of papers studying the firm’s dominant logic, it was of further interest to compare this information with the volume of studies exploring market orientation (as per Figure 2.2). That is, there is a large difference between the volume of studies examining the respective domains of market orientation and the firm’s dominant logic. Thus, it is emphasised that there is more scope for new research to be undertaken on theory pertaining to the firm’s dominant logic. Moreover, as stated in section 1.3, a similar term to dominant logics is managerial mind-sets, as they relate to individuals’ (particularly managers) assumptions in their decision-making processes (Pettigrew, 1979; Barney, 1986). As such, the firm’s dominant logic is differentiated from managerial mind-sets in the following section.

### 2.6.3. Mind-sets versus dominant logics

A managerial mind-set concerns a management team’s assumptions and thought processes they use to make decisions (Pettigrew, 1979; Barney, 1986). While

managerial mind-sets are used to make decisions, they are based upon the factors that managers assume to be important such as a certain strategic activity (Zyphur, 2009). For example, Lane and Piercy (2003) discussed the role of female discrimination in health care providers in the United Kingdom. They highlighted the role of managerial mind-sets which have been linked with the views of male members of staff that they should have more decision-making capabilities than female workers – promoting discrimination. As such, a managerial mind-set is based upon management teams' beliefs about how a business should be structured and operated to achieve its objectives – this could include positive and negative assumptions that concern a firm's stakeholders (Phillips, 1994). Like dominant logics, managerial mind-sets can either concern a fixed way of thinking or open-mindedness (Miller, 1996; Prahalad, 2004). Dominant logics (including a CVODL) are suggested to be beneficial (with a few exceptions that will follow in due course) for managers to possess because they facilitate management teams' decision-making into the area of their activities that they perceive to be an important driver of sales performance (Cote, Langley and Pasquero, 1999).

Moreover, a dominant logic (again, including a CVODL) is the degree to which managerial assumptions about the importance of a certain activity are integrated into the departmental-level values and norms across a corporation (Rindova and Fombrun, 1999; Lampel and Shamsie, 2000). These norms and values are comparable with corporate cultures (Homburg and Pflesser, 2000), but a dominant logic also contains a mind-set dimension (Miller, 1996). A CVODL is proposed to be an extension of a market-oriented mind-set, in which it is the degree to which managers' CVO assumptions are integrated into the different functions and hierarchies of a corporation (Cadogan, 2003). As such, the CVODL construct is positioned at the intersection between theory surrounding market orientation and the firm's dominant logic (Crick, 2017a). Therefore, a market-oriented managerial mind-set is incorporated into a market-oriented organisational culture by the CVODL construct, something that Homburg and Pflesser (2000) (among other scholars) have overlooked in their conceptualisations of market-oriented corporate cultures. There is a debate in the literature relating to whether businesses can manage more than one dominant logic; this theoretical debate is explained as follows.

Prahalad and Bettis (1986) were the first scholars to define and conceptualise the notion of the firm's dominant logic. In terms of these authors' definition and conceptualisation of the firm's dominant logic, by assuming that a certain activity (e.g., delivering value to customers) is an important driver of sales performance, there can be only one dominant logic within an organisation (Shamsie, 2003). That is, other logics (or ways of thinking) that could compete against a CVODL could include an entrepreneurially-oriented dominant logic (i.e., a managerial assumption that entrepreneurial orientation is a driver of sales performance) (Obloj, Obloj and Pratt, 2010). However, it is likely that the dominant logic of senior managers is the managerial logic that an organisation implements that out-weighs other managerial logics (Miller, 1996; Prahalad, 2004). As such, while Prahalad and Bettis (1986) suggested that it is possible for corporations to manage more than one managerial logic, they highlighted that one of these managerial logics will be the firm's dominant logic. In the case of this PhD study, the CVODL is the dominant logic that surrounds CVO activities being a driver of organisational performance (e.g., sales).

Scholars that have suggested that multiple dominant logics can be fostered have argued that a dominant logic is intended to facilitate diversification (i.e., pursuing different business strategies) (Grant, 1988). However, examining such papers in greater depth, it appears that corporations can manage multiple dominant logics, but only in rare cases, such as through mergers and acquisitions (Verbeke, 2010). Further, through mergers and acquisitions, it is anticipated that over time, multiple logics will exist, but only one of these managerial logics will be "dominant" (see Verbeke, 2010). That is, managers may believe that various activities are important drivers of performance, but the one factor that is most important (based on their pre-conceived beliefs) will be based on their dominant logic (Prahalad, 2004). The stance taken in this doctoral-level thesis is that a CVODL can be managed alongside other managerial logics (i.e., logics pertaining to other strategic orientations than market orientation), but if management teams have a high CVODL, it is proposed that customer value creation will be believed to be a very important activity (Crick, 2016b). Thus, a CVODL (using the literature surrounding dominant logics) encapsulates the customer-driven beliefs and assumptions that are infused within a corporate culture (Crick, 2017a). Examples of conceptual and empirical studies pertaining to the firm's dominant logic are discussed in the following section.

#### 2.6.4. Conceptual and empirical studies examining the firm's dominant logic

Prahalad and Bettis (1986) suggested that the firm's dominant logic is an organisational culture linked to the extent to which managers' assumptions are infused within their corporations (i.e., across all departments and hierarchies). Prahalad and Bettis (1986) ended their seminal paper with a call for future research to employ empirical methods to measure and test dominant logics in broader management research. Over thirty years later, very little empirical research has been undertaken to empirically test such theory (e.g., Von Krogh, Erat and Macus, 2000; Obloj, Obloj and Pratt, 2010). Such studies have provided almost no evidence on how dominant logics can be operationalised, as some have discussed dominant logics in a conceptual or qualitative context, making scale development difficult. However, organisational cultures can include multiple issues (e.g., mind-sets, values, norms, and artefacts) (Gebhardt, Carpenter and Sherry Jr., 2006). Hence, it is crucial to conduct empirical research, to understand the facets, antecedents, and consequences of dominant logics, such as the CVODL. While the CVODL is the subject of this PhD thesis, to contribute to the under-researched (and overlooked) area of market-oriented managerial mind-sets and market-oriented corporate cultures, it also helps condense company cultures into an area that a single doctoral study can manage. Please refer to Table 2.7 for a summary of how dominant logics have been conceptually and empirically studied. The antecedents of the firm's dominant logic are discussed in the following section.

#### 2.6.5. Antecedents of the firm's dominant logic

Ellonen, Jantunen and Johansson (2015, p. 1) explored the link between dominant logics and dynamic capabilities, whereby, a “dominant logic and dynamic capabilities co-evolve in a reciprocal relationship, and the interplay of cognition and capabilities seems to be most visible in the seizing and reconfiguring capabilities.” As mentioned in section 2.4.5, the dynamic capabilities perspective is very broad – applying to various types of organisational capabilities (Ambrosini and Bowman, 2009). The dynamic managerial capabilities framework condenses dynamic capabilities theory into a manageable domain for theory-testing research (Adner and Helfat, 2003; Bruni and Verona, 2009).

**Table 2.7. Examples of conceptual and empirical studies exploring the firm's dominant logic**

<b>Source</b>	<b>Publication</b>	<b>Paper type</b>	<b>Description</b>
Prahalad and Bettis (1986)	Strategic Management Journal	Conceptual	Dominant logics act as a link between diversity and performance. A dominant logic is a managerial mind-set that is based upon investing resources and capabilities into the divisions of a corporation that senior managers perceive to be very important. A problem with this article is that the authors contradict themselves regarding whether businesses can possess more than one dominant logic.
Grant (1988)	Strategic Management Journal	Conceptual	The investigation does not develop any measures for dominant logics, but comments on why there needs to be empirical research on this topic. The function of dominant logics is to help managers allocate resources to the areas of a company that are responsible for fostering the area of perceived importance.
Goold and Luchs (1993)	Academy of Management Perspectives	Conceptual	Businesses can spread themselves too thinly if they overly-diversify. Dominant logics allow firms to diversify, but still have a strong focus on the areas that managers deem as being important. This is done through resource investments into the dominant area(s) of the company.
Harrison, Hall Jr., and Nargundkar (1993)	Academy of Management Journal	Empirical	Diversification is a function of dominant logics, in which managers might invest resources to the functional areas that help the firm be as diversified as possible. Senior managers with a dominant logic, who perceive innovation as being a driver of business performance, might invest resources into the Research and Development (R&D) Department.
Bettis and Prahalad (1995)	Strategic Management Journal	Conceptual	Dominant logics are a tool used to process information across the various functions and hierarchies of an organisation. Dominant logics allow managers to determine what information is useful to them and help them choose what competitive strategies to pursue. This can be an expensive and time-consuming process. This affects how organisations perform based on a range of internal and external contingencies.
Miller (1996)	Strategic Management Journal	Conceptual	While dominant logics allow management teams to configure functions around the assumptions of managers, they can also cause management teams to over-invest resources into such departments. This yields a rise in internal politics in the form of tensions between business functions. Dominant logics are underpinned by a cognitive bias that inevitably means that certain departments will be favoured by

			managers. That is, resources and power (via configuration) are likely to be invested towards the functional areas that fosters managers' beliefs.
Lane and Lubatkin (1998)	Strategic Management Journal	Empirical	Firms can learn from their competitors based on a range of factors including their dominant logics. Dominant logics are never identical across companies, but can be very similar, as certain assumptions can be shared by industry rivals.
Ma (1998)	Journal of International Management	Conceptual	Diversity is more likely to be achieved by firms having multiple dominant logics. A business can be best managed through a single dominant logic. However, while a firm can compete with multiple dominant logics, this was found in a global context. This might vary for domestic companies.
Cote, Langley and Pasquero (1999)	Journal of Management Studies	Empirical	This study develops a model outlining the antecedents and consequences of dominant logics. Organisations are likely to keep their dominant logics in sync with their history and culture. This is especially relevant for more established corporations. In times of crisis, managers might have to consider implementing multiple dominant logics to survive such turbulent climates.
Rindova and Fombrun (1999)	Strategic Management Journal	Conceptual	The authors develop a model that examines performance-driving competitive strategies through micro and macro-level factors. Micro-level factors include resources and capabilities, while macro-level factors are the national cultures and markets firms compete within. Dominant logics allow managers to possess the belief systems to organise their activities to decide what issues are the most important (i.e., performance-driving) to them and align the company around fostering these issues.
Lampel and Shamsie (2000)	Strategic Management Journal	Empirical	Dominant logics across business units can be different from that of the entire corporation. The values of senior management teams are critical in fostering and developing dominant logics, as they have more decision-making capabilities to take an organisation in a direction in sync with their assumptions.
Von Krogh, Erat and Macus (2000)	Creativity and Innovation Management	Empirical	An equation is presented for econometric studies to measure dominant logics. This investigation proposes that dominant logics have an indirect relationship with company performance. This relationship is mediated by managerial behaviours (strategic action) that can appear in varied forms in sync with their dominant logic.
Hart and Sharma (2004)	Academy of Management Perspectives	Empirical	In times of strategic change, dominant logics allow managers to communicate their assumptions across departments and hierarchies. This makes decision-making simpler for senior managers, as they are provided with the tools needed to filter-out perceived useless information and focus on what is most important to them.

Prahalad (2004)	Long Range Planning	Conceptual	Dominant logics allow managers to focus on the issues that they view as being important and allocate resources to the functions that foster the performance of the firm. Dominant logics force managers to exclude the departments that do not foster the area of dominance. This can be detrimental for corporations, as some business functions still play vital roles in shaping organisational performance, but do not fall under managers' pre-conceived assumptions.
Obloj, Obloj and Pratt (2010)	Entrepreneurship Theory and Practice	Empirical	Dominant logics can be investigated by two views: an "information filter approach" or a "learning and routines approach." This approach was guided by the principles of entrepreneurial orientation. While this operationalises the firm's dominant logic, it takes a specific perspective that is only relevant to some management theories.
Verbeke (2010)	Journal of International Business Studies	Conceptual	When companies are taken over by other corporations, there is scope for dominant logics to change by merging elements from the respective cultures of the firms involved. While decision-making may become simpler, due to the firm having one mind-set and culture, it may take a long time to occur, and there may be some resilient members of staff members who avoid implementing a new dominant logic.
Crilly and Sloan (2012)	Strategic Management Journal	Empirical	An enterprise logic does not have to be the most important area of an organisation – just something that is highly-valued by top-level managers. Dominant enterprise logics allow to make sense of information surrounding the business and using it to communicate with stakeholders. The function of dominance involves an issue being assumed by managers to be the most important driver of performance.
Kor and Mesko (2013)	Strategic Management Journal	Conceptual	There is a major difference between a manager's dominant logic and the firm's dominant logic as managers might perceive that an issue is important, but cannot disseminate such a mind-set throughout their organisation. An organisation-wide dominant logic is likely to be a uni-dimensional variable based on the issue that is perceived as being very important. The consequences of a firm-level dominant logic include the functional resource allocations that foster such perceived importance.
Gentry, Dibrell and Kim (2016)	Entrepreneurship Theory and Practice	Empirical	The authors explore the long-term orientation in the decision-making processes of public limited family firms. A dominant logic can manifest itself in accumulating slack resources and reducing risk-taking capabilities. Dominant logics can cause negative consequences for managers, such as fixed ways of thinking, which does not help companies' competitiveness, or allow them to change and adapt.



While conventional dynamic capabilities have been operationalised in prior literature, (see Lew, Sinkovics and Kuivalainen, 2013; Wilden and Gudergan, 2015), the examples of such assets could include a vast quantity of constructs that need to be tested. Thus, Ellonen, Jantunen and Johansson's (2015) linkage between dynamic capabilities and the firm's dominant logic could involve a vast array of variables that could be used as antecedents. Kor and Mesko (2013) used the three elements of the dynamic managerial capabilities framework (i.e., managerial human capital, managerial cognition, and managerial social capital) as drivers of managerial (and firm-level) dominant logics. Kor and Mesko's (2013) conceptualisations were appropriate, as managerial assets were linked with a managerial dominant logic. Following the discussion in section 2.4.1 (regarding the dimensions of the dynamic managerial capabilities framework), it is acceptable for scholars to use dynamic managerial capabilities to operationalise the dynamic capabilities perspective if they are examining a managerial issue. Hence, Kor and Mesko's (2013) conceptualisations were valid. The consequences of the firm's dominant logic are evaluated in the following section.

#### 2.6.6. Consequences of the firm's dominant logic

The firm's dominant logic allows management teams to make resource allocations to the various internal (e.g., departments) and external areas (e.g., markets) of the business that are in line with their assumptions (Cote, Langley and Pasquero, 1999; Kor and Mesko, 2013). A major theme with dominant logics is that they link with managers' ability to process information (to make focused decisions about issues such as departmental resource investments) (see Bettis and Prahalad, 1995). As managers receive more information, they become more competent at processing such intelligence which feeds into their conceptualisation of what functions of the business should be dominant (Grant, 1988). However, management teams may become overloaded with information at a certain point, after which they cannot make decisions as easily as when they were provided with less information (Hodgkinson, Hughes and Hughes, 2012). A dominant logic allows managers to filter information (based on their beliefs and assumptions) to make decisions and avoid becoming overloaded with information that they cannot process effectively (Miller, 1996; Prahalad, 2004). Dominance determines the nature of senior managers' resource allocations, in terms of where they are made and their magnitude (Harrison, Hall Jr.,

and Nargundkar, 1993). That is, it is a normal issue for management teams to assume that certain issues are important, such as those guided by their prior experience or tangible financial performance results (Piercy, 1987). Dominant logics raise the potential for managers to become too focused on the areas they perceive to be important, but overlook other areas of the firm that may also assist the firm's performance (Miller, 1996; Prahalad, 2004). By overlooking other divisions of a company (that might be important drivers of performance), managers might under-invest in vital areas of their operations and cause tensions between their functions (Le-Breton Miller and Miller, 2015).

Linking with the discussion in section 2.6.3, certain business strategies can be effective drivers of company performance (e.g., market orientation), but there is such an issue as managers over-investing in a certain competitive strategy (Le-Breton Miller and Miller, 2015). Managers can become “blinded” by their assumptions and unintentionally cause tensions between non-dominant departments (Prahalad, 2004). While there might be a direct relationship between a dominant logic and performance (Obloj Obloj and Pratt, 2010), managers have finite resources, meaning only so much can be spent on one area at the expense of another (i.e., a zero-sum game scenario) (Sirmon, Hitt, Ireland and Gilbert, 2011). Managers are likely to invest resources towards the functional area(s) that are in sync with their dominant logic (Rindova and Fombrun, 1999). Furthermore, managers are also likely to invest fewer resources towards the departments that do not foster their dominant logic (Miller, 1996; Prahalad, 2004). For instance, if managers' dominant logic surrounds entrepreneurial orientation being an important driver of organisational performance (as per Obloj, Obloj and Pratt, 2010), it is anticipated that they will invest resources towards the business functions that foster entrepreneurially-oriented behaviours.

Functional resource investments could be harmful for companies, as by making resource investments to “dominant” functional divisions, “non-dominant” departments are overlooked (Miller, 1996; Prahalad, 2004). Just because a department is non-dominant, does not necessarily mean that is unrelated to sales performance. A non-dominant department is simply not perceived by managers to be a driver of business performance (e.g., sales); managers' assumptions can be made in error by management teams, as there could be a role played by a certain department that drives sales, but is overlooked by managers due to their dominant logic (Le-

Breton Miller and Miller, 2015). In the case of a CVODL, only CVO business functions are proposed to be perceived as important by senior managers – this will influence the degree to which resources are invested across departments, in which customer-focused departments are more likely to receive resources, over the functional areas that are not perceived to be customer-driven (Crick, 2017a). In summary of this section on the firm's dominant logic, a dominant logic has the potential to be positive and negative for sales performance. Before such positive and negative consequences are more formally applied to the CVODL construct, the facets of the CVODL are explored in the following section.

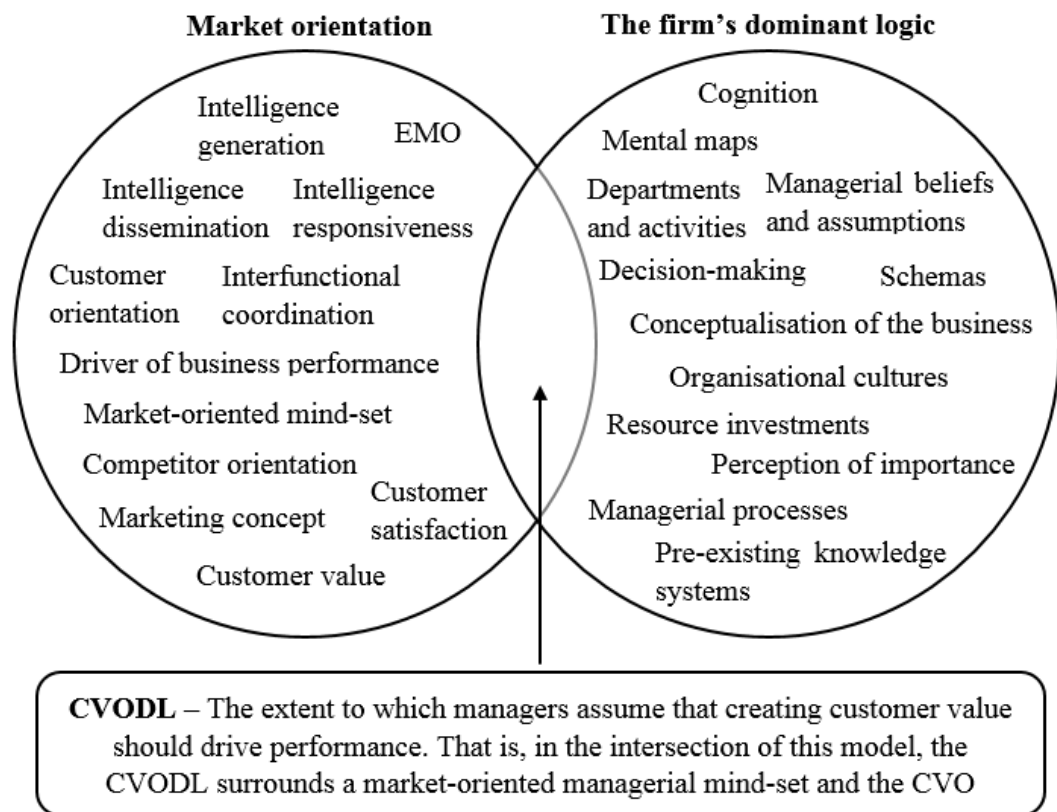
#### 2.6.7. Nature of the CVODL construct

A CVODL encapsulates all the key features of market orientation and the firm's dominant logic (Crick, 2016a). Please refer to Figure 2.4 for a model that yields the definition of the CVODL construct; this definition of the CVODL captures both aspects of market orientation and the firm's dominant logic via it being a function of creating customer value (market orientation as the implementation of the marketing concept) and a managerial assumption that creating customer value "should" drive performance (the firm's dominant logic). A CVODL has strong links to customer orientation in the ways firms strive to create customer value; they differ, as customer orientation is a market-oriented behaviour, whereas, a CVODL is a market-oriented managerial mind-set that drives market-oriented behaviours (Crick, 2017a). As discussed in section 2.5.2, the function of all market-oriented activities is the notion of creating customer value (Slater and Narver, 1998). By viewing the firm's dominant logic as being comprised of a single dimension (Von Krogh, Erat and Macus, 2000; Kor and Mesko, 2013) and combining it with the function of creating customer value, a CVODL is also argued to be a uni-dimensional variable (Crick, 2017b).

The reason that a CVODL is proposed to be uni-dimensional is because it is centred around the core assumption of customer value creation being a driver of company performance (Crick, 2017a). For managers with a high CVODL, the role of creating customer satisfaction is proposed to be the most important issue in the entire firm – therefore, not achieving this objective would not fulfil their goals. As such, all other strategic orientations (e.g., entrepreneurial orientation) are suggested to be

overlooked in favour of prioritising customer value creation. As this customer-driven managerial mind-set will (in such scenarios) underpin every decision and business strategy, the single facet of the CVODL is the managerial mind-set surrounding the assumption that creating customer value should drive performance. A CVODL relates to market-oriented corporate cultures, in which the principles of implementing the marketing concept are disseminated across the different levels of a corporation (Homburg and Pflesser, 2000; Harris and Ogbonna, 2001). Despite the multi-dimensionality of market orientation (e.g., Narver and Slater, 1990; Ruekert, 1992; Jaworski and Kohli, 1993), the firm’s dominant logic is more likely to be a uni-dimensional variable. That is, the single facet of a dominant logic is the issue that managers assume to be an important driver of their business’ performance (Von Krogh, Erat and Macus, 2000).

**Figure 2.4. Definition of the CVODL construct**



To stress the afore-mentioned point, a CVODL is based on a market-oriented mind-set and is the extent to which CVO assumptions are infused within a corporate culture (Crick, 2016a). As such, firms are likely to have varying degrees of a CVODL, in which market-oriented assumptions are integrated into the: values, norms, and

artefacts of managers and employees across an entire organisation (Crick, 2017a). That is, managers with low-levels of a CVODL are likely to view customer value creation as unimportant, whereby customer-driven activities are believed to not drive sales performance. However, as discussed above, management teams with high-levels of a CVODL are anticipated to view customer value creation as extremely important, whereby, customer-focused activities are assumed to be a driver of sales performance (Crick, 2016b). Further, it is suggested that there cannot be a situation where managers have a zero-level CVODL, as to some extent, managers will need to appreciate that the satisfaction of customers' wants/needs is likely to drive sales (Slater, 1997; Woodruff, 1997). Thus, even the least market-oriented firms are likely to need to have some form of value proposition (and associated managerial assumptions) to survive in their market – whereby, enough sales are obtained to cover business' operating costs. While market-oriented assumptions (and mind-set) can be low for managers, a firm will require at least some level of a CVODL (Crick, 2017b). The antecedents of the CVODL are discussed in the following section.

## **2.7. Antecedents of the CVODL**

As mentioned in section 2.6.5 (regarding the antecedents of the firm's dominant logic), Kor and Mesko (2013) used the dynamic managerial capabilities framework (i.e., managerial human capital, managerial cognition, and managerial social capital) as drivers of the firm's dominant logic. Kor and Mesko's (2013) study supplemented the qualitative work of Ellonen, Jantunen and Johansson (2015) which argued that general dynamic capabilities (i.e., those not linked with managers) are antecedents of the firm's dominant logic. In the context of this PhD thesis, CVO dynamic managerial capabilities are used as drivers of the CVODL. CVO dynamic managerial capabilities are the intangible assets that help managers make decisions about ways to create superior customer value compared with their competitors (Crick, 2017b). Using CVO dynamic managerial capabilities as drivers of the CVODL is like studies by Cadogan, Paul, Salminen, Puumalainen and Sundqvist (2001) and Cadogan, Diamantopoulos and Siguaw (2002) which employed export-specific drivers of EMO rather than generic constructs. A similar approach was used in this doctoral study, in which it keeps the customer-focused theme consistent in this element of the review of the extant literature. The CVO dynamic managerial capabilities framework, developed for this study, is positioned at the intersection between

marketing capabilities and generic dynamic managerial capabilities, in which they are focused on creating customer value (Crick, 2016b).

CVO dynamic managerial capabilities are different from marketing capabilities. Marketing capabilities are the organisational assets (i.e., managerial and non-managerial) that allow businesses to create customer value, and while they have been conceptualised and operationalised differently in the extant literature, allow firms to drive sales performance through developing a superior marketing mix as compared to competitors (see Greenley, Hooley and Rudd, 2005; Vorhies and Morgan, 2005; Morgan, Vorhies and Mason, 2009). Dynamic managerial capabilities are not to be confused with dynamic marketing capabilities, as the latter are not managerial in nature (i.e., they are fostered by both managers and employees), but are closer to dynamic managerial capabilities, as they are based upon: managerial human capital, managerial cognition, and managerial social capital (i.e., the elements of the dynamic managerial capabilities framework (Bruni and Verona, 2009). Nevertheless, CVO dynamic managerial capabilities remain the focus of this PhD investigation, due to the managerial nature of such assets being related to dominant logics (Kor and Mesko, 2013). The CVO dynamic managerial capabilities framework is compared (in terms of the similarities and differences) with the drivers of market-oriented behaviours as follows.

Jaworski and Kohli (1993) stated that market-oriented behaviours (i.e., generation, dissemination, and responsiveness activities) are driven by: interdepartmental dynamics, top management factors, and organisational systems. The interdepartmental dynamics construct is comprised of: interdepartmental conflict and connectedness (Jaworski and Kohli, 1993). As interdepartmental dynamics relate to the relationships between employees across departments, a strong social capital theme exists (Nahapiet and Ghoshal, 1998). Managerial social capital extends to collaborating with network members within and outside of an organisation, due to firms networking with a range of stakeholders (Acquaah, 2007). Managerial social capital also concerns firms accessing tangible resources from their network members (Andersson and Evers, 2015); this is not apparent within the themes of interdepartmental dynamics (Kirca, Jayachandran and Bearden, 2005). Likewise, (CVO) managerial social capital involves the degree to which a firm's network members can provide it with heuristics to make decisions (Kor and Mesko, 2013;

Crick, 2017a). Market orientation is driven by firms' capabilities to network with multiple stakeholder groups used to deliver customer value (Vorhies, Morgan and Mason, 2009). Thus, it is proposed that social capital partnerships (both formal and informal) can be used to facilitate the creation of customer value. Hence, interdepartmental dynamics are linked with CVO managerial social capital.

Interdepartmental dynamics does not involve such issues between business functions (Kohli and Jaworski, 1990). Networking capabilities are vital assets for market-oriented companies to possess in which relationships with a range of network members complements market orientation (Morgan, 2012). Networking is an integral element of managerial social capital i.e., the ways in which management teams access resources from their network members (Martin, 2011). CVO managerial social capital is defined as the extent to which CVO network members provide the firm with resources. CVO network members are proposed to originate from any area of the firm's business model, covering a wide array of potential internal and external stakeholders, such as: suppliers, industry-specific groups, and shareholders (Crick, 2017b). If businesses have the network members to help them create customer value, they might develop a dominant logic based on the resources and knowledge gained through such interactions (Kor and Mesko, 2013). Management teams receive information from various sources, but the input provided by network members has the possibility of shaping the information that is processed by the firm (Huff, 1982; Walsh, 1995). Network members can provide managers with new and/or improved ways of making decisions and determining what factors should be prioritised, in terms of what is important (Acquaah, 2007). By influencing managers' assumptions, a firm-level dominant logic could be created – providing senior management teams can disseminate their assumptions across functional levels (Kor and Mesko, 2013).

Top managements factors are comprised of: emphasis and risk-aversion, in which “top management reinforcement of the importance of market orientation is likely to encourage individuals in the organisation, to track changing markets, share market intelligence with others in the organisation and be responsive to market needs (Jaworski and Kohli, 1993, p. 55). Top management factors are comparable with (CVO) managerial human capital as it involves senior managers making decisions involving the entire corporation using their skills and experience (Kor and Leblebici,

2005; Crick, 2016b). Top management factors also link with managers' attitudes, communication styles and knowledge that allows them to take their organisation in a chosen direction (Kirca, Jayachandran and Bearden, 2005). The top management factors construct has multiple facets pertaining to the skills managers might possess, e.g., their "upward mobility and education, an ability to win trust of non-marketing managers, and risk-aversion" (Kohli and Jaworski, 1990, p. 8). CVO managerial human capital and top management factors differ in terms of CVO managerial human capital involving managers' customer-driven education and experience, guiding the mind-set that underpins their managerial behaviours (Crick, 2017a). Customer-driven education and experience are scarcely conceptualised as part of the top management factors construct, as it is based upon managers' instructions to make employees focused on implementing the marketing concept (Jaworski and Kohli, 1993).

Senior managers have important roles in shaping dominant logics, as they are based on their mind-set (whatever such a mind-set might involve) and implementing it within the firm (Lampel and Shamsie, 2000). Managers' assumptions need to integrate within their organisation, so that their dominant logic is in sync with the strategic and organisational fit of the firm (Verbeke, 2010). CVO managerial human capital is defined as the extent to which managers possess the skills and knowledge used to create value for their customers. Customer-driven management practices involve a degree of market-oriented experience that managers have accumulated from education and/or practical skills (Huber, Herrmann and Morgan, 2001). If managers have a set of skills, they are likely to have an influence (e.g., through motivational practices) in developing the dominant logic of the organisation (Kor and Mesko, 2013). Management teams need to recruit and retain employees that share senior managers' dominant logic (Kor and Leblebici, 2005). Further, by recruiting and retaining customer-oriented employees, managers could build a corporate culture focused on the importance of implementing the marketing concept (Crick, 2017b). That said, it is appreciated that organisational cultures can take a long time to develop, due to various reasons (Pettigrew, 1979; Barney, 1986). Yet, (CVO) managerial human capital could be vital for this purpose.

Organisational systems are comprised of: formalisation, centralisation, departmentalisation, and reward systems (Jaworski and Kohli, 1993). Organisation



systems are somewhat like (CVO) managerial cognition as it links with the psychological thought processes that underpin managers' decision-making (Stubbart, 1989). However, organisational systems involve the factors within the firm, i.e., how the business is structured (such as employees and hierarchies) for managers to pursue certain competitive strategies (Kirca, Jayachandran and Bearden, 2005). A psychological thought process is an element of managerial cognition, as it is a factor that managers are likely to consider when deciding how to improve their organisation's performance (Combe, Rudd, Leeflang and Greenley, 2012). CVO managerial cognition involves assumptions about creating a customer value provision that is superior to competitors (Crick, 2016b). Organisational systems and CVO managerial cognition differ quite largely, in terms of CVO managerial cognition extending beyond the factors within the firm (as per organisational systems) and considers external thought processes (Helfat and Peteraf, 2015). Moreover, organisational systems are more focused on how managers structure their organisations (e.g., communication channels and decision-making) to drive market-oriented behaviours (Jaworski and Kohli, 1993). Further, market-oriented companies are likely to highly-value customer-driven strategies across all their systems (Wei, Samiee and Lee, 2014).

Managerial cognition is a construct that helps integrate the domains of strategic management and psychology (Hodgkinson and Healey, 2011). As stated in section 2.4.6.3, managerial cognition is sometimes referred to as "management cognition", which allows decision-makers to focus on the divisions of the business that foster their assumptions e.g., the performance-driving effects of a competitive strategy (Combe, Rudd, Leeflang and Greenley, 2012). "Despite the strong link between managerial cognition and a managerial dominant logic, these are separate concepts. Managerial cognition represents the broader set of schemas and mental models of managers, whereas, a managerial dominant logic for a specific firm is what is generated after the system of managerial human capital, social capital, and cognition is deployed in processing and interpreting the information specific to a firm and its environment" (Kor and Mesko, 2013, p. 235). CVO managerial cognition is defined as the degree to which managers possess assumptions about creating value for their customers. These customer-oriented assumptions are proposed to originate from a market-oriented managerial mind-set in which customer value creation is viewed as

a performance-driving activity (Cadogan, 2003). Such assumptions shape the ways in which senior managers make decisions through processing business information (Huff, 1982; Walsh, 1995). These information processing abilities are key factors in shaping a firm's dominant logic and are assisted by organisation-wide cognitive capabilities (Hart and Sharma, 2004). Based on the above discussion, CVO dynamic managerial capabilities are likely to be drivers of the CVODL construct. The direct and indirect consequences of the CVODL are examined in the following section.

## **2.8. Consequences of the CVODL**

### **2.8.1. Behavioural consequences of a CVODL**

Firm-level behaviours reflect an organisation's culture, in terms of employees' actions matching what the business' management teams value (Harris and Ogbonna, 1999; Homburg and Pflesser, 2000). Managerial behaviours are consequences of dominant logics, as senior managers pursue the actions they deem to be very important (Crilly and Sloan, 2012). If firms have an organisational culture that highly-values their customers' satisfaction, their behaviours will be market-oriented (i.e., their culture drives their behaviours) through the: generation of, dissemination of, and responsiveness to market intelligence (Jaworski and Kohli, 1996). However, managers may not implement market-oriented behaviours, due to reasons, such as having limited resources, despite their instinct being to create customer value (Cadogan, 2003). Moreover, to emphasise an earlier point, the key facet of market-oriented behaviours is intelligence responsiveness, as this is activity primarily associated with implementing the marketing concept over and above intelligence generation or dissemination (Jaworski and Kohli, 1993; Wei, Samiee and Lee, 2014). As such, the behavioural consequences of a CVODL are proposed to include intelligence responsiveness. However, firm-level behaviours are only one outcome of dominant logics, with another likely consequence being the potentially direct link with business performance (e.g., sales) (Obloj, Obloj and Pratt, 2010). The relationship between a CVODL and sales performance is discussed in the following section.

### **2.8.2. Performance consequences of a CVODL**

Market-oriented behaviours and CVO management activities have been found to be positively related to several types business performance outcomes (e.g., sales

performance and sustainable competitive advantages) (Hurley and Hult, 1998; Murray, Gao and Kotabe, 2011). Market orientation is affected by customer-focused capabilities that allow firms to create superior customer value to competitors (Morgan, Vorhies and Mason, 2009; Ngo and O’Cass, 2012). A CVODL has the potential to encapsulate all the benefits of: market orientation, organisational cultures, and dominant logics and allows firms to drive sales performance (Crick, 2017a). Further, the proposed link between a CVODL and sales performance is supplemented by Obloj, Obloj and Pratt’s (2010) study which found a positive relationship between the firm’s dominant logic and organisational performance (in their case, subjective measures of financial performance metrics).

While performance can have different meanings depending on factors such as managers’ objectives and firm size (Crick and Spence, 2005), when examining the resource-based view, there are several performance outcomes (Ray, Barney and Muhanna, 2004). Sales performance has been suggested to be an appropriate tool used to assess company performance under the resource-based view (see Katsikeas, Morgan, Leonidou and Hult, 2016). As such, following the same point made in section 2.4.2, sales performance is used in this study in the direct and indirect relationship between a CVODL and organisational performance. Therefore, it is possible that a CVODL has a direct relationship with sales performance (linking with Obloj, Obloj and Pratt, 2010). However, in sections 2.8.3 and 2.8.4, the indirect relationship between a CVODL and sales performance is discussed, to build upon studies that have evaluated the intermediary factors in this link (e.g., Von Krogh, Erat and Macus, 2000; Crilly and Sloan, 2012).

A few studies have examined the quadratic relationship between market-oriented behaviours and organisational performance (e.g., Atuahene-Gima, Slater and Olsen, 2005; Cadogan, Kuivalainen and Sundqvist, 2009). In such instances, there can be a diminishing-returns effect, whereby, a greater level of marketing investments, does not yield higher levels of performance (Mantrala, Naik, Sridhar and Thorson, 2007). A similar relationship could occur between a CVODL and sales performance, in which being customer-driven is positive for managers, but only to a certain point, as being too market-oriented could distract them from other strategic orientations (e.g., entrepreneurial orientation) (as per Morgan, Anokhin, Kretinin and Frishammar, 2015). Dominant logics have been suggested to drive managers’ assumptions (e.g.,

that customer value creation drives sales performance) to become so strong that they overlook any other activity that they do not believe drives organisational performance (Miller, 1996; Prahalad, 2004). The sales performance outcomes of a CVODL could be reduced by managers overly perceiving that delivering value to customers is an important activity (at the cost of under-appreciating other activities) (Crick, 2017b). While there could be a direct relationship between a dominant logic and sales performance (as per Obloj, Obloj and Pratt, 2010), the link could also be driven through intermediary factors (Von Krogh, Erat and Macus, 2000). Specifically, the role of CVO functional resource investments in the relationship between a CVODL and sales performance follows in the next section.

### 2.8.3. CVODL and CVO functional resource investments

Returning to a point made in section 2.5.1 (regarding the history of market orientation research), earlier studies highlighted that implementing the marketing concept includes managers investing resources (e.g., equipment and cash) towards the departments that are perceived to be CVO (Felton, 1959; McNamara, 1972). However, the market orientation literature has focused on firm-level behaviours as proxies for implementing the marketing concept (Cadogan, Souchon and Procter, 2008). More interestingly, Kumar and Reinartz (2016) discussed how customer value creation is an important topic that is not always associated with market-oriented behaviours, namely, the: generation, dissemination, and responsiveness to market intelligence. That is, there are other forms of implementing the marketing concept. In this PhD thesis, CVO functional resource investments are revisited (as per Felton, 1959; McNamara, 1972) as an alternative form of implementing the marketing concept, alongside intelligence responsiveness – to allow a better understanding of the firm-level activities that a CVODL is likely to yield. That is, the literature surrounding different forms of implementing the marketing concept are discussed as follows.

Dominant logics have been linked with management teams making resource investments to the departments of their corporation that foster their assumptions (Harrison, Hall Jr., and Nargundkar, 1993). Miller (1996, p. 510) stated that “excessive configuration [based on the firm’s dominant logic] can be indicated by a preponderance of resources going to a particular activity or function or an intolerant

culture... One skill or issue becomes too dominant; one function or department head becomes too powerful, and one set of objectives becomes too exclusive and specific.” Le-Breton Miller and Miller (2015, p. 400) developed the term “value-induced skewness” to suggest that if resources are over-invested into certain departments, “the well-funded functions get richer, and the poor ones get poorer due to neglect, all at the cost of organisational resilience.” The direct consequences of a CVODL are likely to include investing resources into the functions that are perceived to create customer value (Crick, 2017a). Investing resources towards customer-driven business functions links with value-induced skewness, in which a CVODL influences managers to invest resources into the departments they perceive as being customer value-driving at the cost of under-investing in non-CVO functions (Le-Breton Miller and Miller, 2015). That is, while certain business functions might create customer value, it is management teams’ perceptions of departments’ contribution to delivering customer value that influences departmental-level resource investments (Crick, 2017a).

Value-induced skewness may not necessarily be a negative state for corporations to manage as investing resources heavily into certain functions may be needed in some scenarios (Sirmon and Hitt, 2009). However, having a customer-value driving corporate culture may not always lead to managers investing resources into CVO business functions. “An organisation may believe that something is important, but fail to act on its beliefs for a variety of reasons (e.g., resource constraints). Thus, from a manager’s perspective, it may be more important to focus on what an organisation does, than what it feels is important” (Jaworski and Kohli, 1996, p. 121). In other words, managers’ customer-focused assumptions might not match their actions as “from a behavioural perspective, the adoption of the marketing concept, as a philosophy, does not necessarily mean that the firm will be market-oriented in its behaviour” (Cadogan, 2003, p. 103). However, as discussed in section 2.7.4 (about the facets of the firm’s dominant logic), dominant logics are based upon a managerial mind-set that an activity is an important driver of sales performance (Goold and Luchs, 1993). Despite the comments of Jaworski and Kohli (1996) and Cadogan (2003) about market-oriented corporate cultures not always driving market-oriented behaviours, a CVODL (due to its market-oriented managerial mind-set dimension) should drive CVO functional resource investments as managers’

perceptions are likely to guide such decisions (Crick, 2017b). The relationship between CVO functional resource investments and sales performance is discussed in the following section.

#### 2.8.4. CVO functional resource investments and sales performance

For a corporation's departments to perform their functional duties, resource investments are required (Feng, Morgan and Rego, 2015). Management teams need to determine the extent to which each of their departments drives the firm's performance (and why) to determine the volume of resources allocated to each functional area (Piercy, 1987). As indicated in section 2.6.6 (regarding the consequences of the firm's dominant logic), dominant logics can cause managers to overlook vital components of the business and only focus on those that fall under their assumptions (Miller, 1996; Prahalad, 2004). Thus, on the one hand, CVO functional resource investments could positively drive sales performance, as such departments are provided with the resources that they need to implement the marketing concept (see Felton, 1959; McNamara, 1972). On the other hand, there may be departments that are critical in driving sales performance, but are not CVO. In these instances, by making CVO functional resource investments, at the cost of under-investing in non-CVO business functions, sales performance could suffer (Crick, 2016b). That is, a non-linear (quadratic) relationship might occur, in which by investing resources in customer-focused departments, there reaches a diminishing-returns effect, which is harmful (i.e., sales-reducing) for company performance (Crick, 2017a). Over-investing in CVO departments is proposed to be linked with value-induced skewness, whereby, non-dominant business functions (i.e., departments that do not foster management teams' beliefs) do not receive a sufficient level of resources to perform their functional duties (Le-Breton Miller and Miller, 2015).

The function of dominance is as an assumption (typically valued by senior management teams) that an activity is an important issue in the entire company (see Cote, Langley and Pasquero, 1999). While there may be a linear and quadratic relationship between a CVODL and sales performance, dominant logics risk negative (i.e., sales-reducing) outcomes occurring, due to making managers too focused on a single area (Miller, 1996; Prahalad, 2004). If CVO departments are made dominant,

a CVODL affects managers' abilities to drive sales performance as customer-driven activities are only one managerial logic, for which management teams could overlook other important divisions of the business that have other sales-driving attributes than customer value creation (Crick, 2016b). Specifically, by becoming overly-focused on a dominant division of a firm's activities, managers' risk-taking can decrease, due to fixed thought processes and lack of ability to adapt in competitive environments (Gentry, Dibrell and Kim, 2016). Fixed thought processes could be risky as management teams may not be open-minded when making decisions and not consider the long-term (potentially negative) effects of their actions (Zyphur, 2009). Fixed thought processes are the determinant of dominant logics possessing negative attributes (Miller, 1996; Prahalad, 2004). Fixed thought processes, in addition to value-induced skewness, can create tensions (e.g., conflict and/or power imbalances) between departments (Le-Breton Miller and Miller, 2015).

A CVODL should embrace all departments to minimise any negative consequences originating from skewed functional resource investments. Instead of taking the view that the Marketing Department (or any other single business function) is the most important function in the firm (Verhoef and Leeflang, 2009), it should be viewed as important, but only as one function – which must coordinate with other departments within a company (Narver and Slater, 1990). This holistic view of departments supports the work of Piercy (1987; 1989), in which marketing (as a practical set of activities) should be viewed as being critical, but should be considered in tandem with other business areas. That is, if a management team wanted to implement a radically-innovative competitive strategy, it would not be able to do so without a coordination with other business functions (e.g., the Finance Department to fund the strategy or the Operations Department to process such activities) (Piercy, 1987; 1989). Coordinating with all departments should ensure that a CVODL does not drive organisational tensions (e.g., conflict and/or power imbalances between departments) to a significant degree, as all functions are involved in the company's customer value provision and still coordinate other management logics (Crick, 2017a). As such, the extant literature provides scope to suggest that there are positive and negative outcomes of dominant logics.

In summary of the consequences of a CVODL, the extant literature suggests that dominant logics are likely to drive sales performance via functional resource

investments and firm-level behaviours (Von Krogh, Erat and Macus, 2000). Sales performance is the ultimate outcome for a CVODL to assess the degree to which managerial CVO beliefs and assumptions have the organisational performance consequences that they expect (Crick, 2017b). That is, as the CVODL is associated with a market-oriented managerial mind-set, if investing resources towards CVO functions positively drives sales performance, a CVODL could be an appropriate culture to manage (Crick, 2016a). If CVO functional resource investments do not drive sales performance, it might be that managers have made the wrong decision to be highly-customer-focused (Crick, 2017b). Moreover, by examining CVO functional resource investments, this PhD study contributes to the work of Felton (1959) and McNamara (1972), in which such activities are another form of implementing the marketing concept. Thus, it would be interesting to determine whether the CVODL – sales performance relationship is direct (as per Obloj, Obloj and Pratt, 2010), or indirect (as per Von Krogh, Erat and Macus, 2000). If the relationship is indirect, it is proposed that managers' CVO functional resource investments are central to this link (Kor and Mesko, 2013). The summary of this chapter is presented in the following section.

## **2.9. Chapter summary**

The framing literature of this PhD has been explored in this chapter. Under the dynamic managerial capabilities framework, the domains of market orientation and the firm's dominant logic were integrated to highlight the gaps in such literature to discuss the literature surrounding the: facets, antecedents, and consequences of the CVODL construct. Moreover, the CVODL was differentiated from market-oriented behaviours (i.e., generation, dissemination, and responsiveness activities). Several hypotheses used to test these theoretical findings are developed in the following chapter.



**CHAPTER III – CONCEPTUAL FRAMEWORK AND HYPOTHESIS  
DEVELOPMENT**

**3.1. Chapter introduction**

The literature surrounding the: facets, antecedents, and consequences surrounding the CVODL construct was discussed in the previous chapter. In this chapter, the underpinning theory of this study is formalised into a conceptual framework (guided by a series of research hypotheses), as well as a set of control paths. Specifically, this chapter is divided into the following sections. First, the underpinning theory used in this investigation is reviewed (namely, the dynamic managerial capabilities perspective). Second, the CVODL construct is conceptualised through integrating the literature surrounding market orientation and the firm's dominant logic. Third, the conceptual framework is outlined. Fourth, the research hypotheses pertaining to the antecedents and consequences of the CVODL construct are developed. Fifth, the control variables used in this doctoral thesis are justified.

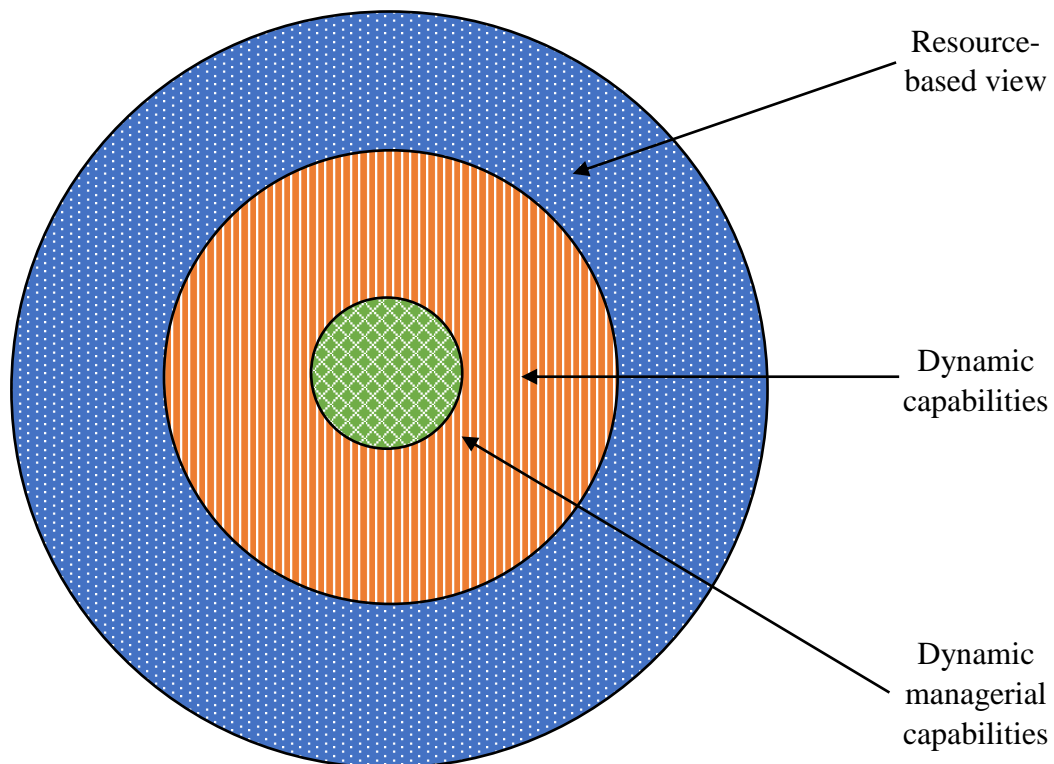
**3.2. Dynamic managerial capabilities perspective**

The underpinning theory used to explore the: facets, antecedents, and consequences of the CVODL construct is the dynamic managerial capabilities sub-set of the resource-based view of the firm. The resource-based view is a strategic management theory (with applications in broader management disciplines such as marketing) used to examine how company performance (e.g., sales) is driven by organisational resources and capabilities (Barney, 1991). Moreover, as the resource-based view is a broad perspective, in which it applies to numerous types of competitive strategies (e.g., domestic and international activities) (see Priem and Butler, 2001; Ketchen Jr., Hult and Slater, 2007), there are various components of the resource-based view, such as the dynamic managerial capabilities perspective. The dynamic managerial capabilities perspective is used to examine the managerial assets used to drive organisational performance (e.g., sales) in rapidly-changing business environments (Adner and Helfat, 2003). Please refer to Figure 3.1 for an outline of how the dynamic managerial capabilities perspective integrates into the resource-based view.

Under the resource-based view, there have been several ways to assess company performance such as sales performance and sustainable competitive advantages (Wernerfelt, 1984; Hall, 1993). Sales performance is used in this PhD thesis to

conceptualise/operationalise business performance under the broader resource-based view, as it is a measure used to capture how well companies have performed (against their key competitors) via their resources and capabilities (Katsikeas, Morgan, Leonidou and Hult, 2016). Moreover, dynamic capabilities are the tangible assets that allow businesses to secure sustainable competitive advantages (and/or drive sales) by being able to reconfigure and adapt in dynamic (rapidly-changing) environments (Wilden and Gudergan, 2015). The dynamic managerial capabilities framework operationalises the dynamic capabilities perspective, by identifying three areas dynamic capabilities can originate, with a managerial focus: managerial human capital, managerial cognition, and managerial social capital (Helfat and Martin, 2015).

**Figure 3.1. Dynamic managerial capabilities within the resource-based view**



Managerial human capital relates to the expertise (e.g., skills and knowledge) of managers based on their education and practical experience (Sirmon and Hitt, 2009). Managerial cognition is the assumptions and psychological thought processes that management teams possess (Hodgkinson and Healey, 2011). Managerial social capital refers to organisations being able to access resources from their network members as well as the heuristics such stakeholders provide (Nahapiet and Ghohal,

1998). As discussed in section 2.7, CVO dynamic managerial capabilities are used in this doctoral thesis as drivers of the CVODL construct. Using CVO dynamic managerial capabilities as antecedents of the CVODL construct keeps the customer-focused element consistent in this part of the conceptual framework. Using CVO dynamic managerial capabilities is like EMO, which was conceptualised using export-oriented antecedents and consequences (see Cadogan, Paul, Salminen, Puumalainen and Sundqvist, 2001; Cadogan, Diamantopoulos and Siguaw, 2002). The CVODL construct is conceptualised in the following section.

### **3.3. Conceptualisation of the CVODL construct**

As outlined in section 2.6.7.1 (in terms of the facets of the CVODL), the CVODL construct is positioned at the intersection between theory surrounding market orientation and the firm's dominant logic (Crick, 2017a). Market orientation concerns firms attempting to create value for their customers, through processing information about their market (Cadogan and Diamantopoulos, 1995). The firm's dominant logic is a firm-level culture that helps managers conceptualise their business (via resource investments) and determine what areas are the most important drivers of performance (e.g., sales) (Goold and Luchs, 1993; Obloj, Obloj and Pratt, 2010). A CVODL is a market-oriented corporate culture that is based on a market-oriented managerial mind-set (i.e., the degree to which managers' market-oriented assumptions are infused within a corporation) (Crick, 2017a). Moreover, market-oriented organisational cultures have been studied in the extant literature in terms of the: values, artefacts, and norms surrounding the implementation of the marketing concept and the organisation-wide creation of customer value (see Deshpande and Webster Jr., 1989; Homburg and Pflesser, 2000).

However, such studies have overlooked the managerial mind-set element of organisational cultures, which is arguably a vital element of organisational cultures (Pettigrew, 1979; Barney, 1986). A market-oriented mind-set is encapsulated by a CVODL, which is intended to help scholars and practitioners develop a stronger understanding of market-oriented corporate cultures than what the current literature as conceptualised (Crick, 2016a). Thus, the CVODL construct is a form of a market-oriented organisational culture, but includes the market-oriented managerial mind-set dimension (Crick, 2017b). The CVODL differs from the conventional market

orientation literature, as it focuses on customer value creation at a corporate cultural-level rather than viewing market orientation as a set of behaviours (Jaworski and Kohli, 1996; Cadogan, Souchon and Procter, 2008). The function of creating customer value is the single dimension of the CVODL construct (Crick, 2016b). Prior studies have suggested that the firm's dominant logic is a uni-dimensional variable that is dictated by the factor that senior managers deem to be an important issue within their company (Von Krogh, Erat and Macus, 2000).

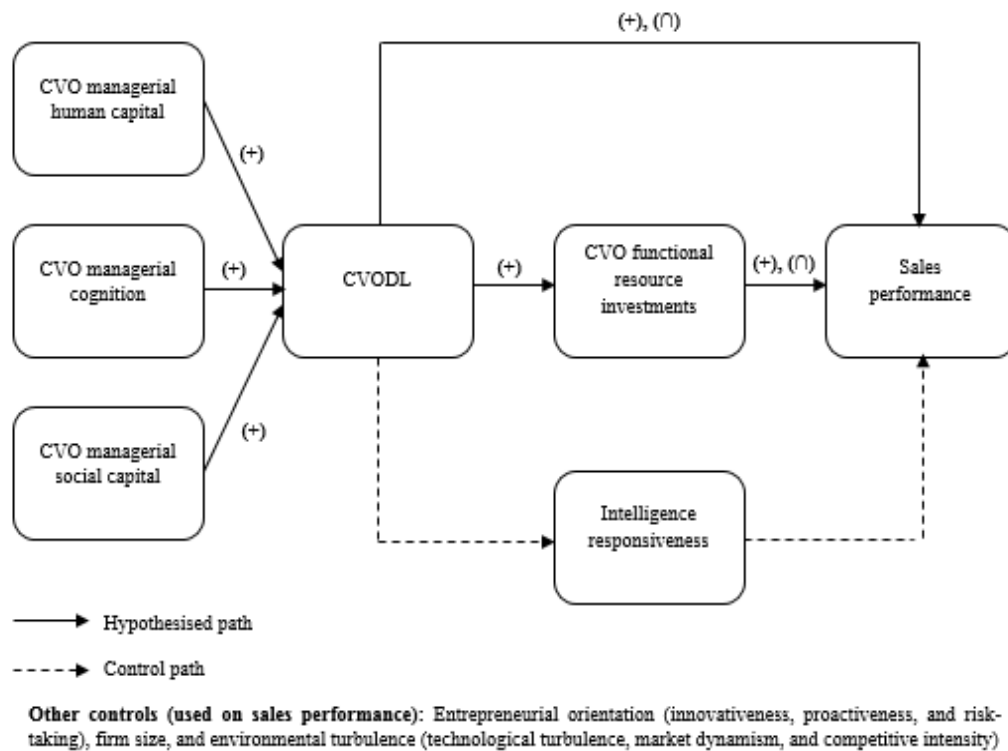
Managers with a low CVODL are proposed to have an organisational culture that minimally values the notion of satisfying customers' wants/needs and the creation of customer value (Crick, 2016a). However, managers with a high CVODL are proposed to believe that creating customer value is very important (Crick, 2017a). It is proposed that managers will need at least some level of a CVODL, as it is highly-unlikely that by not valuing the customers' satisfaction (i.e., what would be termed as a zero-level CVODL), companies would not be able to survive in their markets due to not obtaining enough sales to cover operating costs (Slater, 1997). Thus, even the least market-oriented managers (i.e., those that do not value the importance of implementing the marketing concept) will have a very small degree of a CVODL (Crick, 2017b). The conceptual framework used to evaluate the antecedents and consequences of the CVODL construct is outlined in the following section.

### **3.4. Conceptual framework**

The study's formal conceptual framework, including key control (non-hypothesised) paths is outlined in Figure 3.2. Sales performance (the outcome variable) is also controlled by: firm size, entrepreneurial orientation, and environmental turbulence. The conceptual framework is divided into three components: the facets, antecedents, and consequences of the CVODL construct (research questions 1, 2, and 3 respectively). The first research question (what are the facets of the CVODL?) was conceptually-answered by exploring the extant theory surrounding market orientation and the firm's dominant logic. As such, the first research question cannot be tested via a research hypothesis (as it is not directional), but the facets of the CVODL construct are used throughout the conceptual framework in several of the research hypotheses pertaining to the second and third research questions). The second research question (what are the antecedents of the CVODL?) was answered

via using the CVO dynamic managerial capabilities perspective as drivers of the CVODL construct (Hypotheses 1, 2, and 3, with the latter hypotheses being divided into four sub-hypotheses). The third research question (what are the consequences of the CVODL?) was answered by conceptualising the direct and indirect consequences of the CVODL construct (Hypotheses 4, 5, 6, 7, and 8). That is, the direct and indirect link between a CVODL and sales performance is explored. Please refer to Table 3.1 for the definitions of the core and control variables used in the study's conceptual framework. The research hypotheses used to guide the study's conceptual framework are as follows.

**Figure 3.2. Conceptual framework**



### 3.5. Antecedents of the CVODL

#### 3.5.1. CVO managerial human capital and a CVODL

Managerial human capital concerns the expertise of top-level managers, in terms of their education and practical experiences (Kor and Leblebici, 2005). CVO managerial human capital is defined as the extent to which managers possess the educational and practical expertise used to create value for their customers. If managers can harness their expertise, they can be more competent devising a firm-

level dominant logic that fosters their assumptions (Martin, 2011; Fainshmidt, Nair and Mallon, 2017). In the case of this PhD investigation, managers' expertise will surround customer value creation being an important driver of company performance (i.e., sales). Further, "the knowledge of specialised resource strategies and their corresponding managerial skill set, then shape the key assumptions and heuristics that managers use to perceive, interpret, and evaluate a business environment" (Kor and Mesko, 2013, p. 235). In other words, managers' skills and experiences (practical and educational) allow them to have certain assumptions based on their knowledge of their business environment (Kor and Leblebici, 2005).

Managers' education and practical experience is combined with recruiting and retaining the employees who create an organisational culture in sync with the beliefs and assumptions of managers (Crilly and Sloan, 2012). Specifically, managers might understand (based on their education and practical experiences) ways to create customer value and build a corporate culture (associated with the implementation of the marketing concept) by drawing upon the practical and educational experiences they have accumulated about the factors (e.g., competitive strategies) that are (and are not to) likely to deliver value to customers (Harris and Ogbonna, 1999; Gebhardt, Carpenter and Sherry Jr., 2006). However, managers also need to recruit and retain members of staff who are skilled in engaging in activities that they believe will deliver value to customers. Managerial human capital builds upon the work of Homburg and Pflesser (2000) who highlighted how employees' knowledge (as well as their communication and responsibility) is critical to creating a market-oriented organisational culture. Thus, a CVODL is likely to be driven by CVO managerial human capital, as managers' dominant beliefs about what factors create (and do not create) value for their customers are obtained from their educational and practical experiences. As such, it is hypothesised that:

Hypothesis 1. CVO managerial human capital has a positive relationship with a CVODL.

**Table 3.1. Definitions of the core and control variables**

<b>Constructs*</b>	<b>Variable types</b>	<b>Definitions</b>	<b>Sources</b>	<b>Publications</b>
CVO managerial human capital	Core variable	The extent to which managers possess the educational and practical expertise used to create value for their customers	Originally-developed	Not applicable.
CVO managerial cognition	Core variable	The degree to which managers possess assumptions about creating value for their customers	Originally-developed	Not applicable.
CVO managerial social capital (facet 1)	Core variable	The extent to which managers can access resources from their network members that facilitate the creation of customer value	Originally-developed	Not applicable.
CVO managerial social capital (facet 2)	Core variable	The degree to which managers use the resources gained from their network members to facilitate the creation of customer value	Originally-developed	Not applicable.
CVO managerial social capital (facet 3)	Core variable	The degree to which managers' network members have a CVO viewpoint	Originally-developed	Not applicable.
CVO managerial social capital (facet 4)	Core variable	The degree to which managers have used the viewpoint provided by their network members	Originally-developed	Not applicable.
CVODL	Core variable	The extent to which managers assume that creating customer value should drive performance	Originally-developed	Not applicable.
CVO functional resource investments	Core variable	The extent to which tangible assets (including cash) are allocated to the functional areas of an organisation that managers perceive to be CVO	Originally-developed	Not applicable.
Sales performance	Core variable	The degree to which companies have performed in their market (relative to key competitors) in terms of their sales	Hooley, Greenley, Cadogan and Fahy (2005)	Journal of Business Research.
Firm size	Control variable	The size of a company as it competes across its selected markets, in terms of its annual sales	Kumar, Jones, Venkatesan and Leone (2011)	Journal of Marketing.

Innovativeness	Control variable	The degree to which firms have a “predisposition to engage in creativity and experimentation through the introduction of new products/services, as well as technological leadership via R&D in new processes”	Rauch, Wiklund, Lumpkin and Frese (2009, p. 763)	Entrepreneurship Theory and Practice.
Proactiveness	Control variable	The degree to which firms take: “bold actions by venturing into the unknown, borrowing heavily, and/or committing significant resources to ventures to uncertain environments”	Rauch, Wiklund, Lumpkin and Frese (2009, p. 763)	Entrepreneurship Theory and Practice.
Risk-taking	Control variable	The extent to which organisations possess: “an opportunity-seeking, forward-looking perspective, characterised by the introduction of new products and services ahead of the competition and in anticipation of future demand”	Rauch, Wiklund, Lumpkin and Frese (2009, p. 763)	Entrepreneurship Theory and Practice.
Market dynamism	Control variable	“The rate of: change, hostility, and heterogeneity inherent in the firm’s markets”	Cadogan, Kuivalainen and Sundqvist (2009, p. 77)	Journal of International Marketing.
Competitive intensity	Control variable	The magnitude of the rivalry within a firm’s industry	Jaworski and Kohli (1993)	Journal of Marketing.
Technological turbulence	Control variable	The rate of technological change” in a firm’s industry	Jaworski and Kohli (1993)	Journal of Marketing.
Intelligence responsiveness	Control variable	The extent to which organisations act in response to the market intelligence they have processed	Kohli and Jaworski (1990)	Journal of Marketing.
<p><b>*In this table, only core and control variables are reported on, i.e., those that are integral to the study’s conceptual framework. In the following chapter, other variables were collected during this doctoral investigation, serving other purposes, such as testing for common method variance and company characteristics (for the empirical sample).</b></p>				



### 3.5.2. CVO managerial cognition and a CVODL

Managerial cognition is the set of schemas or mental models that help senior managers process information and assist decision-making (Combe, Rudd, Leeftang and Greenley, 2012; Andersson and Evers, 2015). CVO managerial cognition is defined as the degree to which managers possess assumptions about creating value for their customers. The information managers process may appear in high volumes that could be difficult to disseminate (Martin, 2011). Managerial cognition provides managers with the assumptions and beliefs used to sift through high volumes of information, to decide what they deem as being important, and screen out the information that does not support their pre-existing assumptions (Helfat and Peteraf, 2015). To illustrate the way managerial cognition helps management teams sift information, Bettis and Prahalad (1995) developed a funnel-effect to demonstrate how managers' cognitive thought processes allow them to decide what information they should act on (in terms of pursuing certain competitive strategies).

Bettis and Prahalad's (1995) funnel-effect model depicts that managers are provided with high volumes of information (e.g., about small-scale, operational issues through to important information about their business environment), but due finite resources and capabilities, they cannot process all this information, nor is all the information they receive vital to the performance of their company (e.g., sales). As such, Bettis and Prahalad (1995) argued that managerial cognition develops managers' thought processes, to provide them with the ability to decipher the information they receive and can differentiate between important and non-important data. Further, "based on: previous experiments, accomplishments, and failures, managers develop these cognitive lenses through which they perceive and interpret the world" (Kor and Mesko, 2013, p. 235). Managers' cognitive lenses will indicate what information management teams should use (and ignore) in creating their customer value provision (Woodruff, 1997). If managers have assumptions about creating value for their customers, they will use these beliefs to create an organisational culture focused on implementing the marketing concept (i.e., a CVODL) (Crick, 2017a). That is, (CVO) managerial cognition is stored at the managerial-level, whereas, a dominant logic (including a CVODL) is a firm-level notion (Prahalad and Bettis, 1986; Sirmon and Hitt, 2009). As such, managers with a high-degree of CVO managerial cognition

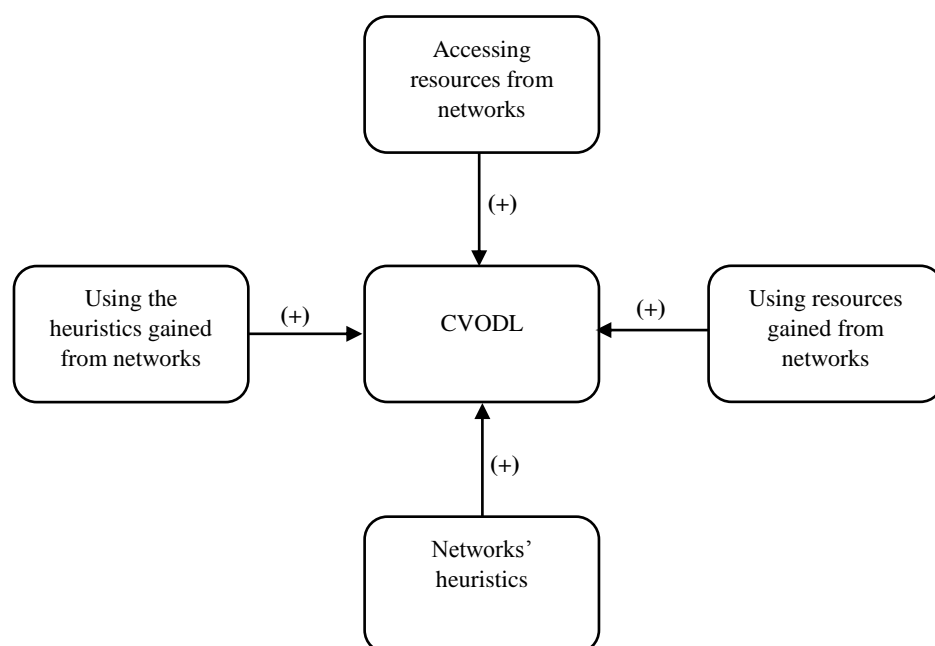
should attempt to infuse their customer-oriented beliefs across their corporation's functions and hierarchies to develop a CVODL. Therefore, it is anticipated that:

Hypothesis 2. CVO managerial cognition has positive relationship with a CVODL.

### 3.5.3. CVO managerial social capital and a CVODL

Managerial social capital relates to the networks and relationships that managers possess to access resources (Andersson and Evers, 2015). CVO managerial social capital is defined as the degree to which CVO network members can provide companies with resources. Network members in this PhD study are the stakeholders that an organisation has relationships with; for example: industry-specific groups, suppliers, shareholders, and other contacts (Nahapiet and Ghoshal, 1998). Managerial social capital has been conceptualised/operationalised as a multi-dimensional variable due to its complex nature and varied purpose for managers (i.e., resource and lens acquisitions) (Helfat and Martin, 2015). That is, accessing resources from networks is only one issue concerned with (CVO) managerial social capital as it is also associated with the viewpoints (i.e., ways of assessing the business environment) network members can provide managers with (Kor and Mesko, 2013). Hence, CVO managerial social capital was also conceptualised as a multi-dimensional construct formed based on the following components (see Figure 3.3).

**Figure 3.3. The dimensions of CVO managerial social capital's link with a CVODL**



The first dimension of CVO managerial social capital is defined as the extent to which managers can access resources from their network members that facilitate the creation of customer value. The first dimension of CVO managerial social capital is the core facet of the construct, as it is in sync with the above definition of the overall construct (Crick, 2016b). Being able to access resources from (CVO) network members allows managers to have the ability to create a (customer-oriented) corporate culture due to being able to interact with stakeholders and learn from their experiences (Kor and Mesko, 2013). Accessing resources from network members supports the notion of social capital, in which networks can help companies perform better through collaborative efforts as opposed to operating as an individual entity (Boso, Story and Cadogan, 2013). Managerial social capital challenges some of the individualistic assumptions of the resource-based view, as cooperation with network members (internal and external to a company) can help managers achieve their objectives, through resources that would be difficult to obtain if managers operated individually (Martin, 2011; Crick, 2018). In the case of a CVODL, if managers cannot access resources from their network members, customer value may not be created, as they might not have access to the correct resources used to create a corporate culture focused on creating customer value. Managers may not be able to implement customer-focused assumptions throughout their business' hierarchies if they cannot access resources from their network members. As such, the subsequent hypothesis is presented:

Hypothesis 3a. The first facet of CVO managerial social capital (accessing resources from networks) has a positive relationship with a CVODL.

The second dimension of CVO managerial social capital is defined as the degree to which managers use the resources gained from their network members to facilitate the creation of customer value. This dimension of CVO managerial social capital is important for managers, as being provided with resources is one matter, but using these resources is another issue entirely (Adner and Helfat, 2003; Helfat and Martin, 2015). By using network members' resources, managers can use new assets to develop their customer-driven assumptions as well as to strengthen their offerings to customers (Morgan, 2012). That is, managerial social capital helps management teams improve their interpretation of their business environment to make more informed decisions by using new-found assets from network members (Kor and

Mesko, 2013; Fainshmidt, Nair and Mallon, 2017). In the case of a CVODL, by utilising such resources, it is suggested that managers become more aware of what factors are likely to create (and not create) customer value, due to utilising resources that help them appreciate what factors deliver value to customers (Crick, 2017b). Therefore, it is hypothesised that:

Hypothesis 3b. The second facet of CVO managerial social capital (using resources gained from networks) has a positive relationship with a CVODL.

The third dimension of CVO managerial social capital is defined as the degree to which managers' network members have a CVO viewpoint. Network members can provide management teams with a way of looking at the world (i.e., understanding their business environment) to shape decision-making (Nahapiet and Ghoshal, 1998). Network members' viewpoints are likely to influence managers' beliefs and assumptions in shaping a dominant logic, in terms of what factors managers assume to be important (Acquaah, 2007). Managers are likely to share and seek information from network members who have a similar viewpoint to themselves (e.g., a shared vision for their company) (Peteraf and Reed, 2007). As such, "interactions with close network members (like colleagues, mentors and friends) impact how managers perceive and interpret information about the external environment and evaluate what is achievable by the firm" (Kor and Mesko, 2013, p. 235). If network members have a customer-oriented viewpoint, it is proposed that these heuristics will transfer into the mind-set of the managers, with whom it is shared (Crick, 2017b). Network members' heuristics are anticipated to be a driver of a CVODL and this stated in the following hypothesis:

Hypothesis 3c. The third facet of CVO managerial social capital (networks' heuristics) has a positive relationship with a CVODL.

The fourth dimension of CVO managerial social capital is defined as the degree to which managers have used the viewpoint provided by their network members. The use of network members' lenses shapes management teams' understanding of creating an organisational culture (e.g., the assumptions that link with a customer value provision) (Crick, 2016b). While network members can offer CVO insights, managers may not use them. Further, "in the presence of the overwhelming amount of information managers often receive (Walsh, 1995), conversations with confident

colleagues and friends within and outside the firm help managers decide which stimuli to focus on, what additional information to collect, and how to process data in an efficient and coherent manner” (Kor and Mesko, 2013, p. 235). As such, network members can help managers determine what information is most important in shaping their firm’s performance which fosters their beliefs and assumptions (Fainshmidt, Nair and Mallon, 2017). In the case of CVO managerial social capital, network members’ customer-focused heuristics are proposed to shape managers’ market-oriented assumptions (Crick, 2017a). By using this customer-driven viewpoint provided by network members, managers are suggested to be equipped with a mechanism to create a CVODL (i.e., specialist insights into how creating customer value could be a driver of sales performance). Consequently:

Hypothesis 3d. The fourth facet of CVO managerial social capital (using the heuristics gained from networks) has a positive relationship with a CVODL.

### **3.6. CVODL and CVO functional resource investments**

As discussed in section 2.5.1 (regarding the history of the market orientation literature), pre-1990 studies highlighted that the implementation of the marketing concept concerned managers investing resources into the departments of their corporations that they perceive to create customer value (e.g., Felton, 1959; McNamara, 1972). However, after Kohli and Jaworski (1990) and Narver and Slater (1990) published their seminal papers on market orientation, subsequent studies have concentrated on information processing activities (i.e., market-oriented behaviours) as proxies for implementing the marketing concept (Ellis, 2006). More recently, the topic of customer value creation has been revisited in the marketing literature (see Kumar and Reinartz, 2016; Payne, Frow and Eggert, 2017). As such, in this PhD thesis, CVO functional resource investments are examined as an alternative form of implementing the marketing concept to the more conventional market-oriented behaviours. That is, CVO functional resource investments are studied as a direct consequence of a CVODL, as well as something that might drive sales performance.

Following the discussion in section 3.3 (regarding the facets of the CVODL construct), the CVODL is defined as the extent to which managers assume that creating customer value should drive performance (Crick, 2017a). Departmental resource investments are a key consequence of dominant logics (Prahalad and Bettis,

1986; Kor and Mesko, 2013). CVO functional resource investments are defined as the extent to which tangible assets (including cash) are allocated to the functional areas of an organisation that managers perceive to be CVO. A CVODL is proposed to influence management teams to invest resources towards perceived CVO functional areas based on their dominant assumptions (i.e., customer-focused departments). These customer-oriented assumptions should yield functional resource investments even if business functions do not actually create customer value (Crick, 2017b). In other words, managers' assumptions guide functional resource investments linked with dominant logics, as opposed to concrete evidence that a department facilitates actual performance (Prahalad, 2004; Kor and Mesko, 2013).

Some studies have highlighted that a firm's Marketing Departments is the most important functional area in fostering market orientation due to its resources and capabilities in devising strategies to satisfy customers' wants and needs (e.g., Verhoef and Leeflang, 2009; Feng, Morgan and Rego, 2015). While the Marketing Department is an important division within companies in delivering value to customers, it is only one function within the business and needs to coordinate with other areas to drives sales (Hooley, Piercy and Nicouland, 2008). Inter-functional coordination is a key facet of market orientation, in which departments need to coordinate with one another to create a customer value provision that out-performs competitors (Slater and Narver, 1999). Thus, although the Marketing Department is likely to be a key function to create an effective (i.e., sales-driving) market-oriented strategy, so are other divisions of a company (Ruekert and Walker Jr., 1987). Furthermore, some departments are likely to shape firm-level performance (e.g., sales), but may not be associated with creating customer value (Homburg, Workman Jr., and Krohmer, 1999; Homburg, Workman Jr. and Jensen, 2002).

As stressed throughout the doctoral thesis, it is anticipated that a CVODL allows management teams to allocate resources to the departmental functions that they perceive to create customer value and overlook the departments that do not foster such a role (Crick, 2017b). Due to their potentially skewed perceptions, managers might believe that a certain few departments create customer value, when there are others that receive relatively low resource investments due to not falling under managers' beliefs. Functional resource investments are a key consequence of dominant logics, whereby, resources are allocated towards the departments of a

corporation that management teams believe to be important drivers of business performance (e.g., sales), and invest fewer (or zero) resources towards the departments that are not perceived to drive sales performance (Miller, 1996; Prahalad, 2004). Moreover, if managers have a high-level of a CVODL, it is proposed that they are likely to invest resources to the departments that they perceive to create value for customers at the expense of investing fewer resources in non-CVO business functions (Crick, 2016a). Under these conditions, this study offers the following hypothesis:

Hypothesis 4. A CVODL has a positive relationship with CVO functional resource investments.

### **3.7. CVO functional resource investments and sales performance**

By making resource allocations to CVO business functions, managers can implement the marketing concept through providing customer-driven departments with the assets they need to generate, disseminate, and be responsive to market intelligence (Jaworski and Kohli, 1996; Harris and Ogbonna, 1999). If customer-oriented management teams assume that creating customer value drives sales performance (via a CVODL), resource investments into CVO departments is likely to foster market-oriented behaviours (Crick, 2016a). By investing resources in market-oriented divisions of the firm, it is proposed that companies can become more focused on creating value for their customers, as opposed to departments that are less customer-driven. That is, CVO departments are likely to be focused on satisfying customers' wants/needs (Crick, 2017b). Hence, by providing CVO business functions with resources (including cash), such business departments might be able to drive sales by fulfilling their role as customer-focused divisions (Crick, 2017a).

Market orientation has been found to be positively related to sales performance in the extant literature – providing that managers invest resources towards the implementation of the marketing concept (Hult and Ketchen Jr., 2001). As such, based on the assumption that creating customer value drives sales performance, investing resources in CVO departments has a direct link with sales performance (Crick, 2017b). Under the resource-based view (including the dynamic managerial capabilities perspective), investing resources (and capabilities) in a competitive strategy is usually assumed to increase an organisation's chance of driving sales

performance (Westhead, Wright and Ucbasaran, 2001; Helfat and Martin, 2015). By making resource investments into functions that are perceived to be customer-driven, it is anticipated that managers can capitalise on sales performance via effective and well-funded market-oriented activities. Specifically, as such CVO business functions are indeed capable of driving sales performance, CVO functional resource investments could provide these departments with the support they need to fulfil their functional duties of implementing the marketing concept (Felton, 1959; McNamara, 1972). That is:

Hypothesis 5. CVO functional resource investments have a positive relationship with sales performance.

Market orientation involves managers coordinating and integrating their firms' departments to create customer value due to managers not appreciating that market orientation is an organisation-wide activity (Morgan, Vorhies and Mason, 2009). If managers invest resources towards the departments that they perceive to create customer value, they might overlook other departments of the firm that need resources to perform their duties other than creating customer value (Crick, 2017a). Over and under-investing in market orientation links with value-induced skewness, in which managers' assumptions guide their resource investments to the extent that certain functional areas become better off, while other divisions become poorer – this can be harmful for sales performance, due to value-induced skewness causing tensions between departments (Le-Breton Miller and Miller, 2015). Therefore, an initial positive link is proposed to occur between CVO functional resource investments and sales performance, but management teams can reach a point at which there is a diminishing-returns effect on sales performance due to over-investing in CVO departments at the cost of under-investing in non-CVO business functions. In this scenario (i.e., where non-CVO functions suffer from under-investments), diminishing-returns could involve firms not being able to create value for their customers. Specifically, managers could create internal problems such as conflict and power imbalances between departments due to skewed functional investments (Miller, 1996; Prahalad, 2004).

Value-induced skewness relates to managers over-investing resources in departmental functions (based on pre-conceived beliefs) that they assume to drive



performance (e.g., sales) – this means that other departments might not be able to execute their functional duties (Le-Breton Miller and Miller, 2015). Other examples of this diminishing returns effect could include firms annoying their customers through overloading them with promotional communication (Mantrala, Naik, Sridhar and Thorson, 2007). While managers might attempt to be customer-driven, they can create negative consequences (e.g., decreasing sales) that they may not be able to recover from; this can be costly and time-consuming (Heidenreich, Wittkowski, Handrich and Falk, 2015). Dominant logics can make management teams become too focused on the dominant areas of their operations based on their pre-conceived assumptions, even if this means under-investing resources in non-dominant functional areas (Miller, 1996; Prahalad, 2004). In the case of a CVODL, by making CVO functional resource investments, managers could under-invest in the departments that they do not perceive to be customer-oriented (Crick, 2016b). As such, investing resources in customer-driven departments might be a positive activity (i.e., sales performance-driving) for managers, but there is likely to be a point at which the functions that managers do not perceive to deliver value to customers cannot execute their functional duties (which could be vital for driving sales performance) (Crick, 2017b). Hence, it is expected that:

Hypothesis 6. CVO functional resource investments have an inverted U-shaped relationship with sales performance.

### **3.8. CVODL and sales performance**

Sales performance is defined as the extent to which an organisation has performed in its market (via market growth) relative to competitors (Hooley, Greenley, Cadogan and Fahy, 2005). Under the resource-based view (including the dynamic managerial capabilities perspective), organisational performance has been assessed in several ways, such as sales performance (as per this PhD study) and sustainable competitive advantages (see Huang, Dyerson, Wu and Harindranath, 2015; Crick, 2018). Sales (or market) performance is an effective way to conceptualise/operationalise business performance as it is used to evaluate the extent to which firms have performed in their market against key competitors is evaluated (Ray, Barney and Muhanna, 2004; Katsikeas, Morgan, Leonidou and Hult, 2016). Organisational cultures (and dominant logics) have been positively linked with sales performance, as some firms

have ways of operating that are superior to their competitors via: human resource management practices, working environments, and/or customer service (Harris and Ogbonna, 2001). Market orientation and customer-focused management practices have been linked with sales performance, due to the benefits of creating customer value yielding positive outcomes for organisations (Kumar, Jones, Venkatesan and Leone, 2011). If senior managers can enhance a mind-set focused on creating customer value (i.e., a CVODL), sales performance should be increased (Deshpande, Farley and Webster Jr., 1993). Moreover, Obloj, Obloj and Pratt (2010) found that the firm's dominant logic is directly related to organisational performance. Consequently, Obloj, Obloj and Pratt's (2010) study, together with market orientation's positive link with sales performance, suggests that:

Hypothesis 7. A CVODL has a linear (positive) relationship with sales performance.

Some studies have argued that an inverted U-shaped relationship exists between market-oriented behaviours and organisational performance, suggesting how market orientation may have a diminishing returns effect on performance after an optimal level is found (e.g., Atuahene-Gima, Slater and Olson, 2005; Cadogan, Kuivalainen and Sundqvist, 2009). Managers need to find an optimal level of a CVODL to maximise the effect on driving sales performance, before senior management teams unintentionally damage their firm's performance through over-investing in CVO activities (Miller, 1996; Prahalad, 2004). A market-oriented managerial mind-set (via a CVODL) may initially drive sales performance until companies reach a point at which "too much" of a customer-oriented corporate culture (i.e., the point at which customer value creation becomes too dominant within the firm) damages their sales performance (through decreasing sales) (Crick, 2016b). Moreover, the potentially damaging to sales from a CVODL supports theory surrounding the firm's dominant logic, in which managers can overlook non-dominant (but vital) areas of their operations (see Miller, 1996; Prahalad, 2004). That is, a CVODL is proposed to direct management teams to invest resources towards the departments that they perceive to deliver value to customers at the expense of allocating fewer resources to non-CVO functional areas (Crick, 2017b). By having a high CVODL, managers might be able to create customer value successfully, but may discover that because they have under-invested resources in non-CVO departments, there will be a point at which

sales decrease (Crick, 2017a). Based on this assertion, the competing hypothesis is offered:

Hypothesis 8. A CVODL has an inverted U-shaped relationship with sales performance.

In summary of the research hypotheses used in this PhD thesis, these proposed relationships are used to test the antecedents and consequences of the CVODL construct under the dynamic managerial capabilities perspective. The control paths used in this doctoral-level investigation are described in the subsequent sections.

### **3.9. Control variables**

#### **3.9.1. Use of control variables**

Control variables in non-experimental research (e.g., survey-based methodologies) purify hypothesised relationships (and conceptual frameworks), by determining other explanations of the variance of a certain construct (Spector and Brannick, 2011). There are two main methods to incorporate control variables into conceptual models. An “experimental design” is when a researcher adapts their study to make the sample or context of the investigation identical for all participants (Bryman, 2012). For instance, experimental researchers might avoid the differences between male and female respondents by only sampling females - this type of control variable limits the generalisability of the study to the group the researcher decides to investigate (see Bernerth, Cole, Taylor and Walker, 2018). “Statistical controls” are where researchers examine differences between groups, to identify alternative factors that explain the variance of a construct (Becker, 2005). Statistical control variables are used in this PhD thesis. The specific control variables that are used in this investigation are described as follows.

#### **3.9.2. Firm size**

The size of an organisation is a key component in assessing resource-advantages, as small businesses have less ability to develop higher levels of performance than larger firms with more resources and capabilities (Westhead, Wright and Ucbasaran, 2001). While small firms can be more agile, flexible, and responsive to their market than large corporations (and drive sales in other ways, such as through their heritage), the resource-based view is based upon the core assumption that there is an association

between firm size and sales performance (Vorhies and Morgan, 2005). Specifically, the firm size variable is defined as the size of a company as it competes across its markets, in terms of its annual sales (Kumar, Jones, Venkatesan and Leone, 2011). Firm size could yield explanation explanations of the dependent variable (sales performance) because larger companies could have greater scope for higher-levels of sales than smaller organisations. The second control variable (environmental turbulence) is outlined in the following section.

### 3.9.3. Environmental turbulence

Environmental turbulence is defined as the magnitude of market-level forces that exist externally to a company's operations (Cadogan, Cui and Li, 2003; Andersson, Evers and Kuivalainen, 2014). The business environment has been conceptualised to include different facets, such as: technological turbulence, competitive intensity, and market dynamism which can make markets unpredictable (Cadogan, Kuivalainen and Sundqvist, 2009). It is anticipated that environmental turbulence could reduce sales performance via disruptions in competitive and customer-sensitive markets (Porter, 1985). Moreover, firms competing in dynamic (i.e., rapidly-changing) business environments might face more uncertainty than firms in stable business environments (Schilke, 2014). As such, environmental turbulence is used as a control variable for sales performance. The role of intelligence responsiveness, as a control variable, is discussed in the next section.

### 3.9.4. Intelligence responsiveness

Market-oriented behaviours are defined as “three processes, namely, the: generation and dissemination of, and responsiveness, to market intelligence (Cadogan, Souchon and Procter, 2008, p. 1263). Intelligence responsiveness is said to be the core facet of market-oriented behaviours, as it examines actions associated with companies responding to their customers' wants and needs (Ozturan, Ozsomer and Pieters, 2014). Intelligence responsiveness is defined as the extent to which organisations act in response to the market intelligence they have processed (Kohli and Jaworski, 1990). As such, intelligence responsiveness is used in this PhD thesis as a core market-oriented behaviour that is driven by a CVODL. A CVODL is different from market-oriented behaviours (including intelligence responsiveness) as it is a managerial mind-set focused on customer value creation being assumed to be an

important driver of organisational performance (e.g., sales performance) (Crick, 2017a).

Organisational cultures are likely to drive firm-level behaviours, as the beliefs and values shared across functions and hierarchies are usually implemented into the activities companies engage in (Harris and Ogbonna, 2001). The link between corporate cultures and firm-level behaviours has been applied to market-oriented corporate cultures, in which customer-driven beliefs have a positive relationship with market-oriented behaviours – including intelligence responsiveness (Homburg and Pflesser, 2000). Therefore, a CVODL is used to control intelligence responsiveness, whereby, a CVODL (as a market-oriented managerial mind-set) has a positive (non-hypothesised) relationship intelligence responsiveness (as a market-oriented behaviour). Furthermore, due to the extant literature highlighting the positive link between market orientation and sales performance (see Narver and Slater, 1990; Ruekert, 1992; Jaworski and Kohli, 1993), it also anticipated that intelligence responsiveness is likely to drive sales performance. It is therefore, used as a control variable. The role of entrepreneurial orientation (as a control variable) is described in the next section.

#### 3.9.5. Entrepreneurial orientation

Entrepreneurial orientation is defined as the “strategy-making processes that provide organisations with a basis for entrepreneurial decisions and actions” (Rauch, Wiklund, Lumpkin and Frese, 2009, p. 762). Baker and Sinkula (2009) and Boso, Story and Cadogan (2013) found that it is helpful for managers to be both market-oriented and entrepreneurially-oriented while Morgan, Anokhin, Kretinin and Frishammar (2015) found that a degree of both orientations yields performance-reducing consequences for organisations. “Businesses with high entrepreneurial orientation can: target premium market segments, charge high prices, and skim the market ahead of competitors, which should provide them with larger profits and allow them to expand faster” (Rauch, Wiklund, Lumpkin and Frese, 2009, p. 765). Furthermore, the literature suggests that being entrepreneurially-oriented allows managers to make decisions based on their: risk-taking, proactive, and innovative capabilities (Sundqvist, Kylaheiko, Kuivalainen and Cadogan, 2012). Entrepreneurial orientation, combined with the benefits of intelligence

responsiveness (as per section 3.9.4), allows firms to drive sales performance due to equipping managers with skills to create superior customer value to competitors (Rauch, Wiklund, Lumpkin and Frese, 2009). With this doctoral study's core and control variables defined and justified, the purpose of the following section is to summarise this chapter before measures are developed in the Methodology chapter to test these hypotheses and control paths.

### **3.10. Chapter summary**

The discussion outlined in the Literature Review has been continued in this chapter to justify a set of research hypotheses (within a conceptual framework) used to answer this investigation's research questions. After justifying the research hypotheses (with all constructs defined), the control variables were outlined, and explanations were provided on why they should be used to control sales performance (the outcome variable) (as well as the non-hypothesised link between a CVODL and sales performance). Measures, data collection, and data analysis techniques used to test these research hypotheses are developed in the following chapter.

## **CHAPTER IV – METHODOLOGY**

### **4.1. Chapter introduction**

This investigation's conceptual framework and research hypotheses were established in the previous chapter. In Chapter IV, the study's research design, data collection, and data analysis techniques are described through the following sections. First, it begins with an overview of the epistemological perspective of the thesis' author and how such philosophical views are integrated into the investigation. Second, the empirical data collection techniques are outlined. Third, operationalisations for the core, control, and demographic variables are described. Fourth, data analysis techniques (and how reliability and validity were assessed) are justified.

### **4.2. Epistemological perspective**

Research philosophies have been approached from ontological and epistemological perspectives (Garud and Gehman, 2017). Ontologies concern researchers understanding what things (e.g., a construct or phenomenon) are, by determining the nature of what is true versus false (Sandberg, 2005). Epistemologies refer to the research method(s) researchers use to understand the phenomenon or phenomena they are investigating – this philosophical perspective is intended to inform researchers what is true versus false (Coghlan, 2011). There are three core groups of epistemological positions: positivism, interpretivism, and critical theory (Murray and Ozanne, 1991). Positivism is based upon scientific judgements that researchers use to view the world as objective (e.g., constructs can be related to one another causally) (Lewis and Grimes, 1999).

“Positivists tend to take a realist position, whereby, they assume that reality exists independently of what individuals perceive. In contrast, interpretivists deny that one real world exists; that is, reality is essentially mental and perceived” (Hudson and Ozanne, 1988, p. 509). Therefore, interpretivism challenges positivism, by allowing researchers to subjectively view the world through an in-depth understanding of a phenomenon (Kohler, 2016). Positivists typically use quantitative methods (e.g., experiments and questionnaires) which allow them to uncover their perception of reality (i.e., the truth) without incorporating human perceptions (Hunt, 1991). The purpose of such methods is to remove bias (i.e., via human perceptions) in empirical results – the objective of which is to obtain “value-free” data, whereby, “values”

refer to the bias researchers can impose on their results (Sobh and Perry, 2006). Interpretivists are open to human involvement in empirical research methods, in which bias is embraced to understand in-depth answers that positivists would not be able to uncover (Hunt, 1993). (i.e., the truth), by incorporating their human perceptions (Brannick and Coghlan, 2007).

Hence, interpretivists are more likely to use qualitative research methods (e.g., interviews and focus groups) to obtain subjective findings that allow them to uncover what they perceive to be reality. Critical theory questions reality through tools including post-modernism (Cummings and Bridgman, 2011). Critical theory often draws upon left-wing political views (such as the work of Karl Marx and Max Weber) to confront mainstream research philosophies (namely, positivism and interpretivism) and explores the problems with established methodological views (e.g., the lack of political orientation of a positivist viewpoint) (Brewis and Wray-Bliss, 2005). The philosophy of the thesis' author is to select a research method (or methods) that is/are most effective in answering a research question(s). Therefore, while the prior work of this thesis' author has been qualitative (e.g., Crick and Crick, 2014; 2015; 2016; 2017; 2018; Crick, 2018), the research questions in this investigation were deemed more appropriate for quantitative methods. It was more important to be concerned about the quality of the research (findings that answered the research questions), as opposed to the epistemological perspective. The research design, under this philosophical viewpoint, follows in the next section.

### **4.3. Research design**

Following from the previous section, rather than exploring the in-depth nature of ontological and epistemological perspectives, the research methods used in this investigation were chosen to best answer the study's three research questions. That is, as the three research questions stated in this investigation (please refer to section 1.5) were outlined to study the facets, antecedents, and consequences of the CVODL construct, it was deemed appropriate to design a quantitative methodology (Alvesson and Sandberg, 2011). Quantitative research involves using numerical data to test relationships and/or differences between groups (Hanson and Grimmer, 2007). While it would have been beneficial to triangulate this quantitative data with interviews with managers (i.e., qualitative research), the financial cost and time to



conduct supporting interviews would have exceeded the budget for this doctoral study. Moreover, considering that interviews would have been used to explore the facets, antecedents, and consequences of a CVODL, it may have been difficult to reduce bias from the possibility of interviewees indicating a strong customer-driven mentality – showing little variance in what a CVODL might entail.

Furthermore, while a quantitative methodology was deemed to be appropriate for this PhD investigation, there are different kinds of numerical data that researchers can use, namely, cross-sectional versus longitudinal data (Ginsberg, 1984). Cross-sectional research involves investigating a phenomenon at a set time, whereas, longitudinal research involves studying a phenomenon over time to test for causality (Rindfleisch, Malter, Ganesan and Moorman, 2008). Obtaining data from the same companies over different periods would have been difficult to achieve, as it would have been challenging to guarantee responses for several data periods (e.g., years) (due to respondent attrition), as well as the high costs associated with such methods (Wang and Bodner, 2007). Despite cross-sectional research not yielding causal inferences, all constructs (where applicable) were measured within a specific period to help make temporal inferences about relationships between variables. Despite such drawbacks, the conceptual framework could still be tested with the cross-sectional data. In summary of the research design employed within this PhD study, a cross-sectional quantitative methodology was used to answer the three research questions and to test the eight research hypotheses guiding the conceptual framework. The specific data collection techniques used in this thesis are described in the following section.

#### **4.4. Survey research method**

As noted in section 4.3 (in terms of the research design), quantitative research can be used in multiple ways, in respect of cross-sectional versus longitudinal data, but can also include various research methods (such as experiments and questionnaires) (Bryman, 2012). The empirical research method used in this study was an electronic survey (using Qualtrics) to administer it to respondents. Survey researchers have debated over the benefits and drawbacks of electronic versus mail questionnaires (see Roster, Hozier, Baker and Albaum, 2007; Hulland, Baumgartner and Smith, 2018). A main advantage of electronic surveys is that they are cheap to develop

(Wilson and Laskey, 2003). However, because many electronic surveys have been circulated, some populations are over-surveyed because of the ways in which communication has evolved (i.e., conventional mail/post has decreased in favour of emails and other forms of social media) (Bryman, 2012). When designing electronic surveys, there is often a function to make all questions compulsory to reduce missing data despite the risk of bias (de Jong, Fox and Steenkamp, 2015). Another benefit is that electronic surveys allow researchers to automatically transfer recorded data into statistical analysis software. This minimises the chances of making mistakes by inputting data and helps ensure any statistical information is correct. Hence, an electronic was chosen for this PhD study, despite the potential drawbacks of the research method. The sampling of respondents for this PhD thesis follows in the next section.

#### **4.5. Sampling**

##### 4.5.1. Ethics approval

Before any data were collected, ethics approval was granted in accordance with Loughborough University's academic regulations. This ethics application assured that no harm would come to the: researcher, respondents, university, or any other stakeholder associated with this study. Specifically, a short application form was completed (and signed by the supervisory team) to ensure that the questionnaire would not break any of Loughborough University's rules on conducting empirical academic research. It was anticipated that this PhD investigation was a low-risk study as the names of the respondents and their companies were kept confidential (i.e., any information pertaining to their identities would not be reported). Furthermore, the themes of this study were not linked to sensitive matters, suggesting that it would be highly-unlikely that respondents (or other stakeholders) would be harmed by the survey's themes. After adhering to the ethics application process, permission was granted for empirical data to be collected using the above-specified electronic survey (see section 4.4). The population of interest during the data collection period is specified in the following section.

##### 4.5.2. Population of interest

Based on most market orientation research being empirically-studied in Western countries (such as the: United States, United Kingdom, Finland, Australia, and New

Zealand) (e.g., Kirca, Jayachandran and Bearden, 2005), once the final survey was administered, it was decided that large American organisations would be sampled across multiple industries and locations<sup>3</sup>. Moreover, during various stages of this PhD study, a range of formal and informal conversations were had with senior academics (e.g., former and current journal editors) at various conferences and doctoral colloquiums – these experts stressed the value of using American data. That is, such senior academics (originating from several countries) suggested that empirical data from the United States is attractive to highly-ranked ABS (2015) journals over various other country contexts. This is not to say that other country contexts would have been invalid for this PhD thesis, but the decision to use empirical data from the United States was made based on the strong recommendations from the extant literature and from the above-mentioned formal and informal conversations with senior academics.

In terms of respondent profiles, theory surrounding dominant logics has often taken a large-firm perspective (e.g., Cote, Langley and Pasquero, 1999; Crilly and Sloan, 2012). Hence, the sample that this doctoral study selected was senior managers, such as: Chief Executive Officers (CEOs), Chief Financial Officers (CFOs), Chief Operating Officers (COOs), Presidents, Directors, and Vice Presidents. Despite it being anticipated that these individuals would be the busiest people in their companies, top-level managers were needed for two main reasons. First, senior managers that develop and implement dominant logics across all hierarchies (Rindova and Fombrun, 1999; Kor and Mesko, 2013). Second, some constructs in the conceptual framework (such as CVO functional resource investments) measured issues that might introduce a high-degree of bias if answered by an employee affiliated to a specific department. Therefore, the respondents of the questionnaire were taken outside (and above) departmental-level internal politics and sent to senior managers (synonymously referred to as respondents or informants). As noted in section 4.4 (in respect of the use of an electronic questionnaire), Qualtrics was used to design the study's electronic questionnaire; the role of Qualtrics in the sampling of respondents is described in the following section.

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<sup>3</sup> In this study, after multiple pre-tests and pilot studies (see sections 4.7 and 4.8 for more information), large American firms were categorised as having between: 100 and 50,000 full-time employees (SBA, 2016).

#### 4.5.3. Role of Qualtrics

The data collection services of Qualtrics were used in this study to administer the survey to senior managers in large American corporations. Qualtrics allows researchers to design and administer electronic surveys and provides services, in which it sends questionnaires out to respondents for a set price per completed response. This price is determined by factors, such as the length of the questionnaire and what type of respondents their clients wish to sample. As senior managers in large American firms were the population of interest, industry data from the United States was used to determine what differentiates small versus large organisations. It was discovered that small businesses can have up to 500 full-time employees, but most small-firms have less than 100 full-time members of staff (see SBA, 2016). Therefore, after the final survey was ready to be administered, when sampling respondents, a screener question was used to determine the number of full-time employees within the respondents' companies (ranging from: 0 to 50,000). If respondents' firms had less than 100 full-time employees, they would be deemed ineligible for the questionnaire (as the population of interest was larger organisations). Another screening question asked for the respondents' functional role. A list of top-level managerial positions was provided, as well as an "other (please specify)" option. If respondents selected this latter option, they were screened out of the survey as it was assumed that they would not be qualified to complete the survey (as they would be assumed to not be holding a senior manager title).

Sampling senior managers, across multiple industries in the United States, was priced at £28 per completed response. Furthermore, the study was restricted to a survey that would take respondents up to thirty minutes to complete. Otherwise, this price per response would have increased, influencing which questions were asked in the survey. The length of the questionnaire was not a problem as the final survey was estimated (based on the questionnaire's on-line information) to take participants roughly twenty minutes to complete. It was noted that twenty minutes was still a reasonably long time for a survey, especially when sampling senior managers/respondents (Dillman, Sinclair and Clark, 1993; Deutskens, de Ruyter, Wetzels and Oosterveld, 2004), but Qualtrics ensured a complete sample for the questionnaire. Qualtrics also indicated that if: responses were completed too quickly (i.e., in under 200 seconds), respondents were choosing the same answer for every

question, or were writing inappropriate phrases in the questions that required a typed answer (e.g., swear words), they would delete these responses and re-sample at no extra charge. After some price-oriented negotiations, for £5,000, Qualtrics could guarantee 60 pilot responses and 200 core responses (all fully-completed with no missing data) under these. Qualtrics also suggested in advance (when quoting this survey) that they typically over-sample, meaning that the total of at least 260 responses would be collected. The sample size collected for this study is described further in the following section.

#### 4.5.4. Sample size

A sample size is an integral component in empirical research for both qualitative and quantitative studies, as it determines the level of inference that researchers can make about their findings (i.e., the extent to which such results extend outside of a sample into broader populations) (Combs, 2010). That is, the sample size for the survey administered in this PhD thesis needed to have the potential to be applicable to wider populations, rather than being restricted to the activities of the sampled companies – otherwise, the theoretical and practical contribution of the doctoral study would not make a significant impact to scholars and practitioners. Before any data were collected, the population of interest (as per section 4.5.2) was specified to Qualtrics to sample firms from across multiple industries and across the United States, so that the data were not exclusive to a single industry or a geographic location. Moreover, the main data analysis technique used in this PhD thesis was structural equation modelling (SEM) (see section 4.10.9). While there is not an agreed sample size for SEM research, studies suggest that a sample of 200 observations is usually sufficient (see Fan, Thompson and Wang, 1999). As such, when employing the data collection services of Qualtrics, the specified sample of 60 pilot responses and 200 core responses was expected to be a respectable sample size for the forthcoming SEM analysis. Furthermore, depending on the extent to which Qualtrics over-sampled respondents (as noted in section 4.5.3), it was anticipated that a greater sample size than 200 responses would be collected. Therefore, as well as having a multi-industry and national-level sample of corporations operating in the United States, the sample size specified to Qualtrics was deemed to be large enough for this doctoral study. The design of this investigation's questionnaire follows in the next section.

## 4.6. Questionnaire design

### 4.6.1. Survey design

In designing the study's electronic survey, three sections were outlined:

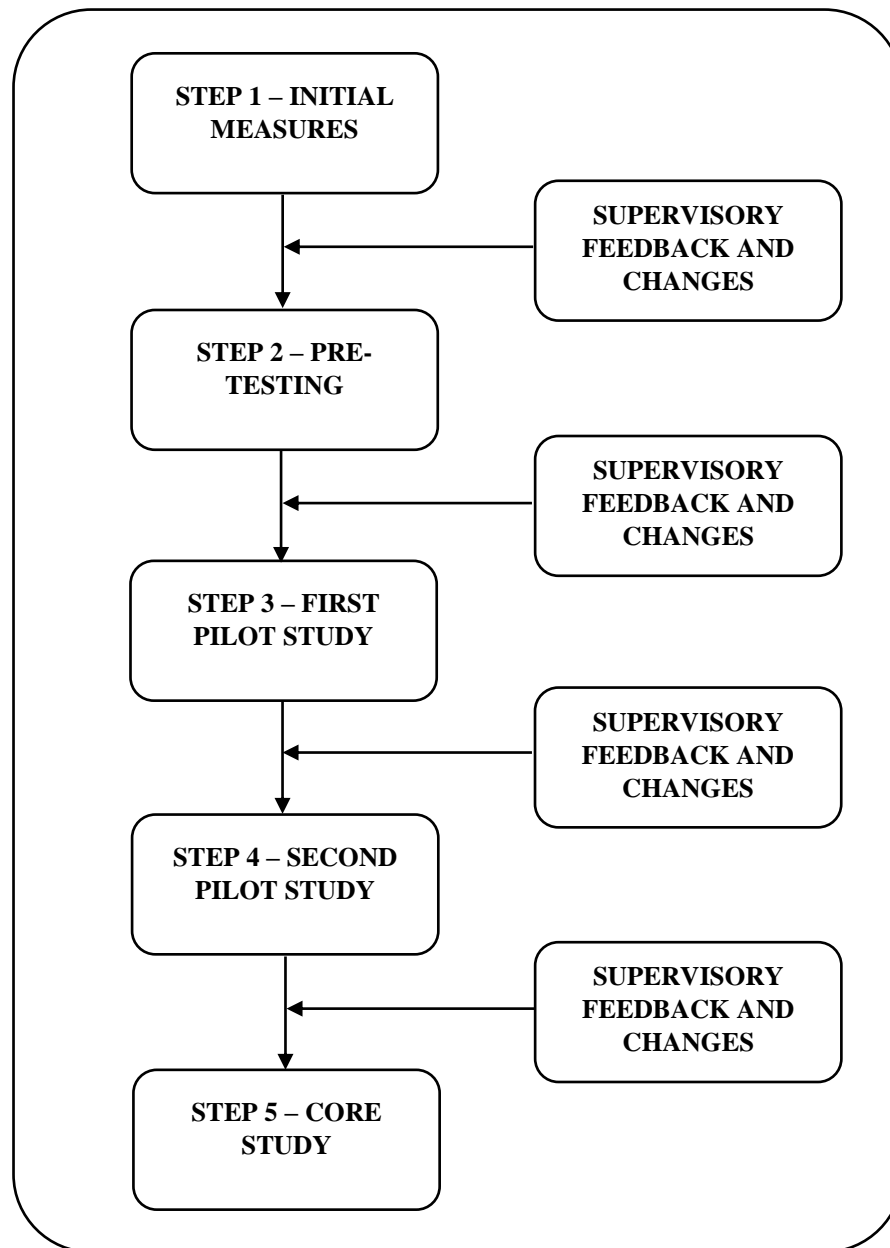
1. A short cover letter outlining the themes of the questionnaire and contact details
2. The core and control variables (as per the conceptual framework)
3. Demographic information about the respondents and their organisations

However, before any empirical data were collected, a step-wise procedure was undertaken to develop the format of the survey (see Figure 4.1). First, initial measures were designed on-line (via Qualtrics) to gauge how the questions would appear to the respondents. Supervisory feedback was sought to improve the design and content after a first-draft of the survey was completed. Second, the questionnaire was pre-tested with 22 academics and practitioners (who were deemed to be knowledgeable on the content of the survey) to seek feedback on content and cosmetic issues. Third, after changes were made to the questionnaire (after the pre-testing stage), a pilot study was conducted to assess the scale reliabilities and distributions. Fourth, after changes were made to the survey based on supervisory feedback pertaining to the first pilot study's results, a second pilot study was undertaken to validate these changes. Fifth, after making a small number of changes to the questionnaire after the second pilot study, the core survey was administered. The specific stages of this step-wise procedure are described across the following sections<sup>4</sup>.

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<sup>4</sup> Please note that the following sections contain the initial operationalisations of the core and control variables (as well as company characteristic variables). The survey also listed questions pertaining to other constructs to be used in post-PhD publications. As such, these variables (intended to be used in post-PhD publications) are not reported on during this doctoral-level investigation. For instance, if reviewers ask for additional information, certain variables may have been collected to serve this purpose. Further, for the operationalisations that were originally-developed (e.g., the CVODL), new measures were only used because no prior studies, offering appropriate scales existed. In the subsequent sections, operationalisations are displayed in a tabular format, but due to the formatting of the survey through Qualtrics, the presentation differs from how respondents saw it. In section 4.9.3, reference is made to the actual design of the final survey – with visual evidence.

Figure 4.1. Step-wise procedure used in the data collection process



#### 4.6.2. Initial operationalisations of core variables

##### 4.6.2.1. CVO managerial human capital

CVO managerial human capital was initially measured on a new seven-point semantic differential scale with four items (see Table 4.1). The initial measure of CVO managerial cognition is outlined in the next section.

#### 4.6.2.2. CVO managerial cognition

CVO managerial cognition was initially measured on a new seven-point Likert scale with four items (see Table 4.2). Each item ranged from: 1 = not at all to 7 = to an extreme extent. Furthermore, each item was answered via a dropdown menu, in which respondents would click on a box that would reveal all seven scale points (in an ascending order) for them to choose accordingly. The initial operationalisation of CVO managerial social capital follows in the next section.

#### 4.6.2.3. CVO managerial social capital

CVO managerial social capital was operationalised as a four-component variable pertaining to each of the four facets conceptualised in section 3.5.3. The first dimension of CVO managerial social capital (i.e., the extent to which managers can access resources from network members that facilitate the creation of customer value) was measured on a new seven-point Likert scale with four items (see Table 4.3). Each item ranged from: 1 = very strongly disagree to 7 = very strongly agree.

The second dimension of CVO managerial social capital (i.e., the degree to which managers use the resources gained from their network members to facilitate the creation of customer value) was measured on a new seven-point Likert scale with three items (see Table 4.4). Each item ranged from: 1 = very strongly disagree to 7 = very strongly agree. Like CVO managerial cognition, the second facet of CVO managerial social capital was measured via a dropdown menu.

The third dimension of CVO managerial social capital (i.e., the degree to which managers' network members have a CVO viewpoint) was measured on a new seven-point semantic differential scale with four items (see Table 4.5).



**Table 4.1. Initial measure of CVO managerial human capital (MHC)**

CUSTOMER VALUE represents the benefits a customer experiences from buying a good or service minus the cost they incur to receive such benefits.									
Over the last 3 years, in terms of providing customers with value, senior managers in our organization...									
<b>Codes</b>	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Items</b>
MHC_1	... had no expertise								... had lots of expertise
MHC_2	... had no understanding								... had lots of understanding
MHC_3	... had no knowledge								... had lots of knowledge
MHC_4	... were not skilled								... were highly skilled

**Table 4.2. Initial measure of CVO managerial cognition (MCG)**

Over the last 3 years, managers in our organization believed that...								
Codes	Items	1 = not at all	2 = to a very slight extent	3 = to a small extent	4 = to a moderate extent	5 = to a considerable extent	6 = to a great extent	7 = to an extreme extent
MCG_1	... businesses succeed because they have created customer value							
MCG_2	... business performance is primarily driven by creating customer value							
MCG_3	... creating customer value is an important driver of success							
MCG_4	... customer satisfaction is a core driver of business performance							

**Table 4.3. Initial measure of CVO managerial social capital (facet 1) (SC\_F1)**

		NETWORK MEMBERS are the stakeholders an organization has relationships with; for example, industry-specific groups, suppliers, shareholders and competitors.						
		Over the last 3 years, our organization has had...						
Codes	Items	1 = very strongly agree	2 = strongly disagree	3 = disagree	4 = neither agree nor disagree	5 = agree	6 = strongly agree	7 = very strongly agree
SC_F1_1	... the ability to access customer value-creating resources from our network members							
SC_F1_2	... network members with the resources to allowed us to create customer value							
SC_F1_3	... network members that helped us create customer value via the resources they provided							
SC_F1_4	... network members that were able to help us gain resources needed to create customer value							

**Table 4.4. Initial measure of CVO managerial social capital (facet 2) (SC\_F2)**

Over the last 3 years, in our organization...								
Codes	Items	1 = very strongly agree	2 = strongly disagree	3 = disagree	4 = neither agree nor disagree	5 = agree	6 = strongly agree	7 = very strongly agree
SC_F2_1	... we have rarely used the resources from our network members in order to create customer value							
SC_F2_2	... we have barely used our network members' resources and skills to help us create our customer value provision							
SC_F2_3	... we have hardly employed the resources gained from our network members when creating customer value							

**Table 4.5. Initial measure of CVO managerial social capital (facet 3) (SC\_F3)**

Over the last 3 years, to what extent have your organization's network members focused on creating customer value?									
<b>Codes</b>	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Items</b>
SC_F3_1	Minimally								Maximally
SC_F3_2	To a small extent								To a large extent
SC_F3_2	Slightly								A great deal
SC_F3_4	Inconsiderably								Considerably

The fourth dimension of CVO managerial social capital (i.e., the degree to which managers have used the viewpoint provided by their network members) was measured on a new seven-point Likert scale with four items (see Table 4.6). Each item ranged from: 1 = very strongly disagree to 7 = very strongly agree. This was operationalised using a dropdown menu. The initial measure of the CVODL construct is highlighted in the subsequent section.

#### 4.6.2.4. CVODL

The CVODL construct was initially measured using a new seven-point Likert scale with six items (see Table 4.7). Each item ranged from: 1 = very strongly disagree to 7 = very strongly agree. As with certain other constructs, the CVODL variable was measured via a dropdown menu. The initial operationalisation of CVO functional resource investments is outlined in the following section.

#### 4.6.2.5. CVO functional resource investments

The CVO functional resource investments construct was initially measured using four originally-developed stages. The first stage provided respondents with an extensive list of the departments that could exist within large companies (especially those in the United States) and required respondents to indicate (via selecting the relevant boxes) which departments exist within their organisations (see Table 4.8). The names of the departments in this list were sourced from the literature and presented in alphabetical order (see Appendix 1).

The second stage carried respondents' choices forward from the first stage of the operationalisation and excluded the choices not selected. Furthermore, a new seven-point Likert scale was linked to these departments, whereby, respondents were asked the extent to which these departments provide customer value (see Table 4.9). Each department would be scored on a scale ranging between: 1 = not at all to 7 = to an extreme extent.

The third stage carried the same departments forward (i.e., only the departmental functions that existed within the respondents' organisations) and provided a new seven-point Likert scale concerning the extent to which resources are invested into each business function (see Table 4.10). Each functional area would be scored on a scale ranging between: 1 = not at all to 7 = to an extreme extent.

**Table 4.6. Initial measure of CVO managerial social capital (facet 4) (SC\_F4)**

Over the last 3 years, in our organization...								
Codes	Items	1 = very strongly agree	2 = strongly disagree	3 = disagree	4 = neither agree nor disagree	5 = agree	6 = strongly agree	7 = very strongly agree
SC_F4_1	... our approach to business mirrored that of our network members							
SC_F4_2	... we learned many lessons from our network members' approach to business							
SC_F4_3	... our way of doing business reflected that of our network members							
SC_F4_4	... network members' approach to business shaped our approach to business							

**Table 4.7. Initial measure of the CVODL (CVODL)**

Over the last 3 years, if you had asked senior managers their opinion, they would have said that...								
Codes	Items	1 = very strongly agree	2 = strongly disagree	3 = disagree	4 = neither agree nor disagree	5 = agree	6 = strongly agree	7 = very strongly agree
CVODL_1	... all of our business functions should revolve around creating customer value							
CVODL_2	... underpinning every strategy driving us forward should be the desire to create customer value							
CVODL_3	... a core purpose of our business activities should be to create customer value							
CVODL_4	... fulfilling every customer's wants and needs should be an important activity in our organization							
CVODL_5	... our organizational culture should strive to create value for our customers							
CVODL_6	... adding value to our customers should be an important activity in our organization							



**Table 4.8. Initial measure of CVO functional resource investments (part 1: selecting which departments currently exist within the respondents' companies) (FRI\_1)**

Please indicate (by selecting the boxes) the business functions that currently exist within your organization:		
Code*	Item	Answer space
FRI_1_1	Administration	
FRI_1_2	After Sales	
FRI_1_3	Customer Service	
FRI_1_4	Engineering	
FRI_1_5	Exporting/International	
FRI_1_6	Finance	
FRI_1_7	Government Relations	
FRI_1_8	Human Resources/Personnel	
FRI_1_9	IT	
FRI_1_10	Key Accounts	
FRI_1_11	Legal	
FRI_1_12	Logistics/Distribution/Supply Chain	
FRI_1_13	Marketing	
FRI_1_14	Merchandising	
FRI_1_15	Operations	
FRI_1_16	Procurement	
FRI_1_17	Production	
FRI_1_18	Public Relations	
FRI_1_19	Purchasing	
FRI_1_20	Quality	
FRI_1_21	Relationships	
FRI_1_22	Research and Development (R&D)	
FRI_1_23	Sales	
FRI_1_24	Service	
FRI_1_25	Other (please specify)	
<p><b>*For demonstration purposes only, it is assumed that a respondent answering this question selected the “Marketing” (FRI_1_13), “Finance” (FRI_1_6), “Engineering” (FRI_1_4), “Operations” (FRI_1_15), and “Public Relations” (FRI_1_18) Departments.</b></p>		

**Table 4.9. CVO functional resource investments (part 2: deciding the extent to which the selected departments create customer value) (FRI\_2)**

Codes*	Items	To what extent does each business function provide customer value?						
		1 = not at all	2 = to a very slight extent	3 = to a small extent	4 = to a moderate extent	5 = to a considerable extent	6 = to a great extent	7 = to an extreme extent
FRI_2_4	Engineering							
FRI_2_6	Finance							
FRI_2_13	Marketing							
FRI_2_15	Operations							
FRI_2_18	Public Relations							

**\*As described in Table 4.8 (in terms of the first part of the initial measure of CVO functional resource investments), it is assumed for demonstration purposes only that a respondent answering this question selected the “Marketing” (FRI\_2\_13), “Finance” (FRI\_2\_6), “Engineering” (FRI\_2\_4), “Operations” (FRI\_2\_15), and “Public Relations” (FRI\_2\_18) Departments.**

**Table 4.10. Initial measure of CVO functional resource investments (part 3: deciding the extent to which resources are invested towards the selected departments) (FRI\_3)**

		To what extent are your organization's resources (e.g., budgets, people, equipment, tangibles) invested into each business function?						
Codes*	Items	1 = not at all	2 = to a very slight extent	3 = to a small extent	4 = to a moderate extent	5 = to a considerable extent	6 = to a great extent	7 = to an extreme extent
FRI_3_4	Engineering							
FRI_3_6	Finance							
FRI_3_13	Marketing							
FRI_3_15	Operations							
FRI_3_18	Public Relations							
<p><b>*As described in Table 4.8 (in terms of the first part of the initial measure of CVO functional resource investments), it is assumed for demonstration purposes only that a respondent answering this question selected the “Marketing” (FRI_3_13), “Finance” (FRI_3_6), “Engineering” (FRI_3_4), “Operations” (FRI_3_15), and “Public Relations” (FRI_3_18) Departments.</b></p>								

This measure of CVO functional resource investments was originally-developed as the prior literature has not provided an option for respondents to indicate which specific functional areas exist within their corporations. Studies such as Homburg, Workman Jr., and Krohmer (1999) and Verhoef and Leeflang (2009) have provided respondents with a fixed list of business functions (namely: Marketing, Sales, R&D, Operations, and Finance Departments), rather than with an ability to indicate which departments exist within their companies with attached scales pertaining to customer value creation and functional resource investments. As such, the measure of CVO functional resource investments is argued to more effectively measure department-specific constructs. The fourth stage involved a series of five calculations from the previous three stages of the measure of CVO functional resource investments:

1. The number of departmental functions (as indicated by the respondents) were summed
2. The median of the customer value-creating functional areas was calculated to differentiate between the top and bottom 50% of departments that managers perceive to be CVO
3. The summed functional resource investment score was calculated for the resource investments to the top 50% of customer value-creating functions
4. The number of departmental functions that were in the top 50% of customer value-creating departments was calculated
5. The average functional resource investments to the top 50% of customer value-creating departments was calculated by dividing the sum of the respondents' CVO functional resource investments by the number of departments in the top 50% of business functions that were perceived to create customer value

The initial measure of sales performance is described in the following sections.

#### 4.6.2.6. Sales performance

Sales performance was initially measured on a seven-point Likert scale with three items (see Table 4.11). Each item ranged from: 1 = much worse than rivals to 7 = much better than rivals. This measure of sales performance was adapted from Hooley, Greenley, Cadogan and Fahy (2005) and Vorhies and Morgan (2005). The initial measures for the control variables are outlined in the following sections.

**Table 4.11. Initial measure of sales performance (SALES)**

Over the past year, how well has your organization performed in its markets relative to key competitors?								
Codes	Items	1 = much worse than rivals	2 = worse than rivals	3 = slightly worse than rivals	4 = the same as rivals	5 = slightly better than rivals	6 = better than rivals	7 = much better than rivals
SALES_1	Market share growth							
SALES_2	Sales growth							
SALES_3	Sales volume growth							

### 4.6.3. Initial operationalisations of control variables

#### 4.6.3.1. Firm size

There is no agreed measure of an organisation's size, but two popular operationalisations have included a company's annual sales and the number of full-time employees (see Homburg, Workman Jr., and Krohmer, 1999; Sirmon and Hitt, 2009). In this study, firm size was initially measured using the organisations' annual sales, by providing respondents with a ratio scale ranging from: 0 to 100 million (in American Dollars (see Table 4.12). The initial measure of environmental turbulence is specified in the next section.

#### 4.6.3.2. Environmental turbulence

There is not an agreed consensus in the literature about the most effective way to measure environmental turbulence, with various factors involved (e.g., Cadogan, Cui and Li, 2003). Environmental turbulence was initially measured as a three-component variable comprised of: competitive intensity, technological turbulence, and market dynamism as these dimensions of environmental turbulence have been commonly used in the literature. Competitive intensity was initially measured on a seven-point Likert scale with six items (see Table 4.13). Each item ranged from: 1 = very strongly disagree to 7 = very strongly agree. This measure was adapted from Jaworski and Kohli (1993) to include seven scale points (instead of five) in anticipation of maximising the variance of the construct's distribution.

Technological turbulence was initially measured on a seven-point Likert scale with five items (see Table 4.14). Each item ranged from: 1 = very strongly disagree to 7 = very strongly agree. This operationalisation was adapted from Jaworski and Kohli (1993) via using seven anchor points (instead of five anchor points) to increase the variance of the scale's distribution. Market dynamism was measured on a reverse-coded seven-point Likert scale with five items (see Table 4.15). Each item ranged from: 1 = to an extreme extent to 7 = not at all. As with certain other constructs, market dynamism was operationalised using a dropdown menu. This scale was adapted from Cadogan, Kuivalainen and Sundqvist's (2009) paper, in terms of converting the scale into a domestic measure of market dynamism (rather than the original measure of "export market dynamism"). The initial operationalisation of intelligence responsiveness is described in the following section.

**Table 4.12. Initial measure of firm size (SIZE)**

What is your organization's annual turnover?												
Code*	Item	\$0	\$10	\$20	\$30	\$40	\$50	\$60	\$70	\$80	\$90	\$100
SIZE	Turnover (\$US millions)											
<p><b>*This initial measure of firm size (SIZE) was measured using a sliding ratio scale. The initial measure presented in this table does not depict this due to formatting reasons. That is, being a sliding ratio scale, respondents could select any option between: \$0 and 100 million American Dollars.</b></p>												

**Table 4.13. Initial measure of competitive intensity (COMP)**

Over the last 3 years, in our organization we found that...								
Codes	Items	1 = very strongly agree	2 = strongly disagree	3 = disagree	4 = neither agree nor disagree	5 = agree	6 = strongly agree	7 = very strongly agree
COMP_1	... competition in our industry has been cut-throat							
COMP_2	... there have been many “promotion wars” in our industry							
COMP_3	... anything that one competitor can offer, others could match readily							
COMP_4	... price competition was a hallmark in our industry							
COMP_5	... we heard of a new competitive move almost every day							
COMP_6	... our competitors were relatively strong							



**Table 4.14. Initial measure of technological turbulence (TT)**

Over the last 3 years, in our organization we found that...								
Codes	Items	1 = very strongly agree	2 = strongly disagree	3 = disagree	4 = neither agree nor disagree	5 = agree	6 = strongly agree	7 = very strongly agree
TT_1	... the technology changed rapidly							
TT_2	... technological changes provided big opportunities							
TT_3	... it was very difficult to forecast where the technology would be in the next 2 to 3 years							
TT_4	... a large number of new product ideas were made possible through technological breakthroughs							
TT_5	technological developments in our industry were relatively major							

**Table 4.15. Initial measure of market dynamism (MD)**

Over the last 3 years, in our organization we found that...								
Codes	Items	1 = to an extreme extent	2 = to a great extent	3 = to a considerable extent	4 = to a moderate extent	5 = to a small extent	6 = to a very slight extent	7 = not at all
MD_1	... our customers' product preferences changed quite a bit over time							
MD_2	... new customers tended to have product-related needs that were different from those of our existing customers							
MD_3	... our customers tended to look for new products all the time							
MD_4	... our customers tended to have stable product preferences							
MD_5	... we witnessed changes in the type of products/services demanded by our customers							

#### 4.6.3.3. Intelligence responsiveness

Intelligence responsiveness was initially measured on a seven-point Likert scale with five items (see Table 4.16). Each item ranged from: 1 = very strongly disagree to 7 = very strongly agree. The items used to operationalise this variable were sourced from Jaworski and Kohli (1993) and Story, Boso and Cadogan (2015). The initial measure of entrepreneurial orientation is presented in the next section.

#### 4.6.3.4. Entrepreneurial orientation

Entrepreneurial orientation was initially measured as a three-component construct, comprised of: innovativeness, proactiveness, and risk-taking. It was noted that entrepreneurial orientation measures have also included the facets of “competitiveness aggressiveness” and “autonomy”, but they are more peripheral to its operationalisation (see Sundqvist, Kylaheiko, Kuivalainen and Cadogan, 2012). Innovativeness was initially measured on a seven-point Likert scale with five items (see Table 4.17). Each item ranged from: 1 = not at all to 7 = to an extreme extent. This measure was sourced from Boso, Story and Cadogan (2013).

Proactiveness was initially measured on a seven-point Likert scale with three items (see Table 4.18). Each item ranged from: 1 = not at all to 7 = to an extreme extent. Moreover, proactiveness was measured on a drag/drop scale, whereby, respondents would have the three items of the measure on the left-hand side of their screen and the seven anchor points on the right-hand side of their screen in the form of a labelled box. To answer the question, respondents would be required to click on each item (one item at a time) and drag them into the relevant labelled box (an anchor point of their choice). Once they had chosen a certain anchor point, the item would appear in the relevant labelled box, for which they could change their mind – should they wish. This process would need to be repeated for all three items, so that respondents could proceed onto the next page of the questionnaire. This measure was sourced from Boso, Story and Cadogan (2013).

Risk-taking was initially measured on a reverse-coded seven-point Likert scale with three items (see Table 4.19). Each item ranged from: 1 = very strongly agree to 7 = very strongly disagree. This measure was sourced from Boso, Story and Cadogan (2013). The initial measures of the company characteristic variables are described in the following sections.

**Table 4.16. Initial measure of intelligence responsiveness (RESP)**

Over the last 3 years, in our organization...								
Codes	Items	1 = very strongly disagree	2 = strongly disagree	3 = disagree	4 = neither agree nor disagree	5 = agree	6 = strongly agree	7 = very strongly agree
RESP_1	... we were quick to respond to significant changes in our competitors' price structures							
RESP_2	... we responded to competitive actions that threaten us							
RESP_3	... if a major competitor had launched an intensive campaign targeted at our customers, we would have responded immediately							
RESP_4	... when we found out that customers are unhappy with the quality of our product or service, we took corrective action immediately							
RESP_5	... we were quick to respond to important changes in our business environment (e.g., regulatory, technology, economic)							

**Table 4.17. Initial measure of innovativeness (INNV)**

Over the last 3 years, in our industry...								
Codes	Items	1 = not at all	2 = to a very slight extent	3 = to a small extent	4 = to a moderate extent	5 = to a considerable extent	6 = to a great extent	7 = to an extreme extent
INNV_1	... we were known as an innovator							
INNV_2	... we promoted new, innovative products/services							
INNV_3	... we were leaders in developing new products/services							
INNV_4	... we built a reputation for being the best for developing new methods and technologies							
INNV_5	... we constantly experimented with new products/services							

**Table 4.18. Initial measure of proactiveness (PRCT)**

Over the last 3 years, in our industry...								
Codes*	Items	1 = not at all	2 = to a very slight extent	3 = to a small extent	4 = to a moderate extent	5 = to a considerable extent	6 = to a great extent	7 = to an extreme extent
PRCT_1	... we sought to exploit anticipated changes in our target market ahead of our rivals							
PRCT_2	... we seized initiatives whenever possible in our target market operations							
PRCT_3	... we acted opportunistically to shape the business environment in which we operated							
<b>*The initial measure of proactiveness (PRCT) was measured using a drag/drop format. The initial measure presented in this table does not depict this due to formatting reasons.</b>								

**Table 4.19. Initial measure of risk-taking (RISK)**

Over the last 3 years, in our organization...								
<b>Codes</b>	<b>Items</b>	<b>1 = very strongly agree</b>	<b>2 = strongly agree</b>	<b>3 = agree</b>	<b>4 = neither agree nor disagree</b>	<b>5 = disagree</b>	<b>6 = strongly disagree</b>	<b>7 = very strongly disagree</b>
RISK_1	... top managers, in general, avoided investing in high-risk projects							
RISK_2	... we showed a low level of tolerance for high-risk projects							
RISK_3	... our strategy was characterized by a strong tendency to not take risks							

#### 4.6.4. Operationalisations of company characteristic variables

##### 4.6.4.1. Industry type

Industry type was initially measured via providing respondents with a list of industry classifications that have been used in empirical studies in the United States (see Table 4.20). Respondents were required to select one industry type that was most aligned to the sector their firm competed in. This list of industry types was sourced from Dai, Maksimov, Gilbert and Fernhaber (2014). The initial measure of respondents' experience is outlined in the next section.

##### 4.6.4.2. Respondents' experience

Respondents' experience was initially measured via new ratio scales (see Table 4.21). The first question required respondents to indicate the number of years they have held their current job title; the second question required respondents to indicate the number of years they have worked in their current organisation. Each item ranged from: 0 to 50 years. This list was originally-developed to enquire into the background of the respondents. The initial measure of the export ratios of the sampled companies is described in the next section.

##### 4.6.4.3. Export ratio

The export ratios (i.e., the percentage of annual sales that originate from export markets – sometimes used to measure firms' degree of internationalisation) of the respondents' companies was initially operationalised on a ratio scale (see Table 4.22). This question ranged from: 0 to 100% and was sourced from Cadogan, Kuivalainen and Sundqvist (2009). The initial measure of informant quality is highlighted in the subsequent section.

##### 4.6.4.4. Informant quality

Informant quality was initially measured on a seven-point Likert scale with five items (see Table 4.23). Each item ranged from: 1 = not at all to 7 = to an extreme extent. This measure was adapted from Hultman, Robson and Katsikeas (2009) and Boso, Story and Cadogan (2013) to develop the best measures possible. As noted in section 4.11.13, the informant quality items were used to test for common method variance. The initial operationalisation of the full-time employees variable is described in the following section.



**Table 4.20. Initial measure of industry type (INDS)**

What industry does your organization compete in (please choose one)?		
<b>Codes</b>	<b>Items</b>	<b>Answer space</b>
INDS_1	Apparel, textiles, leather products	
INDS_2	Chemicals, petroleum, rubber, plastics	
INDS_3	Electronics	
INDS_4	Food products	
INDS_5	Instruments, medical and optical goods, measuring devices	
INDS_6	Machinery and equipment	
INDS_7	Metal fabrication	
INDS_8	Paper and allied products	
INDS_9	Printing	
INDS_10	Stone, glass, clay, cement	
INDS_11	Wood products, furniture, textiles	
INDS_12	Other (please specify)	

**Table 4.21. Initial measure of respondents' experience (EXPNC)**

Please answer the following questions about your experience in this organization:												
<b>Codes*</b>	<b>Items</b>	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>
EXPNC_1	How many years have you held your current job title?											
EXPNC_2	How many years have you worked in this organization?											
<p><b>*This initial measure of respondents' experience (EXPNC) was measured using two sliding ratio scales. The initial measure presented in this table does not depict this due to formatting reasons. That is, being a sliding ratio scale, respondents could select any option between: 0 and 50 years.</b></p>												

**Table 4.22. Initial measure of export ratio (EXPORTS)**

		What percentage of your firm's sales are from exports?										
Code*	Item	0	10	20	30	40	50	60	70	80	90	100
EXPORTS	Exports (%)											
<p><b>*This initial measure of export ratio (EXPORTS) was measured using a sliding ratio scale. The initial measure presented in this table does not depict this style due to formatting reasons. That is, being a sliding ratio scale, respondents could select any option between: 0 and 100%.</b></p>												

**Table 4.23. Initial measure of informant quality (PQUAL)**

To what extent do the statements below describe your suitability for completing this questionnaire?								
Codes	Items	1 = not at all	2 = to a very slight extent	3 = to a small extent	4 = to a moderate extent	5 = to a considerable extent	6 = to a great extent	7 = to an extreme extent
PQUAL_1	I am completely confident about my answers to the questions							
PQUAL_2	I am confident that my answers reflect our company's situation							
PQUAL_3	This questionnaire deals with issues I am very knowledgeable about							
PQUAL_4	My job qualifies me as an appropriate person to complete this questionnaire							
PQUAL_5	I am competent to answer the above questions							

#### 4.6.4.5. Full-time employees

To initially measure the number of full-time employees in the respondents' organisations, a new ratio scale was developed (see Table 4.24). This question ranged from: 0 to 5,000 full-time employees. Referring to section 4.5.3 (in terms of the role of Qualtrics in the sampling of respondents), Qualtrics would screen out respondents who indicated that their corporation had less than 100 full-time employees, as this would be a sign of being a small business in the United States (see SBA, 2016). The initial measure of respondents' functional role follows in the next section.

#### 4.6.4.6. Functional role

As mentioned in section 4.5.3 (in terms of the role of Qualtrics in sampling respondents), a question was required pertaining to the respondents' functional role. An originally-developed list was created that stated five options (listed in order of seniority), plus, an "other (please specify)" option (see Table 4.25). If respondents chose the "other (please specify)" option, Qualtrics would screen such respondents out of the survey as they would be assumed to not hold a managerial position that qualified them to complete the questionnaire. These initial measures were developed during and between several supervision meetings in which the survey was prepared for the pre-testing interviews with academics and practitioners who were deemed knowledgeable on the content of the survey. The pre-testing of the questionnaire is discussed in the following section.

### **4.7. Pre-testing of the questionnaire**

#### 4.7.1. Protocol versus debriefing

Pre-testing involves seeking feedback (both positive and negative) on a questionnaire to determine whether it is ready to be administered (Reynolds, Diamantopoulos and Schlegelmilch, 1993). There are two main pre-testing techniques: de-briefing and protocol methods. De-briefing involves a researcher working through the questionnaire with a respondent and receiving feedback on a face-to-face basis (Bolton, 1993). Protocol involves a researcher sending a questionnaire to a respondent and receiving feedback (usually written) after they have had an opportunity to work through the survey (Reynolds and Diamantopoulos, 1998). The type of feedback expected from the pre-testing process included:

1. Formatting (i.e., are questions and instructions easy to read/follow?)
2. Length (i.e., will respondents become fatigued?)
3. Response rates (i.e., will the survey gain low interest?)
4. Sensitive issues (i.e., will respondents feel uncomfortable about answering questions?)
5. Language (i.e., is the survey written in American English?)
6. Composition (i.e., is there an appropriate use of grammar?)

Pre-testing interviewees were contacted through protocol and debriefing methods to obtain feedback on this PhD questionnaire before it was administered. As a large proportion of the survey contained new measures (e.g., CVO managerial human capital, CVO managerial cognition, CVO managerial social capital, and the CVODL), there was a need to improve these measures (as well as the established scales, such as sales performance, intelligence responsiveness and market dynamism) as much as possible – in terms of maximising variance and obtaining reliable scales. Furthermore, it was of interest to make the survey as clear to the respondents as possible. That is, as the research team designing the survey originated from the United Kingdom, the wording of the questionnaire needed to be presented in a familiar way to American respondents. Hence, the pre-testing stage involved seeking assistance/feedback on both content and cosmetic issues pertaining to the survey. The sampling of pre-testing interviewees is described in the following section.

#### 4.7.2. Sampling of pre-testing interviewees

As mentioned in section 4.7.1 (in terms of an overview of the pre-testing stage), pre-testing interviewees were contacted through a mixture of protocol and de-briefing methods. Due to the nature of the intended sample, there was an underlying theme in the pre-testing stage of selecting participants that had some awareness and/or experience of the American culture. However, Vandello and Cohen (1999) found that different parts of the United States are so diverse from one another, that they have region-specific cultures that are distinguished by: political orientations (i.e., Democratic versus Republican Party voters), economic wealth, and other demographic factors, such as age and education.

**Table 4.24. Initial measure of full-time employees (WORK)**

How many full-time US employees does your organization have?												
Code*	Item	0	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
WORK	How many full-time US employees does your organization have											
<b>*This initial measure of full-time employees (WORK) was measured using a sliding ratio scale. The initial measure presented in this table does not depict this due to formatting reasons. That is, being a sliding ratio scale, respondents could select any option between: 0 and 5,000.</b>												

**Table 4.25. Initial measure of functional role (ROLE)**

How would you describe your functional role (please choose one option)?		
<b>Codes</b>	<b>Items</b>	<b>Answer space</b>
ROLE_1	Owner	
ROLE_2	CEO/Director	
ROLE_3	Senior manager	
ROLE_4	Middle manager	
ROLE_5	Junior manager	
ROLE_6	Other (please specify)	



Hence, when selecting pre-testing interviewees with experience of American culture, a mixture of regions (in terms of geography such as the “Mid-West” versus “New England”) (see Dillman, Christenson, Carpenter and Brooks, 1974; Drucker, 2011) were used to make the questionnaire as relevant to all parts of the country as possible. Participants were purposively identified through the recommendations of Dillman, Smyth and Christian (2009), in terms of seeking feedback from academic and practical experts that would have varied insights into the content and format of the survey. Interviewees were therefore, sampled from the following four main groups.

The first group was academics who had theoretical knowledge in the subject area of this PhD thesis (i.e., in marketing – specifically, market orientation). The second group was academics who had some connection with the theories and/or methods used in this investigation. The third group was senior managers who could provide practical insights into the questionnaire, particularly, those that matched the profile of the intended respondents. The fourth group was PhD students at Loughborough University who could provide insights from their own studies and practical experience.

The final sample for the pre-testing stage involved 22 interviewees (10 protocol and 12 de-briefing) across each of the above groups (see Appendix 2). Furthermore, miscellaneous assistance was provided by: Professor Nicole E. Coviello (Wilfrid Laurier University in Waterloo, Ontario), Dr Stephanie A. Fernhaber (Butler University in Indianapolis, Indiana), and Professor James P. Johnson (Rollins College in Orlando, Florida), as well as general feedback received at the *McGill International Entrepreneurship Conference’s Doctoral Colloquium* and the *American Marketing Association’s Special Interest Group in Entrepreneurial Marketing* (both in August 2016). This miscellaneous feedback was not counted towards the pre-testing sample (as such feedback was not recorded in the same in-depth format as the core 22 pre-testing interviews), but was used as over-arching feedback. The analysis of the pre-testing data is discussed in the following section.

#### 4.7.3. Analysis of pre-testing data

Regardless of whether a pre-testing interview was conducted through de-briefing or protocol, all were written up immediately after they had taken place. While some interviewees provided more feedback than others, comments were always provided

in a construct-specific format as well as some general comments at the end. The pre-testing process allowed key themes to emerge clearly, which indicated any problems that needed to be addressed. After the fifteenth pre-testing interview, a point of theoretical saturation had begun to develop in which no new significant problems were emerging from the interviews - suggesting that the pre-testing could be terminated. An additional seven interviews were conducted with those who had kindly spared their time. In these final interviews, no new significant themes emerged, confirming earlier assertions that the pre-testing stage could end<sup>5</sup>. All construct-specific comments (and some additional general comments) were reviewed and changes were made to most constructs. The major changes made to the survey are explained in the subsequent sections.

#### 4.7.4. Changes to the survey after the pre-testing stage

##### 4.7.4.1. Overview of the major changes to the survey after the pre-testing stage

The purpose of this section is to highlight the major changes that were made to the survey between the end of the pre-testing stage and the administering of the first pilot study. It was deemed important to respect interviewees' perspectives on the survey (especially since they were all deemed as knowledgeable on various aspects pertaining to the questionnaire), but at the same time, acknowledge that while a theme appeared, it did not necessarily mean that it would be changed. For example, 19 out of the 22 interviewees indicated that for various constructs (e.g., CVO managerial human capital and the CVODL), the items were worded very similarly. While this was true, in numerous questions, the items were largely kept the same as they needed to capture shared variance in measuring latent variables (Diamantopoulos and Winklhofer, 2001; de Jong, Fox and Steenkamp, 2015). There were some survey questions that were particularly problematic; the measure of proactiveness required respondents to answer the question using a drag/drop style. Some interviewees were either unsure of how to answer this question, or knew how to answer the question themselves, but did not think respondents would. Hence, this

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<sup>5</sup> In mainstream qualitative research, theoretical saturation is usually the stage at which researchers (e.g., interviewers) decide to terminate their data collection stage, as they have a sufficient quantity and quality of information (Sinkovics, Penz and Ghauri, 2005).

question type was changed to a more conventional scale type, which was far more user-friendly with the pre-testing interviewees.

Some questions were not written in a way that would be unfamiliar to managers based in the United States. This problem was not just spelling-based differences (e.g., “organisation” versus “organization”), but terminology that would have been unfamiliar to American managers. These wording-based issues were simple to address, as pre-testing interviewees provided alternative (and more suitable) terms. A slightly more serious problem was that when asking participants to select their functional role, the initial options provided (e.g., “owner, senior manager, middle manager, and junior manager”) were not applicable for American respondents. Pre-testing interviewees suggested that American job titles (such as President, CEOs, CFOs, COOs, and the Chairman of the Board of Directions) should be used instead. When asking respondents to select the industry, in which they compete, the original options were geared towards manufacturers and not a general distribution of industries. Several respondents suggested that the “North American Industry Classification System” code should be used instead (United States Census Bureau, 2012). These pre-testing comments were deemed as reasonable and were implemented into the revised questionnaire. Finally, a variety of miscellaneous (but smaller) changes were made to the questionnaire (e.g., altering the order of the questions). The specific changes made to each of the constructs’ operationalisations are described in the following sections<sup>6</sup>.

#### 4.7.4.2. Firm size

Instead of using a ratio scale, it was suggested by 18 out of the 20 interviewees that a categorical scale should be used instead to measure annual sales (as a proxy for the firm size variable). As such, a measure was adapted from Josephson, Johnson and Mariadoss (2016) to provide respondents with a seven-point categorical scale with specific options (see Table 4.26). The revised measure of entrepreneurial orientation is presented in the next section.

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<sup>6</sup> Please note that if a construct is not listed in the subsequent sections, it was not changed after the pre-testing stage (due to being satisfactory in its then current condition).

#### 4.7.4.3. Entrepreneurial orientation

The scales for the innovativeness and risk-taking dimensions of entrepreneurial orientation were deemed to be acceptable for the pre-testing respondents. However, there was a concern linked to the proactiveness facet of the construct. That is, as mentioned in section 4.6.3.4, proactiveness was initially measured using a drag/drop scale type. During the pre-testing stage, 20 out of the 22 interviewees indicated that the drag/drop style could cause trouble for respondents as they may not know how to answer the question. Further, the same 20 interviewees highlighted that a traditional/conventional scale type (as per all the other operationalisations) would be simpler for the respondents. Consequently, the measure for proactiveness was left the same (in terms of the wording – as this was approved during the pre-testing stage), but was changed to a more traditional and conventional scale type (see Table 4.27). The revised operationalisation of the industry type variable is outlined in the following section.

#### 4.7.4.4. Industry type

The list of industry types that were presented to pre-testing interviewees was criticised for being inapplicable to American respondents. Specifically, the list of industry types was focused on manufacturers, rather than service-oriented firms (which were within the sampling frame). The original measure (sourced from Dai, Maksimov, Gilbert and Fernhaber, 2014) was indeed applicable to manufacturing corporations and therefore, needed to be changed to an industry classification guide that would be applicable to a broader range of organisations in the United States. As noted in section 4.7.4.1 (in terms of the general feedback from the pre-testing stage), several pre-testing interviewees recommended that the North American Industry Classification System code should be used instead (United States Census Bureau, 2012). The North American Industry Classification System code is a guide used by almost all of companies in the United States (as well as Canada and Mexico); hence, it was deemed as a suitable measure of the industry type variable (see Table 4.28). The revised measure of respondents' experience is presented in the subsequent section.

#### 4.7.4.5. Respondents' experience

In the initial measure, respondents' experience was operationalised using two questions (each on a ratio scale ranging from: 0 to 50 years) (as noted in section 4.6.4.2). However, during the pre-testing stage, respondents suggested that in the United States, it is highly-unlikely that senior managers will have worked in their current role (and current organisation) for more than 35 years. Thus, several interviewees recommended that the original ratio, should be changed to range from: 0 to 35 years. As such, this scale was changed to this specification based upon the expertise of these interviewees (see Table 4.29). The revised measurement scale for the number of full-time employees follows in the next section.

#### 4.7.4.6. Full-time employees

A significant problem during the pre-testing stage was that the original scale for the number of full-time employees (as noted in section 4.6.4.5) ranged from: 0 to 5,000 full-time employees. However, almost all pre-testing interviewees indicated that the scale should be significantly extended to apply to larger corporations in the United States (as many large American firms employ more than the initial upper limit of 5,000 full-time people). Hence, the scale was extended to range from: 0 to 50,000 full-time employees in the United States. That said, as this revised scale had considerably more anchor points than the original scale, the measure needed to be split into two separate scales – otherwise, the scale points would have been condensed together into an unreadable/unclear format to respondents (whereby, the scale points overlapped in an illegible style).

When designing these two separate scales, a filter question was asked to determine whether respondents' organisations employed more/less than 2,000 full-time employees in the United States. If respondents chose the "less than 2,000 full-time employees" in the United States option, a scale would appear ranging from: 0 to 1,999 full-time employees. If respondents' companies employed 100 or less full-time employees, they would be screened out of the survey (as per the specifications of the questionnaire stated in section 4.5.3). If respondents chose the "more than 2,000 full-time employees" in the United States option, a different scale would appear ranging from: 2,000 to 50,000 full-time employees (see Table 4.30). In the following section,

an explanation is provided about a new variable added to the survey (namely, the respondents' business unit location).

#### 4.7.4.7. Business unit location

During the first-draft of the questionnaire (i.e., the version presented to the pre-testing interviewees), there was not a question pertaining to the location of the respondents' business unit. However, during several presentations at the *American Marketing Association's Special Interest Group in Entrepreneurial Marketing* (in August 2016) (where a few pre-testing interviews took place), some American authors/presenters recorded survey data on the location of their sample. As such, a new question was added to the survey to record the location of the respondents' business unit. That is, it was anticipated that if this new question had asked respondents for the location of their corporation's headquarters, only a few industrial locations would be provided (e.g., New York, California, Texas, Illinois, and Florida) (based on the dialogue with the pre-testing interviewees).

By using the business unit location of the respondents' firms, it was expected that a larger distribution of locations would be provided (i.e., industrial and non-industrial locations). Moreover, it was of interest to sample a range of locations, including rural (non-industrial) American States (e.g., Vermont, Utah, Alaska, New Mexico, and Wyoming). To measure this variable, a dropdown menu was provided that listed all fifty of the American States (in alphabetical order), followed by: Washington D.C., United States Territories (e.g., Guam or Puerto Rico), and an "other" option (for American businesses with an international subsidiary) (see Table 4.31).

The changes made to the questionnaire were discussed and approved by the supervisory team. In summary of the pre-testing stage, the depth of the 22 pre-testing interviews with academics and practitioners helped shape the nature of the survey, in terms of content (e.g., measurement factors) and cosmetic (e.g., wording factors) issues. The piloting of the survey is discussed in the following section.

**Table 4.26. Measure of firm size (SIZE) in the first pilot study**

What is your organization's annual revenue in \$US (please note that this will be treated with complete confidentiality)?								
Code	Item	1 = less than \$10 million	2 = \$10 – 49 million	3 = \$50 – 99 million	4 = \$100 – 499 million	5 = \$500 – 999 million	6 = \$1 – 5 billion	7 = greater than \$5 billion
SIZE	Revenues (\$US)							

**Table 4.27. Measure of proactiveness (PRCT) used in the first pilot study**

Over the last 3 years, in our industry...								
Codes	Items	1 = not at all	2 = to a very slight extent	3 = to a small extent	4 = to a moderate extent	5 = to a considerable extent	6 = to a great extent	7 = to an extreme extent
PRCT_1	... we sought to exploit anticipated changes in our target market ahead of our rivals							
PRCT_2	... we seized initiatives whenever possible in our target market operations							
PRCT_3	... we acted opportunistically to shape the business environment in which we operated							



**Table 4.28. Measure of industry type (INDS) used in the first pilot study**

What industry does your organization compete in (please choose one)?		
<b>Codes</b>	<b>Items</b>	<b>Answer space</b>
INDS_1	Agriculture, Forestry, Fishing and Hunting	
INDS_2	Mining, Quarrying and Oil and Gas Extraction	
INDS_3	Utilities	
INDS_4	Construction	
INDS_5	Manufacturing	
INDS_6	Wholesale Trade	
INDS_7	Retail Trade	
INDS_8	Transporting and Warehousing	
INDS_9	Information	
INDS_10	Finance and Insurance	
INDS_11	Real Estate and Rental Leasing	
INDS_12	Professional, Scientific and Technical Services	
INDS_13	Management of Companies and Enterprises	
INDS_14	Administrative Support	
INDS_15	Education Services	
INDS_16	Health Care and Social Assistance	
INDS_17	Arts, Entertainment and Recreation	
INDS_18	Accommodation and Food Services	
INDS_19	Other Services (except Public Administration)	
INDS_20	Public Administration	
INDS_21	Other	

**Table 4.29. Measure of respondents' experience (EXPNC) used in the first pilot study**

Please answer the following questions about your experience in this organization:									
<b>Codes*</b>	<b>Items</b>	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>
EXPNC_1	How many years have you held your current job title?								
EXPNC_2	How many years have you worked in this organization?								
<p><b>*This measure of respondents' experience (EXPNC) was measured using two sliding ratio scales. The measure presented in this table does not depict this due to formatting reasons. That is, being a sliding ratio scale, respondents could select any option between: 0 and 35 years.</b></p>									

**Table 4.30. Measure of full-time employees (WORK) used in the first pilot study**

		How many full-time US employees does your organization have (000s)?										
Code*	Item	0	5	10	15	20	25	30	35	40	45	50
WORK	US employees											
<p><b>*Respondents were asked to indicate whether their organisation has “more/less than 2,000 full-time US-based employees.” If they chose the “no” option, a sliding ratio scale would appear ranging from: 0 to 1,999 full-time US-based employees. If they chose the “yes” option, a different sliding ratio scale would appear ranging from: 2,000 to 50,000.</b></p>												

**Table 4.31. Measure of business unit location (USA) used in the first pilot study**

From the following list, where is your business unit located?		
<b>Codes</b>	<b>Items</b>	<b>Answer space</b>
USA_1	Alabama	
USA_2	Alaska	
USA_3	Arizona	
USA_4	Arkansas	
USA_5	California	
USA_6	Colorado	
USA_7	Connecticut	
USA_8	Delaware	
USA_9	Florida	
USA_10	Georgia	
USA_11	Hawaii	
USA_12	Idaho	
USA_13	Illinois	
USA_14	Indiana	
USA_15	Iowa	
USA_16	Kansas	
USA_17	Kentucky	
USA_18	Louisiana	
USA_19	Maine	
USA_20	Maryland	
USA_21	Massachusetts	
USA_22	Michigan	
USA_23	Minnesota	
USA_24	Mississippi	
USA_25	Missouri	
USA_26	Montana	
USA_27	Nebraska	
USA_28	Nevada	
USA_29	New Hampshire	
USA_30	New Jersey	
USA_31	New Mexico	
USA_32	New York	
USA_33	North Carolina	
USA_34	North Dakota	
USA_35	Ohio	
USA_36	Oklahoma	
USA_37	Oregon	
USA_38	Pennsylvania	
USA_39	Rhode Island	
USA_40	South Carolina	
USA_41	South Dakota	
USA_42	Tennessee	
USA_43	Texas	

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USA_44	Utah	
USA_45	Vermont	
USA_46	Virginia	
USA_47	Washington	
USA_48	West Virginia	
USA_49	Wisconsin	
USA_50	Wyoming	
USA_51	Washington D.C.	
USA_52	US Territory	
USA_53	Other	

## 4.8. Piloting of the survey

### 4.8.1. Reasoning for conducting a pilot study

A pilot study is a preliminary investigation that takes a small sub-set of a population to gauge: an indication of the ease of completing a questionnaire, likely response rates, the time that the survey will take to complete, and the cost of administering the full (core) study (Johanson and Brooks, 2010). Pilot studies also give researchers an opportunity to improve the core study's results; for example, if there is an unreliable scale, or a high-degree of missing data, it may be that the questions need to be changed before: time, effort, and cash are spent administering a core study (Bryman, 2012). Furthermore, as described in section 4.5.3 (in terms of the role of Qualtrics in the data collection stage of the study), Qualtrics had been commissioned to collect 260 completed responses (60 pilot responses and 200 core responses). However, Qualtrics stated that the 260 responses could be collected in any combination that the client (in the case of this PhD investigation, the research team) specified. The first pilot study is described as follows.

### 4.8.2. First pilot study

#### 4.8.2.1. Sample size for the first pilot study

Following section 4.8.1 (in terms of the number of responses contracted by Qualtrics), 60 pilot responses were deemed to be an excessive sample size for a pilot study, for which a smaller pilot sample of 45 responses was estimated to be a more reasonable sample size (based on the guidance from Bockenholt and Dillon, 1997; Johanson and Brooks, 2010). If Qualtrics would not over-sample (as they suggested), the research team did not feel it was wise to conduct a pilot study with a large sample, as this would mean that fewer responses would remain for the core study.

Moreover, despite the intention of the research team to merge the pilot study's data with the core study's data (if major differences between two datasets did not exist) (as per Morgan and Hunt, 1994), if the pilot study could not be merged with the core study, it was important to have the largest sample size possible to maximise the inference from the core study (Diamantopoulos and Siguaw, 2000). As such, a sample of 45 observations was collected for the first pilot study. When analysing the results from the first pilot study, it was discovered that numerous scales (both new

and established operationalisations) had high averages, with low variances. Henceforth, significant adaptations had to be made to these measures before the core study could be administered. The specific changes made to the problematic scales are explained in the following sections.

#### 4.8.2.2. CVO managerial human capital

Due to each item having high averages and a lack of variance, the measure of CVO managerial human capital was adapted. Specifically, an extremely low proportion of respondents were not choosing the lower three anchor points on the semantic differential scale. That is, before any adaptations were made, the lower anchor points were given terms such as “1 = ... had no expertise”, and the higher anchor points were given terms, such as “7 = ... had lots of expertise”. Each item was changed to range from: an averagely-worded term (e.g., “just satisfactory”) to an extremely-worded term (e.g., “truly excellent”) (see Table 4.32). The revised measure of CVO managerial cognition is presented in the next section.

#### 4.8.2.3. CVO managerial cognition

Instead of using a dropdown menu, the measure for CVO managerial cognition was changed to a scale type where respondents would have to click a certain anchor point. Moreover, the anchor points were changed to range from: 1 = to a small extent to 7 = to an extreme extent<sup>7</sup>. Further, when changed, the even-numbered scale points did not have a label, whereby, if respondents wanted to provide an answer that was between labelled options (e.g., “to a moderate extent” and “to a considerable extent”), they would be given this option (see Table 4.33). The revised of CVO managerial social capital is discussed in the next section.

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<sup>7</sup> Non-labelled even-numbered anchor points were used in the adaptation of various constructs’ operationalisations. These non-labelled anchor points (used to stretch the variance of certain skewed variables) will be outlined in the subsequent sections, but to reduce repetition, the same detail will not be provided (as per the discussion on CVO managerial cognition) as the exact reasoning was used. Please also note that numerous scales were adapted so that the anchor points ranged from: an averagely-worded term to a term used to denote a high-level of a certain variable. As such, when referring to a variable’s measurement scale being changed to the above-mentioned format (e.g., “neither agree nor disagree” to “very strongly agree”), such alterations were made based on the scale frequencies (and associated lack of variance) to stretch the distribution of variables.

**Table 4.32. Measure of CVO managerial human capital (MHC) used in the second pilot study**

CUSTOMER VALUE represents the benefits a customer experiences from buying a good or service minus the cost they incur to receive such benefits.									
Over the last 3 years, in terms of providing customers with value, senior managers in our organization...									
<b>Codes</b>	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Items</b>
MHC_1	... average								... downright excellent
MHC_2	... moderate								... beyond outstanding
MHC_3	... just satisfactory								... truly excellent
MHC_4	... mediocre								... off the scale



**Table 4.33. Measure of CVO managerial cognition (MCG) used in the second pilot study**

Over the last 3 years, managers in our organization believed that...								
Codes	Items	1 = to a small extent	2	3 = to a moderate extent	4	5 = to a considerable extent	6	7 = to an extreme extent
MCG_1	... businesses succeed because they have created customer value							
MCG_2	... business performance is primarily driven by creating customer value							
MCG_3	... creating customer value is an important driver of success							
MCG_4	... customer satisfaction is a core driver of business performance							

#### 4.8.2.4. CVO managerial social capital

Regarding the first facet of CVO managerial social capital, this measure was changed from a seven-point Likert scale into a nine-point Likert scale. Moreover, the revised scale points ranged from: 1 = neither agree nor disagree to 9 = very strongly agree. Like other revised scales, the even-numbered scale points were not given a label (see Table 4.34).

In terms of the third facet of CVO managerial social capital, this operationalisation was changed to a similar format to CVO managerial human capital (as explained in section 4.8.2.2). That is, instead of using terms such as “minimally” for the lower anchor points and “maximally” for the higher anchor points, the revised scale used average-like terms for the lower-end of the scale (e.g., “moderate”) and extremely-worded terms for the higher-end of the scale (e.g., “beyond outstanding”) (see Table 4.35).

The fourth facet of CVO managerial social capital was adapted from a seven-point Likert scale into a nine-point Likert scale. Each item was changed to range from: 1 = neither agree nor disagree to 9 = very strongly agree. Further, like other revised operationalisations, even-numbered scale points were not labelled (see Table 4.36). The revised measure of the CVODL construct in the next section.

#### 4.8.2.5. CVODL

The CVODL construct’s measurement scale was changed from a dropdown menu format to a scale, in which respondents would have to click a scale point that matched their views (as used for several other operationalisations). Furthermore, the measure of the CVODL construct was changed from a seven-point Likert scale to a nine-point Likert scale with non-labelled even-numbered anchor points. Each item ranged from: 1 = neither agree nor disagree to 9 = very strongly agree (see Table 4.37). The revised of sales performance is measure is outlined in the subsequent section.

#### 4.8.2.6. Sales performance

The operationalisation of sales performance was changed from a seven-point Likert scale to a nine-point Likert scale. Each item ranged from: 1 = worse than rivals to 9 = much better than rivals. Moreover, like certain other variables’ measures, even-

numbered anchor points were not labelled (see Table 4.38). The revised measures of the dimensions of environmental turbulence follow in the next section.

**Table 4.34. Measure of CVO managerial social capital (facet 1) (SC\_F1) used in the second pilot study**

	<p>NETWORK MEMBERS are the stakeholders an organization has relationships with; for example, industry-specific groups, suppliers, shareholders and competitors.</p> <p>Over the last 3 years, our organization has had...</p>									
<b>Codes</b>	<b>Items</b>	<b>1 = neither agree nor disagree</b>	<b>2</b>	<b>3 = slightly agree</b>	<b>4</b>	<b>5 = agree</b>	<b>6</b>	<b>7 = strongly agree</b>	<b>8</b>	<b>9 = very strongly agree</b>
SC_F1_1	... the ability to access customer value-creating resources from our network members									
SC_F1_2	... network members with the resources to allowed us to create customer value									
SC_F1_3	... network members that helped us create customer value via the resources they provided									
SC_F1_4	... network members that were able to help us gain resources needed to create customer value									

**Table 4.35. Measure of CVO managerial social capital (facet 3) (SC\_F3) used in the second pilot study**

Over the last 3 years, to what extent have your organization's network members focused on creating customer value?									
<b>Codes</b>	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Items</b>
SC_F3_1	Average								Downright excellent
SC_F3_2	Moderate								Beyond outstanding
SC_F3_2	Just satisfactory								Truly exceptional
SC_F3_4	Mediocre								Off the scale

**Table 4.36. Measure of CVO managerial social capital (facet 4) (SC\_F4) used in the second pilot study**

Over the last 3 years, in our organization...										
Codes	Items	1 = neither agree nor disagree	2	3 = slightly agree	4	5 = agree	6	7 = strongly agree	8	9 = very strongly agree
SC_F4_1	... our approach to business mirrored that of our network members									
SC_F4_2	... we learned many lessons from our network members' approach to business									
SC_F4_3	... our way of doing business reflected that of our network members									
SC_F4_4	... network members' approach to business shaped our approach to business									

**Table 4.37. Measure of the CVODL (CVODL) used in the second pilot study**

Over the last 3 years, if you had asked senior managers their opinion, they would have said that...										
Codes	Items	1 = neither agree nor disagree	2	3 = slightly agree	4	5 = agree	6	7 = strongly agree	8	9 = very strongly agree
CVOD L_1	... all of our business functions should revolve around creating customer value									
CVOD L_2	... underpinning every strategy driving us forward should be the desire to create customer value									
CVOD L_3	... a core purpose of our business activities should be to create customer value									
CVOD L_4	... fulfilling every customer's wants and needs should be an important activity in our organization									
CVOD L_5	... our organizational culture should strive to create value for our customers									
CVOD L_6	... adding value to our customers should be an important activity in our organization									

**Table 4.38. Measure of sales performance (SALES) used in the second pilot study**

		Over the past year, how well has your organization performed in its markets relative to key competitors?								
<b>Codes</b>	<b>Items</b>	<b>1 = worse than rivals</b>	<b>2</b>	<b>3 = the same as rivals</b>	<b>4</b>	<b>5 = slightly better than rivals</b>	<b>6</b>	<b>7 = better than rivals</b>	<b>8</b>	<b>9 = much better than rivals</b>
SALES_1	Market share growth									
SALES_2	Sales growth									
SALES_3	Sales volume growth									



#### 4.8.2.7. Environmental turbulence

Competitive intensity was kept as a seven-point Likert scale, but the names of the anchor points were adapted after the first pilot study. Specifically, each item ranged from: 1 = neither agree nor disagree to 7 = very strongly agree, with even-numbered scale points not being labelled (see Table 4.39).

Technological turbulence was changed from a seven-point Likert scale to a nine-point Likert scale, with each item ranging from: 1 = neither agree nor disagree to 9 = very strongly agree. Further, as per various other constructs' measurement scales, the even-numbered anchor points were not labelled (see Table 4.40). The revised measure of intelligence responsiveness is described in the next section.

#### 4.8.2.8. Intelligence responsiveness

The operationalisation of intelligence responsiveness was changed from a dropdown menu to a different scale type, in which respondents would have to click a certain answer that was in sync with their views. Furthermore, this measure was adapted from a seven-point Likert scale into a nine-point Likert scale with non-labelled even-numbered scale points (in the same style as other constructs' measures). Each item ranged from: 1 = neither agree nor disagree to 9 = very strongly agree (see Table 4.41). The revised measurement scales for entrepreneurial orientation are highlighted in the following section.

#### 4.8.2.9. Entrepreneurial orientation

The operationalisation of innovativeness was kept as a seven-point Likert scale, but the names of the anchor points were changed. That is, each item was changed to range from: 1 = to a small extent to 7 = to an extreme extent. Furthermore, the even-numbered scale points were not labelled (as per numerous other measurement scales within the survey) (see Table 4.42). Moreover, the measure of innovativeness was moved to the beginning of the survey (after the two screening questions – i.e., full-time employees and functional role) because previously, the first core question was CVO managerial human capital, which could have created skewed results, in which respondents would rate their senior management teams as being highly-skilled in creating customer value (i.e., a high-degree of CVO managerial human capital). Placing the innovativeness variable before CVO managerial human capital, it was deemed as a mechanism to reduce respondents' bias.

**Table 4.39. Measure of competitive intensity (COMP) used in the second pilot study**

Over the last 3 years, in our organization we found that...								
Codes	Items	1 neither agree nor disagree	2	3 = agree	4	5 strongly agree	6	7 = very strongly agree
COMP_1	... competition in our industry has been cut-throat							
COMP_2	... there have been many “promotion wars” in our industry							
COMP_3	... anything that one competitor can offer, others could match readily							
COMP_4	... price competition was a hallmark in our industry							
COMP_5	... we heard of a new competitive move almost every day							
COMP_6	... our competitors were relatively strong							

**Table 4.40. Measure of technological turbulence (TT) used in the second pilot study**

Over the last 3 years, in our industry we have found that...										
Codes	Items	1 = neither agree nor disagree	2	3 = slightly agree	4	5 = agree	6	7 = strongly agree	8	9 = very strongly agree
TT_1	... the technology changed rapidly									
TT_2	... technological changes provided big opportunities									
TT_3	... it was very difficult to forecast where the technology would be in the next 2 to 3 years									
TT_4	... a large number of new product ideas were made possible through technological breakthroughs									
TT_5	technological developments in our industry were relatively major									

**Table 4.41. Measure of intelligence responsiveness (RESP) used in the second pilot study**

Over the last 3 years, in our organization...										
Codes	Items	1 = neither agree nor disagree	2	3 = slightly agree	4	5 = agree	6	7 = strongly agree	8	9 = very strongly agree
RESP_1	... we were quick to respond to significant changes in our competitors' price structures									
RESP_2	... we responded to competitive actions that threaten us									
RESP_3	... if a major competitor had launched an intensive campaign targeted at our customers, we would have responded immediately									
RESP_4	... when we found out that customers are unhappy with the quality of our product or service, we took corrective action immediately									
RESP_5	... we were quick to respond to important changes in our business environment (e.g., regulatory, technology, economic)									

**Table 4.42. Measure of innovativeness (INNV) used in the second pilot study**

Over the last 3 years, in our organization...								
Codes	Items	1 = to a small extent	2	3 = to a moderate extent	4	5 = to a considerable extent	6	7 = to an extreme extent
INNV_1	We were known as an innovator							
INNV_2	... we promoted new, innovative products/services							
INNV_3	... we were leaders in developing new products/services							
INNV_4	... we built a reputation for being the best for developing new methods and technologies							
INNV_5	... we constantly experimented with new products/services							

The measure of proactiveness was changed from a seven-point Likert scale to a nine-point Likert scale, with the even-numbered anchor points not having labels. Each item was adapted to range from: 1 = to a small extent to 9 = to an extreme extent (see Table 4.43). The revised is described in the next section.

#### 4.8.2.10. Functional role

The format of the operationalisation of respondents' functional role was largely kept the same (as the first pilot study), in which managers would be required to indicate (from a specified list) which functional role they would describe that they had. Moreover, if respondents chose the "other (please specify)" option (as noted in section 4.5.3 in terms of the role of Qualtrics in the sampling process), Qualtrics would screen such respondents out of the survey as they would not be eligible to complete the questionnaire (i.e., due to not being senior managers) (see Table 4.44). A new variable (examining organisational performance) was added to the survey; this is described as follows.

#### 4.8.2.11. Organisational performance

A new question was added to the survey concerning the financial performance of the sampled organisations. While annual revenue was used to measure a firm's size, the questionnaire also captured data on organisational performance, in terms of the degree to which the company's financial performance (return on investments, overall profitability, and sales) had changed over a one-year period on sliding ratio scales ranging from: -100% to 200%. This operationalisation was sourced from Boso, Story and Cadogan (2013) (see Table 4.45). After making the above-specified changes to the questionnaire (due to the results from the first pilot study), a decision was made to validate these adaptations with a second pilot study.

While conducting a second pilot study reduced the remaining responses that Qualtrics would collect during the core study, it would have been too risky to assume that such changes would work (i.e., obtain better results) without a second pilot study. Qualtrics were then contacted to collect another 45 completed responses. Even if these 45 responses could not be merged with the eventual core study, the core study would collect at least 170 responses. In the following section, the changes made to the questionnaire during the second pilot study are discussed. An explanation is provided in the next section about the process used in the second pilot study.

**Table 4.43. Measure of proactiveness (PRCT) used in the second pilot study**

Over the last 3 years, in our industry...										
Codes	Items	1 = to a small extent	2	3 = to a moderate extent	4	5 = to a considerable extent	6	7 = to a great extent	8	9 = to an extreme extent
PRCT_1	... we sought to exploit anticipated changes in our target market ahead of our rivals									
PRCT_2	... we seized initiatives whenever possible in our target market operations									
PRCT_3	... we acted opportunistically to shape the business environment in which we operated									

**Table 4.44. Measure of functional role (ROLE) used in the second pilot study**

How would you describe your functional role (please choose one option)?		
<b>Codes</b>	<b>Items</b>	<b>Answer space</b>
ROLE_1	Chairman of the Board of Directors	
ROLE_2	Vice Chairman of the Board of Directors	
ROLE_3	CEO	
ROLE_4	CFO	
ROLE_5	COO	
ROLE_6	President	
ROLE_7	Company Secretary	
ROLE_8	Treasurer	
ROLE_9	Executive Vice President	
ROLE_10	Senior Vice President	
ROLE_11	Vice President	
ROLE_12	Director	
ROLE_13	Other (please specify)	



**Table 4.45. Measure of organisational performance (PERF) used in the second pilot study**

Over the last year, approximately by what percentage has your organization's financial performance changed?												
Codes*	Items	-100	-70	-40	-10	20	50	80	110	140	170	200
PERF_1	Return on investments											
PERF_2	Sales											
PERF_3	Overall profitability											
<p><b>*This measure of organisational performance (PERF) was measured using three sliding ratio scales. The measure presented in this table does not depict this due to formatting reasons. That is, being a sliding ratio scale, respondents could select any option between: -100 and 200%.</b></p>												

### 4.8.3. Second pilot study

#### 4.8.3.1. Sample size for the second pilot study

As noted in section 4.8.2.11 (in terms of the rationale for conducting a second pilot study), a second pilot study was undertaken to validate the changes made to the survey after the first pilot study. As Qualtrics had collected 45 complete responses for the first pilot study, an equal sample was requested from Qualtrics for the second pilot study. However, Qualtrics over-sampled and collected 49 responses, with the additional four observations not counting towards the original contract of 260 responses. After the second pilot study, Qualtrics was still required to collect another 170 responses for the core study. In terms of the problematic measurements within the second pilot study, the scales had larger variances than the first pilot study, as participants responded better to the changes. However, there were still some variance-based concerns linked to certain constructs' operationalisations. In some cases, eleven-point Likert scales were employed to extend the variance in the core study, but in most cases, nine-point Likert scales captured sufficient variances. The specific changes made to the constructs' measures are described as follows.

#### 4.8.3.2. CVO managerial social capital

The first facet of CVO managerial social capital's operationalisation was revised into a new nine-point Likert scale. Each item was now ranged from: 1 = slightly agree to 9 = agree to an extreme extent, with the even-numbered scale points having no labels (see Table 4.46).

The third facet of CVO managerial social capital's measure was adapted to include different anchor points on the semantic differential scale. The change of these anchor points was made to make the higher-end of each item extremely-worded, to encourage respondents to choose anchor points towards the centre of the scale, to maximise the distribution of the variable (see Table 4.47).

The fourth facet of CVO managerial social capital's operationalisation was adapted into a new nine-point Likert scale. Each item was changed to range from: 1 = slightly agree to 9 = agree to an extreme extent, with non-labelled even-numbered anchor points (see Table 4.48). The revised measure of the CVODL construct is outlined in the next section.

**Table 4.46. Measure of CVO managerial social capital (facet 1) (SC\_F1) used in the core survey**

		NETWORK MEMBERS are the stakeholders an organization has relationships with; for example, industry-specific groups, suppliers, shareholders and competitors.								
		Over the last 3 years, in our organization...								
<b>Codes</b>	<b>Items</b>	<b>1 = slightly agree</b>	<b>2</b>	<b>3 = agree</b>	<b>4</b>	<b>5 = strongly agree</b>	<b>6</b>	<b>7 = very strongly agree</b>	<b>8</b>	<b>9 = agree to an extreme extent</b>
SC_F1_1	... our approach to business mirrored that of our network members									
SC_F1_2	... we learned many lessons from our network members' approach to business									
SC_F1_3	... our way of doing business reflected that of our network members									
SC_F1_4	... network members' approach to business shaped our approach to business									

**Table 4.47. Measure of CVO managerial social capital (facet 3) (SC\_F3) used in the core survey**

Over the last 3 years, to what extent have your organization's network members focused on creating customer value?									
Codes	Items	1	2	3	4	5	6	7	Items
SC_F3_1	An average extent								To excess
SC_F3_2	A simply moderate degree								To an extreme degree
SC_F3_2	Just a satisfactory level								The exclusion of all else
SC_F3_4	A mediocre extent								An off the scale extent

**Table 4.48. Measure of CVO managerial social capital (facet 4) (SC\_F4) used in the core survey**

Over the last 3 years, in our organization...										
Codes	Items	1 = slightly agree	2	3 = agree	4	5 = strongly agree	6	7 = very strongly agree	8	9 = agree to an extreme extent
SC_F4_1	... our approach to business mirrored that of our network members									
SC_F4_2	... we learned many lessons from our network members' approach to business									
SC_F4_3	... our way of doing business reflected that of our network members									
SC_F4_4	... network members' approach to business shaped our approach to business									

#### 4.8.3.3. CVODL

The measurement scale used to operationalise the CVODL construct was adapted into a different nine-point Likert scale. Each item was changed to range from: 1 = slightly agree to 9 = agree to an extreme extent. The even-numbered scale points did not have labels (see Table 4.49). The revised measure of sales performance is described in the following section.

#### 4.8.3.4. Sales performance

This measure of sales performance was changed from a nine-point Likert scale to an eleven-point Likert scale. Each item was adapted to range from: 1 = worse than rivals to 11 = completely outstripped rivals. The even-numbered anchor points were not labelled (see Table 4.50). The revised measure of environmental turbulence is outlined in the next section.

#### 4.8.3.5. Environmental turbulence

The measure of technological turbulence was changed to a different nine-point Likert scale. Each item was adapted to range from: 1 = slightly agree to 9 = agree to an extreme extent. The anchor points that were even-numbered did not have labels (see Table 4.51). The revised measure of intelligence responsiveness is described in the subsequent section.

#### 4.8.3.6. Intelligence responsiveness

The operationalisation of intelligence responsiveness was altered to a different nine-point Likert scale. Each item was changed to range from: 1 = slightly agree to 9 = agree to an extreme extent. The even-numbered scale points were not labelled (see Table 4.52). The revised measure of entrepreneurial orientation follows in the next section.

#### 4.8.3.7. Entrepreneurial orientation

The measurement scale used to operationalise proactiveness was changed from a nine-point Likert scale to an eleven-point Likert scale. Each item was changed to range from: 1 = to a small extent to 11 = off the scale. Furthermore, even-numbered anchor points were not provided with labels (see Table 4.53). The revised operationalisation of firm size is presented in the next section.

Table 4.49. Measure of the CVODL (CVODL) used in the core survey

Over the last 3 years, if you had asked senior managers their opinion, they would have said that...										
Codes	Items	1 = slightly agree	2	3 = agree	4	5 = strongly agree	6	7 = very strongly agree	8	9 = agree to an extreme extent
CVODL_1	... all of our business functions should revolve around creating customer value									
CVODL_2	... underpinning every strategy driving us forward should be the desire to create customer value									
CVODL_3	... a core purpose of our business activities should be to create customer value									
CVODL_4	... fulfilling every customer's wants and needs should be an important activity in our organization									
CVODL_5	... our organizational culture should strive to create value for our customers									
CVODL_6	... adding value to our customers should be an important activity in our organization									

**Table 4.50. Measure of sales performance (SALES) used in the core survey**

Over the past year, how well has your organization performed in its markets relative to key competitors?												
Codes	Items	1 = worse than rivals	2	3 = the same as rivals	4	5 = slightly better than rivals	6	7 = better than rivals	8	9 = much better than rivals	10	11 = completely outstripped rivals
SALES_1	Market share growth											
SALES_2	Sales growth											
SALES_3	Sales volume growth											



**Table 4.51. Measure of technological turbulence (TT) used in the core survey**

Taking the last 3 years into account, to what extent do you agree with the following statements?										
Codes	Items	1 = slightly agree	2	3 = agree	4	5 = strongly agree	6	7 = very strongly agree	8	9 = agree to an extreme extent
TT_1	... the technology changed rapidly									
TT_2	... technological changes provided big opportunities									
TT_3	... it was very difficult to forecast where the technology would be in the next 2 to 3 years									
TT_4	... a large number of new product ideas were made possible through technological breakthroughs									
TT_5	technological developments in our industry were relatively major									

**Table 4.52. Measure of intelligence responsiveness (RESP) used in the core survey**

Taking the last 3 years into account, to what extent do you agree with the following statements?										
Codes	Items	1 = slightly agree	2	3 = agree	4	5 = strongly agree	6	7 = very strongly agree	8	9 = agree to an extreme extent
RESP_1	... we were quick to respond to significant changes in our competitors' price structures									
RESP_2	... we responded to competitive actions that threaten us									
RESP_3	... if a major competitor had launched an intensive campaign targeted at our customers, we would have responded immediately									
RESP_4	... when we found out that customers are unhappy with the quality of our product or service, we took corrective action immediately									
RESP_5	... we were quick to respond to important changes in our business environment (e.g., regulatory, technology, economic)									

**Table 4.53. Measure of proactiveness (PRCT) used in the core survey**

Over the past year, how well has your organization performed in its markets relative to key competitors?												
Codes	Items	1 = to a small extent	2	3 = to a moderate extent	4	5 = to a considerable extent	6	7 = to a great extent	8	9 = to an extreme extent	10	11 = off the scale
PRCT_1	... we sought to exploit anticipated changes in our target market ahead of our rivals											
PRCT_2	... we seized initiatives whenever possible in our target market operations											
PRCT_3	... we acted opportunistically to shape the business environment in which we operated											

#### 4.8.3.8. Firm size

The firm size variable's measure was changed back to a ratio scale. That is, instead of using the categorical scale (sourced from Josephson, Johnson and Mariadoss, 2016), a ratio scale was used to capture more variance and a more accurate figure of the sampled firms' annual sales. After a discussion with the supervision team, the revised scale would range from: 0 to 100 billion American Dollars to provide the sampled companies with ample scope to state their annual sales revenue. However, as per the operationalisation of the number of full-time employees in the respondents' corporations (as described in section 4.7.4.6), if a single ratio scale ranging between: 0 to 100 billion American dollars had been provided in the questionnaire, the anchor points would be so condensed that the format would be illegible/unclear to the respondents. As such, a filter question was provided that asked respondents whether their business' annual sales were more/less than one billion American Dollars. If respondents chose the "less than one billion American Dollars" option, a scale would appear ranging from: 0 to 999.99 million American Dollars. If respondents chose the "more than one billion American Dollars option", another scale would appear, with options ranging from: 1 to 100 billion American Dollars option (see Table 4.54). The new measure of the functional home variable is outlined in the following section.

#### 4.8.3.9. Functional home

A new respondent characteristic question was added to the survey pertaining to the functional home of the respondents (i.e., the department in which the respondents had spent most of their career prior to their current role as a top-level manager). The respondents' functional home variable was measured in two stages using a new operationalisation. The first stage provided respondents with a list of six choices (plus, an "other (please specify)" option) that were listed based on the most frequent departments selected as part of the measurement of CVO functional resource investments (as per 4.6.2.5). Choosing the "other (please specify)" option would automatically direct respondents to the second stage - providing them with the same choices initially provided to them in the operationalisation of CVO functional resource investments (excluding the functional areas already provided in the first stage of the measure), to account for most other functional backgrounds senior managers might originate from (see Table 4.55).

Table 4.54. Measure of firm size (SIZE) used in the core survey

What is your organization's approximate annual revenue in \$US millions/billions (please note that this will be treated with complete confidentiality)?												
Code*	Item	\$0	\$25 million	\$50 million	\$100 million	\$500 million	\$750 million	\$1 billion	\$25 billion	\$50 billion	\$75 billion	\$100 billion
SIZE	Revenue (\$US)											
*Respondents were asked to indicate whether their organisation's annual revenue is more/less than \$US 1 billion. If they chose the "less" option, a sliding ratio scale would appear ranging from: \$US 0 to 999,999 million. If they chose the "more" option, a different sliding ratio scale would appear ranging from: \$US 1 billion to 100 billion.												

**Table 4.55. Measure of functional home (HOME) in the core survey**

Prior to your current position in this company, in which functional area did you spend the majority of your career (please choose one)?		
<b>Codes</b>	<b>Items</b>	<b>Answer space</b>
HOME_1	Administration	
HOME_2	After Sales	
HOME_3	Business Development	
HOME_4	Customer Service	
HOME_5	Engineering	
HOME_6	Exporting/International	
HOME_7	Finance	
HOME_8	Government Relations	
HOME_9	Human Resources/Personnel	
HOME_10	IT	
HOME_11	Key Accounts	
HOME_12	Legal	
HOME_13	Logistics/Distribution/Supply Chain	
HOME_14	Marketing	
HOME_15	Merchandising	
HOME_16	Operations	
HOME_17	Procurement	
HOME_18	Production	
HOME_19	Public Relations	
HOME_20	Purchasing	
HOME_21	Quality	
HOME_22	Relationships	
HOME_23	Research and Development (R&D)	
HOME_24	Sales	
HOME_25	Service	
HOME_26	Other (please specify)	

In summary of the second pilot study, while the changes made to the questionnaire after the first pilot study indicated that improvements had been made (e.g., larger variances), there were still some adaptations that needed to be made to certain constructs' operationalisations. That is, certain constructs' distributions were still slightly skewed, for which the above-mentioned changes were used to increase the variance of such scales' distributions. The changes made to the survey after the second pilot study were relatively minor (compared to the changes made to the survey after the first pilot study). Hence, it was possible to merge the data from the second pilot study with the data from the eventual core study (see Morgan and Hunt, 1994). Moreover, after the second pilot study's changes were complete, it was deemed appropriate to proceed onto the administering of the core survey (with some recoding of the second pilot study's measures in SPSS 23), which follows in the next section.

#### **4.9. Core survey**

##### **4.9.1. Administering the core survey**

For the core study, Qualtrics collected another 192 responses. That is, Qualtrics was contracted to collect a minimum of 170 responses, but collected another 22 which were free of charge. All specifications regarding the sample's characteristics remained the same from both pilot studies, namely, that companies with 100 or less full-time employees would be screened out of the survey and only senior managers would be sampled. Using the data collection services of Qualtrics meant that due to the fast data collection process, commonly used techniques were not necessary (e.g., reminders for participants who had not completed the survey) due to all responses being collected during one quick phase. Furthermore, other PhD theses have used Armstrong and Overton's (1977) test for non-response bias in survey research (see Nemkova, 2014; Micevski, 2015). However, as the survey data were not collected using participant reminders, Armstrong and Overton's (1977) test for non-response bias (among other tests used when collecting survey data, oneself) was redundant. Further, discussions with pre-testing interviewees (that had used Qualtrics' data collection services) supported the credibility of such methods. Moreover, highly-ranked ABS (2010; 2015) journal articles (in outlets, such as the: *Journal of Marketing*, *Strategic Management Journal*, and *Academy of Management Journal*)

have reported empirical survey data using the data collection services of Qualtrics (see Hagtvedt, 2011; Long, Bendersky and Morrill, 2011; Chatterji, Findley, Jensen, Meier and Nielson, 2016). The cover letter used in the core survey is discussed in the following section.

#### 4.9.2. Final cover letter

A short cover letter was provided with the core survey (see Figure 4.2).

**Figure 4.2. Cover letter used for the core survey**

Good morning,

I am a graduate student exploring customer value practices in US firms. I would be so grateful if you could share your expertise by completing this survey. Complete confidentiality is assured. At no point will your company be named in this investigation's results. If you would like to receive an executive summary from the findings of this study, please contact me using the email address listed at the end of this message. Alternatively, if you would like to contact my PhD Advisor (Professor John Cadogan), please do so using his LinkedIn details at the end of this message.

You may also be interested in visiting [www.value-diagnostics.com](http://www.value-diagnostics.com). This allows you to see how your organization compares to similar companies, in terms of a range of issues, such as how departmental resource investments have affected your performance, and whether there are any power imbalances between your departments. This provides some hands-on advice on how to deal with such issues.

This website will be fully operational after the study's results have been completed, so please keep in touch to find about how your organization compares to your competitors.

Thank you for your invaluable contribution towards my research.

Yours sincerely,

James Crick

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The cover letter was designed to inform respondents of the objectives of a survey and/or ethics-related information (Kanuk and Berenson, 1975; Dillman, Smyth and Christian, 2009). This study's cover letter was worded in a short manner that was used to engage participants, but not deter their interest due to being too long. However, its structure adhered to Loughborough University's ethical guidelines for postgraduate research (as per section 4.5.1). The cover letter for the core study was minimally changed after the two pilot studies. Specifically, the only change involved updating the respondents about the contact details of one member of the supervisory team – should they have wished to contact them. Also, note that the reference to “good morning” was because Qualtrics administered the survey before 12.00 pm (regardless of the respondents' time zone) from their office in Provo, Utah. In the next section, some reflections are made about the core survey, in respect of the measurement development stage of this PhD investigation.

#### 4.9.3. Reflections on the core survey

The adaptations and changes made to the survey after the second pilot study yielded the final questions for the core survey. Refer to Appendix 3 for the survey as it appeared to respondents (i.e., print screens of the final measures). Moreover, the measurement development stage was deemed to be in-depth and effective in designing and refining good operationalisations of the variables stated within the questionnaire. That is, the 22 pre-testing interviews with academics and practitioners shaped the questionnaire, in terms of its content and cosmetic appearance. Further, the two pilot studies statistically-validated the questions, so that the constructs' variances could be maximised. Moreover, the data collection services of Qualtrics yielded the empirical data (for the pilot and core studies) quickly and with no missing data. The techniques used to analyse the empirical data are outlined in the following section.

### **4.10. Data analysis techniques**

#### 4.10.1. Merging datasets

Since vast changes had been made to the scales used in the first pilot study, this data were unusable. While additional changes were made after the second pilot study, these alterations were relatively minor in comparison, meaning that the data from the

second pilot study could be merged with that of the core study (Morgan and Hunt, 1994). As differences existed between the second pilot study and the core study (e.g., certain seven-point Likert scales had become nine-point Likert scales with different anchors), items were re-coded using different tools (i.e., depending on the ways in which the scales differed) using a syntax file on SPSS 23. When the two datasets were identical (i.e., all operationalisations were the same), they were merged into a single datafile. In some instances (e.g., the measure of senior managers' functional home), a missing value analysis was undertaken to replace data with values that would have been provided if respondents sampled during the second pilot study had been provided with the scales used in the core study. Although several methods are available to survey researchers, some are more appropriate in certain scenarios (Olinsky, Chen and Harlow, 2003).

Since no other missing data were present (due to all questions being compulsory in the survey), the expectation maximisation technique was used since the missing data accounted for a very small percentage of the dataset (Olinsky, Chen and Harlow, 2003). However, it was appreciated that the missing value analysis used in this PhD thesis does not fall under the conventional view of a missing value analysis (i.e., replacing data when respondents have accidentally or purposefully left answers blank in a questionnaire) (Adigüzel and Wedel, 2008). Hence, the final sample equated to the 49 observations from the second pilot study, plus, the 192 observations from the core study, to provide a final sample of 241 cases for the data analysis stage of this investigation. As indicated in section 4.5.4 (in terms of the sample size contracted with Qualtrics), there is not an agreed recommended sample size for SEM analyses, but studies have recommended that 200 cases should be a benchmark figure (see Diamantopoulos and Siguaw, 2000). Thus, with a final sample of 241 complete responses, the sample size was beyond satisfactory. The initial descriptive statistical analyses undertaken are described as follows.

#### 4.10.2. Descriptive statistics

Before any complex statistical procedures were undertaken, a series of descriptive statistical analyses were run. Specifically, the: means, medians, modes, standard deviations, and variances were examined to understand whether the constructs' scale distributions had improved since the two pilot studies. These summary statistics were

built upon with the scale frequencies to gauge the degree of variance within each construct's distribution. From these descriptive statistical analyses, the data were far less skewed than from both pilot studies, indicating that the changes made improved the quality of the empirical results. The inter-item correlations of the multi-item scales are described in the next section.

#### 4.10.3. Inter-item correlations

As another introductory statistical analysis, the inter-item correlations of the multi-item scales were examined. That is, when conducting survey research using multi-item scales, a basic premise is that the items should correlate with one another, so that they measure a latent construct (Peterson, 1994). Furthermore, multi-item scales were used in this PhD study, because they provide researchers with a level of freedom, so that if a certain item is problematic (e.g., it does not correlate with other items with its scale), they can choose to delete it from their study (Diamantopoulos, Sarstedt, Fuchs, Wilczynski and Kaiser, 2012). Using SPSS 23, the inter-item correlations indicated that all items (for all variables) were correlated – providing evidence of shared variance for each latent construct. The initial scale reliability analysis follows in the next section.

#### 4.10.4. Initial scale reliabilities

Before any items were deleted from the statistical analysis, the reliabilities of the initial multi-item scales were assessed using Cronbach's (1951) alpha coefficient. Cronbach's (1951) alpha coefficient was used as a basic indicator of whether the multi-item scales were effective measures of a latent construct. That is, Cronbach's (1951) alpha was calculated via SPSS 23, for which all multi-item scales were greater than the minimum benchmark of ".70", suggesting reliable operationalisations. Moreover, all multi-item scale reliabilities during both pilot studies also were greater than ".70"; hence, it was not surprising that the measures would exceed the minimum benchmarks for the merged sample of 241 observations. However, it was recognised that several items would be deleted from the statistical analysis (due to various reasons that will be discussed in section 4.10.6, in respect of the factor analyses). As such, the initial Cronbach (1951) alpha coefficients were used as exploratory measures of the multi-item scales' reliabilities and were revisited once the final operationalisations were established (i.e., once problematic items were deleted).

Furthermore, Cronbach's (1951) alpha coefficient is a relatively basic statistical evaluation of a multi-item scale's reliability (as it can be improved by increasing the number of items used to measure a certain variable) (Peterson, 1994)<sup>8</sup>. The exploratory factor analyses (EFAs) undertaken in this PhD thesis follow in the next section.

#### 4.10.5. EFAs and scale refinements

##### 4.10.5.1. Purpose of EFAs

An EFA is used to assess the structure of survey data and the degree to which items correspond (i.e., factor loadings) to the variables (i.e., factors) that they are intended to measure (Conway and Huffcutt, 2003). Further, EFAs are used to assess whether items cross-load to different factors (a situation that researchers should aim to avoid, as cross-factor loadings indicate that items measure more than one factor) (Churchill Jr., 1979). EFAs were conducted for multiple multi-item variables within the study's questionnaire using SPSS 23, the details of which follow in the next section.

##### 4.10.5.2. Selected EFA techniques

As noted in section 4.10.5.1 (in terms of the purpose of EFAs in survey research), there are different EFA methods available to questionnaire-based researchers. In this doctoral-level investigation, five techniques were used in the EFA stage. First, factors need to be rotated to fit the data, so that items that load (or correlate) onto a certain factor and so that multiple items (from various variables) do not load onto the wrong factor(s) (Sharma, 1996). There are various factor rotations available; however, the main factor rotation is "varimax", which places the factor loadings corresponding to each item onto a set of factors with higher loadings, indicating the extent to which the items measure the latent factor (Gerbing and Hamilton, 1996). That is, when using varimax, some items will inevitably be more correlated with a factor than others (whereby, the lower the factor loadings, the weaker an item is in measuring its corresponding factor) (Peterson, 2000). Second, factors need to be extracted, so that the factor loadings can correspond onto the number of factors (also known as components) in an EFA model (Sharma, 1996). As with the rotation used

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<sup>8</sup> It is stressed that the initial scale reliabilities were used as an exploratory assessment during the early components of the data analysis stage of this doctoral study.

in an EFA, there are various types of extraction techniques that can be employed. A major factor extraction method is a principal components analysis which extracts the highest degree of variance of the different components identified within a certain EFA model. A principal components analysis was used in this investigation during the EFA stage, which identified the items that loaded onto each component within the various EFAs (Bradlow, 2002).

Third, researchers need to make the decision whether they wish to suppress small coefficients (i.e., factor loadings) in their EFA models. That is, if researchers do not instruct their statistical software (e.g., SPSS 23) to suppress small coefficients, the program will display all the factor loadings corresponding to each of the identified components – with some factor loadings being positive (stronger loadings), and others being negative (weaker loadings) (Conway and Huffcutt, 2003). Furthermore, if researchers do not instruct their statistical software to suppress small coefficients, they will have to manually-determine which items correspond to specific factors. However, by suppressing small coefficients, researchers can determine which items relate to the various components they are assessing. That said, there is not an agreed consensus in the statistical literature pertaining to a cut-off figure that differentiates small versus large coefficients. For instance, Sharma (1996) outlined that factor loadings of greater than “.400” can be counted, whereas, Liu and Arnett (2000) used a series of EFAs in which “.350” and “.500” respectively were used at the cut-off values in the different models. Furthermore, Liu and Arnett (2000) suggested that by increasing the cut-off value of factor loadings, measures can become more reliable and valid, in which researchers can become more assured that they are using items that measure the correct variables in certain statistics tests. As such, in this doctoral study, a decision was made (after consultation with the supervisory team) to have “.600” as the cut-off value, so that coefficients smaller than this value would be suppressed. Thus, while “.600” is noted as a high cut-off value, it was chosen to ensure that the items were true indicators of the respective factors. Additionally, the high cut-off value reduced the degree of cross-factor loadings.

Fourth, Eigenvalues were used to assess the amount of variance explained by each factor, whereby, the lower the Eigenvalue, the lower the chance of a factor explaining the variance of the variables within an EFA model (Gerbing and Hamilton, 1996). In this study, the standard procedure to only examine Eigenvalues of greater than

“1.000” was used because Eigenvalues of less than “1.000” have been found to insufficiently provide an explanation of a variable’s variance (Sharma, 1996). Moreover, in addition to the Eigenvalues, the percentage of variance explained by each factor was recorded, as well as the cumulative percentage of variance explained (i.e., the total percentage of variance explained by all components within the EFA models) (Peterson, 2000). In some EFA models (where there were a high number of items inputted), SPSS 23 was instructed to extract a fixed number of factors, because if the program ran the model without such an instruction, there were complications, such as cross-factor loadings. By instructing SPSS 23 to extract a fixed number of factors, any complications were usually resolved. However, wherever possible, SPSS 23 was not instructed to extract a fixed number of factors as it was preferred to let the statistical software extract the number of components that existed (and not force the system to extract factors that did not exist) without such instructions. Any instances of this issue are explained in the following chapter.

Fifth, the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy was used to measure the extent to which data were suited for the EFA models in which it was used, whereby, a value of between “.800” and “1.000” is considered ideal, although values of greater than “.600” can be accepted (Gerbing and Hamilton, 1996). Further, Barlett’s test of sphericity was used to determine the significance of an EFA model, in terms of the validity of the factors in explaining a certain model (Peterson, 2000). When using Barlett’s test of sphericity, a test statistic of less than “.05” is considered as an ideal benchmark (Sharma, 1996). In closing, while EFAs are a conventional statistical technique in multivariate quantitative data analyses, there are numerous options for researchers to use (as indicated above). In this PhD thesis, EFAs were used to examine the structure of the empirical data and determine the extent to which items loaded onto the correct factors. A series of statistical checks was also used (e.g., the amount of variance explained by each factor) to ensure that the components identified explained a significant proportion of a variable’s variance. The specific EFA models used in this study are described in the next section.

#### 4.10.5.3. EFA model fit tests

The EFA models used within this study were as follows. First, the components of the CVO dynamic managerial capabilities framework (i.e., CVO managerial human

capital, CVO managerial cognition, and all the facets of CVO managerial social capital) and the CVODL were assessed. Second, all the facets of CVO managerial social capital were evaluated in a separate EFA model. Third, the: CVODL, intelligence responsiveness, and sales performance were tested. Fourth, the three dimensions of entrepreneurial orientation (namely: innovativeness, proactiveness, and risk-taking) were assessed. Fifth: innovativeness, risk-taking, and proactiveness were combined with intelligence responsiveness in a different EFA model. Sixth, the three dimensions of environmental turbulence (i.e., technological turbulence, competitive intensity, and market dynamism) were evaluated. Seventh: the organisational performance, respondents' experience, and informant quality variables (as somewhat miscellaneous multi-item variables) were tested in a final EFA model. Any concerns linked with the EFA models (e.g., cross-factor loadings) were resolved before the next stage of the data analysis process commenced. In the following section, the confirmatory factor analyses (CFAs) stage of the study is discussed.

#### 4.10.6. CFAs and scale refinement

##### 4.10.6.1. Purpose of CFAs

CFAs (also known as measurement models) are used when researchers have more confidence about the structure of their empirical data (Sharma, 1996). That is, CFAs should be undertaken when researchers are aware about which items correspond to certain variables (i.e., factors) – something that can be better understood via EFA models (Conway and Huffcutt, 2003). Moreover, a CFA verifies the factor structure of a dataset's items (i.e., observed variables) to test whether they correspond to the factors (i.e., latent variables) that they expect. To undertake a CFA, researchers must specify a measurement model, i.e., a framework that outlines which observed variables correspond to each latent variable. In this PhD thesis, the CFA stage was undertaken via LISREL 9.30, for which this statistical software was instructed, through a syntax file, to run a specific CFA. There are different ways to assess a CFA, with various model fit indices to evaluate the extent to which empirical data fit a measurement model. The specific model fit indices used in this doctoral study follow in the next section.

#### 4.10.6.2. Selected CFA techniques

As noted in section 4.10.6.1 (in terms of the purpose of CFAs), there are various techniques used to assess a CFA. Specifically, statistical software that can process CFAs (in the case of this study, LISREL 9.30) provide a series of model fit indices that describe the extent to which the empirical data fit a specified measurement model (Diamantopoulos and Siguaw, 2000). Moreover, LISREL 9.30 also provides an output file, containing various other statistical results pertaining to the CFA model. This output file contains various pieces of information that allow researchers to improve their CFA model's results (if needed); such information is discussed in section 4.10.6.3, in respect of the ways in which problematic variables were identified. Further, researchers have the choice to conduct a CFA in one stage (i.e., evaluate all observed and latent variables within their measurement model), or alternatively, conduct a series of CFAs in which the variables that are included within each model are conceptually-related (e.g., Boso, Story and Cadogan, 2013). In this PhD study, the entire model was tested, as this is the preferred option to evaluate the extent to which empirical data fits a measurement model (see Conway and Huffcutt, 2003).

Returning to the ways that a CFA is undertaken, in this PhD thesis, a syntax file was created in which the observed and latent variables were specified (i.e., in which observed variables measured each of the latent variables). This syntax file was used to describe the study's measurement model and run the CFA accordingly<sup>9</sup>. Once LISREL 9.30 had calculated the CFA, the above-mentioned model fit indices and output files were available. As mentioned above, the output file will be described in section 4.10.6.3, in terms of what statistical information was used to delete items to improve the model fit indices. However, there are various model fit indices used in a CFA, but it is uncommon for researchers to use all of them, as some have been criticised in the literature, as well as some being more effective than others in assessing a good fit of a measurement model (Henseler, Ringle and Sarstedt, 2015). Refer to Table 4.56 for an overview of the model fit indices used in this doctoral-level investigation, including the minimum benchmarks for these tests.

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<sup>9</sup> This syntax file was developed using a template from a PhD graduate from Loughborough University – replaced with the observed and latent variables used in this doctoral investigation.



**Table 4.56. Model fit indices used to evaluate the measurement model**

<b>Fit indices*</b>	<b>Description</b>	<b>Benchmark</b>
Chi-square/degrees of freedom ( $\chi^2/\text{df}$ )	A test of statistical difference between the empirical data and the model	Less than 3.00
Root mean square error of approximation (RMSEA)	A test of how well the model would fit the population's covariance matrix	Less than .05
Incremental fit index (IFI)	A test of the proportionate improvement in the model's fit	Greater than .90
Standardised root mean square residual (SRMR)	A test based on the difference between the observed and predicted correlation	Less than .08
Comparative fit index (CFI)	A test of absolute fit or a test of two measurement models.	Greater than .90
Non-normed fit index (NNFI)	A test of how much better a model fits compared with the baseline model	Greater than .90
<b>*Adapted from Kelloway (1998) and Diamantopoulos and Siguaw (2000).</b>		

The most important test statistic in a CFA is the chi-square value, which should be non-significant, to outline that there is not a significant difference between the empirical data and the measurement model (Sharma, 1996). However, the chi-square value is sensitive to large sample sizes (i.e., greater than “200” observations) and therefore, is highly-likely to be significant (Cheung and Rensvold, 2002). To rectify the potential concern of a significant chi-square test statistic, researchers can divide the value of the chi-square by the degrees of freedom, in which a new value of less than “3.00” is considered acceptable (Fan and Sivo, 2007). Note that while certain CFA model fit indices have minimum benchmarks, the statistical literature has allowed some deviation from such values, whereby, if researchers have a slightly higher value for a certain model fit index, it does not mean that the entire model is invalid. For example, Cadogan, Diamantopoulos and Siguaw (2002, p. 621) reported on a RMSEA of “.09”, whereas, the statistical literature suggests that the cut-off value for the RMSEA fit index is “.05” (Kelloway, 1998). As such, there is some scope to use model fit indices with higher values than the cut-off points, though it is stressed that such a scenario should be avoided (Diamantopoulos and Siguaw, 2000). Under these parameters, all CFA model fit indices were acceptable. In the following section, the ways in which problematic variables were identified are discussed (including the use of the output folder provided by the LISREL 9.30 software).

#### 4.10.6.3. Identifying problematic variables

In this study, a problematic variable was defined as an observed or latent variable that lowered the model fit of the measurement model. When referring to the output file provided by the LISREL 9.30 software, the following four procedures were used to identify problematic variables. Note that all the subsequent stages were run one stage at a time, so that a clear record could be kept about which variables reduced the model fit indices. Moreover, the process of identifying problematic variables was iterative in nature, whereby, items may have been initially deleted (due to one or more of the following procedures), but later included if the deletion of other variables made it necessary to include the original variable(s). First, the factor loadings (i.e., the lambda-x values) were standardised, so a score between “0.000” and “1.000” was provided; with the higher the factor loading, the better the measure was for a certain latent variable (Kelloway, 1998). That is, if a certain observed variable had a much lower factor loading than the other items used to measure a latent variable, the statistical package would be run without this variable. If the deletion of such a variable significantly improved the model fit indices, the item would be excluded from the statistical analysis.

Second, the error terms (also known as error variances or theta-delta values) of the variables were also standardised, so that LISREL 9.30 provided a score between “0.000” and “1.000”, with higher error terms indicating worse measures for a certain latent variable (Diamantopoulos and Sigua, 2000). If an item had a high error term (relative to other observed variables), the statistical package would be run without this item. If the model fit indices had improved without this item, it would be deleted from the measurement model. Third, the modification indices for the error terms (i.e., the theta-delta values) and the factor loadings (i.e., the lambda-x values) were used to identify the change made to the chi-square test statistic if a certain item(s) was deleted from the statistical analysis (Cheung and Rensvold, 2002). That is, when certain variables were deleted from the measurement model, the change in the chi-square test statistic was noted. If the deletion of certain variable made a noticeable improvement to the chi-square test statistic (and the other model fit indices), it would be deleted from the statistical analysis. The use of the modification indices for the factor loadings and error terms was the most prominent (i.e., directly noticeable) procedure in improving the model fit indices. However, it is stressed that this stage

was iterative as some variables (despite seemingly being problematic) were deleted, but worsened the model fit indices. Hence, this was why the deletion of items was undertaken with one variable at a time, so that mistakes were not made in this regard.

Fourth, using SPSS 23, the correlations of all latent variables were assessed for instances of where a correlation was equal to or greater than “.70” as one sign of a lack of discriminant validity (Hulland, 1999). Note that discriminant validity is evaluated in section 4.10.7.3, in terms of formal tests that were undertaken in this PhD thesis to avoid such statistical problems. Moreover, a correlation of equal to or greater than “.70” did not immediately signify a problematic variable as constructs could have been closely associated/related based on a theoretical relationship. However, if there was not a theoretical association/relationship between two or more variables, the variable that appeared to be problematic would be excluded from the statistical analysis to explore whether such a change improved the model fit indices. Further, the information presented in the correlation matrix was triangulated with the problematic variable’s: factor loading, error variance, and role in the different modification indices. Such a comparison helped determine whether such variables should be permanently deleted from the measurement model. The ways in which reliability and validity were addressed in this PhD study follow in the next section.

#### 4.10.7. Reliability and validity

##### 4.10.7.1. Reliability

Reliability is a crucial issue in social science (including marketing) research, as it is a factor that academics need to appreciate when deciding about the extent to which they can generalise from their empirical results (Peter, 1979; John and Reve, 1982). That is, reliability is the degree to which a researcher will obtain the same (or very similar) results if their study was to be repeated in the same (or very similar) circumstances (Bryman, 2012). Reliability can be evaluated in two respects: the “test/re-test method” or through the “internal consistency method” (Churchill Jr., 1979; Peter, 1981). The test/re-test method refers to researchers replicating a measure of a variable(s) across different datasets through longitudinal research to test whether such an operationalisation is accurate on different samples (Shortell and Zajac, 1990). As cross-sectional data were used in this doctoral-level study, the test/re-test

method cannot be used at this stage<sup>10</sup>. The internal consistency method refers to the use of Cronbach's (1951) alpha coefficient in which researchers can evaluate the accuracy of a scale in measuring a certain variable (Peterson, 1994). In this PhD thesis, Cronbach's (1951) alpha was calculated during two stages, namely, before and after the scales were refined to evaluate whether the variables' operationalisations were still classed as reliable (i.e., equal to or greater than “.70”) after certain items were deleted during the EFA and CFA stages. Specifically, after these measures were refined, the scales were still deemed as reliable through the internal consistency method. The methods used to address validity are described in the following sections.

#### 4.10.7.2. Validity

Validity is the extent to which researchers have measured what they intended to measure in their investigation (Fornell and Larcker, 1981). There are three types of validity that can be addressed in empirical questionnaire-based research: face (or content) validity, convergent validity, and discriminant validity (John and Reve, 1982). These types of validity are discussed in the subsequent sections.

#### 4.10.7.3. Face validity

Face (or content) validity is a subjective evaluation of the link between a set of items and the theoretical concept that such items are intended to measure (Rossiter, 2008). Face validity was addressed through the pre-testing of the questionnaire with 22 academics and practitioners who were deemed as being knowledgeable on the content of the questionnaire used in this PhD study. Additionally, face validity was assessed with two pilot studies to shape decent measures that reflected the theoretical concepts, in which such items were intended to operationalise. Furthermore, the measures (i.e., both the new and established scales) were developed from the extant literature, and therefore, had a theoretical underpinning. Moreover, face validity was addressed via an informant quality scale (adapted from Hultman, Robson and Katsikeas, 2009; Boso, Story and Cadogan, 2013) to ensure that knowledgeable

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<sup>10</sup> It would be interesting to replicate this doctoral study; if such research occurs, the test/re-test method will be used as one assessment of reliability.

respondents were completing the survey (Kumar, Stern and Anderson, 1993). The techniques used to assess convergent validity are discussed in the following section.

#### 4.10.7.4. Convergent validity

Convergent validity is the extent to which a construct is closely related to theoretically-similar constructs within a statistical analysis (e.g., SEM) (Peter, 1981). In this doctoral-level investigation, convergent validity was addressed through using high factor loadings in the EFAs and CFAs to best measure the latent constructs that were tested. Moreover, the average variance extracted (AVE) for all refined variables (i.e., after the EFA and CFA stages of the study) was greater than “.50 (50%)”, indicating that the final measures explained a satisfactory/acceptable proportion of the variables’ variances (Kelloway, 1998). Further, all the composite reliabilities (CRs) of the final operationalisations were greater than “.60”, suggesting strong and valid measures (Gerbing and Hamilton, 1996). Note that the AVEs and the CRs of the final operationalisations will be discussed in more detail in section 4.10.9.4. The tools used to evaluate discriminant validity are discussed in the next section.

#### 4.10.7.5. Discriminant validity

Discriminant validity is the degree to which a latent variable is distinct from other latent variables in the statistical analysis (Bagozzi and Yi, 1991). Discriminant validity was assessed through three respects. First, during the EFA stage, if there were any cross-factor loadings, a decision was made to delete certain constructs from the statistical analysis so that two variables did not measure the same construct. Second, during the CFA stage, if there was a high correlation between two or more variables (i.e., equal to or greater than “.70”), another decision was made to exclude a certain variable(s) from the statistical analysis, if such constructs were not theoretically associated/related. Third, after the above stages were used to assess discriminant validity, the items used in the final operationalisations were averaged and run through a correlational analysis using SPSS 23. That is, the Pearson correlation coefficients were squared and the AVEs of each variable were placed on the diagonal of a new correlation matrix. When using this discriminant validity test, ideally, the largest squared correlation should be less than the lowest AVE (Voorhees, Brady, Calantone and Ramirez, 2016).

If a squared Pearson correlation coefficient was greater than the lowest AVE, a case-by-case judgement was made to determine if this indicated a lack of discriminant validity. Specifically, a high squared Pearson correlation coefficient could have meant that two (or more) variables were theoretically related to one another. Note that statistical evidence is provided in the subsequent chapter to demonstrate the rationale for making such judgements to improve the discriminant validity of the empirical data. In summary of the reliability and validity tests used in this PhD investigation, such tools were used to maximise the quality of the empirical data used to test the research hypotheses. Further, reliability and validity were also considered to maximise the chances of the empirical results being generalisable beyond the sample of 241 American corporations. The SEM data analysis stage of the study is discussed in the following section.

#### 4.10.8. SEM analysis

##### 4.10.8.1. SEM versus multiple regression

There are two main multivariate statistical procedures used to test relationship-based research hypotheses (i.e., those that propose that two or more constructs are related to one another): multiple regression and SEM (Bagozzi and Yi, 2012). Multiple regression is recommended when researchers have multiple independent variables and one dependent variable, whereas, SEM is recommended when researchers have more complex conceptual models, such as having multiple dependent variables, or are testing a conceptual framework with multiple linkages (Aguinis, 1995). Further, SEM (as known as a structural model or path analysis) is a combination of factor analyses and multiple regression, in which statistical software (e.g., LISREL 9.30) allows researchers to refine their operationalisations (through a measurement model or CFA), before testing their hypotheses (using refined operationalisations). That is, SEM is a more rigorous quantitative data analysis technique than multiple regression as it focuses on the measures of constructs as well as the relationships between variables (Babin, Hair and Boles, 2008).

In the case of this PhD study, SEM was used as the primary data analysis technique (once the final operationalisations were established), as despite the conceptual framework having one dependent/outcome variable (i.e., sales performance), the model itself had multiple paths. Moreover, due to the limited applications of

statistical software with a function to conduct multiple regression analyses (e.g., SPSS 23), multiple regression models must be undertaken individually. However, LISREL 9.30 allows all paths to be tested simultaneously. As such, if multiple regression had been used, multiple regression models would have needed to have been tested, as opposed to SEM which allows researchers to test their hypothesised and control paths in one single analysis (Steenkamp and Baumgartner, 2000). Additionally, there are various types of SEM statistical packages available to social science researchers, with the main types being covariance versus correlation-based SEM analyses (Hair, Sarstedt, Ringle and Mena, 2012). The differences between covariance and correlation-based SEM analyses follow in the next section.

#### 4.10.8.2. Covariance versus correlation-based SEM analyses

Correlation-based SEM (e.g., SmartPLS 3.2.6) focuses on the relationships between latent constructs and less about the relationship between observed variables and latent variables, while covariance-based SEM (e.g., LISREL 9.30) focuses on both the relationship between observed variables and latent variables and the relationship between latent variables (Hair, Hult, Ringle, Sarstedt and Thiele, 2017). Furthermore, Hair, Hult, Ringle and Sarstedt (2014) recommend that correlation-based SEM should be used when researchers are working with a small sample size (e.g., less than “200” observations) and/or a model with multiple indicators and latent variables. Moreover, Hair, Hult, Ringle and Sarstedt (2014) recommend that covariance-based SEM should be used when researchers are focused on the quality of the measurement model (so that it can be applied to other contexts) and a combination of linear and non-linear (e.g., quadratic) hypotheses are being tested. As it was important in this PhD study to have the best operationalisations possible (due to a major contribution being the development of new constructs, with new measures such as the CVODL), and testing of two quadratic hypotheses (namely, Hypotheses 6 and 8), covariance-based SEM (via LISREL 9.30) was an appropriate statistical package used to test the research hypotheses. In the following section, the assessment of the structural model fit is discussed.

#### 4.10.8.3. Structural model fit tests

In addition to evaluating the model fit summary for the measurement model (i.e., the CFA), the same model fit indices were assessed for the structural model. When using

LISREL 9.30 to run the structural model, the syntax file (as discussed in section 4.10.6.2 in the capacity of the CFA stage) was extended to specify the relationships between the latent variables within the structural model. That is, these relationships between the latent variables were the research hypotheses and the control paths. These hypothesised and control paths were stated in the order that they appeared in the conceptual framework, whereby, the paths worked from left to right across the model with the relationships between the facets of the CVO dynamic managerial capabilities framework and the CVODL (i.e., Hypotheses 1 to 3d) appearing first, and the control paths appearing last. The model fit indices of the structural model were evaluated based on the same criteria as the measurement model (as discussed in section 4.10.6.2). Specifically, all model fit indices were acceptable. A discussion of the final operationalisations used in the SEM analysis is provided in the following section.

#### 4.10.8.4. Final operationalisations

The operationalisations of the variables that were used in the structural model were not changed after the end of the CFA stage (as discussed in section 4.10.6.3). That is, after identifying problematic variables, all multi-item scales still had multiple indicators. Furthermore, it is not uncommon for researchers to delete items after they have developed their structural model, as some variables could be excluded to improve the model fit indices (Steenkamp and van Trip, 1991). However, in this PhD thesis, no items were deleted after the structural model was tested due to an acceptable set of model fit indices. Moreover, the statistical evidence pertaining to the structural model will be presented in the following chapter, to demonstrate why this judgement was made to not delete any additional items from the final dataset. Also, in the following chapter, an overview of the final operationalisations will be provided, in terms their descriptive scale statistics (e.g., means and standard deviations), the number of items, parameter ranges (i.e., factor loadings and error terms), and scale coefficients, namely, Cronbach's (1951) alpha coefficients, CRs, and AVEs used to test the research hypotheses. Note that while multi-item scales were preferred in the SEM analysis (due to the reasons identified in section 4.10.3), there were some measurements that involved using single indicators. The ways in which single indicators were incorporated into the structural model are discussed in the next section.



#### 4.10.8.5. Single indicators

There is a debate in the statistical literature pertaining to the use of single versus multiple items in SEM. That is, some authors have argued that multiple items are required to capture the shared variance of a latent construct (providing that the items co-vary with each other) and to provide researchers with the flexibility to delete items if they worsen their model's fit indices (Jarvis, Mackenzie and Podsakoff, 2003; Diamantopoulos and Siguaw, 2006). Other authors have argued that single indicators can be valid measures of latent constructs and can be used to simplify measurement and structural models (Hayduk and Littvay, 2012). Furthermore, an interesting quote is that "no single indicator can capture the full theoretical meaning of the underlying construct and hence, multiple indicators are necessary" (Steenkamp and Baumgartner, 2000, p. 196). However, authors in favour of single indicators in SEM have recommended that they can be used if the single-item measures a solid construct that only requires one indicator (e.g., the number of full-time employees in an organisation) (see Shah and Goldstein, 2006). Most authors appear to be in favour of the use of multiple items in SEM research for the above-specified reasons. In this doctoral study, multiple items were preferred (to be in sync with the recommendations of the extant statistical literature), but certain single indicators were used for various purposes. Specifically, there were some variables that were reported in this PhD thesis that were not used in the measurement or structural models, as they were used as characteristics of the sampled companies. These company characteristic variables were:

1. Number of full-time employees in America (ranging from: 0 to 50,000)
2. Industry type (using a list of industry types)
3. Export ratio (ranging from: 0 to 100%)
4. Respondents' functional role (using a list of top-level managerial positions)
5. Business unit location (using a list of geographic locations)
6. Respondents' functional home (using a list of departmental functions)

These company characteristic variables were not used in the SEM analysis and therefore, did not require any special statistical treatment; they were used to provide an overview of the backgrounds of the respondents and their corporations. Alternatively, the variables that were used in the SEM analysis (namely, CVO

functional resource investments and firm size) were treated differently to the company characteristic variables. That is, unlike multi-item scales, LISREL 9.30 does not calculate the error variances for single-item scales (something that researchers need to calculate themselves). The error variances were calculated (for which the specific equation is presented in the following chapter) and specified in the LISREL 9.30 syntax file. Once calculated, the statistical software was instructed to test the measurement and structural models respectively. In the next section, the process used to ensure that the structural model converged, in respect of item parcelling is discussed.

#### 4.10.8.6. Item parcelling

In SEM, a main reason why structural models do not converge is that the sample size for a certain dataset is not large or powerful enough to process the number of parameter estimates (e.g., factor loadings, error variances, and relationships between latent variables) (Williams, Vandenberg and Edwards. 2009). As such, sample size is a vital consideration for SEM analyses, so that researchers can test their research hypotheses and control paths (Gerbing and Hamilton, 1996). As discussed in section 4.10.1 (in respect of the final sample size in this PhD study), the 241 observations collected for this doctoral thesis were considered as a sufficient sample size to test the measurement and structural models (see Shook, Ketchen Jr., Hult and Kacmar, 2004). Due to the high-level of parameter estimates used in this PhD study, the structural model was on the cusp of not converging, whereby, the addition of more parameters caused LISREL 9.30 to not be able to process the information that it was instructed to test. Hence certain variables were treated via item parcelling to reduce the number of parameters.

Item parcelling is when the observed variables (used to measure a latent construct) are averaged so that instead of being operationalised by multiple observed variables, the measure is changed to be a single indicator (Martinez-Lopez, Gazquez-Abad and Sousa, 2013). By converting the observed variables into a single-item measure, the number of parameter estimates is reduced, helping the structural model converge. Item parcelling is comparable with multiple regression, in which items are averaged to measure a latent variable (Irwin and McClelland, 2001). Further, when the specific variables were treated via item parcelling, their new error variances were calculated

(based on the procedure described in section 4.10.8.6, in respect of setting up the syntax file) and added to the syntax file in LISREL 9.30 used to test the structural model. Note that specific variables that were treated via item parcelling are discussed in the following chapter with the supporting statistical evidence. Moreover, in the following section, the ways in which the research hypotheses were tested through SEM are discussed. That is, the different methods used to test both the linear and non-linear (i.e., quadratic) paths are also highlighted in the next section.

#### 4.10.8.7. Linear versus quadratic hypothesis-testing

Both linear and non-linear (i.e., quadratic) research hypotheses were developed within this PhD study. In terms of the linear hypotheses, all procedures that were used to test these paths have been described in the previous chapters and are supported with statistical evidence in the next chapter of this PhD thesis. The non-linear hypotheses (namely, Hypotheses 6 and 8) were tested using the following five steps. Please note that the ultimate method used to test the quadratic research hypotheses was residual-centering – a major and statistically-accurate way to test non-linear statistical relationships (Lance, 1988; Story, Boso and Cadogan, 2015). The other major way to test quadratic relationships is through mean-centering, an approach that was not followed in this PhD thesis, due to the criticism it has received in not accurately representing the non-linear relationship between two latent variables (Marsh, Wen, Hau, Little, Bovaird and Widaman, 2007). Also, note that the example of the quadratic relationship between the CVODL and sales performance (i.e., Hypothesis 8) will be used to describe the procedures used to test the non-linear research hypotheses. However, the same procedures were used for Hypothesis 6 (i.e., the quadratic relationship between CVO functional resource investments and sales performance).

First, the CVODL construct was averaged by summing the variable's indicators and dividing them by the number of items (using SPSS 23). Second, the averaged CVODL construct was squared (i.e., multiplied by itself via SPSS 23). Third, the squared CVODL construct was orthogonalised. That is, it was expected that there could be a linear or quadratic relationship between a CVODL and sales performance (i.e., Hypotheses 7 and 8 respectively). The linear relationship (tested using the non-squared CVODL variable) was anticipated to be positive, but the quadratic

relationship (tested using the squared CVODL variable) was proposed to be inverted U-shaped. As such, at most, only one of Hypotheses 7 and 8 could be supported, as a relationship cannot be both linear and quadratic. Therefore, if the squared CVODL variable was used to predict sales performance, it would most likely have a positive relationship (due to containing a proportion of the variance of the non-squared CVODL variable) and not have a quadratic relationship. Using SPSS 23, the squared CVODL construct was regressed using the non-squared CVODL variable and the unstandardised residuals of the equation were saved. These unstandardised residuals acted at the squared CVODL variable that did not contain the variance of the non-squared CVODL variable. This process is termed as orthogonalising a variable using residual-centering.

Fourth, the unstandardised residuals of the squared CVODL construct that were saved as a new variable in SPSS 23 were used as the quadratic term in testing Hypotheses 7 and 8. This new variable was added to the syntax file (via LISREL 9.30) and incorporated into the SEM analysis. Fifth, a hierarchical procedure was used to test Hypotheses 7 and 8, in which the linear path (i.e., Hypothesis 7) would be tested (with the quadratic path not included within the structural model by temporarily removing it from the syntax file), before the quadratic path (i.e., Hypothesis 8) would be tested (with the linear path not included within the structural model by temporarily removing it from the syntax file). Furthermore, the t-values of the linear and quadratic paths, as well as the squared multiple correlation ( $R^2$ ) and chi-square ( $\chi^2$ ) values were compared to evaluate whether the quadratic path significantly changed these values. If there was a significant difference, the quadratic research hypothesis would be supported over the linear research hypothesis (Lance, 1988). In summary of a covariance-based SEM analysis (via LISREL 9.30), the use of SEM allowed the final measures to be established and for the research hypotheses to be tested. Common method variance is discussed in the following section.

#### **4.11. Common method variance**

##### **4.11.1. Description of common method variance**

“Common method variance refers to the shared variance among measured variables that arises when they are assessed using a common factor” (Siemsen, Roth and Oliveira, 2010, p. 456). Common method variance can change the nature of the

relationships between variables and cause researchers to report inflated (or deflated) biased results (Lindell and Whitney, 2001). There are two major causes of common method variance. First, common method variance can be caused by using single respondents (as per this PhD thesis) rushing through questionnaires and not providing valid responses, something which can add bias to empirical data and results (Spector, 2006). Second, common method variance can be caused by a poor questionnaire and measurement design (e.g., poorly-worded questions and/or using leading questions) (Podsakoff, Mackenzie, Lee and Podsakoff, 2003). However, there are ways that researchers can reduce common method variance and indeed, test whether such bias is present within a certain dataset. Note that these issues were addressed in this PhD study. Specifically, the measurement techniques that were used follow in the next section.

#### 4.11.2. Measurement techniques

There were four measurement techniques used to reduce common method bias in this doctoral thesis. First, the questions within the survey were not ordered in the same structure as the conceptual framework to minimise the chances of respondents feeling like that they had to choose certain answers. For instance, as outlined in section 4.8.2.9, the operationalisation of the innovativeness construct was placed near the start of the survey, after the first pilot study, so that respondents were not placed with a question pertaining to customer value creation and the expertise of senior management teams (namely, the measure of CVO managerial human capital). Second, there were different scale types used in the two pilot studies and the core survey to make the questionnaire as interactive as possible for respondents. Some scales, with different anchor points, required respondents to click a box representing a certain anchor point, others used dropdown menus and some used sliding scales (whereby, respondents would have to drag a marker on a scale and place it where they saw fit – based on their views). Hence, the initial measure of proactiveness was captured using a drag/drop format, but as discussed in section 4.7.4.1 (regarding the changes made to the survey after the pre-testing stage), this scale would have been unclear for the respondents. Nevertheless, the different scale type was intended to lessen common method variance.

Third, complete confidentiality was assured to the respondents through the information presented in the cover letter (used in the two pilot studies and the core study), as well as through the data collection services of Qualtrics. Fourth, as noted section 4.10.7.3 (in terms of how face validity was addressed), the questions within the survey were adapted from the extant literature and were shaped through in-depth pre-testing interviews with 22 academics and practitioners and via two pilot studies. As such, the questions were deemed to be clear and understandable to the sampled respondents – a technique used to minimise the risk of participants misunderstanding the questions within the survey. In closing to the measurement-based techniques used to reduce common method variance, the above four methods were designed to ensure that such bias was not present within the empirical results. However, unfortunately, common method variance can still exist within certain datasets – despite researchers' best efforts to avoid such concerns (Chang, van Witteloostuijn and Eden, 2010). The statistical techniques used to check for common method variance follow in the next section.

#### 4.11.3. Statistical techniques

There are numerous statistical procedures that researchers can use to test for common method variance in survey research (Lindell and Whitney, 2001; Antonakis, Bendahan, Jacquart and Lalive, 2010). However, with such tests available, the literature has not suggested a single technique that is the most effective tool to test for common method variance. The method used in this PhD study was the marker variable technique (Lindell and Whitney, 2001). The marker variable technique involves a researcher selecting a construct (ideally, one that has multiple items) that is conceptually/theoretically unrelated to any other variable that is being tested within a measurement or structural model. In this PhD thesis, the marker variable technique was undertaken through the following five stages. First, the variable chosen in this PhD thesis was the informant quality construct, as this was not tested in the measurement or structural models, nor were the five items conceptually/theoretically related to any other variable. Second, using SPSS 23, the informant quality items were averaged to yield a single-score.

Third, using SPSS 23, two correlation matrices were calculated, one with the bivariate Pearson correlation coefficients between all averaged constructs (using the

final operationalisations after the EFA and CFA models) and another using the partial Pearson correlation coefficients using the averaged informant quality items as the control factor. Fourth, the bivariate Pearson correlation coefficients were subtracted from the partial Pearson correlation coefficients to create a third correlation matrix indicating the differences between the data with and without the informant quality items as a control factor for common method variance. Fifth, the differences between the partial and bivariate Pearson correlation coefficients were averaged to create a mean difference benchmark (or critical value) between the two correlation matrices. Unfortunately, there is not an agreed mean difference in the extant literature, so a statistical estimate had to be used. As such, the benchmark figure of “.10” was used, whereby, if the mean difference exceeded this figure, there would be evidence of common method variance. Fortunately, the mean difference was less than “.10”, indicating no evidence of common method variance in the empirical results. The statistical evidence supporting the marker variable test is presented in the next chapter. In the following section, this chapter is summarised.

#### **4.12. Chapter summary**

In this chapter, the data collection (including the development of the operationalisations) and data analysis techniques that were used to test the research hypotheses were discussed. Further, reliability and validity (as well as common method variance) were also assessed, to ensure that the empirical results were as accurate and bias-free as possible. In the next chapter, the empirical results are presented.

## **CHAPTER V – RESULTS**

### **5.1. Chapter introduction**

In the previous chapter, the: empirical context, data collection and data analysis that were used in this doctoral study were discussed. In this chapter, the empirical results are presented across the following four sections. First, the techniques used to derive the final sample are discussed. Second, the measurement development stage is outlined. Third, the findings from the hypothesis tests are described. Fourth, common method variance is tested for.

### **5.2. Merging datasets**

As mentioned in section 4.10.1 (regarding how the data from the second pilot study were merged with the data from the core study), the final sample was comprised of 241 observations from large companies in the United States. Moreover, the final sample of 241 firms was the sum of 49 cases from the second pilot study, plus, 192 cases from the core study. The reason that the data from the second pilot study could be combined/merged with the data from the core study was that the scales used in the two questionnaires were very similar and required few adaptations to make the operationalisations identical.

According to Morgan and Hunt (1994), pilot study data can be merged with core study data if small differences exist between datasets. As a large quantity of changes had been made to the survey after the first pilot study, this data were unusable, but due to the few (minor) differences between the second pilot study and the core study, such datasets could be merged. However, certain changes had to be made to the data from the second pilot study to make it identical to the scales used in the core study. Using SPSS 23, the data were recoded in various respects (as scales were adapted in different ways). One of the main tools used to recode the data was a missing value analysis. To stress a point in section 4.5.3 (in terms of the role of Qualtrics in the data collection process), there were no missing data in the two pilot studies or the core study, as all questions were made compulsory to the respondents. Once the two datasets were identical, the data from the second pilot study was merged with the core study's dataset to yield the final sample of 241 corporations. The characteristics of the sampled companies (and the respondents) follow in the next section.



### 5.3. Company characteristics

#### 5.3.1. Functional role of respondents

Refer to Table 5.1 for an overview of the functional roles of the respondents. All respondents held top-level management positions (as per the specification of the respondents), such as: CEOs, CFOs, and Presidents. The functional homes of the respondents are outlined in the next section.

**Table 5.1. Functional roles of the respondents**

Functional role	Frequency	Percent*	Cumulative
Chairman of the Board of Directors	24	10.0	10.0
CEO	78	32.4	42.3
CFO	7	2.9	45.2
President	11	4.6	49.8
Executive Vice President	13	5.4	55.2
Senior Vice President	5	2.1	57.3
Vice President	11	4.6	61.8
Director	62	25.7	87.6
Vice Chairman of the Board of Directors	10	4.1	91.7
COO	7	2.9	94.6
Company Secretary	7	2.9	97.5
Treasurer	6	2.5	100.0
<b>*Valid percentages were not used since there were no missing data.</b>			

#### 5.3.2. Functional home of respondents

Refer to Table 5.2 for the functional homes that the respondents originated from. Prior to their current role as senior managers (as per section 5.3.1), most respondents had spent their careers in the Marketing or Finance Departments of their respective corporations. However, some respondents originated from other functional areas such as: Government Relations, Operations, and Customer Service Departments. The industry types of the sampled companies are described in the following section.

#### 5.3.3. Industry type

The industry types of the sampled businesses are presented in Table 5.3. Such organisations competed across a broad spectrum of industries, with some sectors being product-oriented markets, while other sectors were service-oriented. The locations of the sampled organisations' business units are presented in the subsequent section.

**Table 5.2. Functional homes of the respondents**

<b>Business unit location</b>	<b>Frequency</b>	<b>Percent*</b>	<b>Cumulative</b>
Administration	12	5.0	5.0
Business Development	4	1.7	6.6
After Sales	3	1.2	7.9
Customer Service	23	9.5	17.4
Exporting/International	11	4.6	22.0
Government Relations	19	7.9	29.9
Key Accounts	16	6.6	36.5
Legal	7	2.9	39.4
Logistics/Distribution/Supply Chain	14	5.8	45.2
Operations	8	3.3	48.5
Procurement/Purchasing	1	.4	49.0
Production/Manufacturing	6	2.5	51.5
Quality	1	.4	51.9
R&D	2	.8	52.7
Service	2	.8	53.5
Other	3	1.2	54.8
Engineering	7	2.9	57.7
Finance	52	22.0	79.7
Human Resources/Personnel	2	1.2	80.9
IT	3	1.2	82.2
Marketing	43	17.8	100.0
<b>*Valid percentages were not used since there were no missing data.</b>			

#### 5.3.4. Business unit location

The geographic location of the sampled firms' business units was spread across the United States. Moreover, the sampled organisations were based in both industrial locations, as well as rural (and/or less-populated), indicating a decent spread of geographic locations (see Table 5.4). Some other company characteristic variables follow in the next section.

**Table 5.3. Industry types of the sampled firms**

<b>Industry type</b>	<b>Frequency</b>	<b>Percent*</b>	<b>Cumulative</b>
Agriculture, Forestry, Fishing, and Hunting	5	2.1	2.1
Mining, Quarrying, and Oil and Gas Extraction	7	2.9	5.0
Utilities	7	2.9	7.9
Construction	21	8.7	16.6
Manufacturing	24	10.0	26.6
Wholesale Trade	13	5.4	32.0
Retail Trade	14	5.8	37.8
Transporting and Warehousing	3	1.2	39.0
Information	29	12.0	51.0
Finance and Insurance	26	10.8	61.8
Real Estate and Rental Leasing	4	1.7	63.5
Professional, Scientific, and Technical Services	22	9.1	72.6
Management of Companies and Enterprises	11	4.6	77.2
Administrative Support	3	1.2	78.4
Education Services	13	5.4	83.8
Health Care and Social Assistance	7	2.9	86.7
Arts, Entertainment and Recreation	2	.8	87.6
Accommodation and Food Services	4	1.7	89.2
Other Services (except Public Administration)	5	2.1	91.3
Public Administration	5	2.1	93.4
Other	16	6.6	100.0
<b>*Valid percentages were not used since there were no missing data.</b>			

### 5.3.5. Other company characteristics

Refer to Table 5.5 for an overview of other demographic factors about the sampled organisations. Specifically, the sampled firms were varied in terms of their: number of full-time employees (based in the United States), annual sales, organisational performance, functional experience, export ratios, and number of departmental functions. Further, the informant quality items were assessed to highlight the knowledgeability of the respondents. In the case of informant quality, the data suggested that the respondents had a high-level of expertise on the content of the questionnaire. In the next section, the inter-item correlations of the multi-item scales are described.

**Table 5.4. Business unit locations of the sampled firms**

<b>Business unit location</b>	<b>Frequency</b>	<b>Percent*</b>	<b>Cumulative</b>
Alabama	4	1.7	1.7
Alaska	1	.4	2.1
Arizona	7	2.9	5.0
California	38	15.8	20.7
Colorado	5	2.1	22.8
Connecticut	1	.4	23.2
Florida	28	11.6	34.9
Georgia	8	3.3	38.2
Hawaii	1	.4	38.6
Idaho	1	.4	39.0
Illinois	11	4.6	43.6
Indiana	4	1.7	45.2
Kansas	3	1.2	46.5
Kentucky	1	.4	46.9
Louisiana	7	2.9	49.8
Maryland	3	1.2	51.0
Massachusetts	3	1.2	52.3
Michigan	4	1.7	53.9
Minnesota	3	1.2	55.2
Mississippi	2	.8	56.0
Missouri	1	.4	56.4
Nevada	4	1.7	58.1
New Jersey	1	.4	58.5
New Mexico	1	.4	58.9
New York	32	13.3	72.2
North Carolina	5	2.1	74.3
Ohio	4	1.7	75.9
Oklahoma	2	.8	76.8
Oregon	2	.8	77.6
Pennsylvania	9	3.7	81.3
Rhode Island	1	.4	81.7
South Carolina	2	.8	82.6
Tennessee	5	2.1	84.6
Texas	20	8.3	92.9
Utah	1	.4	93.4
Virginia	8	3.3	96.7
Washington	5	2.1	98.8
Wisconsin	1	.4	99.2
Wyoming	1	.4	99.6
Other	1	.4	100.0
<b>*Valid percentages were not used since there were no missing data.</b>			

#### 5.4. Inter-item correlations

All constructs' inter-item correlations were assessed to gauge an indication of how well each item measured each latent variable (excluding single-item measures, e.g., CVO functional resource investments). The inter-item correlations of the multi-item scales (for both the core and control variables) are presented in Appendix 4. For all multi-item variables, the items were correlated, suggesting that in this respect, items were acceptable. Note that the use of inter-item correlations for the multi-item scales was an introductory statistical technique used to evaluate the quality of such measures. In the subsequent sections of this chapter, the statistical techniques used to develop the final measures (and eventually test the research hypotheses) become incrementally complex. In the following section, the initial scale reliabilities of the multi-item scales are outlined.

#### 5.5. Initial scale reliabilities

All multi-item scales' reliabilities were initially assessed using Cronbach's (1951) alpha coefficient. That is, before the multi-item scales were refined (in the EFA and CFA models), it was of interest to determine whether the original scales were reliable (i.e., equal to or greater than ".70") before any items were deleted. Cronbach's (1951) alpha coefficient was calculated using the following equation (via SPSS 23):

$$\alpha = \frac{n}{(n - 1)} \times \left( 1 - \frac{\sum_{i=1}^n V_i}{V_t} \right)$$

**Whereby:**  $\alpha$  = Cronbach's (1951) alpha coefficient;  $n$  = number of items;  $V_i$  = variance of scores on each item;  $V_t$  = total variance of overall scores on entire test.

As shown in Table 5.6, the initial scale reliabilities of the multi-item scales were deemed reliable with the Cronbach (1951) alpha coefficients ranging between: ".78" and ".96" – indicating decent initial measures using this statistical technique. In the next section, the EFA models are used to describe how variables' measures were developed.

**Table 5.5. Other demographic characteristics of the sample**

<b>Construct</b>	<b>Mean</b>	<b>Median</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Number of departmental functions*	6.34	4.00	6.19	1.00	24.00
Annual sales (\$US)**	27.95 million	5.72 million	34.36 million	.00	100.00 billion
Full-time employees	26,339.19	30,000.00	17,753.41	101.00	50,000.00
Export ratio (% of annual sales)	53.85	58.53	29.58	.00	100.00
Respondents' years in their current position	15.33	14.30	9.40	.00	35.00
Respondents' years in their current company	17.19	14.70	9.27	.60	35.00
Change in return on investments ( $\Delta\%$ one-year)	55.84	46.97	61.91	-86.56	200.00
Change in sales ( $\Delta\%$ one-year)	67.55	62.49	62.60	-69.39	200.00
Change in overall profitability ( $\Delta\%$ one-year)	77.78	68.21	65.15	-94.00	200.00
Informant quality (seven-point Likert scale)	5.83	6.00	1.12	1.00	7.00
<p><b>*The number of departmental functions was calculated from the measure of CVO functional resource investments. Please note that 79 corporations (32.80% of the sample) had only one departmental function (as per the list provided).</b></p> <p><b>**Please also note that regarding the annual sales (\$US) data, one sampled company had no revenues during the time of this PhD study.</b></p>					

## 5.6. EFAs and scale refinements

### 5.6.1. CVO dynamic managerial capabilities and the CVODL

The first EFA model contained all the items for: CVO managerial human capital, CVO managerial cognition, the four dimensions of CVO managerial social capital, and the CVODL construct (see Table 5.7). A problem with this EFA model was that the items for CVO managerial human capital cross-loaded onto the same factor as the third facet of CVO managerial social capital. This EFA suggested that the items used to measure CVO managerial human capital and the third facet of CVO managerial social capital were operationalisations of the same latent factor. The four dimensions of CVO managerial social capital were evaluated in a separate EFA, which is presented in the next section.

### 5.6.2. CVO managerial social capital

As noted in section 5.6.1 (in terms of the first EFA model and its cross-factor loadings pertaining to CVO managerial human capital and the third facet of CVO managerial social capital), the second EFA model contained the four dimensions of CVO managerial social capital (see Table 5.8). That is, it was of interest to evaluate whether there were any additional problems associated with the third dimension of the construct. Interestingly, the four dimensions of CVO managerial social capital loaded onto four individual factors, suggesting that CVO managerial human capital and the third facet of CVO managerial social capital would cause statistical complications if they were both used in the subsequent quantitative procedures. Therefore, a decision was made to delete the third facet of CVO managerial social capital from the statistical analysis (as opposed to CVO managerial human capital). By doing this, there were three dimensions of CVO managerial capital remaining (i.e., facets 1, 2, and 4). However, if CVO managerial human capital had been deleted from the statistical analysis, the entire construct would have been excluded from the empirical component of the study, an unfortunate outcome as (CVO) managerial human capital is an integral element of the (CVO) dynamic managerial capabilities framework (Helfat and Martin, 2015). An EFA used to assess the: CVODL, intelligence responsiveness, and sales performance follows in the next section.

Table 5.6. Initial scale reliabilities of the multi-item scales

Constructs*	Scale reliabilities		Scale statistics		
	Items (n)	Alpha ( $\alpha$ )	Mean	SD	Variance
CVO managerial human capital	4.00	.78	4.91	1.62	2.62
CVO managerial cognition	4.00	.92	5.09	1.57	2.46
CVO managerial social capital (facet 1)	4.00	.95	5.86	2.17	4.71
CVO managerial social capital (facet 2)	3.00	.89	3.42	1.68	2.82
CVO managerial social capital (facet 3)	4.00	.83	4.94	1.45	2.10
CVO managerial social capital (facet 4)	4.00	.95	4.99	1.37	1.88
CVODL	6.00	.96	5.65	2.24	5.02
Sales performance	3.00	.95	7.66	2.53	6.40
Intelligence responsiveness	5.00	.95	5.66	2.27	5.15
Innovativeness	5.00	.92	4.86	1.76	3.10
Risk-taking	3.00	.79	4.64	1.56	2.43
Proactiveness	3.00	.94	6.79	2.66	7.08
Competitive intensity	6.00	.93	4.78	1.63	2.66
Market dynamism	5.00	.81	4.89	1.49	2.22
Technological turbulence	5.00	.94	5.63	2.16	4.67
Respondents' experience	2.00	.91	16.30	8.94	79.92
Organisational performance	3.00	.92	67.06	58.55	3,428.10
Informant quality	5.00	.91	5.83	1.12	1.25



**Table 5.7. EFA - CVO dynamic managerial capabilities and the CVODL**

Items*	Components					
	1	2	3	4	5	6
MHC_1	.664					
MHC_2	.700					
MHC_3	.731					
MHC_4	.643					
MCG_1		.701				
MCG_2		.792				
MCG_3		.828				
MCG_4		.804				
SC_F1_1			.613			
SC_F1_2			.648			
SC_F1_3			.653			
SC_F1_4			.627			
SC_F2_1				.892		
SC_F2_2				.927		
SC_F2_3				.872		
SC_F3_1	.719					
SC_F3_2	.741					
SC_F3_3	.734					
SC_F3_4	.632					
SC_F4_1					.777	
SC_F4_2					.838	
SC_F4_3					.864	
SC_F4_4					.834	
CVODL_1						.785
CVODL_2						.824
CVODL_3						.822
CVODL_4						.796
CVODL_5						.823
CVODL_6						.787

\*Please note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F3 – CVO managerial social capital (facet 3)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**Total variance explained (%) = 80.37%**

**KMO test = .92**

**df = 406**

**Barlett's test of sphericity:  $\chi^2$  (Sig.) = 6,838.10 (.000)**

**The problem linked with the cross-factor loadings between CVO managerial human capital and CVO managerial social capital (facet 3) was resolved in-text.**

**Table 5.8. EFA - CVO managerial social capital**

Items*	Components			
	1	2	3	4
SC_F1_1	.799			
SC_F1_2	.852			
SC_F1_3	.874			
SC_F1_4	.860			
SC_F2_1		.894		
SC_F2_2		.925		
SC_F2_3		.881		
SC_F3_1			.780	
SC_F3_2			.814	
SC_F3_3			.821	
SC_F3_4			.707	
SC_F4_1				.839
SC_F4_2				.882
SC_F4_3				.870
SC_F4_4				.847
<p><b>*Please note that the item codes represent the following variables:</b>  <b>SC_F1 – CVO managerial social capital (facet 1)</b>  <b>SC_F2 – CVO managerial social capital (facet 2)</b>  <b>SC_F3 – CVO managerial social capital (facet 3)</b>  <b>SC_F4 – CVO managerial social capital (facet 4)</b></p> <p><b>Total variance explained (%) = 80.75%</b>  <b>KMO test = .87</b>  <b>df = 105</b>  <b>Barlett's test of sphericity: <math>\chi^2</math> (Sig.) = 3,072.21 (.000)</b></p>				

### 5.6.3. CVODL, intelligence responsiveness, and sales performance

The third EFA model contained the items for the: CVODL, intelligence responsiveness, and sales performance variables (see Table 5.9). The reason for testing this EFA model was because the CVODL, intelligence responsiveness, and sales performance variables were integral variables within the conceptual framework. Hence, it was important to determine whether the items measuring these variables loaded onto three specific factors. The results for this EFA indicated that the: CVODL, intelligence responsiveness, and sales performance variables loaded onto three separate factors. In the following section, an EFA model examining the dimensionality of the facets of entrepreneurial orientation is outlined.

## 5.6.4. Entrepreneurial orientation

The fourth EFA model contained the three facets of the entrepreneurial orientation construct, namely: innovativeness, risk-taking, and proactiveness (please see Table 5.10). This EFA model did not present any statistical concerns, with three distinct components being identified. In the next section, these three dimensions of entrepreneurial orientation were tested in another EFA with intelligence responsiveness.

**Table 5.9. EFA – CVODL, sales performance and intelligence responsiveness**

Items*	Components		
	1	2	3
CVODL_1	.845		
CVODL_2	.876		
CVODL_3	.863		
CVODL_4	.846		
CVODL_5	.857		
CVODL_6	.833		
SALES_1		.874	
SALES_2		.892	
SALES_3		.870	
RESP_1			.736
RESP_2			.749
RESP_3			.802
RESP_4			.842
RESP_5			.840
<p><b>*Please note that the item codes represent the following variables:</b>  <b>CVODL – CVODL</b>  <b>SALES – sales performance</b>  <b>RESP – intelligence responsiveness</b></p> <p><b>Total variance explained (%) = 85.88%</b>  <b>KMO test = .92</b>  <b>df = 91</b>  <b>Barlett's test of sphericity: <math>\chi^2</math> (Sig.) = 4,142.95 (.000)</b></p>			

## 5.6.5. Entrepreneurial orientation and intelligence responsiveness

The fifth EFA model contained the three dimensions of entrepreneurial orientation (i.e., risk-taking, proactiveness, and innovativeness) and intelligence responsiveness (see Table 5.11). The reason for conducting this EFA model was to test whether there would be any cross-factor loadings between intelligence responsiveness (as a market-oriented behaviour) and entrepreneurial orientation. In this EFA model, there

were no statistical concerns. An EFA for the dimensions of environmental turbulence follows in the next section.

#### 5.6.6. Environmental turbulence

The sixth EFA model contained the three components of the environmental turbulence variable, namely: market dynamism, competitive intensity, and technological turbulence (see Table 5.12). The results from this EFA model highlighted that each facet of environmental turbulence loaded onto a separate factor with no statistical complications. In the next section, the final EFA model was used to assess some of the miscellaneous multi-item scales (i.e., those that were not used in the hypothesised or control paths) within the final dataset.

**Table 5.10. EFA – entrepreneurial orientation**

Items*	Components		
	1	2	3
INNV_1	.820		
INNV_2	.838		
INNV_3	.864		
INNV_4	.870		
INNV_5	.838		
PRCT_1		.914	
PRCT_2		.906	
PRCT_3		.885	
RISK_1			.856
RISK_2			.842
RISK_3			.818
<p><b>*Please note that the item codes represent the following variables:</b>  <b>INNV – innovativeness</b>  <b>PRCT – proactiveness</b>  <b>RISK – risk-taking</b></p> <p><b>Total variance explained (%) = 78.51%</b>  <b>KMO test = .84</b>  <b>df = 55</b>  <b>Barlett’s test of sphericity: <math>\chi^2</math> (Sig.) = 1,913.04 (.000)</b></p>			

#### 5.6.7. Organisational performance, respondents’ experience, and informant quality

The seventh (and final) EFA model contained three miscellaneous multi-item variables (i.e., constructs that were not used in the hypothesised or control paths), namely: organisational performance, respondents’ experience, and informant quality (see Table 5.13). Interestingly, when not restricting this model to a specific number

of factors, the items for respondents' experience loaded onto the same factor as the informant quality items. However, when restricting this EFA model to three fixed factors (as described in section 4.10.5.2, in respect of the EFA techniques used in this doctoral study), three distinct components were extracted, with no cross-factor loadings. Moreover, the KMO test of sampling adequacy, Bartlett's test of sphericity and the total variance explained all indicated high-quality EFA models (i.e., all EFAs exceeded the minimum benchmarks). The CFA stage of this PhD is discussed in the following section.

**Table 5.11. EFA – entrepreneurial orientation and intelligence responsiveness**

Items*	Components			
	1	2	3	4
INNV_1	.816			
INNV_2	.812			
INNV_3	.830			
INNV_4	.838			
INNV_5	.780			
RISK_1		.856		
RISK_2		.842		
RISK_3		.819		
PRCT_1			.889	
PRCT_2			.864	
PRCT_3			.837	
RESP_1				.797
RESP_2				.829
RESP_3				.855
RESP_4				.876
RESP_5				.858
<p><b>*Please note that the item codes represent the following variables:</b>  <b>INNV – innovativeness</b>  <b>RISK – risk-taking</b>  <b>PRCT – proactiveness</b>  <b>RESP – intelligence responsiveness</b></p> <p><b>Total variance explained (%) = 80.39%</b>  <b>KMO test = .89</b>  <b>df = 120</b>  <b>Barlett's test of sphericity: <math>\chi^2</math> (Sig.) = 3,412.60 (.000)</b></p>				

**Table 5.12. EFA - environmental turbulence**

Items*	Components		
	1	2	3
COMP_1	.789		
COMP_2	.816		
COMP_3	.838		
COMP_4	.876		
COMP_5	.819		
COMP_6	.807		
MD_1		.772	
MD_2		.742	
MD_3		.754	
MD_4		.625	
MD_5		.732	
TT_1			.859
TT_2			.925
TT_3			.765
TT_4			.903
TT_5			.878
<p><b>*Please note that the item codes represent the following variables:</b>  <b>COMP – competitive intensity</b>  <b>MD – market dynamism</b>  <b>TT – technological turbulence</b></p> <p><b>Total variance explained (%) = 71.28%</b>  <b>KMO test = .88</b>  <b>df = 120</b>  <b>Barlett's test of sphericity: <math>\chi^2</math> (Sig.) = 2,864.26 (.000)</b></p>			

**Table 5.13. EFA - organisational performance, respondents' experience and informant quality**

Items*	Components		
	1	2	3
EXPNC_1	.891		
EXPNC_2	.888		
PQUAL_1		.846	
PQUAL_2		.866	
PQUAL_3		.865	
PQUAL_4		.879	
PQUAL_5		.851	
PERF_1			.878
PERF_2			.888
PERF_3			.898
<p><b>*Please note that the item codes represent the following variables:</b>  <b>EXPNC – respondents' experience</b>  <b>PQUAL – informant quality</b>  <b>PERF – organisational performance</b></p> <p><b>Total variance explained (%) = 81.77%</b>  <b>KMO test = .82</b>  <b>df = 45</b>  <b>Barlett's test of sphericity: <math>\chi^2</math> (Sig.) = 1,769.63 (.000)</b></p>			

## 5.7. CFAs and scale refinements

### 5.7.1. Single indicators

As described in section 4.10.8.5 (in terms of the rationale for using single indicators in SEM research), single-item scales were used in a few instances to operationalise certain constructs. For the single indicators used in the CFA and SEM analyses (namely, CVO functional resource investments and firm size) their error variances were calculated using the following equation:

$$S_e^2 = (1 - \alpha) \times \sigma^2$$

**Whereby:**  $\alpha$  = assumed reliability (all set at “.70”);  $\sigma^2$  = variance of the item<sup>11</sup>.

In the following section, the development of the CFA model is discussed (i.e., the variables that were deleted from the statistical analysis).

<sup>11</sup> Please note that there is no agreed assumed reliability for single indicators in the extant statistical literature. As a result, “.70” was used in this PhD thesis.

### 5.7.2. CFA model development

To determine whether there were any problematic variables within the measurement (and ultimately structural) model, the Pearson correlation coefficients between the latent variables using SPSS 23 were studied (see Table 5.14). Specifically, it was of interest to see if there was an overly-high correlation between two or more variables (suggesting the potential for a lack of discriminant validity). While discriminant validity is evaluated in section 5.8.3, the use of the correlation matrix in the CFA model development stage was used to explore whether certain variables were measuring the same latent construct.

The results from the correlation matrix suggested that technological turbulence was a problematic variable, in which is correlated highly with several other latent constructs (i.e., greater than “.70”). Please note that a high correlation between two or more latent variables does not automatically suggest that there is a lack of discriminant validity (as some latent variables could be theoretically/conceptually related) (namely, the first facet of CVO managerial social capital and the CVODL with a correlation coefficient of “.77”), but if there is not a theoretical/conceptual relationship between certain latent variables, this could be an indication of a lack of discriminant validity. As technological turbulence was the only problematic latent variable, it was deleted from the statistical analysis. Market dynamism and competitive intensity were left within the measurement model to measure environmental turbulence.

Furthermore, following the discussion in section 4.10.6.3 (regarding the identification of problematic variables in the CFA stage), the modification indices for the error terms (i.e., the theta-delta values) and the factor loadings (i.e., the lambda-x values) were studied in the LISREL 9.30 output file to detect any items (i.e., observed variables) that worsened the CFA model fit indices. Additionally, the factor loadings and error variances were also studied and iteratively deleted from the measurement model to attempt to improve the model fit indices.



Table 5.14. Correlation matrix for core and control variables

Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. MHC	1.00															
2. MCG	.50	1.00														
3. SC_F1	.43	.69	1.00													
4. SC_F2	-.07	-.16	-.15	1.00												
5. SC_F4	.33	.42	.65	-.20	1.00											
6. CVODL	.38	.63	.77	-.15	.67	1.00										
7. FRI	.30	.44	.45	-.21	.50	.42	1.00									
8. SALES	.42	.51	.57	-.20	.62	.49	.59	1.00								
9. SIZE	.00	.10	.21	-.15	.24	.18	.19	.30	1.00							
10. RESP	.36	.50	.68	-.18	.70	.67	.54	.66	.23	1.00						
11. MD	.25	.34	.38	-.33	.32	.27	.36	.39	.28	.35	1.00					
12. TT	.36	.63	.81	-.16	.66	.88	.43	.55	.20	.68	.32	1.00				
13. COMP	.15	.29	.42	-.43	.50	.36	.49	.49	.26	.48	.47	.41	1.00			
14. PRCT	.27	.43	.55	-.29	.61	.45	.54	.54	.17	.58	.35	.49	.55	1.00		
15. RISK	-.00	-.11	-.07	-.12	-.10	-.08	-.04	-.00	.08	-.07	.16	-.09	.20	-.18	1.00	
16. INNV	.42	.71	.69	-.17	.52	.54	.48	.48	.24	.59	.43	.57	.35	.52	-.06	1.00

\*Correlations greater than “.15” were significant at the 5% ( $\alpha = .05$ ) level (two-tailed). Note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**FRI – CVO functional resource investments**

**SALES – sales performance**

**SIZE – firm size**

**RESP – intelligence responsiveness**

**MD – market dynamism**

**TT – technological turbulence**

**COMP – competitive intensity**

**PRCT – proactiveness**

**RISK – risk-taking**

**INNV - innovativeness**

By the end of the CFA model development stage, several items had been deleted from the measurement model. However, except for the single-item constructs (namely, CVO functional resource investments and firm size), all constructs that were multi-item variables prior to the CFA stage, had at least two items. Refer to Table 5.15 for the factor loadings and error variances for all items that were retained in the measurement model. In the next section, the model fit indices of the CFA are outlined.

### 5.7.3. CFA model fit indices

Refer to Table 5.16 for the model fit indices of the measures that were refined during the CFA stage. As noted in section 4.10.6.2 (in terms of the reasoning for using certain model fit indices for the measurement and structural models), while some authors have specified minimum thresholds for CFA model fit indices (e.g., the RMSEA should be equal or less than “.05”) (e.g., Kelloway, 1998; Diamantopoulos and Siguaw, 2000), there is some scope for studies to report higher values. As such, the CFA model fit indices reported in this study were deemed as acceptable, with most values meeting the recommended benchmark values (or being very close to such thresholds). Furthermore, as the measurement model contained several new operationalisations (namely: CVO managerial human capital, CVO managerial cognition, CVO managerial social capital (facets 1, 2 and 4), the CVODL, and CVO functional resource investments) in addition to certain established operationalisations (e.g., intelligence responsiveness, innovativeness, risk-taking, proactiveness, and sales performance), the CFA model fit indices were deemed as being acceptable (as these variables indicated a reasonable and acceptable model fit). The reliability and validity of the empirical data are discussed in the following section.

**Table 5.15. Factor loadings and error variances of the retained items in the CFA**

Codes*	Mean	SD	Factor loadings	Error variances
MHC_1	4.980	1.926	.770	.408
MHC_2	4.850	1.744	.721	.480
MCG_2	5.020	1.713	.887	.213
MCG_3	5.160	1.602	.916	.162
SC_F1_2	5.820	2.357	.926	.143
SC_F1_3	6.010	2.184	.948	.102
SC_F1_4	3.576	1.882	.882	.223
SC_F2_1	3.394	1.809	.863	.256
SC_F2_2	3.294	1.873	.914	.165
SC_F2_3	5.370	2.424	.805	.352
SC_F4_2	5.480	2.393	.920	.154
SC_F4_3	5.590	2.395	.945	.107
SC_F4_4	5.550	2.505	.900	.191
CVODL_1	5.620	2.317	.904	.183
CVODL_2	5.790	2.267	.952	.094
CVODL_3	5.435	1.382	.925	.144
FRI	5.590	2.502	.837	.300
RESP_1	5.610	2.369	.916	.161
RESP_2	5.770	2.369	.942	.113
RESP_3	7.560	2.767	.878	.228
SALES_1	7.620	2.670	.906	.179
SALES_2	7.800	2.517	.965	.069
SALES_3	5.138	2.667	.925	.196
SIZE	4.820	1.894	.837	.300
INNV_3	4.692	1.750	.917	.159
INNV_4	4.585	1.749	.904	.182
RISK_1	6.790	2.939	.765	.415
RISK_2	6.750	2.772	.769	.409
PRCT_1	6.840	2.734	.921	.153
PRCT_2	4.560	2.020	.940	.117
PRCT_3	4.830	1.834	.893	.203
MD_1	4.730	1.883	.768	.411
MD_2	4.980	1.747	.769	.389
COMP_1	4.980	1.926	.757	.427
COMP_4	4.850	1.744	.863	.256
COMP_5	5.020	1.713	.874	.237
COMP_6	5.160	1.602	.839	.295

\*Please note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**SALES – sales performance**

**SIZE – firm size**

**RESP – intelligence responsiveness**

**MD – market dynamism**

**COMP – competitive intensity**

**PRCT – proactiveness**

**RISK – risk-taking**

**INNV - innovativeness**

## 5.8. Reliability and validity

### 5.8.1. Final scale reliabilities

Once the final operationalisations were refined during the CFA stage, the multi-item scales' reliabilities using Cronbach's (1951) alpha coefficient were calculated. All scale reliabilities ranged from: ".71" to ".95", suggesting decent measurement scales. Moreover, since the multi-item scales were reliable, single-item scales were assumed to have a scale reliability of ".70" (Peterson, 1994). Refer to Table 5.17 for an overview of the scale reliabilities and statistics (i.e., means and standard deviations) of the final operationalisations. In the next section, the tests used to address convergent validity are discussed.

**Table 5.16. CFA model fit indices**

Model*	$\chi^2$	df	Sig.	$\chi^2/df$	RMSEA	CFI	IFI	NNFI	SRMR
CFA	444.48	227	.000	1.96	.06	.96	.96	.93	.03
<p><b>*Please note that model fit indices stand for:</b>  <math>\chi^2</math> = chi-square  df = degrees of freedom  Sig. = statistical significance  RMSEA = root mean square error of approximation  CFI = comparative fit index  IFI = incremental fit index  NNFI = non-normed fit index  SRMR = standardised root mean square residual</p>									

### 5.8.2. Convergent validity

Convergent validity was assessed via examining the CRs and AVEs for the final operationalisations. Specifically, single indicator CRs ( $\rho_c$ ) and AVEs ( $\rho_v$ ) were manually-calculated using the following equations:

$$\rho_c = \frac{(\sum \lambda^2)}{((\sum \lambda)^2 + (\sum \theta))}$$

$$\rho_v = \frac{(\sum \lambda^2)}{(\sum \lambda^2 + \sum \theta)}$$

**Whereby:**  $\lambda$  = indicator factor loadings,  $\theta$  = indicator error variances,  $\Sigma$  = summation of the indicators of the latent variable.

As the CRs and AVEs were greater than the minimum thresholds, the single-item measures were allocated the minimum benchmarks (i.e., “.60” for the CRs and “.50 (50%)” for the AVEs). Moreover, the results from the CR and AVE calculations indicated an acceptable degree of convergent validity. Refer to Table 5.18 for the CRs and AVEs for the final operationalisations (including the ranges for the factor loadings and error terms). In the next section, the techniques used to address discriminant validity are discussed.

**Table 5.17. Final scale reliabilities and scale statistics**

Scales*	Alpha ( $\alpha$ )	Mean	SD	Items (n)
MHC	.71	4.93	1.62	2.00
MCG	.90	5.09	1.58	2.00
SC_F1	.94	5.86	2.17	3.00
SC_F2	.89	3.42	1.68	3.00
SC_F4	.94	4.99	1.37	3.00
CVODL	.95	5.66	2.25	3.00
SALES	.95	7.66	2.53	3.00
RESP	.94	5.66	2.27	3.00
INNV	.91	4.87	1.76	2.00
RISK	.74	4.64	1.56	2.00
PRCT	.94	6.79	2.66	3.00
COMP	.90	4.78	1.63	4.00
MD	.75	4.89	1.49	2.00

**\*Please note that the item codes represent the following variables:**  
**MHC – CVO managerial human capital**  
**MCG – CVO managerial cognition**  
**SC\_F1 – CVO managerial social capital (facet 1)**  
**SC\_F2 – CVO managerial social capital (facet 2)**  
**SC\_F4 – CVO managerial social capital (facet 4)**  
**CVODL – CVODL**  
**SALES – sales performance**  
**SIZE – firm size**  
**RESP – intelligence responsiveness**  
**MD – market dynamism**  
**COMP – competitive intensity**  
**PRCT – proactiveness**  
**RISK – risk-taking**  
**INNV - innovativeness**

**Table 5.18. CRs and AVEs of the final scales**

<b>Scales*</b>	<b>CRs</b>	<b>AVEs (%)</b>	<b>Items (n)</b>
MHC	.72	.56 (56%)	2.00
MCG	.89	.81 (81%)	2.00
SC_F1	.94	.84 (84%)	3.00
SC_F2	.90	.76 (76%)	3.00
SC_F4	.94	.85 (85%)	3.00
CVODL	.95	.86 (86%)	3.00
FRI	.60	.50 (50%)	1.00
SALES	.95	.86 (86%)	3.00
SIZE	.60	.50 (50%)	1.00
RESP	.94	.83 (83%)	3.00
INNV	.91	.83 (83%)	2.00
RISK	.74	.59 (59%)	2.00
PRCT	.94	.84 (84%)	3.00
COMP	.90	.70 (70%)	4.00
MD	.75	.60 (60%)	2.00
<b>Mean</b>	.85	.73 (73%)	2.46
<b>Median</b>	.90	.81 (81%)	3.00
<b>SD</b>	.13	.14 (14%)	.83
<b>Min</b>	.60	.50 (50%)	1.00
<b>Max</b>	.95	.86 (86%)	4.00
<p><b>*Please note that the item codes represent the following variables:</b>  <b>MHC – CVO managerial human capital</b>  <b>MCG – CVO managerial cognition</b>  <b>SC_F1 – CVO managerial social capital (facet 1)</b>  <b>SC_F2 – CVO managerial social capital (facet 2)</b>  <b>SC_F4 – CVO managerial social capital (facet 4)</b>  <b>CVODL – CVODL</b>  <b>FRI – CVO functional resource investments</b>  <b>SALES – sales performance</b>  <b>SIZE – firm size</b>  <b>RESP – intelligence responsiveness</b>  <b>MD – market dynamism</b>  <b>COMP – competitive intensity</b>  <b>PRCT – proactiveness</b>  <b>RISK – risk-taking</b>  <b>INNV - innovativeness</b></p>			

The one squared Pearson correlation coefficient that was greater than the lowest AVE was the link between the first facet of CVO managerial social capital and the CVODL (i.e., “.59” versus “.56”). This result was assumed to not indicate a lack of discriminant validity as these two constructs were expected to be related to one another (as per Hypothesis 3a).

An assessment of the normality of the final measurement scales is presented in the following section. Note that when assessing the normality of the final operationalisations, all items were averaged to yield one histogram (representing the latent construct) with a normal distribution curve (with associated scale statistics). Also, note that when assessing the kurtosis (the sharpness of the peak of the distribution curve) and skewness (the extent to which a distribution deviates from a standard normal distribution curve) of the scales' distributions, at the 5% significance-level ( $\alpha = ".05"$ ), the critical values of  $\pm 1.96$  was used (Hair, Black, Babin, Anderson and Tatham, 2006).

### 5.8.3. Discriminant validity

Discriminant validity was addressed using the Pearson correlation coefficients of the final averaged latent constructs using SPSS 23. Specifically, using SPSS 23, a new correlation matrix was created, containing the squared bivariate Pearson correlation coefficients, with the AVEs on the diagonal (see Table 5.19). With one exception (as discussed shortly), the largest squared correlation was less than the lowest AVE (with the highest squared correlation being ".50" and the lowest AVE being ".56"), there was no evidence of discriminant validity in the empirical results (Voorhees, Brady, Calantone and Ramirez, 2016).

Table 5.19. Discriminant validity test (squared Pearson correlation coefficients with AVEs on the diagonals)

Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. MHC	.56														
2. MCG	.25	.81													
3. SC_F1	.18	.47	.84												
4. SC_F2	.00	.02	.02	.76											
5. SC_F4	.11	.17	.42	.04	.85										
6. CVODL	.14	.39	.59	.02	.44	.86									
7. FRI	.09	.19	.20	.04	.25	.17	.50								
8. SALES	.17	.26	.32	.04	.38	.24	.34	.86							
9. SIZE	.00	.01	.04	.02	.05	.03	.03	.09	.50						
10. RESP	.12	.25	.46	.03	.49	.44	.29	.43	.05	.83					
11. MD	.06	.11	.14	.10	.10	.07	.12	.15	.07	.12	.60				
12. COMP	.02	.08	.17	.18	.25	.12	.24	.24	.06	.23	.22	.70			
13. PRCT	.07	.18	.30	.08	.37	.20	.29	.29	.02	.33	.12	.30	.84		
14. RISK	.00	.01	.49	.01	.01	.00	.00	.00	.00	.00	.02	.04	.03	.59	
15. INNV	.17	.50	.47	.02	.27	.29	.23	.23	.05	.34	.18	.12	.27	.00	.83

\*Please note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**FRI – CVO functional resource investments**

**SALES – sales performance**

**SIZE – firm size**

**RESP – intelligence responsiveness**

**MD – market dynamism**

**COMP – competitive intensity**

**PRCT – proactiveness**

**RISK – risk-taking**

**INNV – innovativeness**

Please also note that in addition to the squared Pearson correlation coefficients, the squared phi matrix coefficients (from LISREL 9.30) were compared against the AVEs. In this latter test, there were no discriminant validity concerns.



That is, if the kurtosis and skewness values were outside of these figures, the data would not fall under a standard normal distribution. Furthermore, at the end of the next section, the descriptive statistics of the final operationalisations are presented (and are commented on).

## **5.9. Assessment of final scale normality**

### **5.9.1. CVO managerial human capital**

CVO managerial human capital was measured on a seven-point semantic differential scale. The scale was normally distributed with a mean of “4.92” and a standard deviation of “1.62”, indicating a suitable final operationalisation (see Figure 5.1). Moreover, the kurtosis and skewness values fell below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of the CVO managerial cognition construct is outlined in the following section.

### **5.9.2. CVO managerial cognition**

CVO managerial cognition was operationalised on a seven-point Likert scale. The scale was normally distributed with a mean of “5.09” and a standard deviation of “1.58”, suggesting that the final measure was acceptable (see Figure 5.2). Further, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of the facets of the CVO managerial social capital construct is described in the following section.

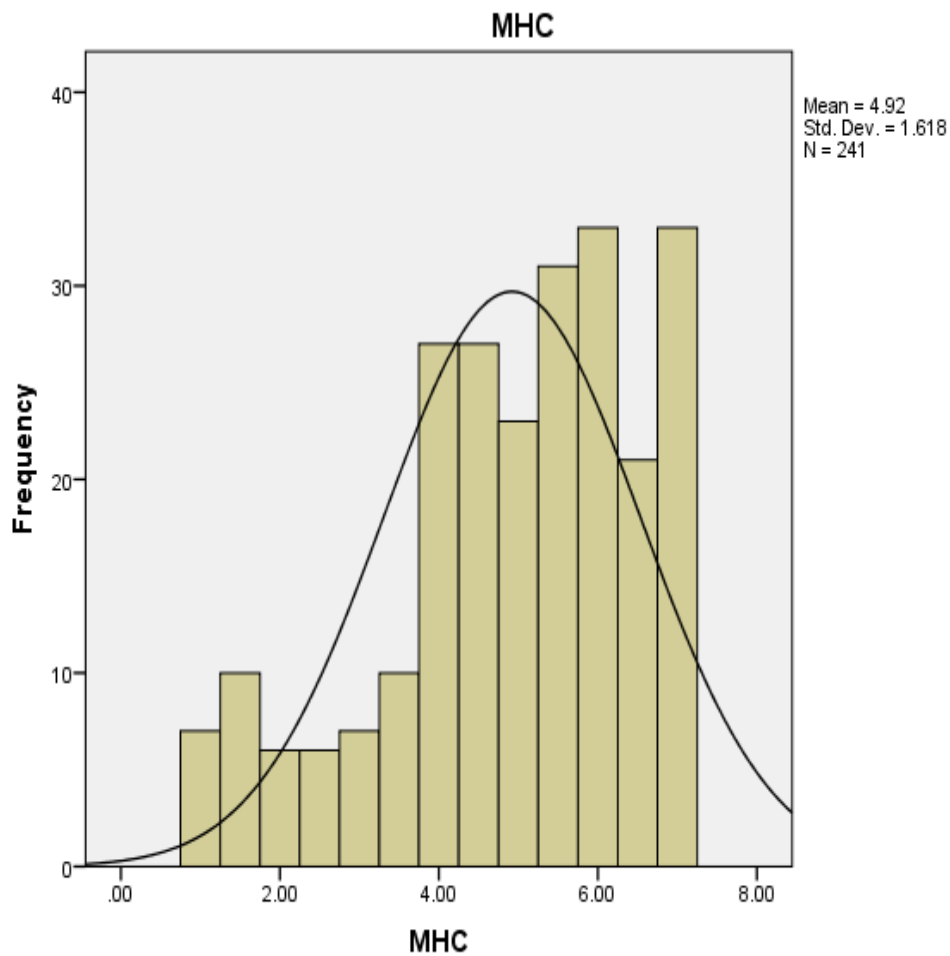
### **5.9.3. CVO managerial social capital**

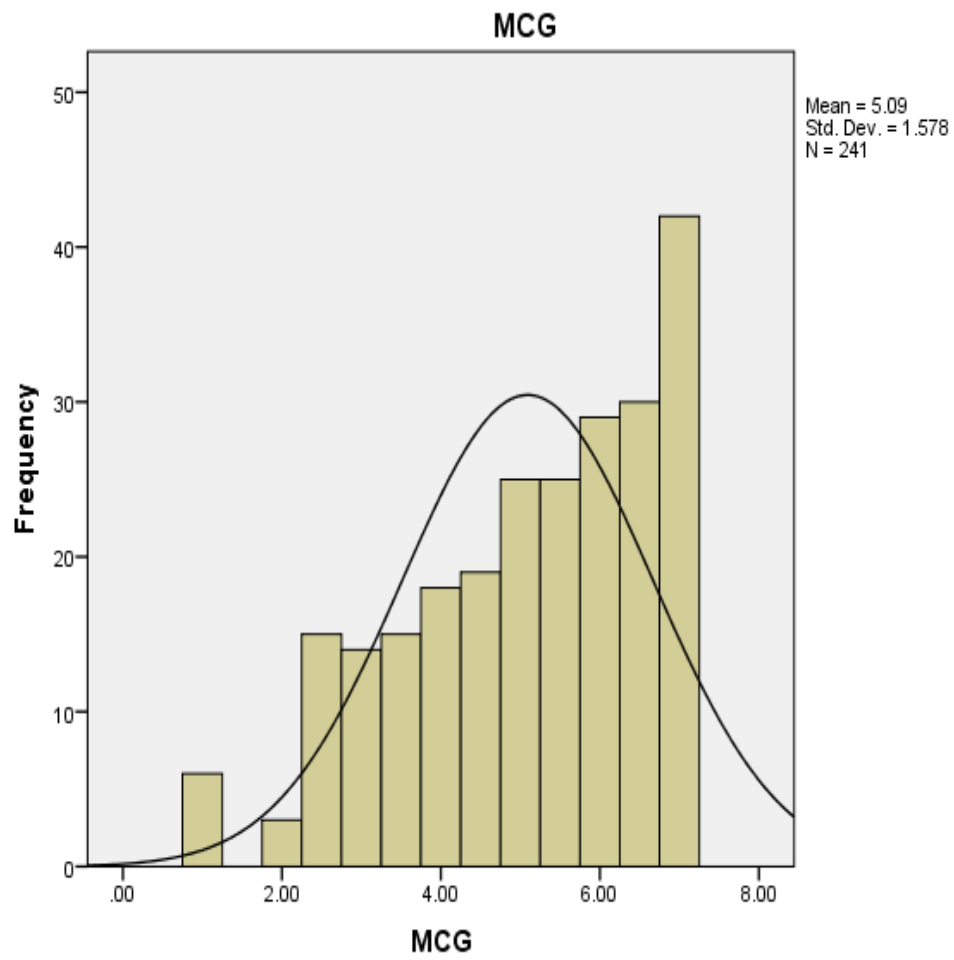
The first facet of CVO managerial social capital was measured on nine-point Likert scale. The measure was normally distributed with a mean of “5.86” and a standard deviation of “2.17”, indicating a decent operationalisation (see Figure 5.3). Additionally, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ).

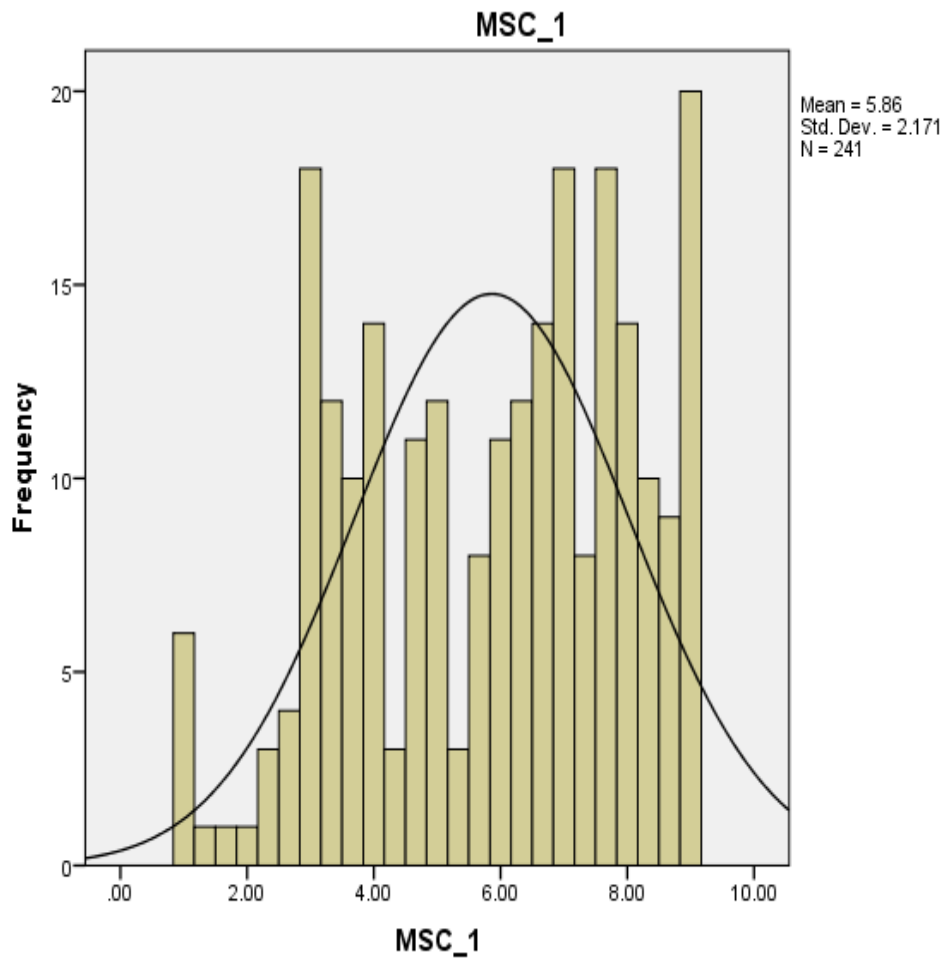
The second facet of CVO managerial social capital was measured on a seven-point Likert scale. The operationalisation was normally distributed with a mean of “3.42” and a standard deviation of “1.68”, suggesting a good final measure (see Figure 5.4). Also, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ).

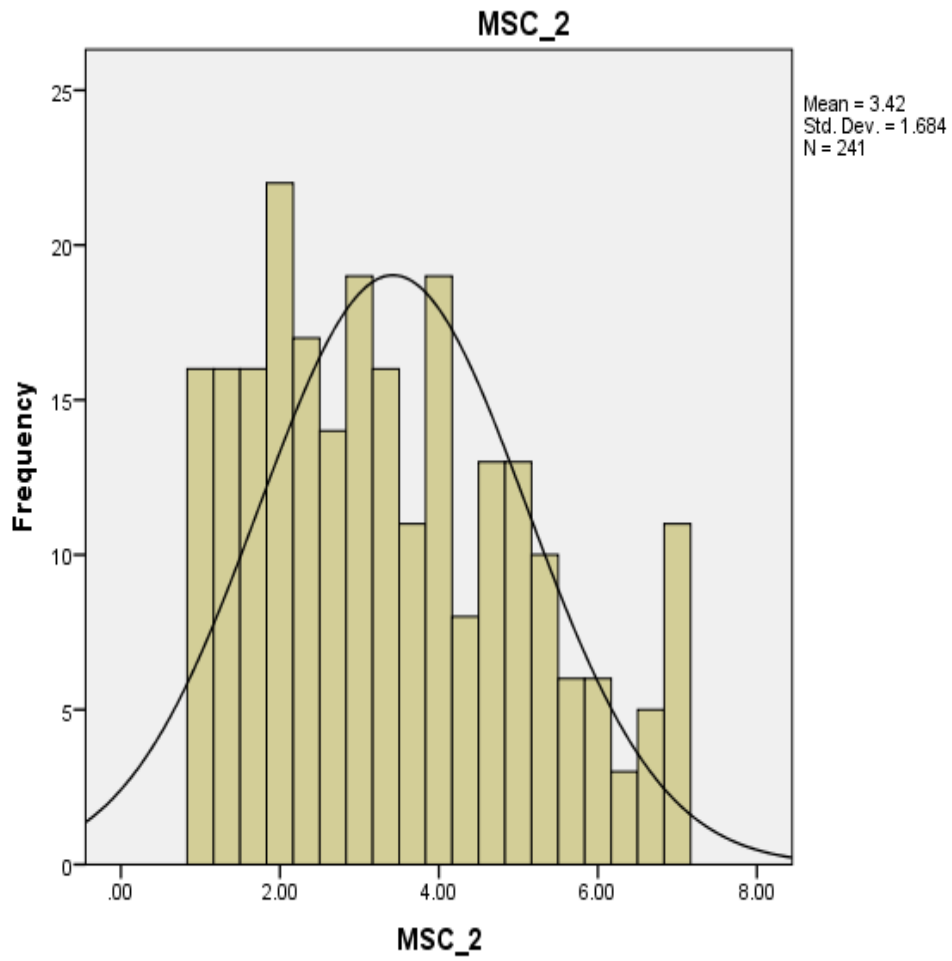
The fourth facet of CVO managerial social capital was measured on a seven-point Likert scale. The scale was normally distributed with a mean of “4.99” and a standard deviation of “1.37”, highlighting an acceptable measure (see Figure 5.5). Moreover, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of the CVODL construct is described in the following section.

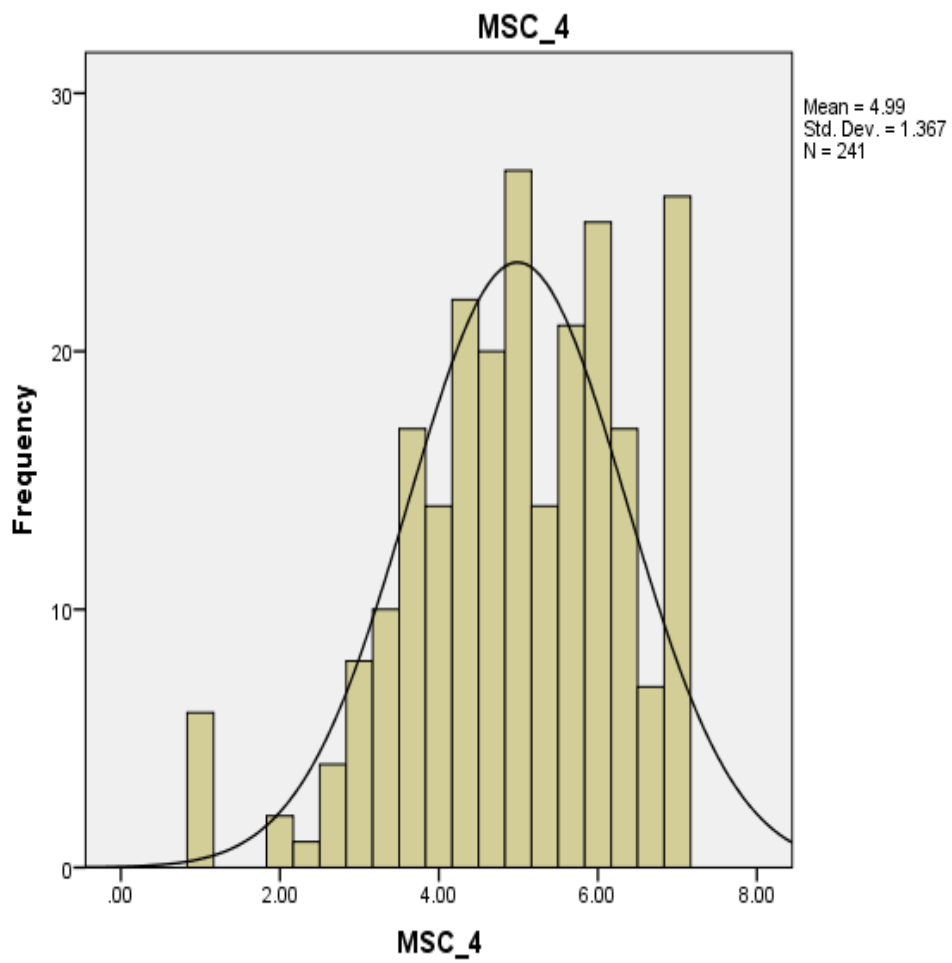
**Figure 5.1. CVO managerial human capital (normal curve)**



**Figure 5.2. CVO managerial cognition (normal curve)**

**Figure 5.3. CVO managerial social capital (facet 1) (normal curve)**

**Figure 5.4. CVO managerial social capital (facet 2) (normal curve)**

**Figure 5.5. CVO managerial social capital (facet 4) (normal curve)**

#### 5.9.4. CVODL

The measure for the CVODL construct was captured on a nine-point Likert scale. The operationalisation was normally distributed with a mean of “5.66” and a standard deviation of “2.25”, suggesting a good final measure (see Figure 5.6). Furthermore, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of the CVO functional resource investments variable is outlined in the next section.

#### 5.9.5. CVO functional resource investments

CVO functional resource investments were operationalised on a seven-point Likert scale. The measure was normally distributed with a mean of “5.44” and a standard deviation of “1.38”, highlighting an acceptable operationalisation (see Figure 5,7). Additionally, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of sales performance is discussed in the subsequent section.

#### 5.9.6. Sales performance

Sales performance was measured on an eleven-point Likert scale. The scale was normally distributed with a mean of “7.66” and a standard deviation of “2.53”, suggesting a decent final measure (see Figure 5.8). Also, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of firm size is presented in the next section.

#### 5.9.7. Firm size

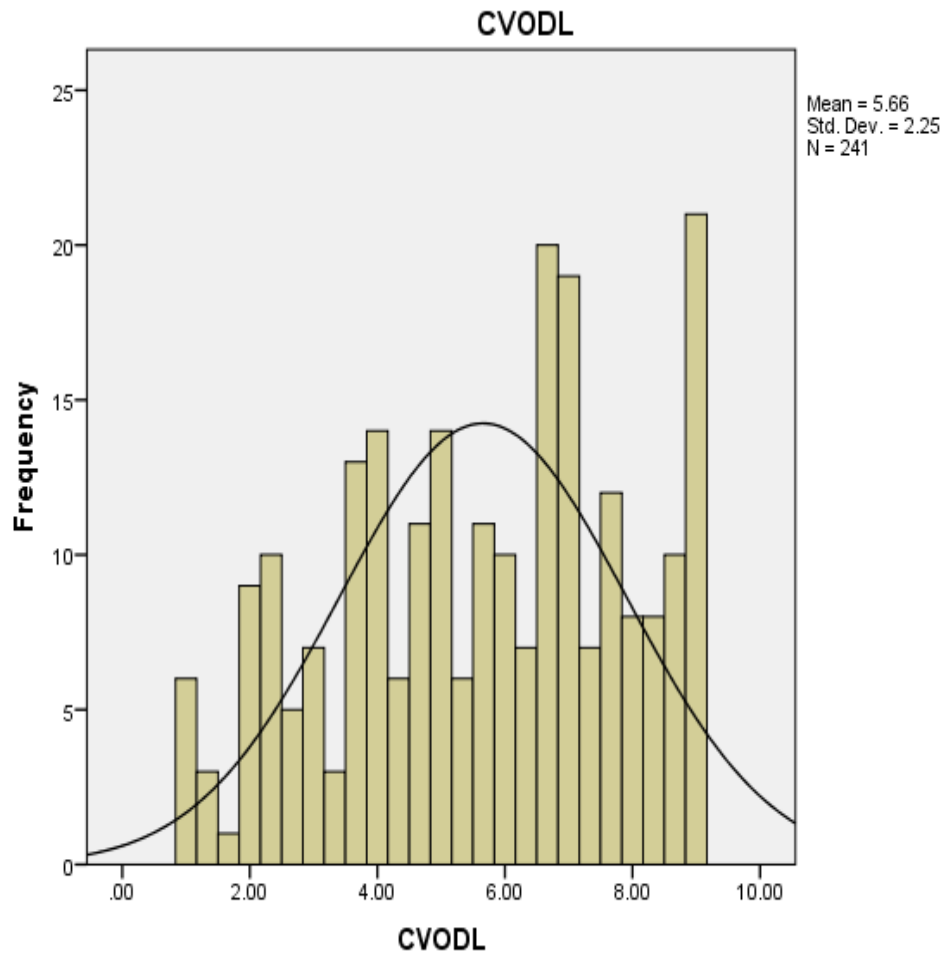
Firm size was measured on a ratio scale, ranging between: 0 and 100 billion American Dollars. However, to reduce the variance of the initial measure, the scale was treated with a logarithmic transformation (as per Hultman, Robson and Katsikeas, 2009). As such, the final scale had a mean of “5.16” and a standard deviation of “2.65”, suggesting a decent measure (see Figure 5.9). Moreover, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of entrepreneurial orientation is outlined in the subsequent section.

#### 5.9.8. Entrepreneurial orientation

Innovativeness was measured on a seven-point Likert scale. The measure was normally distributed with a mean of “4.87” and a standard deviation of “1.76”,

highlighting a decent final operationalisation (see Figure 5.10). Furthermore, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = ".05"$ ).

**Figure 5.6. CVODL (normal curve)**





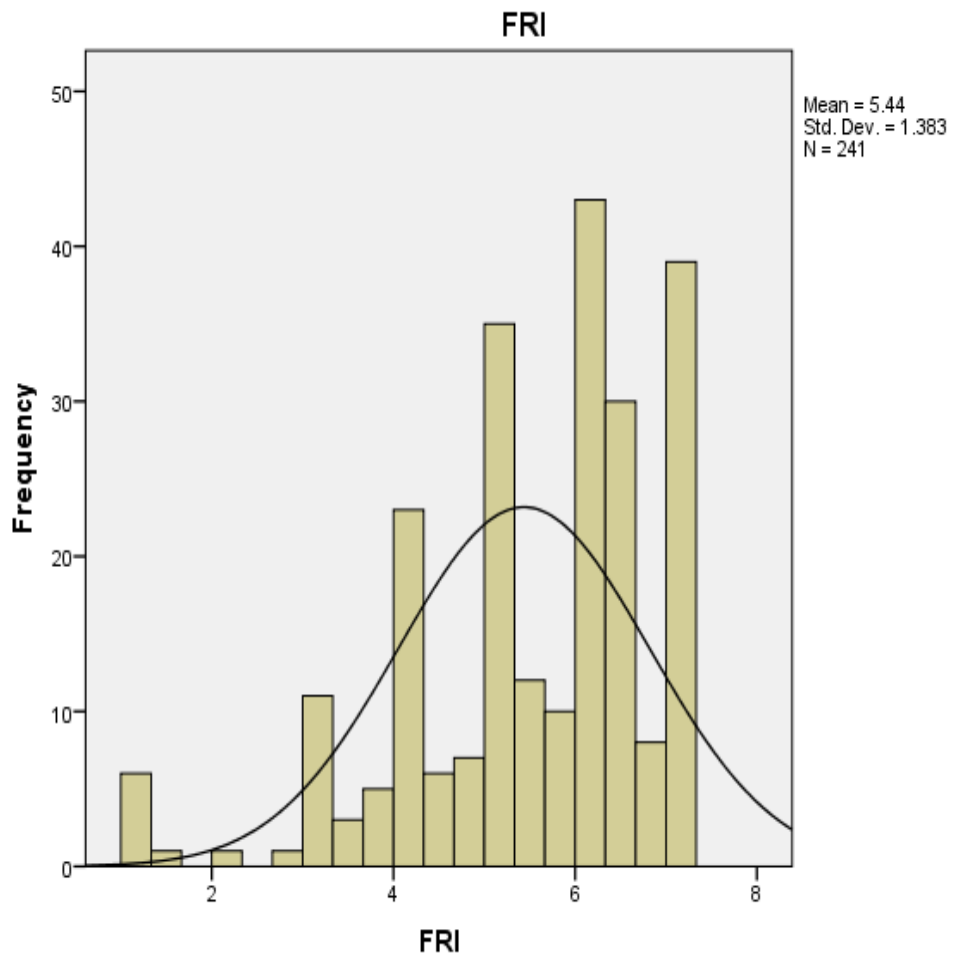
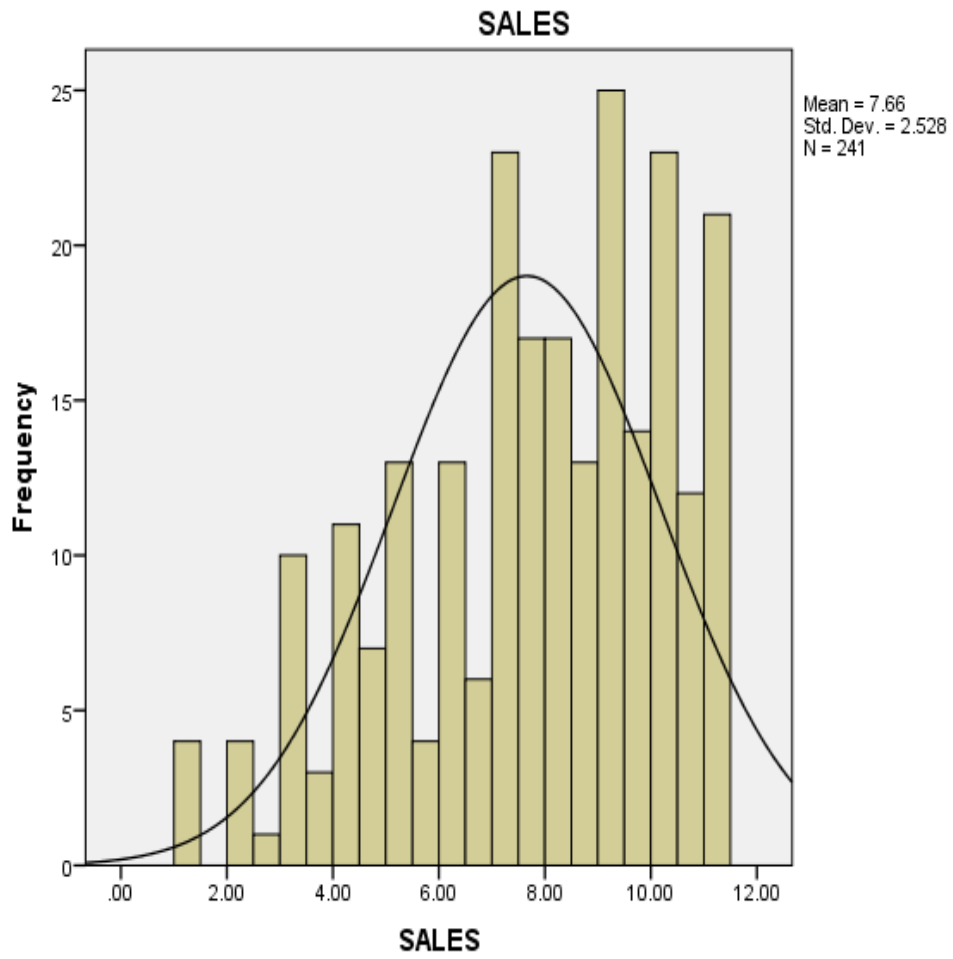
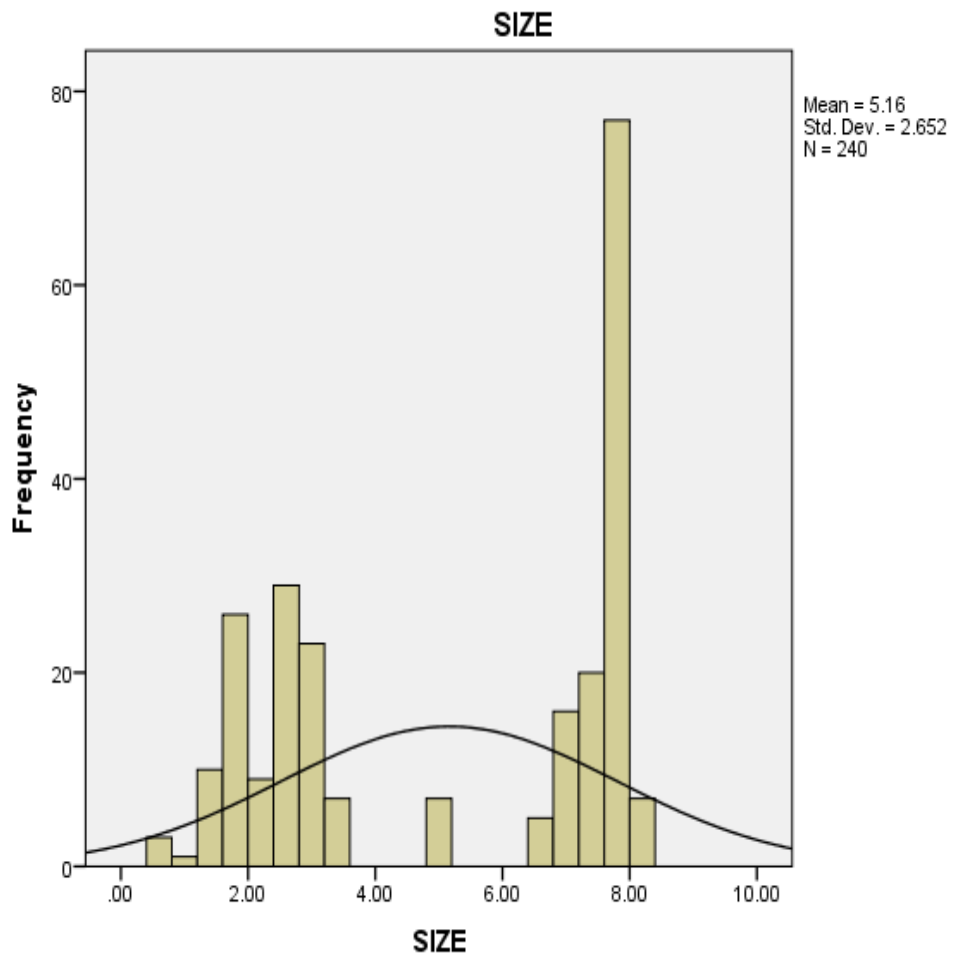
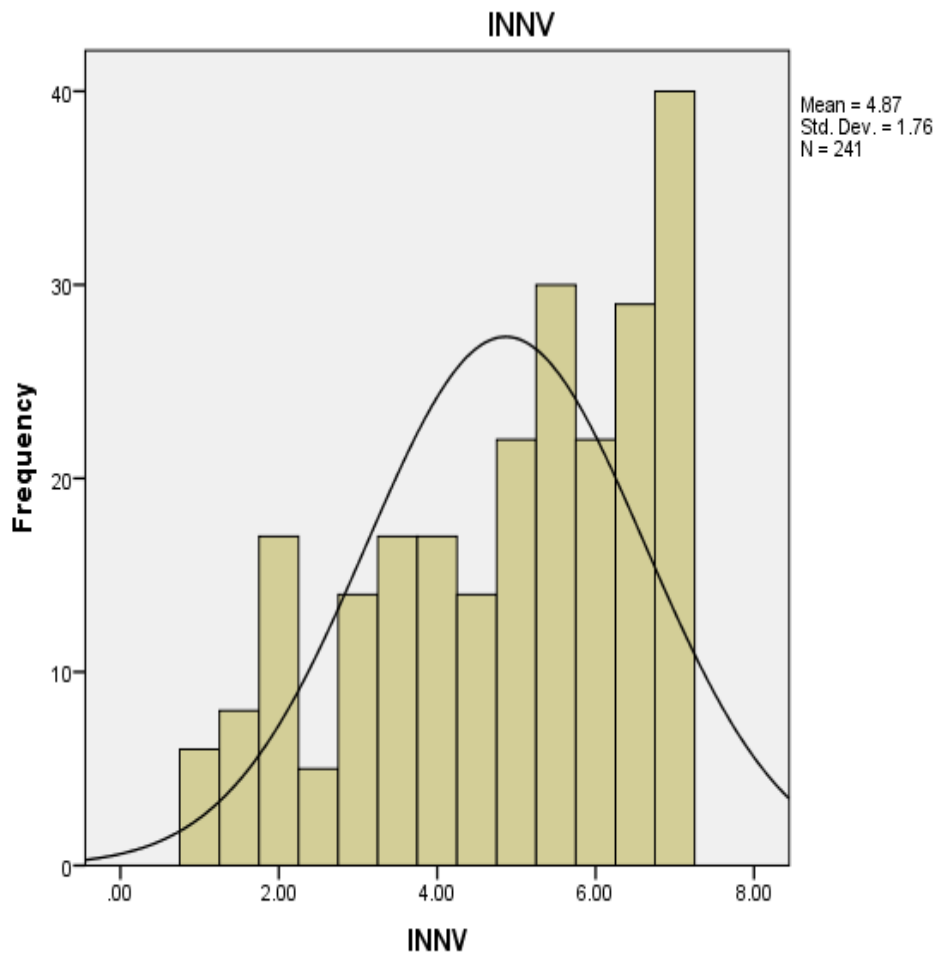
**Figure 5.7. CVO functional resource investments (normal curve)**

Figure 5.8. Sales performance (normal curve)



**Figure 5.9. Firm size (normal curve)**

**Figure 5.10. Innovativeness (normal curve)**

Proactiveness was operationalised on an eleven-point Likert scale. The scale was normally distributed with a mean of “6.79” and a standard deviation of “2.67”, suggesting a good final measure (see Figure 5.11). Additionally, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). Risk-taking was measured on a seven-point Likert scale. The final operationalisation was normally distributed with a mean of “4.64” and a standard deviation of “1.56”, highlighting a good measure (see Figure 5.12). Also, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of the dimensions of environmental turbulence are displayed in the following section.

#### 5.9.9. Environmental turbulence

Market dynamism was operationalised on a seven-point Likert scale. The scale was normally distributed with a mean of “4.89” and a standard deviation of “1.49”, suggesting a decent measure (see Figure 5.13). Moreover, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). Competitive intensity was measured on a seven-point Likert scale. The operationalisation was normally distributed with a mean of “4.78” and a standard deviation of “1.64”, highlighting an effective measure of the construct (see Figure 5.14). Also, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of intelligence responsiveness is described in the next section.

#### 5.9.10. Intelligence responsiveness

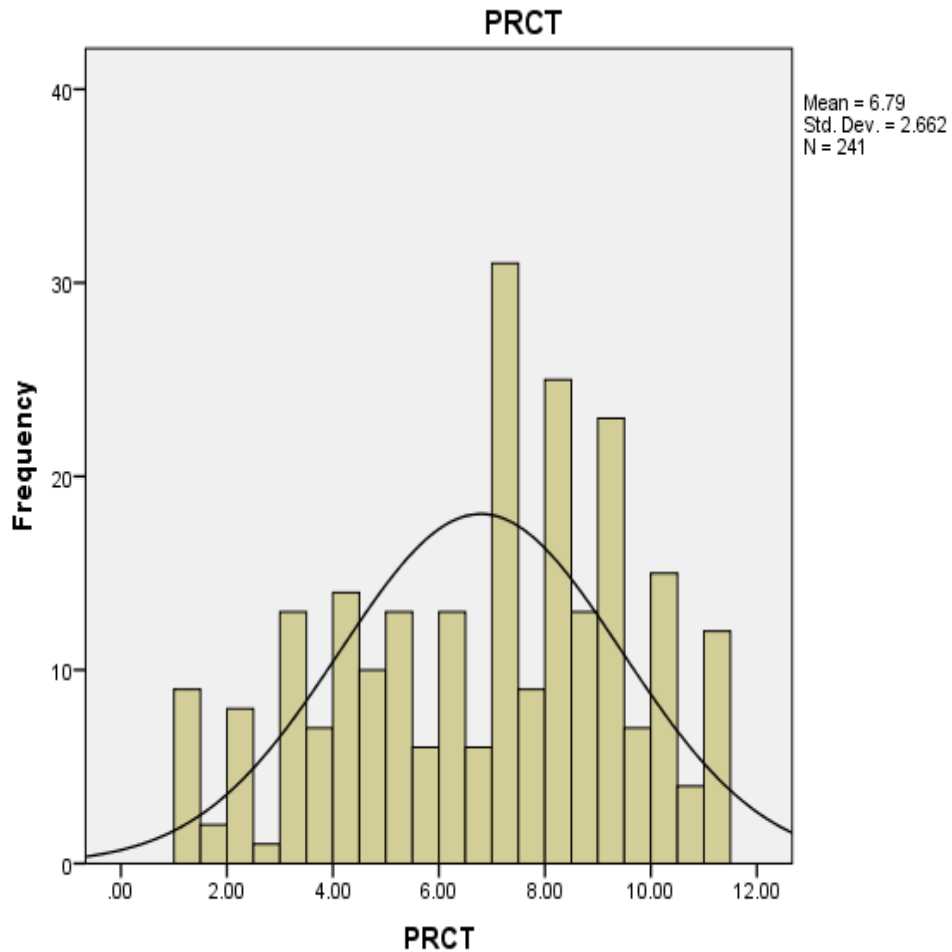
Intelligence responsiveness was measured on a nine-point Likert scale. The final scale had a mean of “5.66” and a standard deviation of “2.27”, suggesting an acceptable measure (see Figure 5.15). Further, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The scale normality of the informant quality construct is presented as follows.

#### 5.9.11. Informant quality

Informant quality was assessed using a seven-point Likert scale. Please note that while this variable was not used in the testing of the research hypotheses, it was used to evaluate common method variance using the common marker technique (as discussed in section 5.11). Hence, informant quality is discussed in this section to describe the normality of the scale before it was used to test for evidence of common method variance. This scale was normally distributed with a mean of “5.83” and a

standard deviation of “1.29”, suggesting a valid measure (see Figure 5.16). Moreover, the kurtosis and skewness values were below the critical value of  $\pm 1.96$  ( $\alpha = “.05”$ ). The final scales’ descriptive statistics are outline in the subsequent section.

**Figure 5.11. Proactiveness (normal curve)**



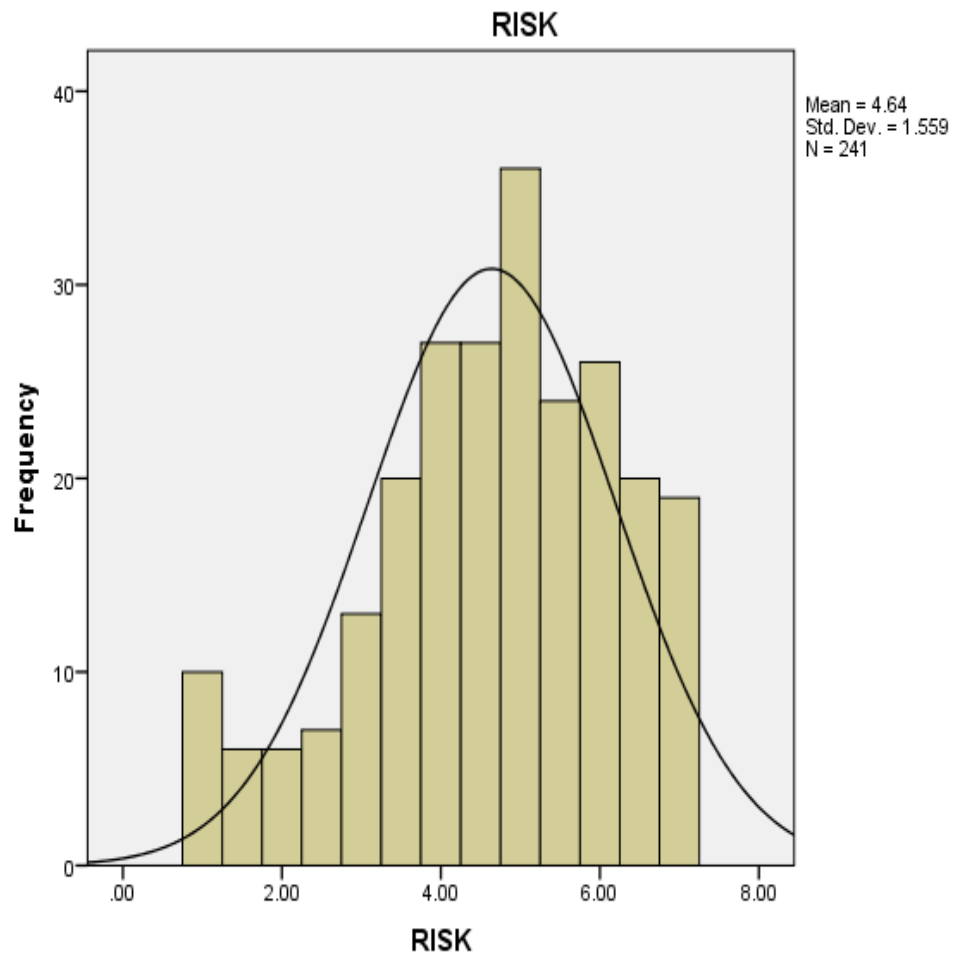
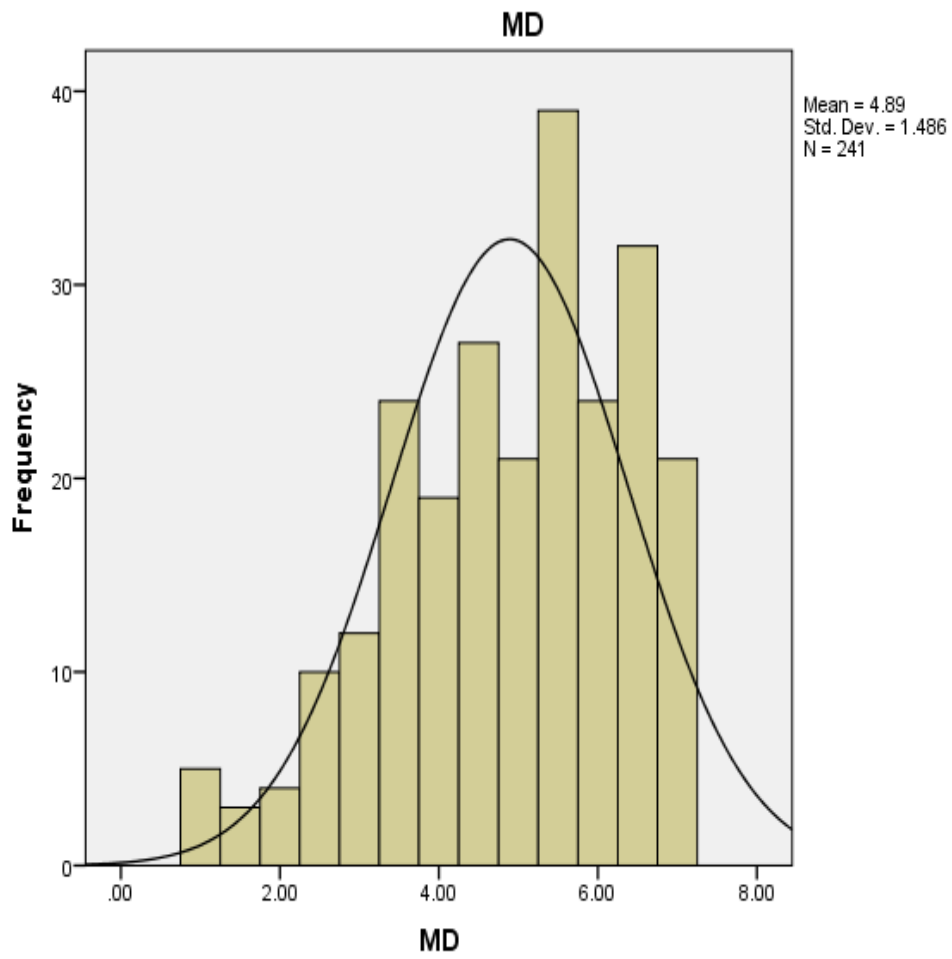
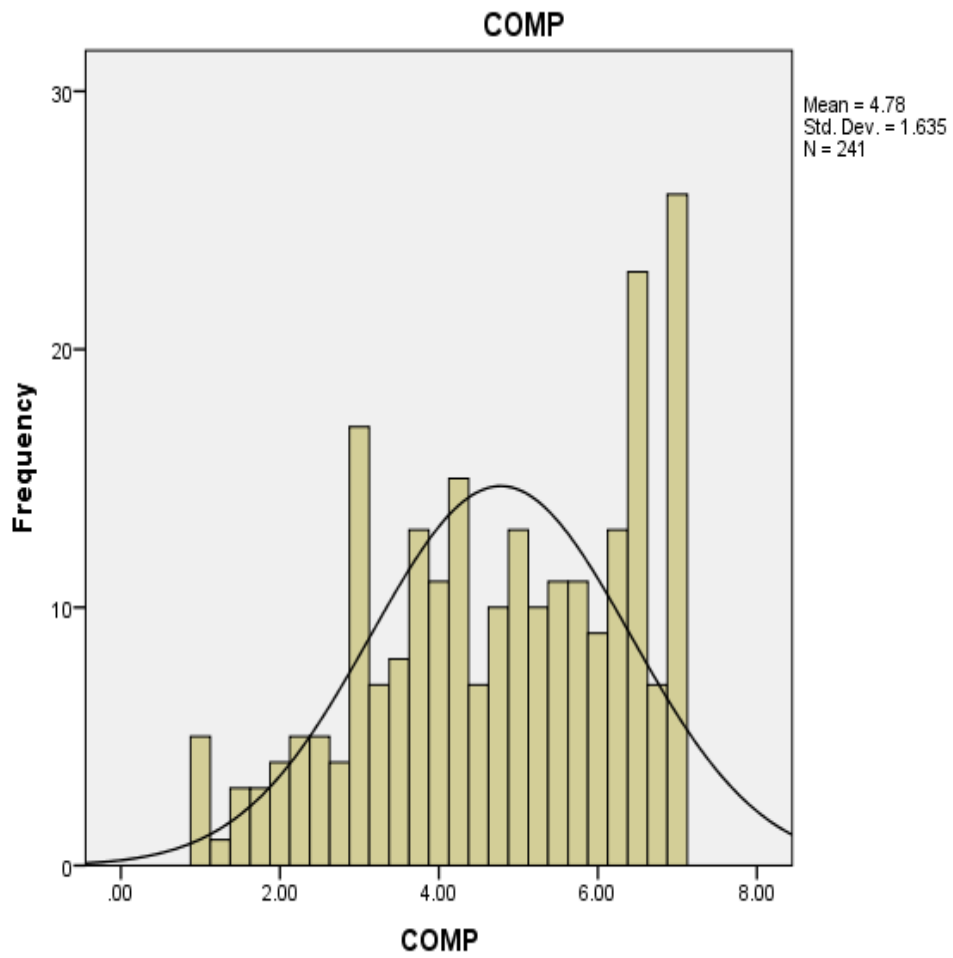
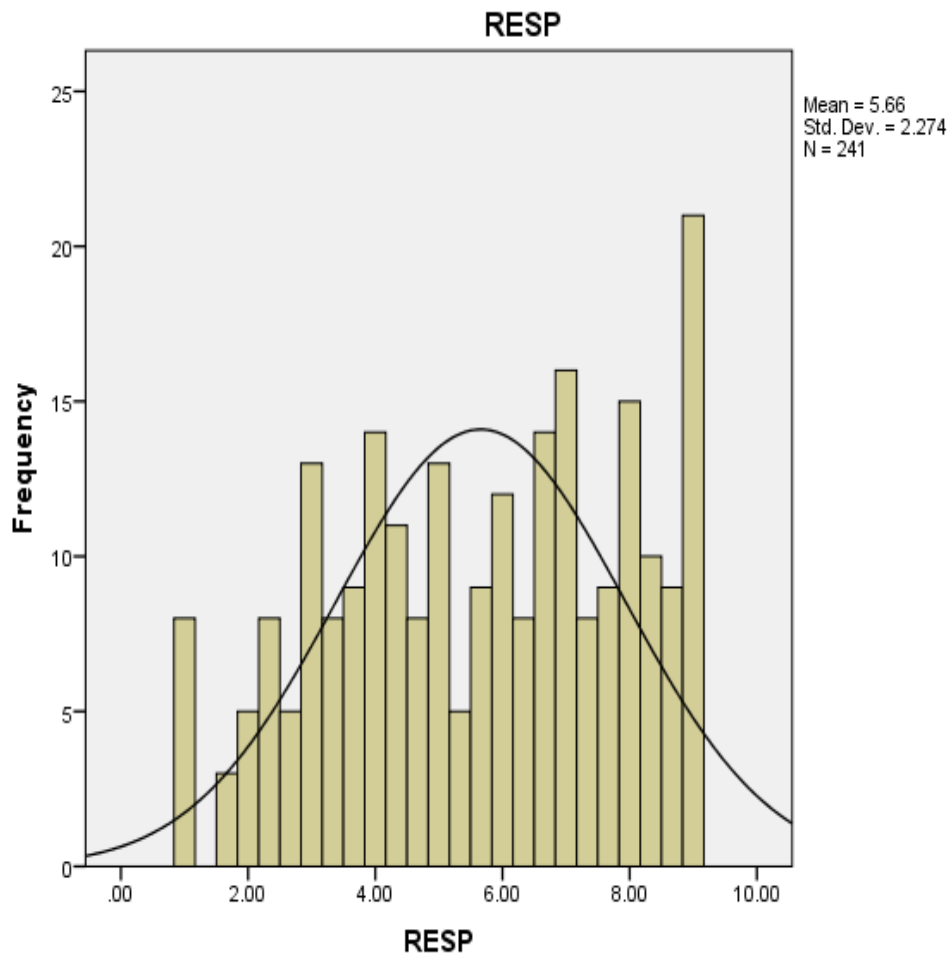
**Figure 5.12. Risk-taking (normal curve)**

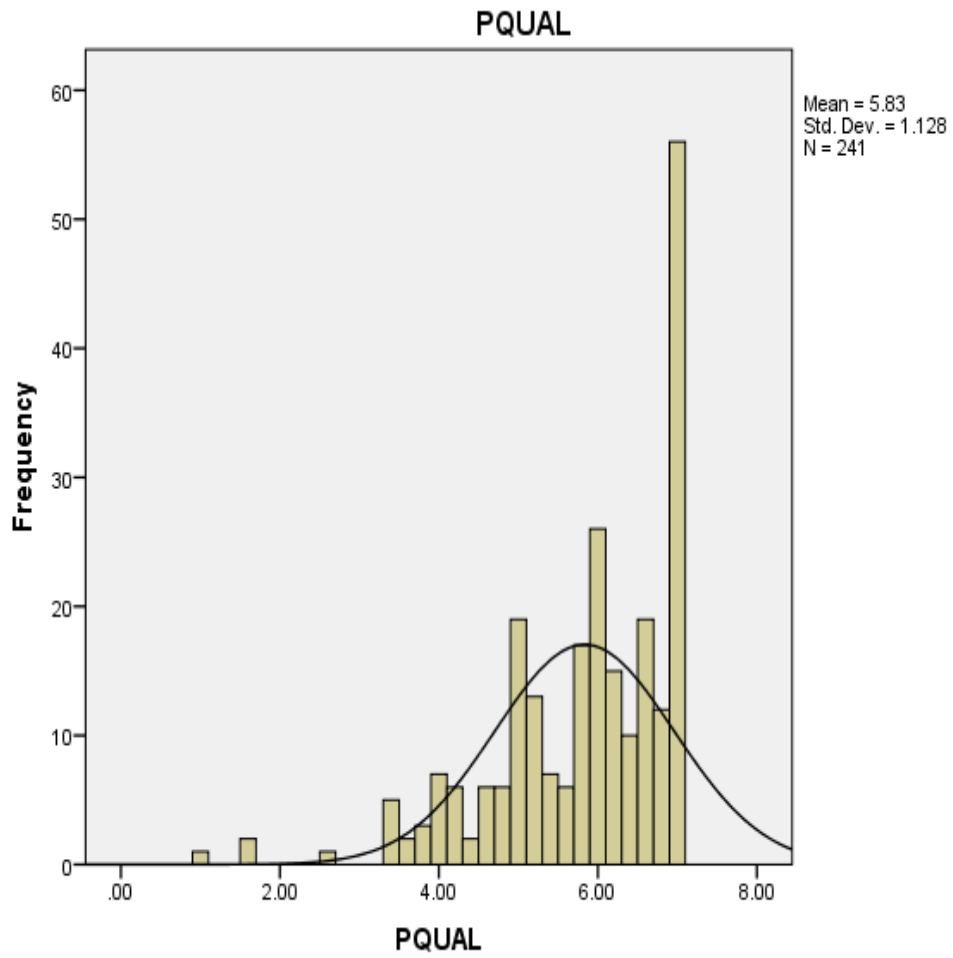
Figure 5.13. Market dynamism (normal curve)





**Figure 5.14. Competitive intensity (normal curve)**

**Figure 5.15. Intelligence responsiveness (normal curve)**

**Figure 5.16. Informant quality (normal curve)**

#### 5.9.12. Final scale statistics

Please refer to Table 5.20 for an overview of the final scale statistics used to test the research hypotheses. All distribution curves of these variables were pleasing, as they were bell-shaped with an acceptable degree of skewness and kurtosis. In the following section, the SEM analysis is discussed in respect of the model fit indices of the structural model and the results from the hypothesised and control path analyses.

### 5.10. SEM analysis

#### 5.10.1. Structural model fit indices

As mentioned in 4.10.8.3 (regarding the process used to evaluate the structural model), after the constructs' final measures were established after the CFA stage, the syntax file (via LISREL 9.30) used for the measurement model was adapted for the structural model. That is, the specific hypothesised and non-hypothesised paths used in this PhD investigation were stated in the syntax file and run using the LISREL 9.30 statistical software. After the statistical package had processed this information, a new set of model fit indices were provided, as well as the information pertaining to the path analyses (e.g., the unstandardised paths, standardised paths and the *t*-values of the standardised paths). In terms of the model fit indices for the structural model, all values were deemed as being acceptable. However, the RMSEA was slightly higher than the minimum benchmark (RMSEA = “.07”), but still was acceptable alongside the other model fit indices. The structural model's fit indices alongside the fit indices for the measurement model (as stated in section 5.7.3, but repeated for convenience purposes) are presented in Table 5.21. In the next section, the results from the quadratic hypothesised paths are reported.

#### 5.10.2. Quadratic path analyses

As discussed in section 4.10.8.7 (in terms of the ways in which linear versus quadratic paths were tested), there were two quadratic hypotheses in the conceptual framework (namely, Hypotheses 6 and 8) that were tested using a residual-centering approach (as per Story, Boso and Cadogan, 2015).

Table 5.20. Final scale statistics

Scales*	Mean	Median	SD	Min	Max	Skewness	Kurtosis
MHC	4.93	5.00	1.62	1.00	7.00	-.72	-.17
MCG	5.09	5.50	1.58	1.00	7.00	-.17	-.48
SC_F1	5.86	6.33	2.17	1.00	9.00	-.31	-.97
SC_F2	3.42	3.33	1.68	1.00	7.00	.46	-.72
SC_F4	4.99	5.00	1.37	1.00	7.00	-.58	-.24
CVODL	5.66	6.00	2.25	1.00	9.00	-.26	-.94
FRI	5.44	5.89	1.38	1.00	7.00	-1.10	1.14
SALES	7.66	8.00	2.53	1.00	11.00	-.65	-.38
RESP	5.66	6.00	2.27	1.00	9.00	-.22	-1.03
SIZE	5.16	6.81	2.65	.63	8.00	-.19	-1.80
INNV	4.87	5.50	1.76	1.00	7.00	-.55	-.82
RISK	4.64	5.00	1.56	1.00	7.00	-.53	-.26
PRCT	6.79	7.33	2.66	1.00	11.00	-.39	-.75
COMP	4.78	5.00	1.63	1.00	7.00	-.37	-.83
MD	4.89	5.00	1.49	1.00	7.00	-.55	-.34
PQUAL	5.83	6.00	1.13	1.00	7.00	-1.21	1.86

\*Please note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**FRI – CVO functional resource investments**

**SALES – sales performance**

**SIZE – firm size**

**RESP – intelligence responsiveness**

**MD – market dynamism**

**COMP – competitive intensity**

**PRCT – proactiveness**

**RISK – risk-taking**

**INNV – innovativeness**

**PQUAL – informant quality**

**Table 5.21. CFA and SEM model fit indices**

Model*	$\chi^2$	df	Sig.	$\chi^2/df$	RMSEA	CFI	IFI	NNFI	SRMR
CFA	444.48	227	.000	1.96	.06	.96	.96	.93	.03
SEM	635.66	272	.000	2.32	.07	.93	.93	.91	.09

**\*Please note that model fit indices stand for:**  
 $\chi^2$  = chi-square  
df = degrees of freedom  
Sig. = statistical significance  
RMSEA = root mean square error of approximation  
CFI = comparative fit index  
IFI = incremental fit index  
NNFI = non-normed fit index  
SRMR = standardised root mean square residual

When testing Hypotheses 6 and 8, the linear relationships were also tested, whereby, the linear relationship for Hypothesis 6 was Hypothesis 5, and the linear relationship for Hypothesis 8 was Hypothesis 7. As also discussed in section 4.10.8.7, the change in the squared multiple correlation ( $R^2$ ) and chi-square ( $\chi^2$ ) values were compared to evaluate if there was a significant difference between the linear and quadratic paths. That is, while Hypotheses 5 and 7 were linear paths, they were used to compare against Hypotheses 6 and 8 which were quadratic paths. The results indicated that the only hypothesis that was supported was Hypothesis 5 (i.e., CVO functional resource investments have a positive relationship with sales performance) (see Table 5.22). Both quadratic hypotheses were unsupported based on the empirical evidence. The results from the hypothesised and control paths are described as follows.

### 5.10.3. Results from the hypothesised and control path analyses

The results from the structural model indicated a mixture of supported and unsupported hypotheses and control paths. Please note that just because a certain hypothesis or control path was unsupported, did not mean that the entire model was invalid, or indeed not make a theoretical contribution. Instead, the results provided an overview of the likely antecedents and consequences of the CVODL construct. In terms of the control paths, other explanations of the variance of the outcome variables (namely, sales performance) were identified, as well as the factors that were unrelated to sales performance (i.e., the unsupported control paths). Refer to Table 5.23 for an overview of the results from the hypothesised and non-hypothesised paths. The link between the empirical results and the extant literature is discussed in the following chapter. Common method variance is discussed in the next section.

Table 5.22. Results from the quadratic hypothesis tests

Hypotheses*	Ustd. path estimates	Std. path estimates	t-values**	$\chi^2$	df	R <sup>2</sup>
<b>Hypothesis 5. CVO functional resource investments have a positive relationship with sales performance</b>	<b>.63</b>	<b>.31</b>	<b>4.36</b>	<b>652.21</b>	<b>288</b>	<b>.50</b>
Hypothesis 6. CVO functional resource investments have a quadratic relationship with sales performance	.08	.07	1.24	650.71	287	.50
Hypothesis 7. A CVODL has a linear (positive) relationship with sales performance	.18	.16	1.40	664.67	289	.53
Hypothesis 8. A CVODL has a quadratic relationship with sales performance	-.01	-.03	-.56	664.09	288	.56
<p><b>*Please note that the change in statistics for the two quadratic hypotheses were as follows:</b></p> <p><b>Hypothesis 5/Hypothesis 6</b>  <math>\Delta\chi^2 = 1.50</math>  <math>\Delta df = 1</math>  <math>\Delta R^2 = .00</math></p> <p><b>Hypothesis 7/Hypothesis 8</b>  <math>\Delta\chi^2 = .58</math>  <math>\Delta df = 1</math>  <math>\Delta R^2 = .03</math></p> <p><b>**Critical t-value = 1.65 (<math>\alpha = .05</math>). These t-tests were one-sided as the paths were directional. As such, only Hypothesis 5 was supported (as indicated with bold font).</b></p>						

Table 5.23. Results from the hypothesis tests

Path analyses	Ustd. path estimates	Std. path estimates	t-values*
<b>Hypothesised paths:</b>			
Hypothesis 1. CVO managerial human capital has a positive relationship with a CVODL	.16	.09	1.44
<b>Hypothesis 2. CVO managerial cognition has a positive relationship with a CVODL</b>	<b>.41</b>	<b>.28</b>	<b>3.43</b>
<b>Hypothesis 3a. Accessing resources from networks has a positive relationship with a CVODL</b>	<b>.29</b>	<b>.29</b>	<b>3.66</b>
Hypothesis 3b. Using resources gained from networks has a positive relationship with a CVODL	-.02	-.01	-.24
<b>Hypothesis 3d. Using the heuristics gained from networks has a positive relationship with a CVODL</b>	<b>.32</b>	<b>.33</b>	<b>5.56</b>
<b>Hypothesis 4. A CVODL has a positive relationship with CVO functional resource investments</b>	<b>.31</b>	<b>.58</b>	<b>8.33</b>
<b>Hypothesis 5. CVO functional resource investments have a positive relationship with sales performance</b>	<b>.63</b>	<b>.31</b>	<b>4.36</b>
Hypothesis 6. CVO functional resource investments have a quadratic relationship with sales performance	.08	.07	1.24
Hypothesis 7. A CVODL has a linear (positive) relationship with sales performance	.18	.16	1.40
Hypothesis 8. A CVODL has a quadratic relationship with sales performance	-.01	-.03	-.56
<b>Control paths:</b>			
<b>Firm size (log annual revenues) controlling sales performance</b>	<b>.18</b>	<b>.17</b>	<b>2.88</b>
Entrepreneurial orientation (innovativeness) controlling sales performance	-.01	-.01	-.16
<b>Entrepreneurial orientation (proactiveness) controlling sales performance</b>	<b>.27</b>	<b>.31</b>	<b>4.39</b>
Entrepreneurial orientation (risk-taking) controlling sales performance	.07	.04	.65
Environmental turbulence (market dynamism) controlling sales performance	-.02	-.00	-.11
Environmental turbulence (competitive intensity) controlling sales performance	-.17	-.11	-1.59
<b>CVODL controlling intelligence responsiveness</b>	<b>.75</b>	<b>.71</b>	<b>13.92</b>
<b>Intelligence responsiveness controlling sales performance</b>	<b>.37</b>	<b>.36</b>	<b>5.43</b>
*Critical t-value = 1.65 ( $\alpha = .05$ ). These t-tests were one-sided as the paths were directional. Hypotheses 3a, 3b, and 3d represent the three facets of CVO managerial social capital that were tested in the SEM analysis (Hypothesis 3c was deleted). The rows that are marked with bold font indicate supported research hypotheses and control paths.			



### **5.11. Common method variance**

Common method variance was assessed using the marker variable technique. As explained in section 4.11.3 (in terms of statistical techniques used to test for common method variance), the marker variable technique involved the informant quality items as a variable that was conceptually/theoretically unrelated to any other variable within the measurement or structural models. Refer to Table 5.24 for the bivariate Pearson correlation coefficients (i.e., the correlation matrix without the use of informant quality as a control factor). Please refer to Table 5.25 for the partial Pearson correlation coefficients (i.e., the correlation matrix with the use of informant quality as a control factor). Please refer to Table 5.26 for the differences between the bivariate and partial Pearson correlation coefficients. Moreover, with a mean difference of “.05” between the two correlation matrices, it was deemed clear that there was no evidence of common method bias within the empirical results. However, as noted in section 4.11.3 (in terms of the use of the marker variable technique), there is not an agreed critical value that researchers can use (Lindell and Whitney, 2001). As such, the mean difference of “.05” is argued to be very small, and therefore, common method variance is highly-unlikely to be a concern in this PhD thesis. In the following section, this chapter is summarised.

### **5.12. Chapter summary**

In this chapter, the empirical results were presented. Specifically, the characteristics of the final sample were outlined. Additionally, the ways in the final operationalisations of the variables were established through a series of statistical techniques. Further, the results from the SEM were described as well as the marker variable test for common method variance. In the next chapter, the ways in which the empirical results relate to the extant literature are discussed.

Table 5.24. Common method variance test (part 1: bivariate Pearson correlation coefficients of the final measures)

Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. MHC	1.00														
2. MCG	.43	1.00													
3. SC_F1	.29	.60	1.00												
4. SC_F2	.00	-.10	-.10	1.00											
5. SC_F4	.21	.28	.57	-.18	1.00										
6. CVODL	.29	.55	.67	-.11	.54	1.00									
7. FRI	.17	.19	.24	-.17	.34	.26	1.00								
8. RESP	.24	.34	.58	-.14	.60	.55	.33	1.00							
9. SALES	.33	.36	.45	-.16	.52	.38	.44	.59	1.00						
10. SIZE	.03	.08	.20	-.14	.23	.13	.18	.21	.30	1.00					
11. INNV	.25	.55	.58	-.12	.39	.36	.22	.44	.43	.26	1.00				
12. RISK	-.03	-.10	-.05	-.07	-.09	-.06	.02	-.07	-.03	.06	-.05	1.00			
13. PRCT	.14	.26	.44	-.21	.50	.31	.37	.48	.56	.14	.38	-.08	1.00		
14. MD	.06	.18	.28	-.25	.20	.15	.25	.21	.24	.21	.28	.22	.26	1.00	
15. COMP	.01	.11	.29	-.41	.39	.21	.32	.34	.30	.21	.21	.22	.43	.37	1.00

\*Please note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**FRI – CVO functional resource investments**

**SALES – sales performance**

**SIZE – firm size**

**RESP – intelligence responsiveness**

**MD – market dynamism**

**COMP – competitive intensity**

**PRCT – proactiveness**

**RISK – risk-taking**

**INNV - innovativeness**

Table 5.25. Common method variance test (part 2: partial Pearson correlation coefficients of the final measures)

Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. MHC	1.00														
2. MCG	.49	1.00													
3. SC_F1	.36	.67	1.00												
4. SC_F2	-.03	-.15	-.15	1.00											
5. SC_F4	.29	.39	.63	-.21	1.00										
6. CVODL	.36	.62	.72	-.15	.61	1.00									
7. FRI	.30	.40	.42	-.21	.47	.44	1.00								
8. RESP	.33	.48	.66	-.18	.66	.64	.53	1.00							
9. SALES	.40	.48	.55	-.20	.59	.49	.59	.68	1.00						
10. SIZE	-.10	.10	.21	-.15	.24	.15	.18	.22	.30	1.00					
11. INNV	.32	.62	.64	-.16	.47	.46	.41	.55	.53	.26	1.00				
12. RISK	-.04	-.10	-.05	-.07	-.09	-.06	.01	-.07	-.04	.06	-.05	1.00			
13. PRCT	.24	.40	.54	-.24	.58	.44	.54	.60	.65	.16	.49	-.08	1.00		
14. MD	.10	.23	.31	-.26	.23	.19	.28	.24	.28	.21	.30	.21	.29	1.00	
15. COMP	.12	.26	.40	-.42	.47	.33	.48	.46	.43	.22	.33	.20	.53	.39	1.00

\*Please note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**FRI – CVO functional resource investments**

**SALES – sales performance**

**SIZE – firm size**

**RESP – intelligence responsiveness**

**MD – market dynamism**

**COMP – competitive intensity**

**PRCT – proactiveness**

**RISK – risk-taking**

**INNV - innovativeness**

Table 5.26. Common method variance test (part 3: difference between the Pearson correlation coefficients of the final measures)

Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. MHC	.00														
2. MCG	-.06	.00													
3. SC_F1	-.07	-.07	.00												
4. SC_F2	.03	.05	.05	.00											
5. SC_F4	-.08	-.11	-.06	.03	.00										
6. CVODL	-.07	-.07	-.05	.04	-.07	.00									
7. FRI	-.13	-.21	-.18	.04	-.13	-.18	.00								
8. RESP	-.09	-.14	-.08	.04	-.06	-.09	-.20	.00							
9. SALES	-.07	-.12	-.10	.04	-.07	-.11	-.15	-.09	.00						
10. SIZE	.13	-.02	-.01	.01	-.01	-.02	.00	-.01	.00	.00					
11. INNV	-.07	-.07	-.06	.04	-.08	-.10	-.19	-.11	-.10	.00	.00				
12. RISK	.01	.00	.00	.00	.00	.00	.01	.00	.01	.00	.00	.00			
13. PRCT	-.10	-.14	-.10	.03	-.08	-.13	-.17	-.12	-.09	-.02	-.11	.00	.00		
14. MD	-.04	-.05	-.03	.01	-.03	-.04	-.03	-.03	-.04	.00	-.02	.01	-.03	.00	
15. COMP	-.11	-.15	-.11	.01	-.08	-.12	-.16	-.11	-.13	-.01	-.12	.02	-.10	-.02	.00

\*Please note that the item codes represent the following variables:

**MHC – CVO managerial human capital**

**MCG – CVO managerial cognition**

**SC\_F1 – CVO managerial social capital (facet 1)**

**SC\_F2 – CVO managerial social capital (facet 2)**

**SC\_F4 – CVO managerial social capital (facet 4)**

**CVODL – CVODL**

**FRI – CVO functional resource investments**

**SALES – sales performance**

**SIZE – firm size**

**RESP – intelligence responsiveness**

**MD – market dynamism**

**COMP – competitive intensity**

**PRCT – proactiveness**

**RISK – risk-taking**

**INNV - innovativeness**

## **CHAPTER VI – DISCUSSION**

### **6.1. Chapter introduction**

The empirical findings were outlined in the previous chapter. In this chapter, the empirical findings are related to the underpinning theory of the dynamic managerial capabilities perspective to highlight original aspects of the results (as well as themes that support prior studies). In discussing these themes, the chapter is divided into the following sections. First, an overview of the empirical framework is presented. Second, the results are discussed in the context of the extant literature, to identify explanations as to why the hypotheses were either supported or unsupported. Third, the results from the control variable tests are discussed.

### **6.2. Empirical framework**

Referring to section 1.2 (in terms of the positioning of this investigation), the objectives of this study were to: define, conceptualise, operationalise, and test the nature of the CVODL construct. The CVODL is a variable positioned at the intersection between theory surrounding market orientation and the firm's dominant logic (Crick, 2017a). Market orientation is the implementation of the marketing concept and the organisation-wide creation of customer value (Cadogan, 2003). The firm's dominant logic is a corporate culture, in which management teams assume that a certain activity (e.g., customer value creation) is an important driver of business performance (e.g., sales) (Prahalad and Bettis, 1986). Integrating the CVODL into the marketing literature was an important contribution as the CVODL is a different construct from the conventional view of market orientation. That is, a CVODL is not a behavioural form of market orientation (i.e., generation, dissemination, and responsiveness activities), as it is a market-oriented managerial mind-set (Crick, 2017a). Furthermore, a CVODL was proposed to be a driver of intelligence responsiveness, as it links with managers implementing their CVO assumptions into the behavioural processes of business' departments (Harris and Ogbonna, 1999; Homburg and Pflesser, 2000).

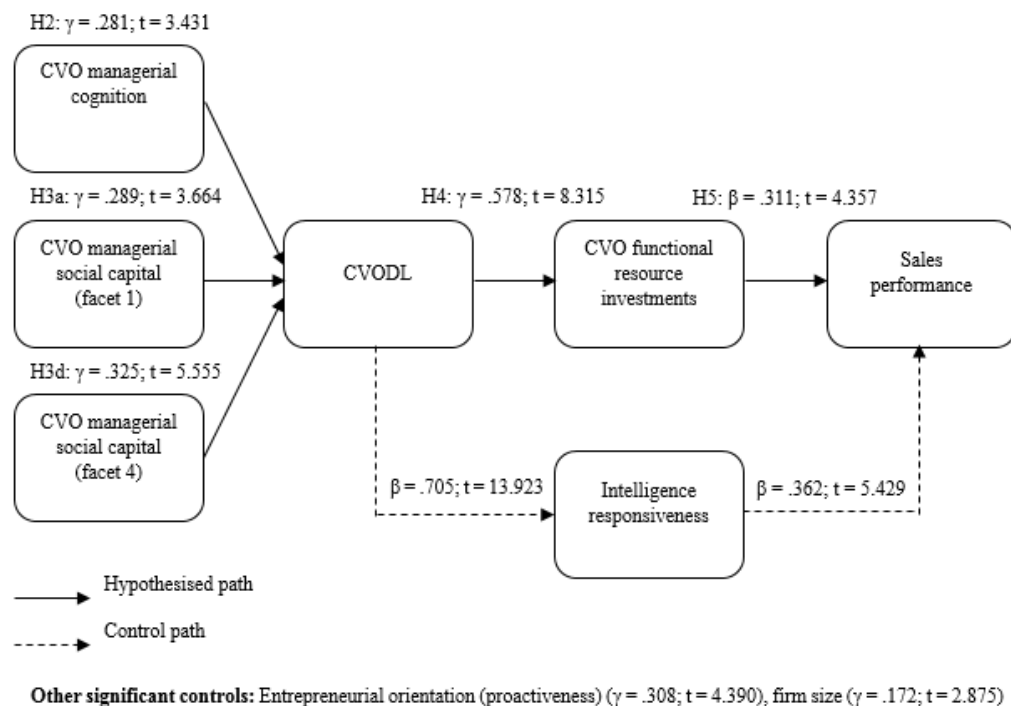
The underpinning theory used to explore the: facets, antecedents, and consequences of the CVODL construct was the dynamic managerial capabilities perspective (or framework). This theoretical viewpoint is a sub-set of the resource-based view of the firm that focuses on the managerial capabilities that allow organisations to adapt and

reconfigure in rapidly-changing (dynamic) business environments (Adner and Helfat, 2003; Fainshmidt, Nair and Mallon, 2017). The resource-based view is a strategic management theory that examines how organisational performance (e.g., sales) can be driven by companies' resources and capabilities (Wernerfelt, 1984; Barney, 1991). The resource-based view is a broad theory with multiple sub-theories. One of these sub-theories is the dynamic capabilities perspective which explores the organisational capabilities that allow firms to adapt and reconfigure in rapidly-changing business environments to drive sales performance (Teece, Pisano and Shuen, 1997; Eisenhardt and Martin, 2000). Arguably, these organisation-wide assumptions make the dynamic capabilities perspective broad and diverse. It therefore, needs to be refined, so it can be tested in empirical research. The dynamic managerial capabilities perspective is a key framework used to condense the dynamic capabilities perspective into a framework that can be tested (i.e., it focuses on managerial, as opposed to organisation-wide assets). Further, the dynamic capabilities perspective is highly-applicable to market orientation research, as it links with how managers utilise customer-driven assets to increase sales (Menguc and Auh, 2006). The dynamic capabilities perspective therefore supplements existing studies that have investigated market orientation under a capabilities perspective (i.e., intangible assets such as marketing capabilities) (see Slater, 1997; Huber, Herrmann and Morgan, 2001).

As noted above, dynamic capabilities theory is relevant to the market orientation literature. The dynamic managerial capabilities perspective refines the dynamic capabilities literature into a specific set of company assets (i.e., with a managerial focus). As dynamic managerial capabilities have scarcely been studied in the marketing literature (see Bruni and Verona, 2009), the perspective acts as a new framework to apply to market orientation-based research. To supplement the dynamic managerial capabilities perspective, mainstream resource-based theory was drawn upon in this PhD study to conceptualise the market-oriented foundations of the CVODL (e.g., Hunt and Morgan, 1995; Hult and Ketchen Jr., 2001). As such, the dynamic managerial capabilities perspective was used as a different theory to extant market orientation literature, but was supplemented by established theoretical viewpoints (i.e., the resource-based view and the generic dynamic capabilities literature). Using the underpinning theory of the dynamic managerial capabilities

perspective (and the broader resource-based view), a conceptual framework was developed to examine the antecedents and consequences of the CVODL construct. Please refer to Figure 6.1 for the empirical model; this framework outlines the hypothesised and non-hypothesised (control) paths that were supported. That is, unsupported paths are excluded from this model. In the subsequent chapter of the PhD thesis (i.e., the Conclusions Chapter), these findings are summarised to highlight the relevant theoretical and practical implications.

**Figure 6.1. Empirical framework**



### 6.3. Discussion of the hypothesis tests

#### 6.3.1. CVO dynamic managerial capabilities and a CVODL

The first core section of the conceptual framework was the antecedents of the CVODL, using the three facets of the dynamic managerial capabilities perspective: managerial human capital, managerial cognition, and managerial social capital. The research hypotheses within this section of the conceptual framework are explained below.

Hypothesis 1. CVO managerial human capital has a positive relationship with a CVODL.

CVO managerial human capital is the experience and knowledge managers use to create value for their customers (Crick, 2016b). This hypothesis was developed to highlight how managers' experience (both educational and practical) might guide their assumptions about what issues are effective in creating customer value. This hypothesis was unsupported ( $\gamma = .098$ ;  $t = 1.437$ ). A reason for this unsupported research hypothesis could be that managers may not need to be skilled (or have a large degree of expertise) to create value for their customers, or indeed, develop a market-oriented corporate culture (i.e., a CVODL). It could be that other CVO dynamic managerial capabilities (e.g., CVO managerial cognition) are more important in creating a CVODL than CVO managerial human capital (as discussed in respect of Hypothesis 2). Furthermore, a CVO managerial mind-set might not require customer-focused management teams to be created because functional-level employees (non-managers) could be more important in shaping customer-led viewpoints throughout an organisation. Additionally, according to Harris and Ogbonna (1999) and Harris (2013), functional-level employees (especially in service-oriented industries) have a vital role in customer relations as they have the face-to-face experience in dealing with customers. That is, non-managers could be more important drivers of a CVODL than management teams, as it their experience and expertise that shapes a market-oriented managerial mind-set. Note that in section 6.5, a post-hoc test is used to understand more about why Hypothesis 1 was unsupported. The relationship between CVO managerial cognition and the CVODL is discussed in the following section.

Hypothesis 2. CVO managerial cognition has positive relationship with a CVODL.

CVO managerial cognition is based on managers' psychological thought processes concerning customer value creation (Crick, 2017b). This research hypothesis was developed to test whether managers' CVO assumptions are implemented into a managerial mind-set that focuses on customer value creation believed to be an important driver of company performance (i.e., a CVODL). Further, it was anticipated that managers who have assumptions about the importance of customer value creation could implement their assumptions across their functional areas and hierarchies (Kor and Mesko, 2013). Managerial (or management) cognition is a set of assumptions and thought processes fostered by management teams (Hodgkinson and Healey, 2011). A dominant logic is a similar concept, but when managers'



assumptions are integrated within an organisation's culture (i.e., not just management teams) (Fainshmidt, Nair and Mallon, 2017). When testing this research hypothesis, the results indicated that CVO managerial cognition has a positive relationship with a CVODL ( $\gamma = .281$ ;  $t = 3.431$ ). This positive (albeit, not highly-associated) relationship between managerial cognition and a CVODL contributes to such prior literature and supports the conceptualisations developed by Kor and Mesko (2013) under a customer-focused perspective. It is proposed that the CVO assumptions of managers are important attributes in developing a CVODL, due to management teams being competent in organising their activities (e.g., business functions) around delivering value to customers. Moreover, a managerial mind-set is an element of a corporate culture (see Pettigrew, 1979; Barney, 1986); hence, it is suggested that the customer-driven assumptions surrounding CVO managerial cognition help managers develop a market-oriented mind-set (the main theme of the CVODL construct). Specifically, managers are proposed to communicate their CVO assumptions towards their functional-level employees, to attempt to foster customer-oriented assumptions and beliefs through their corporations – thus, developing a market-oriented corporate culture, fostering a market-oriented managerial mind-set. The relationship between the first facet of CVO managerial social capital and the CVODL is discussed as follows.

Hypothesis 3a. The first facet of CVO managerial social capital (accessing resources from networks) has a positive relationship with a CVODL.

CVO managerial social capital is the networks that managers use to create value for their customers (Crick, 2017b). Managerial social capital (i.e., without the customer-driven element) has been conceptualised/operationalised as multi-dimensional variable, as it does not just refer to the networks of management teams, but how those networks are utilised (such as in competitive strategies), as well as the viewpoints network members can provide to help managers achieve their objectives (Acquaah, 2007). The first facet of CVO managerial social capital concerns managers being able to access resources from their network members to facilitate the creation of customer value. It was proposed that network members' assets need to be accessible, so that managers have the option to implement them into their corporate culture focused on delivering value to customers (Crick, 2016a). The results indicated that the first facet of CVO managerial social capital was positively related to a CVODL

( $\gamma = .289$ ;  $t = 3.664$ ). This result (albeit, not a highly-associated link) supports such prior conceptualisations about the importance of being able to access network members' resources to create a CVODL. That is, managerial social capital surrounds managers being provided with assets (i.e., resources and/or capabilities) that they would not be able to access if they competed individualistically (see Nahapiet and Ghoshal, 1998; Adner and Helfat, 2003). If managers have access to CVO resources, they are likely to be able to implement such resources into a managerial mind-set focused on delivering value to customers (i.e., a CVODL). The relationship between the second facet of CVO managerial social capital is discussed below.

Hypothesis 3b. The second facet of CVO managerial social capital (using resources gained from networks) has a positive relationship with a CVODL.

This research hypothesis was developed to suggest that while accessing resources from CVO network members (as per the first dimension of CVO managerial social capital) is an important issue, managers should use such resources from their network members to create a customer-driven managerial mind-set based on the implementation of the marketing concept (i.e., a CVODL) (Crick, 2017b). However, this hypothesis was unsupported ( $\gamma = -.011$ ;  $t = -.244$ ), suggesting that using network members' resources may not be related to a CVODL. A reason for this result could be that managers may not need to use network members' resources to develop a CVODL, as having access to such assets may be sufficient to develop a managerial mind-set focused on being CVO. Furthermore, by accessing network members' resources, managers could become confident that they have such assets at their disposal (should they wish to use them) (Sirmon and Hitt, 2009; Martin, 2011; Andersson and Evers, 2015), but not actually utilise them in their competitive strategies or indeed developing their mind-set. This result supports a view that managers may obtain a large volume of information about their market (e.g., concerning customers and competitors), and not respond to it (see Hodgkinson, Hughes and Hughes, 2012).

Given that large organisations in the United States were sampled in this PhD thesis, with an average of 26,339.19 full-time employees (see section 5.2), it could be that these large businesses did not need to use network members' resources, as they may have possessed enough of their own assets needed to create customer value. Under the

resource-based view (including the dynamic managerial capabilities framework), there is an underlying assumption that larger organisations have more scope to drive sales performance than smaller firms (Westhead, Wright and Ucbasaran, 2001; Crick and Crick, 2016). Managers not requiring network members' resources, could have similar implications for developing a CVODL, in which larger companies (as per the empirical sample) might not need to use network members' resources. This unsupported hypothesis therefore, only partially challenges the work of Kor and Mesko (2013) as CVO managerial social capital appears to drive a CVODL (as seen with Hypothesis 3a), but the element of using network members' resources does not appear to have any impact. Moreover, in section 6.5, a post-hoc test is conducted to examine, in greater depth, why Hypothesis 3b was unsupported. The relationship between the third facet of CVO managerial social capital and the CVODL is discussed as follows.

Hypothesis 3c. The third facet of CVO managerial social capital (networks' heuristics) has a positive relationship with a CVODL.

This research hypothesis tested the association between the degree to which network members' heuristics are CVO with developing a CVODL. As noted in section 5.9.3 (in respect of the EFAs and the measurement development stage), Hypothesis 3c was deleted after the EFA stage of the data analysis because of this variable's items having cross-factor loadings with the items for CVO managerial human capital. A possible statistical reason for this problem was that these were the only two constructs in the entire survey to be measured using semantic differential scales, namely, CVO managerial human capital. This facet of CVO managerial social capital (i.e., involving managerially-oriented and network members' viewpoints respectively) (see Adner and Helfat, 2003), meant that one of these variables would need to be deleted from the empirical analysis. Hence, it was decided that the third facet of CVO managerial social capital would be deleted as it was one of four facets (three after it was deleted) of the overall construct (due to its multi-dimensional nature) (Acquaah, 2007; Helfat and Martin, 2015), as well as CVO managerial human capital being conceptualised/operationalised as a uni-dimensional variable (Kor and Mesko, 2013).

Specifically, it could be that network members' heuristics (i.e., the third facet of CVO managerial social capital) have similar traits to the experience of management teams (i.e., CVO managerial human capital). In other words, the viewpoints of network members could be linked with the experience of senior managers due to industry characteristics. However, instead of being a conceptual issue, it was deemed more likely that the above-specified measurement issue (i.e., using a semantic differential scale) was responsible for the cross-factor loadings. This measurement problem presents methodological scope for future research to address (i.e., how to better measure CVO managerial human capital and the third facet of CVO managerial social capital). Moreover, it could have been that managerial social capital does not include this third facet (i.e., accessing network members' heuristics) as it could be an unimportant factor of the managerial social capital construct. CVO managerial social capital was measured using a new operationalisation; hence, it is suggested that the construct is likely to be a three-component (as opposed to a four-component) variable. As such, there is methodological (measurement-based) scope to re-operationalise CVO managerial social capital.

Hypothesis 3d. The fourth facet of CVO managerial social capital (using the heuristics gained from networks) has a positive relationship with a CVODL.

This research hypothesis was developed for a similar reason to Hypothesis 3b. That is, managers might be able to access heuristics/viewpoints from their network members (i.e., Hypothesis 3c – which was deleted from the statistical analysis), but may need to utilise them to create a CVODL. In other words, accessing network members' heuristics may not be enough for management teams, as they might need to implement such viewpoints into their operations to create a managerial mind-set focused on delivering value to customers (i.e., a CVODL). Managerial social capital is not just based on managers accessing resources from social capital-based networks (e.g., Helfat and Martin, 2015), but also, the lenses network members can provide to help managers (and firms) to perform better (e.g., increase sales) (Acquaah, 2007; Fainshmidt, Nair and Mallon, 2017). If managers can use their network members' heuristics, it was proposed that they would be able to develop a CVODL based on new points-of-view (i.e., network members' assumptions and beliefs) about creating value for customers (Crick, 2017a). Such heuristics can confirm managers' pre-conceived thought processes and help them make decisions about implementing their

own beliefs and assumptions throughout their corporations (Huff, 1982; Walsh, 1995). The result from this research hypothesis implied that this fourth facet of CVO managerial social capital was positively related to a CVODL ( $\gamma = .325$ ;  $t = 5.555$ ). This result (albeit, not a highly-associated link) supports existing conceptualisations that using network members' heuristics is an important driver of creating a dominant logic (Kor and Mesko, 2013). The second stage of the conceptual framework is outlined in the following section – the relationship between a CVODL and CVO functional resource investments, and the latter's link with sales performance.

### 6.3.2. CVODL, CVO functional resource investments, and sales performance

The second stage of the conceptual framework examined the role of CVO functional resource investments being driven by the CVODL construct. The relationship between CVO functional resource investments and sales performance was also explored in this stage of the model. CVO functional resource investments was a key construct in the conceptual framework, as it focused on whether managers with an assumption that customer value creation is the most important issue in their companies (i.e., a CVODL) were more likely to invest resources (such as cash and tangible equipment) into the departments that they assume to create customer value (Crick, 2017b). While there has been the proposition in the extant literature that a dominant logic has a positive (direct) relationship with company performance (e.g., sales) (see Obloj, Obloj and Pratt, 2010), it is more likely that dominant logics (including the CVODL) indirectly drive sales performance (Von Krogh, Erat and Macus, 2000; Kor and Mesko, 2013), such as the above-mentioned CVO functional resource investments. More importantly, CVO functional resource investments were used to investigate an alternative form of implementing the marketing concept than market-oriented behaviours (as per Felton, 1959; McNamara, 1972). The direct relationship between a CVODL and sales performance will be discussed in respect of Hypotheses 7 and 8; however, this section of the chapter is devoted to the role of CVO functional resource investments in the relationship between a CVODL and sales performance. The research hypotheses within this stage of the conceptual framework are explained as follows.

Hypothesis 4. A CVODL has a positive relationship with CVO functional resource investments.

As mentioned above, the purpose of this hypothesis was to determine whether having a customer-driven managerial mind-set (i.e., a CVODL) could influence managerial decisions to invest resources into the CVO departments of an organisation (thus, implementing the marketing concept). Dominant logics have been linked with departmental resource investments as it has been proposed that by assuming that an activity (e.g., customer value creation) is an important driver of organisational performance (such as sales), managers will attempt to fulfil their assumptions and expectations by allocating resources to the areas of the firm that foster their assumptions (Harrison, Hall Jr., and Nargundkar, 1993). In the case of a CVODL, it was anticipated that managers are likely to assume that investing resources in CVO business functions is an effective way to implement the marketing concept (Crick, 2017b). In some respects, it did not matter if a certain department (that receives high-levels of resource investments) was CVO as managers' customer-oriented assumptions (i.e., whether managers invested resources in the departments that fostered the activity that they believe to be a driver of sales performance – a key assumption of dominant logics) were of interest in this PhD thesis (Miller, 1996; Verbeke, 2010).

That is, managers might not invest resources in market-oriented activities (even if managers are highly-customer-focused) as there may be factors such as resource constraints that prevent them from investing heavily in CVO divisions of the firm (Jaworski and Kohli, 1996; Cadogan, 2003). The results revealed that this hypothesis was correct (i.e., a CVODL has a positive relationship with CVO functional resource investments) ( $\gamma = .578$ ;  $t = 8.315$ ); this result supports (i.e., a strongly-associated path) the prior conceptualisations in favour of dominant logics linking with functional resource investments. Moreover, having a customer-focused managerial mind-set was found to be linked to a specific type of functional resource investments, whereby, a CVODL drove CVO functional resource investments (Crick, 2017b). Furthermore, the strong path highlights that a managerial mind-set or customer-driven corporate culture (i.e., a CVODL) is likely to drive a managerial behaviour associated with implementing the marketing concept (Crick, 2017a). The linear relationship between CVO functional resource investments and sales performance is discussed below.

Hypothesis 5. CVO functional resource investments have a positive relationship with sales performance.

It was proposed that there was a direct (positive) relationship between CVO functional resource investments and sales performance because managers might provide the resources (including financial assets) to the departments (based on managers' assumptions linked with a CVODL) that create customer value, so that they can drive sales (Crick, 2016b). Further, CVO business functions are more likely to achieve their core role of delivering value to customers if they receive the necessary resources (Crick, 2017a). Functional resource investments link with the resource-based view (including the dynamic managerial capabilities perspective), in which resource investments to departmental functions that foster managers' beliefs is likely to be a positive driver of company performance (including sales performance) (Morgan, Vorhies and Mason, 2009). As this PhD study was focused on large corporations, it was anticipated that such companies would be able to make large resource investments to a much higher degree than small businesses (Durand, Grant and Madsen, 2017).

As such, large firms that manage a CVODL could see the performance-driving effects of CVO functional resource investments as such market-oriented departments can perform their functional duties (including the creation of customer value) and create sales through the implementation of the marketing concept (Homburg, Workman Jr., and Jensen, 2002; Feng, Morgan and Rego, 2015). The results for this hypothesis suggested that CVO functional resource investments are positively related to sales performance ( $\beta = .311$ ;  $t = 4.357$ ). This result (albeit, not a highly-associated path) supports such extant theory. Further, the positive relationship between CVO functional resource investments and sales performance suggests that it is positive for management teams to invest resources into the departments that they perceive to be CVO, as they can positively drive sales performance (Crick, 2017a). Also, the link between CVO functional resource investments and sales performance supports the conceptual assertions of Felton (1959); McNamara (1972), in which such forms of implementing the marketing concept are likely to improve firms' performance. The non-linear relationship between CVO functional resource investments and sales performance is discussed as follows.

Hypothesis 6. CVO functional resource investments have an inverted U-shaped relationship with sales performance.

This research hypothesis was developed to suggest that while CVO functional resource investments could have a positive (direct) relationship with sales performance (i.e., Hypothesis 5), this link could be quadratic. That is, allocating resources to the departments that managers assume to be customer driven could cause the departments that do not foster such beliefs to be under-invested in (Miller, 1996; Prahalad, 2004). Over and under-investing in departmental functions is linked with the term “value-induced skewness”, in which management teams can create a high-level of internal politics (e.g., conflict and/or power imbalances between departments) by over-investing in certain functions (i.e., the ones that they assume to drive sales) at the cost of under-investing in others (i.e., the ones that they do not assume to drive sales) (Le-Breton Miller and Miller, 2015). The empirical results for this hypothesis test yielded a non-significant relationship between CVO functional resource investments and sales performance ( $\beta = .070$ ;  $t = 1.243$ )<sup>12</sup>. An explanation for this unsupported hypothesis could be that it is necessary for management teams to invest resources into CVO departments to drive performance. On the one hand, this result supports the view that customer-driven departments are likely to satisfy customers’ wants and needs and drive performance (Homburg, Workman Jr., and Krohmer, 1999; Homburg and Pflesser, 2000). On the other hand, companies, regardless of size, have a finite amount of resources (a key assumption of resource-based theory), meaning that assets cannot continuously be invested into departments without effects on sales performance (Morgan, Vorhies and Mason, 2009).

This link with resource-based theory (i.e., concerning finite resources) is in addition to internal political consequences, such as conflict and power imbalances between

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<sup>12</sup> As described in section 5.10.2, this quadratic relationship was evaluated in two stages. The first stage involved testing the main (linear) link between CVO functional resource investments and sales performance (i.e., Hypothesis 5); the second stage concerned testing the quadratic relationships alongside the change in values for chi-square ( $\chi^2$ ) and squared multiple correlations for reduced form ( $R^2$ ) statistics for the linear and quadratic models (i.e., Hypotheses 5 and 6 respectively). In addition to the non-significant relationship, there was no significant difference between the  $\chi^2$  and  $R^2$  values across the two models, suggesting that there was no support of a quadratic relationship between CVO functional resource investments and sales performance (Crick, 2017a).



departments, as the under-invested divisions might receive so few resources that they cannot execute their functional duties (Piercy, 1989; Prahalad, 2004). As such, there is some ambiguity surrounding whether there is a conceptual problem with the lack of support for this proposed inverted U-shaped relationship. However, it is suggested (based upon the statistical evidence alongside the study's conceptualisation) that CVO functional resource investments is a positive decision for customer-driven managers to make as it is likely to drive sales performance (Felton, 1959; McNamara, 1972). Further, this result challenges the prior studies that have claimed that there are negative issues associated with the firm's dominant logic via the over-investment of resources creating harmful performance outcomes (e.g., Le-Breton Miller and Miller, 2015). It is noted that managers may not be able to invest resources continuously into CVO business functions, as there may be a point at which resources are depleted. However, the result from this research hypothesis suggests that there is limited evidence of resource scarcity, presenting scope for future research. The third component of the conceptual framework is discussed in the following section (i.e., the relationship between a CVODL and sales performance).

### 6.3.3. CVODL and sales performance

This element of the conceptual framework (in terms of the relationship between a CVODL and sales performance) contained two research hypotheses: a linear relationship (Hypothesis 7), and a quadratic relationship (Hypothesis 8). There is a debate in the underpinning theory surrounding the performance consequences of the firm's dominant logic. That is, it has been proposed that there is a direct relationship between a dominant logic and company performance (see Obloj, Obloj and Pratt, 2010). However, other studies have suggested that dominant logics have an indirect relationship with business performance driven through "strategic action" – which is an activity (or set of activities) that link with managers' dominant assumption (e.g., customer value creation) (Lampel and Shamsie, 2000; Von Krogh, Erat and Macus, 2000). As such, this doctoral study's research hypotheses accounted for both debates by highlighting how both a direct and an indirect relationship might exist between a CVODL and sales performance. Furthermore, just like Hypothesis 6 (the albeit unsupported linear relationship between CVO functional resource investments and sales performance), an inverted U-shaped relationship was proposed to exist between a CVODL and sales performance. This research hypothesis was based upon the body

of literature that has suggested that marketing activities (including market orientation) are positive drivers of sales performance, but up to a certain point in which a diminishing returns effect might occur and harm sales (see Atuahene-Gime, Slater and Olson, 2005; Cadogan, Kuivalainen and Sundqvist, 2009). The results from these hypotheses are explained as follows.

Hypothesis 7. A CVODL has a linear (positive) relationship with sales performance.

This research hypothesis was developed to propose that a CVODL has a direct relationship with sales performance (Crick, 2016b). As discussed in section 3.3 (in terms of the facets of the CVODL construct), a CVODL was conceptualised as a construct positioned at the intersection between the literature surrounding market orientation and the firm's dominant logic (Crick, 2016a). Both market orientation and the firm's dominant logic have been suggested to have linear (direct) relationships with company performance (e.g., sales) (Hult and Ketchen Jr., 2001; Obloj, Obloj and Pratt, 2010). As such, it was hypothesised that a CVODL would also have a direct relationship with sales performance. The results from this hypothesis suggested that a CVODL does not have a linear (direct) relationship with sales performance ( $\gamma = .164$ ;  $t = 1.395$ ). A reasoning for this unsupported hypothesis could be the above-stated view that a dominant logic (as a managerial mind-set) does not directly drive sales performance, but instead has an indirect relationship with company performance through "strategic action" (Von Krogh, Erat and Macus, 2000).

As this PhD study uncovered that a CVODL has an indirect (positive) relationship with sales performance through CVO functional resource investments (as per Hypotheses 4 and 5), it was further suggested that a CVODL is unlikely to have a direct link with company performance. This result supports the prior literature which has made such conceptualisations about the firm's dominant logic (i.e., without the customer-driven dimension of the CVODL construct) (Goold and Luchs, 1993; Von Krogh, Erat and Macus, 2000). Equally, this finding challenges the work of Obloj, Obloj and Pratt (2010) who found (via an empirical study) that the firm's dominant logic is positively related to sales performance. A reason for this could be that Obloj, Obloj and Pratt (2010) operationalised the firm's dominant logic under an entrepreneurial orientation perspective. That is, entrepreneurial orientation (like

market orientation) has been found to be positively (directly) linked with organisational performance (e.g., sales) in the extant literature (Sundqvist, Kylaheiko, Kuivalainen and Cadogan, 2012). Therefore, using an entrepreneurial orientation conceptualisation/operationalisation of the firm's dominant logic could explain the performance-driving relationship that Obloj, Obloj and Pratt (2010) found. As the CVODL was conceptualised/operationalised as a market-oriented managerial mind-set or organisational culture (not a market-oriented behaviour), the lack of support for the direct relationship with sales performance makes theoretical sense.

As the result from Hypothesis 7 is integral to the contribution of this doctoral-level investigation, two issues need to be stressed. First, the relationship between a CVODL and sales performance is indirect because dominant logics have been suggested to indirectly drive sales performance (with the only exception being Obloj, Obloj and Pratt, 2010) (see Grant, 1988; Crilly and Sloan, 2012). As such, the indirect relationship between the CVODL and sales performance (driven through CVO functional resource investments – as noted in Hypotheses 4 and 5) suggests that such theory is also applicable to the CVODL construct. Second, the CVODL is a market-oriented managerial mind-set, not a market-oriented behaviour (such as intelligence responsiveness) (Crick, 2017b). Organisational cultures (which encapsulate managerial mind-sets) do not directly drive company performance (like sales), as they are likely to drive firm-level behaviours, and, in turn, drive business performance (Pettigrew, 1979; Barney, 1986; Harris and Ogbonna, 2001). Thus, there are two theoretical reasonings for the lack of support for the indirect relationship between the CVODL and sales performance. The non-linear relationship between the CVODL and sales performance is discussed as follows.

Hypothesis 8. A CVODL has an inverted U-shaped relationship with sales performance.

This research hypothesis was developed to highlight that there could be a situation in which firms manage too much of a CVODL in which it could drive sales performance, but only to a certain degree, that if exceeded, could have a diminishing-returns effect on such sales performance outcomes (Crick, 2017a). As mentioned in the discussion of Hypothesis 7 (see the above), both market orientation and dominant

logics have been suggested to have quadratic relationships with organisational performance (e.g., sales) (e.g., Prahalad, 2004; Cadogan, Kuivalainen and Sundqvist, 2009). Since the CVODL construct integrates the research domains of market orientation and the firm's dominant logic (Crick, 2017b), it was anticipated that a CVODL could drive sales performance, but eventually lessen such outcomes due to firms becoming too dominant in customer value creation. Theory surrounding the firm's dominant logic has indicated that the function of dominance is when management teams become too focused on the area which they believe is a driver of performance, whereby, they make dominant functions wealthier (via resource investments – as depicted in Hypotheses 5 and 6) and more powerful (in terms of authority and decision-making capabilities) (Gentry, Dibrell and Kim, 2016).

The results of this hypothesis suggest that there is no quadratic relationship between a CVODL and sales performance ( $\gamma = -.029$ ;  $t = -.562$ ). This research hypothesis was further tested by comparing the  $\chi^2$  and  $R^2$  values for the linear and quadratic models to test for a quadratic path. As with Hypothesis 6, these tests did not provide any evidence of an inverted U-shaped relationship. A possible reason for this unsupported hypothesis is that there is no dark-side of market orientation (as tested through the CVODL construct), challenging Morgan, Anokhin, Kretinin and Frishammar (2015), who argued that there can be such a thing as too much market orientation and supporting a range of studies that have highlighted the positive benefits of market-oriented organisational cultures and behaviours (e.g., Cadogan, 2003). Alternatively, it could be that the quadratic relationship between market orientation and organisational performance could just refer to market-oriented behaviours (e.g., Cadogan, Kuivalainen and Sundqvist, 2009), as opposed to market-oriented managerial mind-sets, such as the CVODL construct. That said, as Hypothesis 7 yielded a non-significant relationship, it could also be that there is a zero-level relationship between a CVODL and sales performance on the assumption that dominant logics (as managerial mind-sets) do not have a direct link with sales performance, but instead drive sales performance via intermediary factors<sup>13</sup> (Bettis

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<sup>13</sup> While this terminology suggests that the CVO functional resource investments variable mediates the relationship between a CVODL and sales performance, mediation tests were not used in this PhD thesis, due to the advanced nature of SEM. That is, due to the advanced statistical assumptions of LISREL 9.30, mediation tests are optional procedures (e.g., the Sobel test).

and Prahalad, 1995; Harris and Ogbonna, 2001). In the next section, a discussion is provided on the dynamic managerial capabilities framework as an underpinning theory in this doctoral-level investigation.

#### 6.3.4. Dynamic managerial capabilities perspective

While some elements of the CVO dynamic managerial capabilities framework were supported as drivers of the CVODL construct (namely, CVO managerial cognition and certain facets of CVO managerial social capital), the results suggest that CVO dynamic managerial capabilities indirectly drive sales performance. This finding supplements a range of extant theory surrounding the dynamic capabilities and dynamic managerial capabilities sub-sets of the resource-based view of the firm (see Wilden and Gudergan, 2015; Girod and Whittington, 2017). Furthermore, it is accepted that contextual and cultural factors could have affected the results. For instance, the American empirical context could have meant that the sampled senior managers (in the capacity of CVO managerial human capital) were trained in a certain way that did not concern creating customer value at an organisational cultural-level.

That is, while the average degree of CVO managerial human capital for the final sample (and final operationalisation) was reasonably high (with a mean of “4.93” and a standard deviation of “1.62” for the scale statistics), such expertise may not have been necessary in such an empirical context to create a customer-oriented corporate culture. Hence, CVO managerial human capital had a non-significant relationship with the CVODL. Interestingly, as the first and fourth facets of CVO managerial social capital were found to positively drive the CVODL, it is suggested that managers’ CVO expertise within the sampled corporations was not an important driver of a market-oriented managerial mind-set (i.e., a CVODL), but external networks’ CVO expertise (in the form of the first and fourth facets of CVO managerial social capital) were important drivers of the CVODL construct. Other discussion points (surrounding the link between CVO functional resource investments and sales performance) are explored in the following section.

### 6.3.5. Unmeasured variables in the relationship between CVO functional resource investments and sales performance

There may have been additional (unmeasured) variables affecting the relationship between CVO functional resource investments and sales performance. For example, theory surrounding dominant logics suggests that if managers make resource investments towards the departments that they perceive to foster their assumptions/beliefs (e.g., those that are perceived to create customer value), conflict and power imbalances may increase due to under-invested business functions not being able to perform their functional duties (see Miller, 1996; Prahalad, 2004). That is, while CVO functional resource investments were found to positively drive sales performance (as per Hypothesis 5), CVO functional resource investments could have also driven conflict and/or power imbalances between departments that were not perceived to be CVO. As such, inter-departmental conflict and inter-departmental power imbalances could have been factors used to explain the negative issues associated with dominant logics (including the CVODL construct).

That said, inter-departmental conflict and inter-departmental power imbalances are not integral issues within the resource-based view and the dynamic managerial capabilities framework. Hence, future studies should use alternative management and marketing theories, such as agency theory, so that interdepartmental conflict and/or interdepartmental power imbalances can be justified in a different conceptual framework. The theoretical and practical implications of the results (as well as the supporting set of recommendations for managers to use this study's results to help them achieve their objectives) are discussed in the following chapter. Further, the limitations and avenues of future research of this investigation (in which the methodological concerns identified within this chapter can be improved by scholars in the future) are also examined in the following chapter. The results from the control variables under the dynamic managerial capabilities perspective are explored in the next section in respect of the supported and unsupported control paths.

## **6.4. Discussion of the control paths**

### 6.4.1. Role of the control paths

The purpose of this section is to highlight other interesting aspects of the empirical results (i.e., which develop the current literature) that were not included in the

hypothesis tests. As discussed in section 3.9.1 (as per the justification of the control variables used in this doctoral thesis), control variables were used to identify other explanations of the variance of the dependent variable (sales performance) (Becker, 2005; Bernerth, Cole, Taylor and Walker, 2018). Moreover, two control paths were also used to highlight that there is another indirect link between the CVODL (as a market-oriented managerial mind-set) and sales performance, driven through intelligence responsiveness (as a market-oriented behaviour). The implications of the control paths tested in this PhD investigation are discussed as follows.

#### 6.4.2. Intelligence responsiveness

Intelligence responsiveness was used to represent a core facet of market-oriented behaviours as it concerns how corporations can respond to changes in their business environments (Ozturan, Ozsomer and Pieters, 2014; Wei, Samiee and Lee, 2014). That is, a CVODL (as a market-oriented managerial mind-set) was proposed to drive intelligence responsiveness (as a market-oriented behaviour). While intelligence responsiveness was the only dimension of market orientation used to test this control path (as opposed to generation and dissemination activities), a CVODL was found to have a significant positive relationship with intelligence responsiveness ( $\beta = .705$ ;  $t = 13.923$ ). The strong relationship suggests that intelligence responsiveness is an integral behaviour used to implement the marketing concept and deliver value to customers (Cadogan, Souchon and Procter, 2008). Moreover, the strong relationship supports Homburg and Pflesser's (2000) work, in which a market-oriented corporate culture (i.e., a CVODL – as a market-oriented managerial mind-set) drives market-oriented behaviours (in the case of this study, intelligence responsiveness). Intelligence responsiveness was also used as a control of the dependent variable (sales performance), to highlight the likely positive relationship between market-oriented behaviours and organisational performance (Murray, Gao and Kotabe, 2011; Ngo and O'Cass, 2012).

The results from this control path suggested that intelligence responsiveness has a significant positive relationship with sales performance ( $\beta = .362$ ;  $t = 5.429$ ). As per the above, this result (albeit, not a strongly-associated path) was not surprising as market orientation has frequently been found to drive sales performance in a range of contexts (e.g., industries and countries), as well as using different measures of

performance. The role of intelligence responsiveness also provides the additional contribution of highlighting that a CVODL (as a managerial mind-set) is likely to drive sales performance through “strategic action” as opposed to a direct relationship (Von Krogh, Erat and Macus, 2000). The indirect relationship between a CVODL and sales performance (driven through intelligence responsiveness) also supports the work of Verheof and Leeflang (2009). Specifically, Verheof and Leeflang (2009) examined the role of the Marketing Department within the firm. These authors found that the relationship between the Marketing Department’s influence within the firm and business performance is driven through market orientation and does not have a direct relationship. While the Marketing Department’s influence within the firm and a CVODL are different constructs, they represent a non-behavioural view of marketing at the managerial mind-set-level. Thus, it is interesting to highlight that a CVODL is a driver of intelligence responsiveness. The results from the entrepreneurial orientation control paths follows in the next section.

#### 6.4.3. Entrepreneurial orientation

Entrepreneurial orientation was conceptualise/operationalised as a three-component variable (innovativeness, proactiveness, and risk-taking) (see Sundqvist, Kylaheiko, Kuivalainen and Cadogan, 2012), and was tested using each facet of the construct as an individual control path to explain the variance of sales performance. Innovativeness did not have any relationship with sales performance with a non-significant negative relationship ( $\gamma = -.012$ ;  $t = -.155$ ); the same occurred for risk-taking with a weak, non-significant positive link ( $\gamma = .040$ ;  $t = .646$ ). This result challenges prior literature that suggests that all aspects of entrepreneurial orientation (including innovativeness and risk-taking) are positively related to organisational performance (see Baker and Sinkula, 2009; Boso, Story and Cadogan, 2013). While the corporate entrepreneurship (i.e., innovative, risk-taking, and proactive activities in large and/or established companies) literature has suggested that large companies can still be innovative (via creative decisions), (Rauch, Wiklund, Lumpkin and Frese, 2009), it could be that managers with a CVODL could not value entrepreneurially-oriented behaviours (i.e., risk-taking, innovative, and proactive activities). This result also applies to the lack of support for risk-taking control as customer-driven management teams could be so focused on delivering value to their customers, that they overlook the orientation to take risks.



That is, managers' dominant logic (e.g., a CVODL) can cause them to be "blinded" towards other strategic orientations (and other divisions of the firm) because they are too focused on their "dominant" assumptions (Miller, 1996; Prahalad, 2004). Interestingly, proactiveness was found to be a positive driver of sales performance (with the result not being strongly-associated) ( $\gamma = .308$ ;  $t = 4.390$ ). As proactiveness is based upon exploiting changes in the business environment (Sundqvist, Kylaheiko, Kuivalainen and Cadogan, 2012), it could be that market-oriented managers (fostering a CVODL) constantly scan their environment to ensure that they can satisfy their customers' wants and needs. Market orientation has been linked with managers being aware of their customers' wants and needs (Cadogan, 2003). Hence, while being entrepreneurially-oriented might not be deemed important to managers with a CVODL (as seen with the lack of support for innovativeness and risk-taking), they could still be proactive to ensure that they create the value that they perceive to be the most important driver of performance (e.g., sales) (Crick, 2017b). The results from the environmental turbulence control paths follow in the next section.

#### 6.4.4. Environmental turbulence

Environmental turbulence was conceptualised/operationalised as a multi-dimensional variable, comprised of: competitive intensity, technological turbulence, and market dynamism (Slater and Narver, 1994; Girod and Whittington, 2017). As mentioned in section 5.7.2 (in respect of the scale purification stage of the study), technological turbulence was deleted from the statistical analysis due to discriminant validity concerns (i.e., a high correlation with several variables). Despite being tested in the EFA stage of the study (indicating non-problematic factor loadings), the reason that technological turbulence has discriminant validity problems could have been a measurement-based concern. Technological turbulence was measured using an adaptation (after the two pilot studies) of Jaworski and Kohli's (1993) scale. As such, it was regrettable that technological turbulence had to be deleted from the study, due to it being an important facet of environmental turbulence that can help or hinder business' competitiveness (Cadogan, Cui and Li, 2003).

Deleting technological turbulence was not a major concern as competitive intensity and market dynamism were used in the SEM analysis to measure environment turbulence. Furthermore, competitive intensity ( $\gamma = -.112$ ;  $t = -1.593$ ) and market

dynamism ( $\gamma = -.007$ ;  $t = -.111$ ) were found to have non-significant relationships with sales performance. A reason for this result could be that certain business environments do not have any role in driving performance (Schilke, 2014). Instead, in future research, environmental turbulence could be used as a moderating effect to explain a competitive activity's (e.g., market orientation) relationship with sales performance, as in Slater and Narver (1994). Moreover, the fact that there was no support for the role of the environment as a control variable suggests that it could be an unimportant factor in explaining the variance of the dependent variable (sales performance (Spector and Brannick, 2011; Bernerth, Cole, Taylor and Walker, 2018)). The firm size control path is discussed in the next section.

#### 6.4.5. Firm size

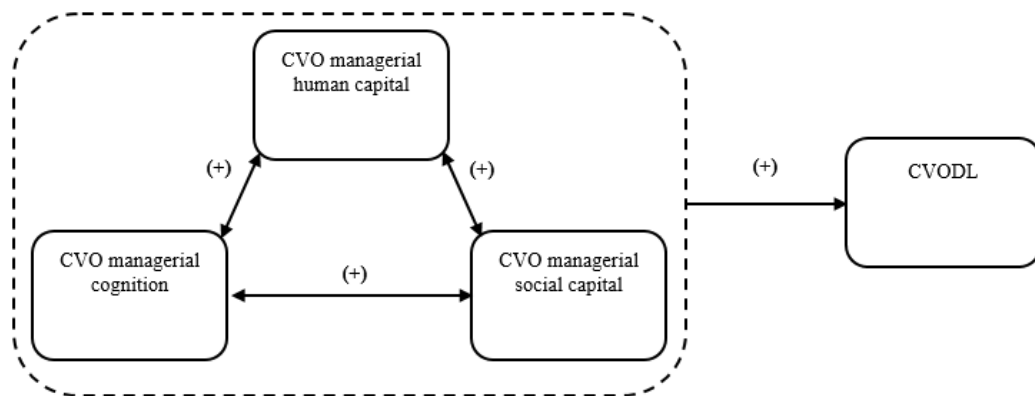
Firm size was operationalised as the logarithm of the annual revenues of the sampled companies (Sirmon and Hitt, 2009). This logarithmic transformation was used to reduce the variance of the firm size variable (Hultman, Robson and Katsikeas, 2009). Firm size was used to test whether there is any issue associated with a company's size that might drive sales performance. Under the resource-based view (including the dynamic managerial capabilities), there is a key assumption that large businesses have more scope to drive sales than smaller organisations due to possessing more resources and capabilities (Wenerfelt, 1984; Barney, 1991). As the empirical sample for this PhD study contained mostly large companies (as per their annual sales as well as having many full-time employees), it was of interest to measure whether firm size was a contributing factor in explaining sales performance. The results stated that firm size is positively related to sales performance (an albeit weak relationship) ( $\gamma = .172$ ;  $t = 2.875$ ); thus, supporting resource-based theory. In summary of the control variables, there was a mixed support for the expected control paths (with some being supported, and others being unsupported). Some post-hoc tests are developed in the following section to examine why Hypotheses 1 and 3b were unsupported.

### 6.5. Over-arching discussion of the empirical results

There was mixed support for the CVO dynamic managerial capabilities framework as drivers of the CVODL construct. While CVO managerial cognition and aspects of CVO managerial social capital were found to drive the CVODL, CVO managerial human capital was not an antecedent factor. According to Adner and Helfat (2003)

and Andersson and Evers (2015), the elements of the dynamic managerial capabilities perspective are inter-related (see Figure 6.2). Hence, it could be that instead of CVO managerial human capital and CVO managerial social capital (facet 2) being antecedents of the CVODL, they are driven by the other elements of the CVO dynamic managerial capabilities framework, namely, CVO managerial cognition and the remaining dimensions of CVO managerial social capital. That said, it is appreciated that such assertions are linked with Kor and Mesko's (2013) conceptualisations, but are nonetheless interesting to explore why Hypotheses 1 and 3b were unsupported.

**Figure 6.2. Inter-relationships between the elements of the CVO dynamic managerial capabilities perspective**



**Adapted from: [Adner and Helfat \(2003\)](#); [Andersson and Evers \(2015\)](#)**

To test whether CVO managerial human capital is driven by the remaining elements of the CVO dynamic managerial capabilities framework, a post-hoc ordinary least squares multiple regression model was run using the same measures as in the core data analysis stage. Specifically, all the latent variables were averaged and run in a correlational analysis (using Pearson correlation coefficients) (see Table 6.1).

The Pearson correlation coefficients indicated that, except for, the second facet of CVO managerial social capital, all variables were significantly correlated. Afterwards, the multiple regression model (using SPSS 23) was run using CVO managerial human capital as the dependent variable, and the remaining elements of the CVO dynamic managerial capabilities framework as the independent variables (see Table 6.2). The results from the multiple regression analysis revealed that CVO managerial human capital is driven by CVO managerial cognition ( $\beta = .149$ ;  $t =$

2.740) and the fourth facet of CVO managerial social capital ( $\beta = .743$ ;  $t = 16.910$ ), with the remaining variables having non-significant paths.

This result suggests that CVO managerial human capital may need a degree of customer-driven assumptions (via CVO managerial cognition) to be created. Furthermore, using the viewpoint of network members (via the fourth facet of CVO managerial social capital) could also shape managers customer-oriented expertise through external perspectives surrounding delivering value to customers. The strong relationship between the fourth facet of CVO managerial social capital and CVO managerial human capital suggests that the sampled senior managers have required the support of their network members' customer-driven heuristics. This strong result supplements the view that managerial social capital helps managers unlock knowledge that would not be available if they operated individualistically (Acquaah, 2007; Helfat and Martin, 2015). Moreover, this post-hoc test was somewhat exploratory (hence, why multiple regression was used instead of SEM), in which there was additional reasoning surrounding why there was mixed support for the elements of the CVO dynamic managerial capabilities perspective as drivers of the CVODL construct. It is still argued that a CVODL could be created by all members of a corporation – not just managers (Harris and Ogbonna, 1999; Harris, 2013).

Furthermore, as noted in section 6.3.1, Hypothesis 3b was also unsupported; that is, the relationship between the second facet of CVO managerial social capital and the CVODL. Using the same logic as the post-hoc test for Hypothesis 1, the facets of the dynamic managerial capabilities framework are inter-related (see Adner and Helfat, 2003; Andersson and Evers, 2015). Therefore, as an exploratory test, it was of interest to evaluate whether the remaining facets of the dynamic managerial capabilities framework were drivers of CVO managerial social capital (facet 2), rather than this variable being a driver of the CVODL. Consequently, an ordinary least squares regression model was run, using: CVO managerial human capital, CVO managerial cognition, CVO managerial social capital (facet 1), and CVO managerial social capital (facet 4) (all using the final operationalisations), as drivers of CVO managerial social capital (facet 2). A bivariate correlation matrix was unnecessary, as the model contained the same variables as the post-hoc test for Hypothesis 1 (as presented in Table 6.1). Yet, the ordinary least squares regression model is presented in Table 6.3.

Table 6.1. Correlation matrix in the post-hoc test of the CVO dynamic managerial capabilities framework

Variables*	1	2	3	4	5
1. MHC	1.00				
2. MCG	.43	1.00			
3. SC_F1	.29	.60	1.00		
4. SC_F2	.00	-.10	-.10	1.00	
5. SC_F4	.21	.28	.57	-.18	1.00
<p>*Correlations greater than “.15” were significant at the 5% (<math>\alpha = .05</math>) level (two-tailed). Please note that the item codes represent the following variables:  MHC – CVO managerial human capital  MCG – CVO managerial cognition  SC_F1 – CVO managerial social capital (facet 1)  SC_F2 – CVO managerial social capital (facet 2)  SC_F4 – CVO managerial social capital (facet 4)</p>					

Table 6.2. Multiple regression analysis in the post-hoc test of the CVO dynamic managerial capabilities framework (model 1)

<b>Model 1 – Dependent variable: CVO managerial human capital</b>					
<b>Independent variables</b>	<b><math>\beta</math></b>	<b>SE</b>	<b>Beta</b>	<b>t-values*</b>	<b>Sig.</b>
<b>CVO managerial cognition</b>	<b>.153</b>	<b>.056</b>	<b>.149</b>	<b>2.740</b>	<b>.007</b>
CVO managerial social capital (facet 1)	-.023	.039	-.031	-.595	.552
CVO managerial social capital (facet 2)	-.042	.037	-.044	-1.131	.259
<b>CVO managerial social capital (facet 4)</b>	<b>.880</b>	<b>.052</b>	<b>.743</b>	<b>16.910</b>	<b>.000</b>
*Critical t-value = 1.645 ( $\alpha = .050$ ). These t-tests were one-sided as the paths were directional. The rows that are marked with bold font indicate supported paths.					
<b>Model fit summary:</b>					
<b>R<sup>2</sup> (%) = .659 (65.9%)</b>					
<b>Adjusted R<sup>2</sup> (%) = .653 (65.3%)</b>					
<b>F-statistic (Sig.) = 113.907 (.000)</b>					
<b>SE of estimate = .953</b>					

The results revealed that only the fourth facet of CVO managerial social capital had a positive significant relationship with the second facet of CVO managerial social capital ( $\beta = .236$ ;  $t = 2.187$ ). This positive link is unsurprising, as both variables form the multiple dimensions of CVO managerial social capital (as per Acquaah, 2007; Helfat and Martin, 2015) and are expected to be statistically-associated. The other independent variables were found to have non-significant relationships with CVO managerial social capital (facet 2). Therefore, the points raised in section 6.3.1, regarding the conceptual reasons why Hypothesis 3b was unsupported, are argued to stand, with there being no statistical rationale (linked with the dynamic managerial capabilities framework) to highlight other explanations for this result. In the next section, this chapter is summarised.

### **6.6. Chapter summary**

The results from the research hypotheses and control paths have been explored in this chapter with reference to the underpinning theory of this doctoral study (the dynamic managerial capabilities framework). In doing so, an overview of the justification for these relationships (hypothesised and non-hypothesised) was provided before the results of the tested paths were stated. For the paths that were unsupported, a reasoning (conceptual and/or methodological) was suggested to explain why this was the case, with guidance from the dynamic managerial capabilities perspective and the broader resource-based view. In the following (and final) chapter of this PhD investigation: the thesis is summarised, scholarly and managerial implications are outlined, and the limitations and avenues of future research are discussed.

Table 6.3. Multiple regression analysis in the post-hoc test of the CVO dynamic managerial capabilities framework (model 2)

<b>Model 2 – Dependent variable: CVO managerial social capital (facet 2)</b>					
<b>Independent variables</b>	<b><math>\beta</math></b>	<b>SE</b>	<b>Beta</b>	<b>t-values*</b>	<b>Sig.</b>
CVO managerial human capital	-.128	.113	-.123	-1.131	.259
CVO managerial cognition	-.137	.098	-.129	-1.398	.164
CVO managerial social capital (facet 1)	-.086	.067	-.111	-1.281	.201
<b>CVO managerial social capital (facet 4)</b>	<b>.291</b>	<b>.133</b>	<b>.236</b>	<b>2.187</b>	<b>.030</b>
*Critical t-value = 1.645 ( $\alpha = .050$ ). These t-tests were one-sided as the paths were directional. The row that is marked with bold font indicate a supported path.					
<b>Model fit summary:</b>					
<b>R<sup>2</sup> (%) = .048 (4.8%)</b>					
<b>Adjusted R<sup>2</sup> (%) = .032 (3.2%)</b>					
<b>F-statistic (Sig.) = 2.994 (.019)</b>					
<b>SE of estimate = 1.656</b>					



## **CHAPTER VII – CONCLUSIONS**

### **7.1. Chapter introduction**

In the previous chapter, the empirical findings were related to the existing body of knowledge, to determine the ways in which the results contribute to the marketing literature. The purpose of this chapter is to conclude the PhD thesis and outline the contribution to scholars and practitioners. Henceforth, this chapter is divided into the following sections. First, the research objectives and questions are briefly outlined. Second, the theoretical contribution is discussed. Third, the practical contribution is described. Fourth, the limitations and avenues of future research are described.

### **7.2. Research objectives and questions**

This PhD study contributes to the research problem of there currently being significantly under-researched areas surrounding the implementation of the marketing concept. Prior to this investigation, very limited research had examined how market-oriented management teams (with a CVO corporate culture) can implement their customer-driven beliefs into activities, such as functional resource investments, as a means of implanting the marketing concept. Over time, various authors have highlighted the importance of creating customer value in corporations, and have alluded to resource investments (as a function of implementing the marketing concept), (see Felton, 1959; McNamara, 1972; Kumar and Reinartz, 2016), but the existing body of knowledge has focused on information processing activities, as a proxy for implementing the marketing concept, namely, the: generation of, dissemination of, and responsiveness to market intelligence (e.g., Kohli and Jaworski, 1990). To better understand how managers can implement the marketing concept, the market orientation literature was linked with theory surrounding the firm's dominant logic, to develop the CVODL construct. Consequently, the objectives of this study were to: define and conceptualise, operationalise, and test the nature of the CVODL construct. Under the dynamic managerial capabilities perspective (a sub-set of the resource-based view), three research questions were developed to guide these research objectives:

7. What are the facets of the CVODL?
8. What are the antecedents of the CVODL?
9. What are the consequences of the CVODL?

These three research questions were asked to better understand how managers can implement the marketing concept within their corporations. That is, the CVODL construct was used to develop a stronger conceptualisation and measure of market-oriented organisational cultures, through considering a managerial mind-set dimension, something that has not been examined in the marketing literature, but which is nevertheless important (Pettigrew, 1979; Barney, 1986). By studying market-oriented managerial mind-sets (as a feature of a market-oriented organisational culture), this doctoral-level study expanded upon the work of Homburg and Pflesser (2000) and used the CVODL construct to conceptualise and operationalise market-oriented corporate cultures in a way that they (among other authors) have overlooked. In terms of the antecedents of the CVODL, understanding the drivers of this construct allowed an improved level of knowledge surrounding the facilitating factors of market orientation (as the implementation of the marketing concept) to be developed.

The dynamic managerial capabilities perspective was used as the core antecedents of the CVODL construct in the thesis' conceptual framework. This contribution integrated a different theoretical perspective with market orientation to understand new drivers of a market-oriented managerial mind-set (i.e., the CVODL). That is, CVO managerial human capital, CVO managerial cognition, and CVO managerial social capital were used as drivers of the CVODL construct (adapted from Kor and Mesko, 2013). Additionally, by exploring the consequences of the CVODL, the ways in which management teams could implement the marketing concept could be evaluated in the form of CVO functional resource investments (as per Felton, 1959; McNamara, 1972) and being responsive to market intelligence, as an information processing activity (Ozturan, Ozsomer and Pieters, 2014). Moreover, by focusing on CVO functional resource investments, this study revisited earlier papers that conceptually examined resource investments, as a way of implementing the marketing concept (see Felton, 1959; McNamara, 1972), with empirical data. The theoretical contribution of this PhD thesis is discussed in the following section.

### **7.3. Theoretical contribution**

There are three major theoretical contributions linked with this PhD thesis. First, new insights were developed into conceptualising and operationalising market-oriented

managerial mind-sets via the CVODL construct. That is, as noted in the previous section, market-oriented corporate cultures were previously studied as a set of: values, norms, and artefacts about creating value for customers (see Harris and Ogbonna, 1999; Homburg and Pflesser, 2000). However, outside of the marketing literature, a key dimension of corporate cultures is a managerial mind-set, namely, the degree to which a company's management team believe that a certain activity is a driver of their firm's performance (Pettigrew, 1979; Barney, 1986). Managerial mind-sets have not been considered by marketing academics. The CVODL construct was used to develop a better conceptualisation and operationalisation of market-oriented corporate cultures by linking market orientation (as a set of CVO beliefs) with theory surrounding the firm's dominant logic, which incorporated the managerial mind-set dimension (as per Bettis and Prahalad, 1995). This contribution was important as a new (and improved) form of market-oriented corporate cultures was developed. Conceptualisations and operationalisations of constructs are critical for researchers' understanding of what they mean in practice. By developing a better conceptualisation and operationalisation of market-oriented corporate cultures, the CVODL construct is used to help marketing academics understand the facets of such organisational cultures. Thus, it is concluded that the CVODL construct is an effective conceptualisation and operationalisation of a market-oriented organisational culture – through considering a market-oriented managerial mind-set.

Second, this doctoral study uncovered new evidence pertaining to the implementation of the marketing concept. Specifically, prior studies have focused on information processing activities, as the primary mechanism for implementing the marketing concept, such as being responsive to market intelligence (e.g., Souchon, Cadogan, Procter and Dewsnap, 2004; Ozturan, Ozsomer and Pieters, 2014). While intelligence responsiveness was an interesting element of this PhD thesis (as it was found to be driven by the CVODL construct), CVO functional resource investments were examined as a form of implementing the marketing concept. That is, past authors have argued that resource investments are an important form of creating value for customers, in terms of developing market-oriented strategies (Felton, 1959; McNamara, 1972), but they have not tested such assertions with empirical data. In this PhD thesis, the CVODL was found to drive CVO functional resource investments, and in turn, drive sales performance. Consequently, it is concluded that

market-oriented managerial mind-sets are highly-likely to drive CVO functional resource investments, which appear to be a valid form of implanting the marketing concept. Moreover, it is also concluded that CVO functional resource investments are positive for improving organisations' sales performance, supporting assertions that developing a strong customer value provision should lead to higher-degrees of company performance (Kumar and Reinartz, 2016; Payne, Frow and Eggert, 2017).

Third, the use of the dynamic managerial capabilities perspective, as a theoretical framework provided new insights into exploring the CVODL and the implementation of the marketing concept. The dynamic managerial capabilities perspective is an established viewpoint in the strategic management literature (see Adner and Helfat, 2003; Helfat and Martin, 2015), but has not been sufficiently explored in the marketing literature (Bruni and Verona, 2009). The dynamic managerial capabilities perspective was chosen for this doctoral study, based on a recent article by Kor and Mesko (2013), who proposed that: managerial human capital, managerial cognition, and managerial social capital (the facets of the framework) drive the firm's dominant logic, and in turn, resource investments. Kor and Mesko's (2013) use of this theory was highly-appropriate for this PhD thesis, as it related to the previously-described gaps within the marketing literature. Furthermore, as the dynamic managerial capabilities perspective has not been studied in the marketing literature (Bruni and Verona, 2009), the framework provided a new way of examining the antecedents and consequences of the CVODL construct (as the implementation of the marketing concept). Thus, it is concluded that the dynamic managerial capabilities framework was an effective theory for explaining the antecedents and consequences (i.e., CVO functional resource investments) of the CVODL. The practical contribution (and managerial recommendations) of this doctoral study follows in the next section.

#### **7.4. Practical contribution**

In addition to the contribution to the marketing literature (as per section 7.3), there are several elements of this PhD thesis that benefit practitioners. First, if managers should wish to create a market-oriented managerial mind-set (i.e., a CVODL), it is recommended that they should draw upon their assumptions about the ways to create value for their customers (i.e., CVO managerial cognition) and attempt to implement

such customer-driven beliefs into the various hierarchies and functional areas of the corporation. Management teams should implement their customer-oriented beliefs, so that employees share the same views about the importance of customer value creation as their senior management teams. Further, if managers intend to create a market-oriented company culture, the role of network members, i.e., internal and external stakeholders with whom managers have dealings, should not be underestimated (through CVO managerial social capital). Specifically, it is recommended that managers need to be able to access network members' resources to foster a market-oriented managerial mind-set, as such resources could allow managers to develop customer-focused assumptions more easily than if their mind-set was developed on an individualistic (less collaborative) basis. Moreover, managers should also utilise network members' viewpoints (i.e., ways of looking at their environment to deliver value to customers), as such heuristics are recommended to shape managers' thought processes about which activities create (and do not create) customer value. By utilising network members' viewpoints, managers should learn effective ways about developing and fostering a market-oriented managerial mind-set (i.e., a CVODL).

Second, if managers have the intention to be responsive to market intelligence (i.e., information about customers' needs as well as the activities of key competitors), a market-oriented managerial mind-set (i.e., a CVODL) should help them achieve such objectives, as it will help them foster and implement CVO assumptions into their strategic activities. In other words, if managers can create a market-oriented managerial mind-set (i.e., one that has CVO assumptions across all hierarchies and departments), they are more likely to be able to lead a firm that can be responsive to intelligence pertaining to customers' wants/needs to out-perform key rivals. It is accepted that an organisational culture (including a CVODL – as a market-oriented managerial mind-set) can take an extended period to develop because ensuring that managers' assumptions are shared across an organisation's functional areas and hierarchies could be a difficult process to develop. If managers can create a CVODL, it is suggested that they will be more responsive to information about their customers and competitors. In turn, responsiveness to market intelligence is likely to help companies increase their sales performance by allowing companies to respond to

important changes in their business environment to satisfy customers' wants/needs. As such, a CVODL is highly-likely to help corporations to improve their sales.

Third, in terms of investing resources (i.e., tangible assets including cash) into the functional areas of an organisation, it is recommended that managers should allocate resources to the departments of the firm that managers perceive to deliver value to customers. Investing resources into customer-driven functions is important because these departments are more likely to increase sales than the functions that managers do not perceive to be CVO. Investing resources in departments that are perceived to be CVO helps firms increase their sales performance. Hence, based on the study's results, it is recommended that practitioners should invest resources towards the functional areas that are more likely to create customer value. The findings from this doctoral study suggest that managers should invest as many resources as possible in the functional areas that they perceive to create customer value. However, it is acknowledged that resources are finite (even for larger firms); so, while it is highly-recommended that investing resources in CVO departments is likely to increase businesses' sales performance, managers should also conserve some resources (as they see fit) for non-CVO activities. By conserving resources for non-CVO activities, managers will provide themselves with contingencies to manage issues, such as internal politics which might arise from non-CVO departments perceiving that they have received an unfair volume of resources<sup>14</sup>. The limitations and avenues of future research of this PhD investigation follow in the next section.

### **7.5. Limitations and avenues of future research**

A common theme across research disciplines (academic and practical) is that limitations always exist, despite researchers' attempts to mitigate any drawbacks to their studies. Despite various techniques used to enhance the reliability and validity of the empirical results (as discussed in section 4.10.7), this PhD thesis is not an exception; hence, the limitations and avenues of future research are discussed as

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<sup>14</sup> To stress a crucial point, managers should invest their resources towards CVO departments, but conserving some resources might be wise, due to the potential for internal politics. That is, conserving resources could allow managers to mitigate the risk of non-CVO departments driving tensions towards those that receive resource investments. Yet, the results from this PhD thesis highlight that investing resources towards CVO business functions is likely to improve firms' sales performance.

follows. First, there are alternative marketing and management theories that could be applied to this doctoral study's conceptual framework. All conceptualisations used in this investigation were linked to the dynamic managerial capabilities sub-set of the resource-based view of the firm. That is, key papers pertaining to this theoretical perspective were drawn upon to justify the research hypotheses and research questions. While the dynamic managerial capabilities framework was deemed to be an appropriate theory used in this PhD thesis, based on its fit with the development of the: facets, antecedents, and consequences of the CVODL construct, there are other marketing and management theories in the extant literature. For instance, as this investigation drew upon functional resource investments, the use of agency theory could have been used to examine interdepartmental relationships between principal and agents (i.e., senior managers and functional-level employees). It is recommended that future research should employ different marketing and management theories when developing this study.

Second, quantitative researchers need to be aware of the extent to which they can generalise from their empirical results. When researchers use samples from certain populations to study a phenomenon (in the case of this study, the: facets, antecedents, and consequences of the CVODL construct), they must determine the degree of inference that they can make about their sample's wider generalisability, not only to the population that such a sample originates from, but also to wider populations. The sample used in this PhD study was senior managers (e.g., CEOs, CFOs, and COOs) from large corporations based in the United States (competing in several industries and originating from a national-level study). As such, this sample was not exclusive to a single context, but drew upon the insights of senior managers from multiple sectors, in different parts of America. Therefore, it is anticipated that the empirical findings have more scope to be applicable to American firms more generally than if one (or few) specific context had been sampled in this PhD study (e.g., a single-sector study). While the sample of 241 American companies is respectable, due to respondents such as senior managers often being too busy to complete surveys (as well as allowing SEM to be undertaken), it is accepted that this sub-set of the population may not be generalisable to all firms (across all industries) in the United States. As such, future research may opt to replicate this study (with a much larger sample size), to test the extent to which the results were indicative of the broader

population. Also, there may be a country bias associated with this study, in which there may be a property of the findings that is exclusively linked to the American context. It is recommended that future research may wish to replicate this study in several countries to test the study's conceptualisations<sup>15</sup>.

Third, the empirical data in this study was based upon a self-reported survey using the data collection services of Qualtrics. Using Qualtrics' data collection services yielded limitations of this PhD study associated with the use of single-source data. The chosen sample was selected based on theory surrounding dominant logics (as per the CVODL) being fostered by senior managers (Goold and Luchs, 1993; Kor and Mesko, 2013). Hence, the sample was managers in top-level positions, as opposed to departmental-level managers, who might have been biased towards internal political issues related to the study's questionnaire (e.g., CVO functional resource investments). Further, the sample was assessed using an informant quality scale (see Hultman, Robson and Katsikeas, 2009; Boso, Story and Cadogan, 2013), which suggested that the respondents were generally very knowledgeable and qualified to complete the survey. However, a drawback of using Qualtrics' data collection services was that they could not provide the identity of any respondent due to strict confidentiality arrangements with those who completed this study's survey (as well as their other clients). Qualtrics also assured that they had kept all records of their participants. Moreover, during the pre-testing stage, academics who had used the data collection services of Qualtrics recommended them and stressed their positive reputation and trustworthy experience. Thus, despite not having access to the firms' identities, Qualtrics were deemed reputable when collecting data for this doctoral study.

Despite the benefits of Qualtrics' data collection services, a key limitation was that the data were from a single-source, whereby, the self-reported questionnaire was completed by one person in an organisation, and did not include data from different departments, or secondary data which some studies have used. Therefore, while

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<sup>15</sup> It is recommended that when under-taking cross-country comparisons, authors should compare culturally and/or economically-similar countries (e.g., the United States and Canada) to ensure that cross-national differences are not linked to economically and culturally-distant countries (Ellis, 2007). If cross-national differences are not a crucial factor, future research should examine a larger array of countries with cultural and/or economic differences.



secondary data sources are highly-unlikely to be obtained for this dataset (e.g., objective financial data from company and/or industry reports), there is the option to return to Qualtrics for a follow-up study to collect certain data from different managers within the same companies. Additionally, despite the survey-based methodology allowing the research hypotheses to be tested, the results could have been supplemented with some follow-up interviews with senior managers. That is, follow-up interviews might have indicated why certain results existed, such as why there was not a quadratic relationship between CVO functional resource investments and sales performance (i.e., Hypothesis 6). However, such qualitative methods may have been time-consuming and expensive to access such interviewees (as the respondents would have been based in the United States, to be consistent with the core sample). Future research might address this limitation with greater budgets and more time than what was available for this PhD thesis. In summary, these conceptual and methodological limitations do not pose serious concerns about the quality of this doctoral study, but provide scope for future authors to revisit the investigation, by studying the: facets, antecedents, and consequences of the CVODL. This chapter is summarised in the following section.

#### **7.6. Chapter summary**

The purpose of this chapter was to: summarise the PhD thesis, state the theoretical and practical contribution, and the limitations and avenues of future research. These sections have highlighted the value of this doctoral study (i.e., the benefits it has brought to scholars and practitioners), as well as the ways in which future scholars may wish to build upon the themes of this PhD study.

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**APPENDICES****Appendix 1. The potential departments of an organisation**

<b>Department*</b>	<b>Source</b>	<b>Publication</b>	<b>Functional role(s)</b>
Administration	Hitt and Ireland (1985)	Strategic Management Journal	This business function is responsible for the day-to-day operations of the organisation, such as: paperwork, operating systems, and compliance. This could include health and safety management systems and protocols. This also includes coordinating with many other departmental functions.
After Sales	Homburg, Workman Jr. and Jensen (2002)	Journal of Marketing	This department maintains relationships with customers after they have purchased a good and/or service from the company. This to maximise brand equity and create future sales. This department also deals with service, maintenance and complaint handling strategies.
Business Development	Bruni and Verona (2009)	British Journal of Management	This departmental function is noted for developing growth opportunities for the entire firm as well as opportunities outside of the business. This links with developing and implementing entrepreneurial and marketing strategies as is typically managed by the headquarters of a company.
Customer Service	Domegan (1996)	European Journal of Marketing	This functional area involves assisting customers in their decision-making by providing advice and support in choosing goods and/or services. This extends to dealing with complaints and service-lift recovery strategies to improve customer service and clients' overall experience with the firm's offerings.
Engineering	Ruekert and Walker Jr. (1987)	Journal of Marketing	This division's focus is designing, implementing, and improving processes, to

			produce the company's outputs. This includes maintenance tools and ways to improve efficiency through the processes and management systems used.
Export or International	Cadogan, Kuivalainen and Sundqvist (2009)	Journal of International Marketing	This business function is responsible for managing and coordinating the international markets the firm serves, both in terms of customers and supply chain partners. This stretches to managing international payments and currency fluctuations to maximise returns.
Finance	Piercy (1987)	Journal of Marketing	This functional area carries out the payroll of the organisation (by coordinating with Human Resources or Personnel) to pay employees' salaries and wages. It is also responsible for seeking finance from external sources (e.g., venture capitalists and/or banks) for business strategies.
Government Relations	Hitt and Ireland (1985)	Strategic Management Journal	This department creates and maintains relationships with officials within the public sector of the country or countries in which the organisation operates. Depending on these countries, the role of the state is likely to vary as some nations have a much larger public sector than others. Relationships are adapted accordingly.
Human Resources or Personnel	Wei and Lau (2008)	Journal of International Business Studies	This business function is focused on: recruiting, training, and retaining the company's workforce to improve the effectiveness and quality of the firm's staff members. It also deals with the dismissal and mediation with employees and their trade union representatives.

Information Technology (IT)	Domegan (1996)	European Journal of Marketing	This function is responsible for the technological hardware and software for the entire business including the maintenance of such equipment. This function is also focused on maintaining the company's intranet and communication channels to ensure that the company is operating as efficiently and effectively as possible.
Key Accounts	Homburg, Workman Jr. and Jensen (2002)	Journal of Marketing	This functional area is focused on maintaining strong relationships with very important clients (i.e., those that can yield high volumes of sales, as well as being highly-beneficial in helping the firm's performance).
Legal	Crilly and Sloan (2012)	Strategic Management Journal	This business function helps resolve legal conflict with external parties as well as assisting in mediation processes for similar matters. This department is also responsible for providing legal advice to the company's officials when developing or creating business contracts.
Logistics, Distribution or Supply Chain	Hitt and Ireland (1985)	Strategic Management Journal	This functional area is responsible for the operations of the firm, in terms of the processes involved with the various stages of the supply chain. This stretches to the inputs received from suppliers and how they can be converted into outputs efficiently and effectively.
Marketing	Verhoef and Leeflang (2009)	Journal of Marketing	This business function is active in the firm's communication strategies in terms of delivering value to customers through promotion (e.g., advertising campaigns), conducting market research, and liaising with other departments within the organisation. This relates to

			implementing the firm's marketing mix and market-oriented activities.
Merchandising	Yu, Ramanathan and Nath (2014)	Industrial Marketing Management	This department is prominent in the retailing sector (and some other industries) as an activity in which firm makes products and services on clear display for customers, as well as rotating stock (such as a first-in, first-out system) and accounting for lost stock and wastage.
Operations	Hitt and Ireland (1985)	Strategic Management Journal	This division of the firm is like the Logistics, Distribution or Supply Chain function, as it deals with the conversion of inputs into outputs in which organisations deal with multiple stakeholders in the supply chain (e.g., customers and suppliers). In this department, there is typically a focus on efficiency.
Procurement or Purchasing	Homburg, Workman Jr. and Jensen (2002)	Journal of Marketing	This function deals with the buying and acquisition of goods and/or services for the firm to sell on. This applies to the process of obtaining invitations and bids to develop contracts and agreements in the acquisition of such goods/services.
Production or Manufacturing	Hitt and Ireland (1985)	Strategic Management Journal	This department is responsible for the manufacturing of the organisation's products. This division is likely to be focused on developing efficient and effective manufacturing processes.
Public Relations	Hitt and Ireland (1985)	Strategic Management Journal	This department is focused on creating and maintaining networks with the members of the public that the firm has dealings with. Depending on the firm's size (e.g., annual sales), this could involve press meetings in positive and negative capacities.

Quality	Day (1994)	Journal of Marketing	This functional area focuses on the total quality management of the business such as ensuring that all outputs and every stage of the supply chain are up to the required standard. This also involves any improvements that can be made.
Relationships	Morgan and Hunt (1994)	Journal of Marketing	This specialised business function is focused on creating and maintaining networks with the company's stakeholders such as customers, suppliers and competitors. This department is likely to integrate within other areas of the business such as the Marketing Department.
R&D	Ruekert and Walker Jr. (1987)	Journal of Marketing	This division is responsible for researching new ways to improve the products of the organisation and is actively involved in developing and implementing the technologies for new product development and general innovation processes.
Sales	Homburg, Workman Jr. and Krohmer (1999)	Journal of Marketing	While in many organisations, this functional area is combined with the Marketing Department, this division is responsible for selling new and existing products and services, as well as providing complementary support services to customers.
Service	Domegan (1996)	European Journal of Marketing	This department is responsible for developing services, in terms of the experience an organisation can provide to its customers, and how businesses can reduce the costs of implementing their services and service-recovery strategies.
<p><b>*The summary of each of these functions is intended provide an overview of their key responsibilities. Some of these departments overlap (e.g., the "Customer Service" and "Service" Departments).</b></p>			

## Appendix 2. Background and eligibility of the pre-testing candidates

Individual*	Title	Method	Group	Summary and eligibility
Martina McGrath	Director of Project Management at Amgen Inc. (Boston, Massachusetts)	Protocol	3	Martina McGrath was born in the United Kingdom and has over a 10 years of senior management experience in large/multi-divisional companies in the United States and United Kingdom. Her functional role has a large overlap with the questions within this PhD thesis' survey (e.g., functional resource investments, customer value creation and sales performance). In her role, she has been sent numerous questionnaires by academic and practitioner-oriented bodies which yielded a useful commentary on the length and design of the survey.
David Gordon	Associate Professor of Marketing at De Montfort University (Leicester, United Kingdom)	Protocol	3	Before his role in full-time academia, David Gordon spent over 25 years in corporate strategy roles in IBM and other large high-tech corporations. His role included tasks, such as spending marketing budgets in the United Kingdom and across key European markets as well as designing and implementing domestic and international marketing strategies. He dealt with many of the issues which the PhD's questionnaire examines, making him an ideal person to comment on the survey. He has also lived and worked in the United States (Atlanta, Georgia) for two years – this has given him some cultural knowledge of the wording of the survey.
Y. Susan Wei	Associate Professor of Marketing at Texas A&M University (College Station, Texas)	Protocol	1	Y. Susan Wei's research interests are in strategic marketing and she has published research on market orientation, business performance and organisational cultures. Her research has appeared in journals, such as the: <i>Journal of Product Innovation Management</i> , <i>Journal of the Academy of Marketing Science</i> , <i>Industrial Marketing Management</i> , and <i>International Journal of Research in Marketing</i> . Her PhD thesis was supervised by Neil A. Morgan (PetSmart Distinguished Full Professor of Marketing Chair at Indiana University) whose research has been referenced heavily within this investigation. She has also lived and worked in the United States, providing her with insights into American respondents' ability to complete this PhD study's survey.

Todd Morgan	Assistant Professor of Management at Western Michigan University (Kalamazoo, Michigan)	De-briefing	1	Todd Morgan is a recent American PhD graduate (Kent State University, Ohio) using SEM to examine the interplay between market orientation and entrepreneurial orientation and its effect on organisational performance. He has also used Qualtrics' data collection services with American data - providing valuable insights into the questionnaire design and implementation processes. A paper from his PhD research was published in the <i>International Small Business Journal</i> examining the dark-side of the market orientation – entrepreneurial orientation interplay and how such constructs have a negative effect on new product performance. This paper has been referenced within this doctoral thesis.
Laurel F. Ofstein	Assistant Professor of Management at Western Michigan University (Kalamazoo, Michigan)	Protocol	2	Laurel F. Ofstein is an American national with numerous years in the private sector, working for large management consulting firms. She has held senior management positions, dealing with many of the issues, for which this study's questionnaire is responsible. Over the last 10 years, she has transitioned into academia in the United States. She has recently complemented her intensive practical experience in American organisations with a publication in the <i>International Small Business Journal</i> (among other outlets) and being a regular attendee at the <i>Academy of Management Conference</i> .
Jamie Ferrill	PhD Candidate at Loughborough University (Loughborough, United Kingdom)	De-briefing	4	Jamie Ferrill has almost 10 years' worth of practical experience in large Canadian public-sector organisations surrounding the Border Services Agency. Her most recent position included managing a large team of Border Service Agency officers. Based on the border between Alberta (Canada) and Montana (United States) and completing her Master's degree at the University of Connecticut, she has ample experience with North American culture.
Ann Philippon	Project Manager at Amgen (Providence, Rhode Island)	De-briefing	3	Ann Philippon holds a senior management position in a large pharmaceutical corporation in the United States in addition to being an American national. Before her current position, she has held a variety of management roles in similar large firms. Her current responsibilities are in line with the themes of this PhD study in terms of being aware

				of functional resource investments, as well as having knowledge about customer satisfaction, social capital/networks and sales performance. She was likely to be an example of the ideal person to complete this survey.
Dayle Childs	PhD Candidate at Loughborough University (Loughborough, University)	De-briefing	4	Dayle Childs' PhD thesis is in sales marketing and management with a focus on employing a primarily quantitative methodology to assess various psychological constructs on sales performance. This has a strong overlap with some of the themes of this doctoral thesis (i.e., managerial cognition and a CVODL having significant psychological themes in their conceptualisations and operationalisations). He was selected for the pre-testing of this study's survey due to using his current quantitative research experience in this thesis.
Mark S. Freel	RBC Financial Group Full Professor in the Commercialization of Innovation at the University of Ottawa (Ottawa, Ontario)	Protocol	2	Mark S. Freel's research interests are in the areas of entrepreneurship and innovation with a strong quantitative theme – using a mixture of methodologies such as questionnaire-based research. He has appeared in highly-ranked publications, such as the: <i>International Small Business Journal</i> , <i>Technovation</i> , <i>Small Business Economics</i> , and <i>Entrepreneurship and Regional Development</i> . He is also an Associate Editor for the <i>Journal of Small Business Management</i> , reviewing papers of similar strategy and entrepreneurship-based theories to this PhD thesis making him a suitable academic to comment on this investigation's survey. He also has a Full Professorship at Lancaster University, United Kingdom.
Suzi Muchmore	PhD Candidate at Loughborough University (Loughborough, United Kingdom)	De-briefing	4	Suzi Muchmore's PhD thesis explores issues such as organisational learning, open innovation and knowledge management. Some of these areas overlap with the themes of this doctoral study (e.g., the learning aspects associated with mind-sets and dominant logics). She was selected mainly due to her cross-cultural experience in the United Kingdom and Australia – where she has held years of senior leadership and management experience.
Martine Spence	Full Professor of Marketing and	Protocol	2	Martine Spence's research interests are at the marketing/entrepreneurship interface. Her work has examined topics



	Entrepreneurship at the University of Ottawa (Ottawa, Ontario)			such as internationalisation theory, marketing planning and decision-making using a mixture of qualitative and quantitative methodologies. Her research has appeared in premier publications, such as the: <i>European Journal of Marketing</i> , <i>International Business Review</i> , <i>Journal of Business Ethics</i> , <i>International Marketing Review</i> , <i>Entrepreneurship Theory and Practice</i> , <i>Management International Review</i> , and <i>Small Business Economics</i> . Such experience and theoretical knowledge made her a useful academic to comment on the format and underpinning theories of the survey.
Fabian Eggers	Associate Professor of Marketing at Menlo College (Atherton, California)	De-briefing	1	Based near Silicon Valley (California), Fabian Eggers has worked intensively with large and small American firms using quantitative and qualitative methodologies. His entrepreneurial marketing background is particularly relevant to the theory used to shape this PhD investigation. His research has appeared in journals, such as the: <i>Journal of World Business</i> , <i>Academy of Management Learning &amp; Education</i> , <i>Service Industries Journal</i> , and <i>Industrial Marketing Management</i> . Such research experience in the United States made him a suitable person to use in the pre-testing process.
Sussie C. Morrish	Associate Professor of Marketing at the University of Canterbury (Christchurch, New Zealand)	De-briefing	2	Sussie C. Morrish's research is positioned at the marketing/entrepreneurship interface, examining the performance of companies employing entrepreneurial marketing strategies. Her work has drawn on similar themes to this doctoral investigation, such as: sales performance, customer value creation, business networks, and corporate-level strategies. Her choice of methodologies has been quantitative and qualitative with research being published in journals such as the: <i>Journal of International Marketing</i> , <i>Journal of Business &amp; Industrial Marketing</i> , and <i>Journal of Strategic Marketing</i> .
Gilles Reinhardt	Associate Professor of Operations Management at the University of	Protocol	2	Gilles Reinhardt's research expertise lies in operations management, logistics and management science using highly-quantitative methodologies. His research has appeared in top journals, such as the: <i>Journal of the Operational Research Society</i> , <i>Decision Sciences</i> , and <i>Omega</i> . His use of quantitative methods at such a high-level were

	Ottawa (Ottawa, Ontario)			valuable to the PhD study. Before entering academia, he worked as a survey methodologist for “Statistics Canada”, making him a credible and knowledgeable individual to pre-test this thesis’ questionnaire. He has also lived/worked in Chicago for 15 years where he worked with and consulted large American organisations. Hence, he has a large degree of familiarity with the American culture and quantitative research.
Alasdair Booth	PhD Candidate at Loughborough University (Loughborough, United Kingdom)	De-briefing	4	Alasdair Booth is a member of Loughborough University’s “Policing Research Group.” Despite his research area largely differing from this PhD thesis, he has over 10 years of practical and leadership experience in the Lincolnshire Police Service. He has dealt with completing questionnaires (albeit not in marketing) as part of his job. In addition, as someone who is currently reading a wide array of papers using survey methodologies, his insights into good/bad questionnaire designs (and what practitioners might respond well to) was valuable to this investigation.
Natasha Evers	Lecturer of Marketing at the National University of Ireland (Galway, Republic of Ireland)	Protocol	1	Natasha Evers published work is based at the international/entrepreneurship interface. Her research has been published in high-quality journals, such as the: <i>International Marketing Review</i> , <i>Journal of International Marketing</i> , and <i>Entrepreneurship &amp; Regional Development</i> . Despite her past methodologies being mostly qualitative, her insights allowed the pre-testing of this PhD study’s questionnaire to receive some variety (i.e., not just quantitative researchers).
Svante Andersson	Full Professor of Business Administration at Halmstad University (Halmstad, Sweden)	Protocol	1	Svante Andersson’s research interests lie in international marketing and entrepreneurship. His research has examined issues such as: small-firm internationalisation, international new ventures, networking strategies and export marketing. His research has appeared in top publications, such as the: <i>Journal of Business Venturing</i> , <i>Journal of International Marketing</i> , <i>European Journal of Marketing</i> , and <i>International Marketing Review</i> . He has also used statistical techniques on a survey of American firms with a variety of colleagues

				including Joseph F. Hair (Cleaverdon Chair of Business at the University of South Alabama).
Gary A. Knight	Helen Simpson Jackson Endowed Full Professor of International Management at Willamette University (Salem, Oregon)	De-briefing	1	Gary A. Knight researches international marketing theory including topics, such as: organisational capabilities, internationalisation strategies, globalisation, entrepreneurial orientation, and international new ventures. Some of these areas are linked to this doctoral study. His work has been published in the outlets, like the: <i>Journal of International Business Studies</i> , <i>Industrial Marketing Management</i> , <i>Journal of the Academy of Marketing Science</i> , <i>Journal of Business Venturing</i> , <i>Journal of International Marketing</i> , and <i>International Marketing Review</i> . His work is highly-quantitative, using similar data collection and analysis techniques to this PhD investigation. His theoretical and methodological knowledge made him a highly-commendable person to use in the pre-testing of this study's questionnaire in terms of knowledge of the subject area, comparable quantitative methods, as well as being an American national.
Don Carswell	International Business Development Executive at Zircar Ceramics (Manhattan, New York)	De-briefing	3	Don Carswell has over 25 years of managerial experience in large organisations in the United States. His roles have included managing international marketing strategies, developing export markets and working with overseas subsidiaries in the growth of the various corporations he has worked for over this period. He has completed numerous academic and practical surveys as part of his job, providing some useful experience for this investigation. He is likely to be an example of the ideal person to complete this survey. As well as being an American citizen, he has visited (and conducted business) in all fifty of the United States – providing him with vast knowledge of the different sub-cultures of American culture.
Rudolf R. Sinkovics	Full Professor of International Business at the University of Manchester	Protocol	2	Rudolf R. Sinkovics is a highly-renowned researcher in the international business and international marketing literature. His work has been referenced in this PhD thesis regarding the role of social capital and dynamic capabilities theory. His research has employed qualitative and quantitative methodologies including SEM. Such

	(Manchester, United Kingdom)			papers have appeared in journals, such as the: <i>Journal of International Business Studies</i> , <i>International Marketing Review</i> , <i>International Business Review</i> , <i>Journal of Advertising</i> , and <i>Long Range Planning</i> . Such theoretical and methodological insights were valuable to this doctoral study.
João S. Oliveira	Lecturer of Marketing at Loughborough University (Loughborough, United Kingdom)	De-briefing	2	João S. Oliveira is a recent PhD graduate of Loughborough University in broader strategic marketing, employing a similar methodology to this PhD investigation (SEM analysis). He has expertise in survey-based methodologies, allowing him to provide a useful perspective of critiquing this study's questionnaire. His own research has been published in the: <i>International Marketing Review</i> , <i>Journal of Business Research</i> , and <i>International Business Review</i> . His expertise has been drawn upon regarding his vast knowledge of quantitative data collection and analysis techniques (e.g., electronic surveys and SEM).
Adamantios Diamantopoulos	Full Professor of International Marketing at the University of Vienna (Vienna, Austria)	De-briefing	1	Adamantios Diamantopoulos is one of the top international marketing scholars in the world, with a focus on quantitative methods (e.g., SEM) in his work. He has also been heavily referenced in this PhD thesis in terms of his work on: EMO, domestic market orientation, and business performance. His research has appeared in publications, such as the: <i>Journal of Marketing Research</i> , <i>Journal of the Academy of Marketing Science</i> , <i>Journal of International Business Studies</i> , <i>Journal of International Marketing</i> , <i>European Journal of Marketing</i> , <i>British Journal of Management</i> , and <i>International Marketing Review</i> . This experience made him a commendable person for the pre-testing stage.
*The pre-testing interviews were listed based on the order in which the interviews took place. The miscellaneous assistance of: Professors James P. Johnson (Rollins College in Orlando, Florida), Nicole E. Coviello (Wilfred Laurier University in Waterloo, Ontario), and Dr Stephanie Fernhaber (Butler University in Indianapolis, Indiana) was not presented in this table due to not being formal pre-testing interviews, but was nevertheless appreciated.				

## Appendix 3. Core survey as it appeared to respondents (using print screens)

## CVO managerial human capital (MHC)



 **Loughborough University**

**CUSTOMER VALUE** represents the benefits a customer experiences from buying a good or service minus the costs they incur to receive such benefits.


Over the last 3 years, senior managers' expertise in proving customer value was...

... Average	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	... Downright excellent
... Moderate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	... Beyond outstanding
... Just satisfactory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	... Truly exceptional
... Mediocre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	... Off the scale

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0%  100%

## CVO managerial cognition (MCG)

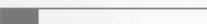


## Loughborough University


Over the last 3 years, managers in our organization believed that...

	To a small extent	To a moderate extent	To a considerable extent	To an extreme extent
... businesses succeed because they have created customer value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... business performance is primarily driven by creating customer value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... creating customer value is an important driver of success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... customer satisfaction is a core driver of business performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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**CVO managerial social capital (facet 1) (SC\_F1)**



**Loughborough University**

**NETWORK MEMBERS** are the stakeholders an organization has relationships with; for example, industry-specific groups, suppliers, shareholders and other contacts.

**Over the last 3 years, our organization has had...**

	Slightly agree	Agree	Strongly agree	Very strongly agree	Agree to an extreme extent
... the ability to access customer value-creating resources from our network members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
... network members with the resources that allowed us to create customer value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
... network members that helped us create customer value via the resources they provided	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
... network members that were able to help us gain resources needed to create customer value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

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**CVO managerial social capital (facet 2) (SC\_F2)**



Loughborough University


**Over the last 3 years, in our organization...**

... we have rarely used the resources from our network members in order to create customer value	<input type="text" value="Disagree"/>
... we have barely used our network members' resources and skills to help us create our customer value provision	<input type="text" value="Disagree"/>
... we have hardly employed the resources gained from our network members when creating customer value	<input type="text" value="Disagree"/>

<<0%  100%>>



**CVO managerial social capital (facet 3) (SC\_F3)**

**Loughborough University**


**Over the last 3 years, to what extent have your organization's network members focused on creating customer value?**

An average extent	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	To excess
A simply moderate degree	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	To an extreme degree
Just a satisfactory level	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	The exclusion of all else
A mediocre extent	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	An off the scale extent

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**CVO managerial social capital (facet 4) (SC\_F4)**



**Loughborough University**


**Taking the last 3 years into account, to what extent do you agree with the following statements?**

	Slightly agree	Agree	Strongly agree	Very strongly agree	Agree to an extreme extent
Our approach to business mirrored that of our network members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
We learned many lessons from our network members' approach to business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Our way of doing business reflected that of our network members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Network members' approach to business shaped our approach to business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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CVODL (CVODL)



## Loughborough University


Over the last 3 years, if you had asked senior managers their opinion, they would have said that...

	Slightly agree	Agree	Strongly agree	Very strongly agree	Agree to an extreme extent
... all of our business functions should revolve around creating customer value	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... underpinning every strategy driving us forward should be the desire to create customer value	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... a core purpose of our business activities should be to create customer value	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... fulfilling every customer's wants and needs should be an important activity in our organization	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... our organizational culture should strive to create value for our customers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... adding value to our customers should be an important activity in our organization	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

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**CVO functional resource investments (part 1: selecting within departments currently existing within the respondents' companies) (FRI)**

**Loughborough University**


**Please indicate (by selecting the boxes) the business functions that currently exist within your organization:**

<input checked="" type="checkbox"/> Administration	<input checked="" type="checkbox"/> Marketing
<input type="checkbox"/> Business Development	<input type="checkbox"/> Merchandising
<input type="checkbox"/> After Sales	<input type="checkbox"/> Operations
<input type="checkbox"/> Customer Service	<input type="checkbox"/> Procurement/Purchasing
<input type="checkbox"/> Engineering	<input checked="" type="checkbox"/> Production/Manufacturing
<input checked="" type="checkbox"/> Exporting/International	<input type="checkbox"/> Public Relations
<input checked="" type="checkbox"/> Finance	<input type="checkbox"/> Quality
<input type="checkbox"/> Government Relations	<input type="checkbox"/> Relationships
<input checked="" type="checkbox"/> Human Resources/Personnel	<input type="checkbox"/> Research and Development
<input checked="" type="checkbox"/> IT	<input checked="" type="checkbox"/> Sales
<input type="checkbox"/> Key Accounts	<input type="checkbox"/> Service
<input type="checkbox"/> Legal	<input type="checkbox"/> Other (please specify) <input type="text"/>
<input type="checkbox"/> Logistics/Distribution/Supply Chain	

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**CVO functional resource investments (part 2: deciding the extent to which the selected departments create customer value) (FRI)**

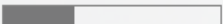


**Loughborough University**


**To what extent does each business function provide customer value?**

	Not at all	To a very slight extent	To a small extent	To a moderate extent	To a considerable extent	To a great extent	To an extreme extent
Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exporting/International	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finance	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human Resources/Personnel	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Production/Manufacturing	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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0%  100%

**CVO functional resource investments (part 3: deciding the extent to which resources are invested towards the selected departments) (FRI)**




**Loughborough University**


**To what extent are your organization's resources (e.g. budgets, people, equipment, tangibles) invested into each business function?**

	Not at all	To a very slight extent	To a small extent	To a moderate extent	To a considerable extent	To a great extent	To an extreme extent
Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exporting/International	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Human Resources/Personnel	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Production/Manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

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0%  100%

Sales performance (SALES)




**Loughborough University**


**Over the past year, how well has your organization performed in its markets relative to key competitors?**

	Worse than rivals	The same as rivals	Slightly better than rivals	Better than rivals	Much better than rivals	Completely outstripped rivals
Market share growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Sales growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales volume growth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

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0%  100%

**Firm size (part 1: deciding whether respondents' companies had an annual revenue of more/less than \$US 1 billion) (SIZE)**



**Is your organization's annual revenue more or less than \$US 1 billion?**

More than \$US 1 billion

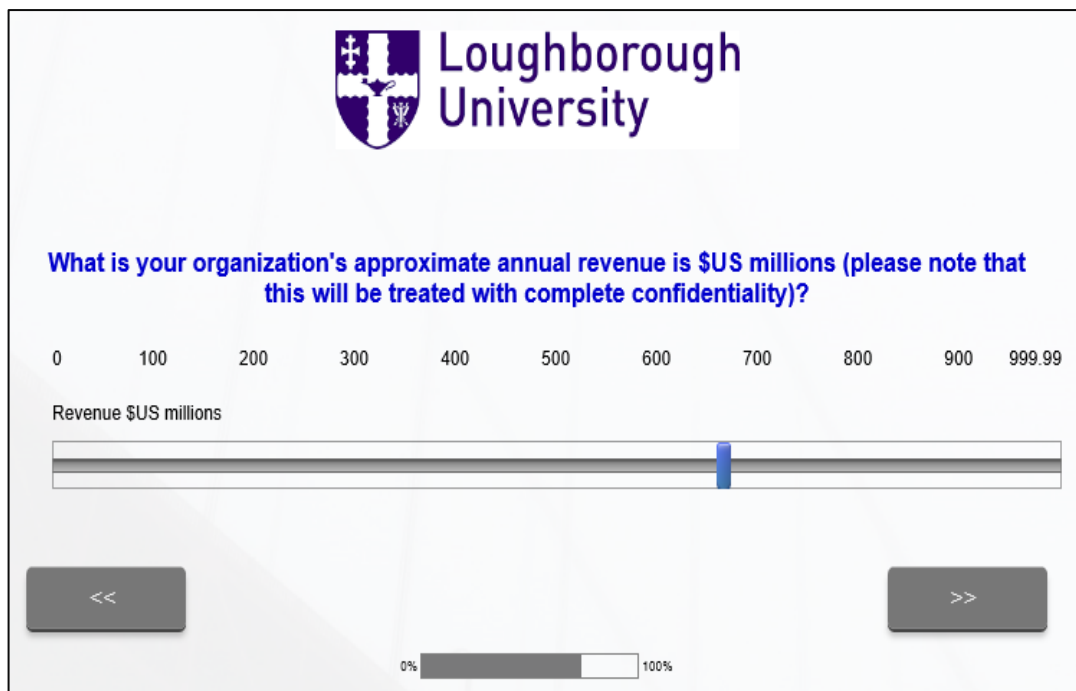
Less than \$US 1 billion

<< >>

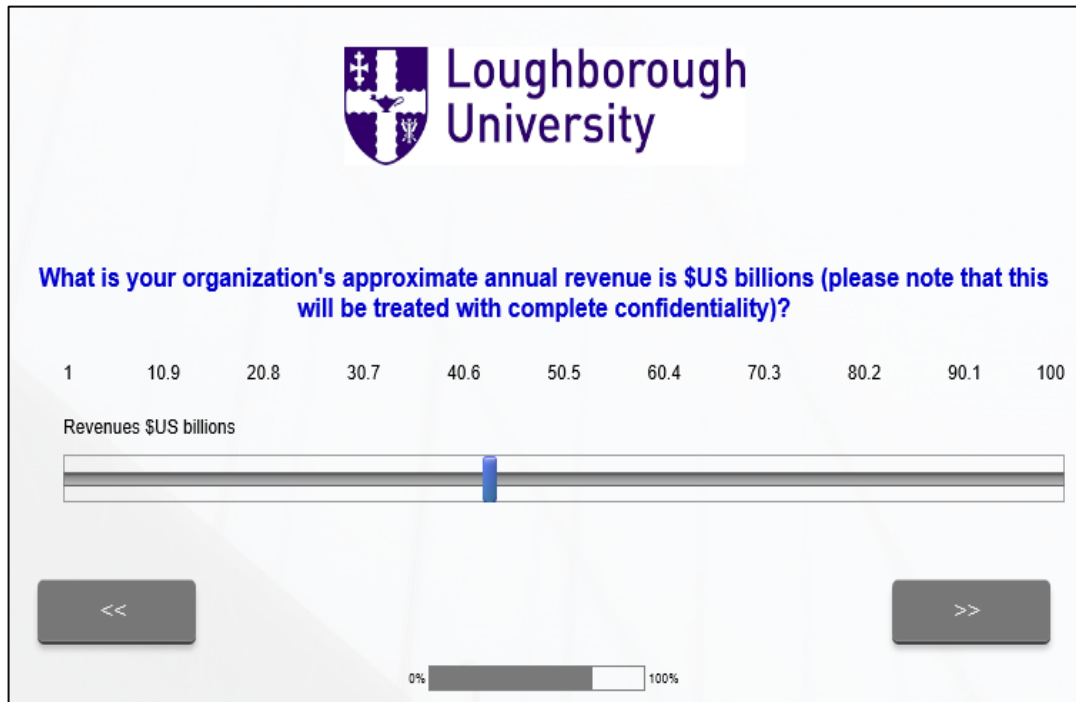
0% 100%



**Firm size (part 2: annual revenues for companies with less than \$US 1 billion)**  
**(SIZE)**



**Firm size (part 3: annual revenues for companies with more than \$US 1 billion)**  
**(SIZE)**



**Industry type (INDS)**

**Loughborough University**

**What industry does your organization compete in (please choose one)?**


- Agriculture, Forestry, Fishing and Hunting
- Mining, Quarrying, and Oil and Gas Extraction
- Utilities
- Construction
- Manufacturing
- Wholesale Trade
- Retail Trade
- Transportation and Warehousing
- Information
- Finance and Insurance
- Real Estate and Rental and Leasing
- Professional, Scientific, and Technical Services
- Management of Companies and Enterprises
- Administrative and Support and Waste Management and Remediation Services
- Educational Services
- Health Care and Social Assistance
- Arts, Entertainment, and Recreation
- Accommodation and Food Services
- Other Services (except Public Administration)
- Public Administration
- Other (please specify)

<<

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0%100%

**Intelligence responsiveness (RESP)**




**Loughborough University**


**Taking the last 3 years into account, to what extent do you agree with the following statements?**

	Slightly agree	Agree	Strongly agree	Very strongly agree	Agree to an extreme extent
... we were quick to respond to significant changes in our competitors' price structures	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... we responded to competitive actions that threatened us	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... if a major competitor had launched an intensive campaign targeted at our customers, we would have responded immediately	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... when we found out that customers were unhappy with the quality of our product or service, we took corrective action immediately	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... we were quick to respond to important changes in our business environment (e.g. regulatory, technology, economic)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

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0%  100%

**Innovativeness (INNV)**



## Loughborough University


Over the last 3 years, in our industry...

	To a small extent	To a moderate extent	To a considerable extent	To an extreme extent
... we were known as an innovator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... we promoted new, innovative products/services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... we were leaders in developing new products/services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... we built a reputation for being the best for developing new methods and technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... we constantly experimented with new products/services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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0%100%

**Risk-taking (RISK)**



Loughborough University


Over the last 3 years, in our organization...

... we, in general, avoided investing in high-risk projects	Agree
... we showed a low level of tolerance for high-risk projects	Agree
... our strategy was characterized by a strong tendency to not take risks	Agree

<< >>

0% 100%

**Proactiveness (PRCT)**



**Loughborough University**


**Over the last 3 years, in our organization...**

	To a small extent	To a moderate extent	To a considerable extent	To a great extent	To an extreme extent	Off the scale
... we sought to exploit anticipated changes in our target market ahead of our rivals	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... we seized initiatives whenever possible in our target market operations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... we acted opportunistically to shape the business environment in which we operated	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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0%  100%


**Market dynamism (MD)**

**Loughborough University**

**Over the last 3 years in our organization, we have found that...**


... our customers' product preferences changed quite a bit over time	To a great extent ▼
... new customers tended to have product-related needs that were different from those of our existing customers	To a great extent ▼
... our customers tended to look for new products all the time	To an extreme extent ▼
... our customers tended to have stable product preferences	To an extreme extent ▼
... we witnessed changes in the type of products/services demanded by our customers	To a great extent ▼

<< >>

0%  100%



Competitive intensity (COMP)




**Loughborough University**


**Over the last 3 years, in our organization we found that...**

	Neither agree nor disagree	Agree	Strongly agree	Very strongly agree
... competition in our industry has been cut-throat	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... there have been many "promotion wars" in our industry	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... anything that one competitor could offer, others could match readily	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... price competition was a hallmark in our industry	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... we heard of a new competitive move almost every day	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... our competitors were relatively strong	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

<<>>

0%  100%

## Technological turbulence (TT)

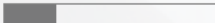


## Loughborough University


Taking the last 3 years into account, to what extent do you agree with the following statements?

	Slightly agree	Agree	Strongly agree	Very strongly agree	Agree to extreme extent
The technology changed rapidly	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technological changes provided big opportunities	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was very difficult to forecast where the technology would be in the next 2 to 3 years	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large number of new product ideas was made possible through technological breakthroughs	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technological developments in our industry were relatively major	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<<
>>

0%  100%

**Senior managers' functional home (part 1: selecting which functional background respondents originate from) (HOME)**

 **Loughborough University**


**Prior to your current position in this company, in which functional area did you spend the majority of your career (please choose one)?**

- Engineering
- Finance
- Human Resources/Personnel
- IT
- Marketing
- Sales
- Other

<< >>

0% 100%

Senior managers' functional home (part 2: selecting which functional background respondents originate from – this question would only appear if the respondents chose the “other” option in part 1 of the operationalisation) (HOME)

 Loughborough University

**Prior to your current position in this company, in which functional area did you spend the majority of your career (please choose one)?**

Administration

After Sales

Business Development

Customer Service

Exporting/International

Government Relations

Key Accounts

Legal

Logistics/Distribution/Supply Chain

Merchandising

Operations

Procurement/Purchasing

Production/Manufacturing

Public Relations

Quality

Relationships

Research and Development

Service

Other (please specify)

<< >>

0%  100%

**Full-time employees (part 1: deciding whether respondents' companies had more/less than 2,000 full-time employees) (WORK)**



The screenshot shows a survey question from Loughborough University. At the top center is the university's logo, which consists of a shield with a cross and four quadrants, followed by the text "Loughborough University". Below the logo, the question is displayed in blue text: "Does your organization employ more than 2,000 full-time US people?". Underneath the question are two radio button options: "Yes" (which is selected) and "No". At the bottom of the question area, there are two grey buttons with double arrows: "<<" on the left and ">>" on the right. At the very bottom center, there is a progress bar showing "0%" on the left and "100%" on the right, with a small grey bar indicating the current progress level.

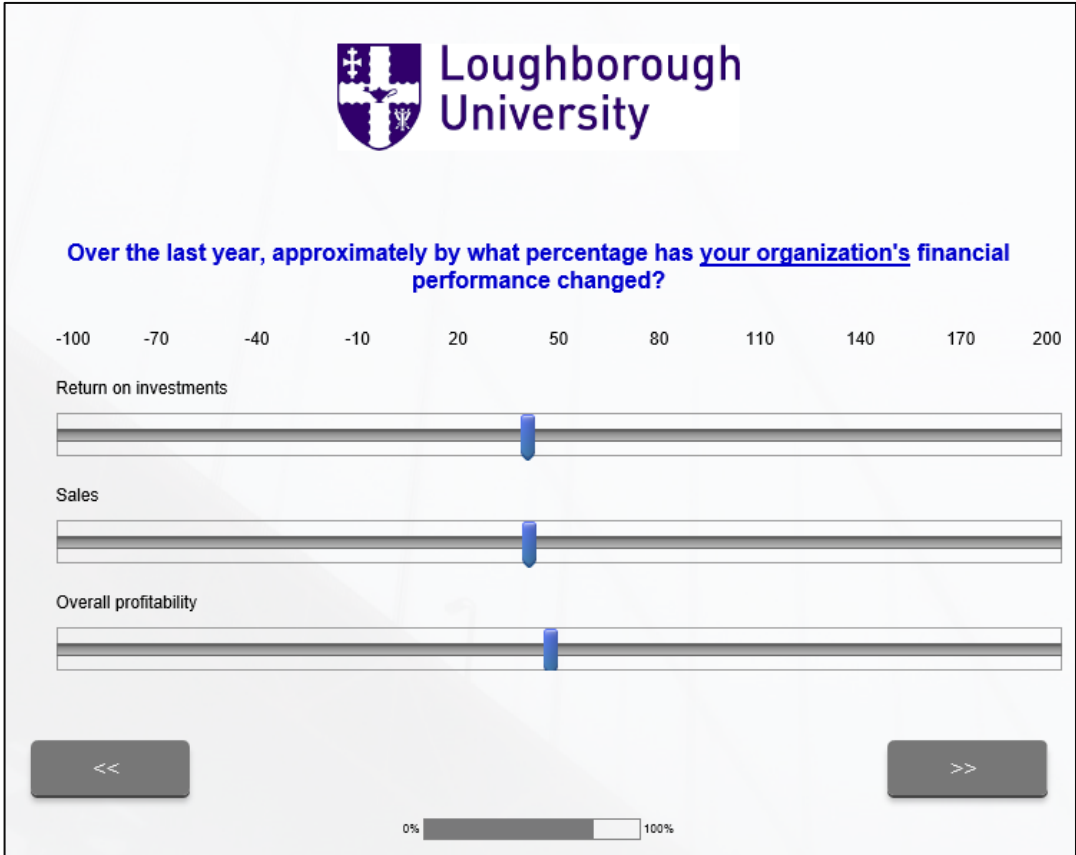
**Full-time employees (part 2: for firms with less than 2,000 full-time employees)  
(WORK)**



**Full-time employees (part 3: for firms with more than 2,000 full-time employees) (WORK)**

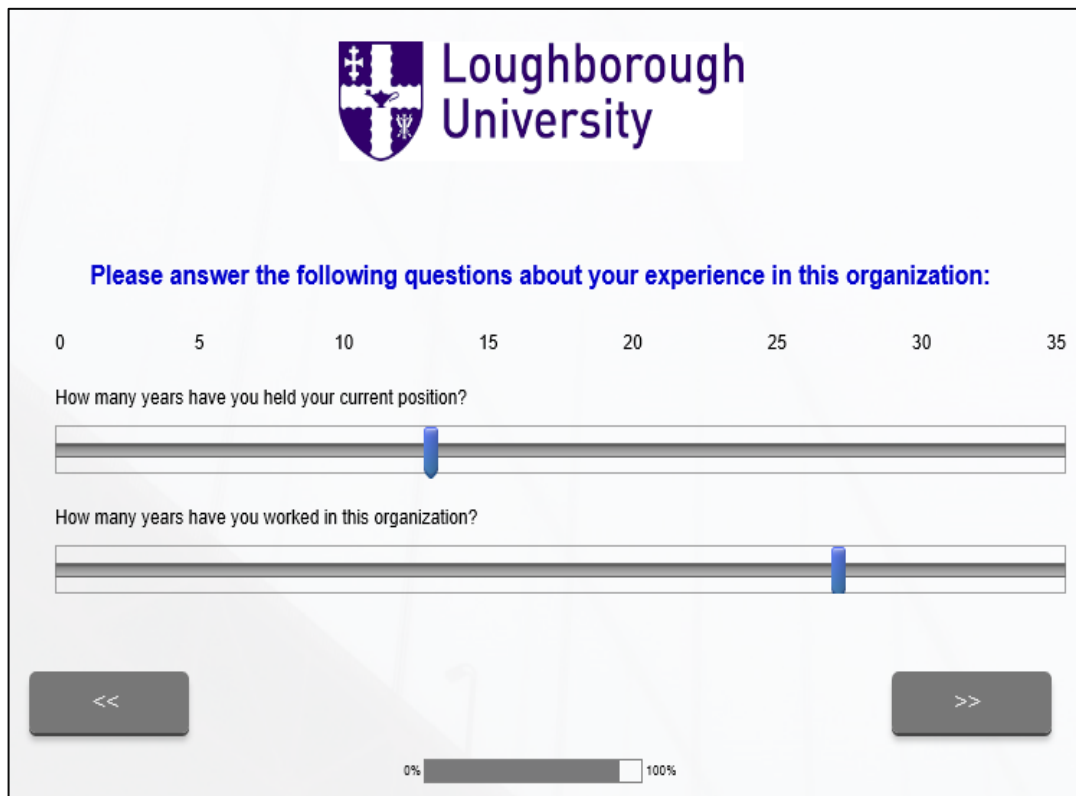


**Organisational performance (PERF)**

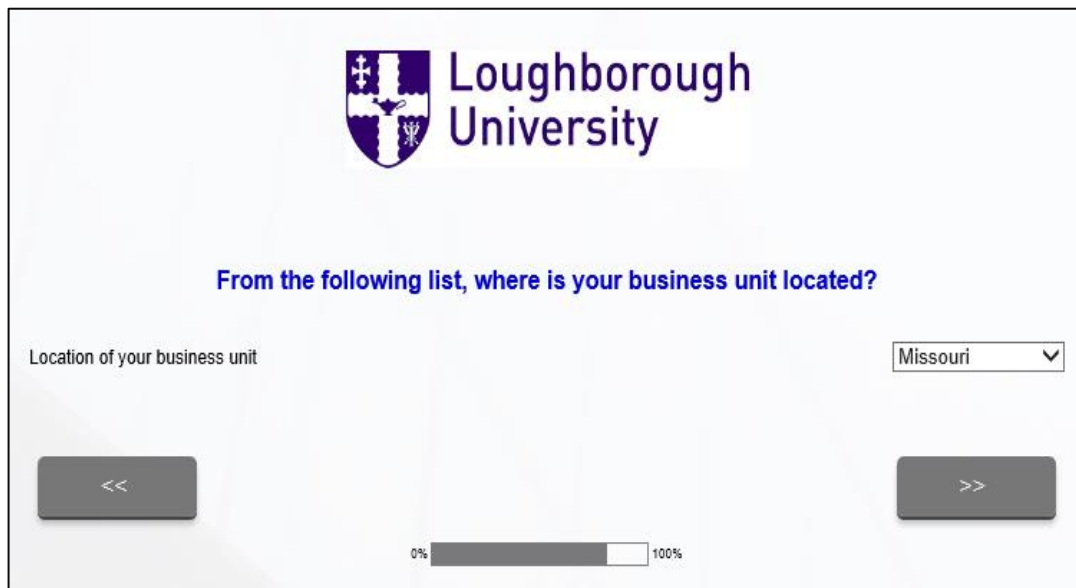




**Respondents' functional experience (EXPNC)**




**Business unit location (USA)**



The screenshot shows a web interface for Loughborough University. At the top center is the university's crest and the text "Loughborough University". Below this is the question "From the following list, where is your business unit located?". Underneath the question is a label "Location of your business unit" and a dropdown menu currently displaying "Missouri". At the bottom of the form are two grey buttons with double arrow symbols: "<<" on the left and ">>" on the right. A progress bar at the bottom center shows a white segment from 0% to approximately 25%, with "0%" and "100%" labels at the ends.

**Informant quality (PQUAL)**




**Loughborough University**

**To what extent do the statements below describe your agreement/disagreement for completing this survey?**

	Very strongly disagree	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Very strongly agree
I am completely confident about my answers to the questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
I am confident that my answers reflect our company's situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
This survey deals with issues I am very knowledgeable about	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
My job qualifies me as an appropriate person to complete this survey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
I am competent to answer the above questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

<<
>>

0%  100%

**Functional role (ROLE)**


**How would you describe your functional role (please choose one option)?**

- Chairman of the Board of Directors
- Vice Chairman of the Board of Directors
- CEO
- CFO
- COO
- President
- Company Secretary
- Treasurer
- Executive Vice President
- Senior Vice President
- Vice President
- Director/Managing Director
- Other (please specify)

<< >>

0%  100%

**Export ratio (INTL)**



**What percentage of your firm's sales are from exports?**

0 10 20 30 40 50 60 70 80 90 100

Exports (%)

<< >>

0% 100%

The image shows a survey question interface for Loughborough University. At the top is the university's logo. Below it is the question: "What percentage of your firm's sales are from exports?". A horizontal scale from 0 to 100 is displayed with tick marks every 10 units. A blue vertical bar is positioned at the 35 mark on the scale. Below the scale is a label "Exports (%)". At the bottom of the interface are two grey buttons with double arrow symbols (<< and >>) and a small progress indicator showing a dark grey bar from 0% to approximately 35%.

#### Appendix 4. Inter-item correlations of the multi-item scales

CVO managerial human capital (MHC)				
	MHC_1	MHC_2	MHC_3	MHC_4
MHC_1	1.000			
MHC_2	.555	1.000		
MHC_3	.482	.523	1.000	
MHC_4	.457	.430	.527	1.000

CVO managerial cognition (MCG)				
	MCG_1	MCG_2	MCG_3	MCG_4
MCG_1	1.000			
MCG_2	.820	1.000		
MCG_3	.738	.814	1.000	
MCG_4	.628	.695	.794	1.000

CVO managerial social capital (facet 1) (SC_F1)				
	SC_F1_1	SC_F1_2	SC_F1_3	SC_F1_4
SC_F1_1	1.000			
SC_F1_2	.847	1.000		
SC_F1_3	.778	.876	1.000	
SC_F1_4	.745	.803	.846	1.000

CVO managerial social capital (facet 2) (SC_F2)			
	SC_F2_1	SC_F2_2	SC_F2_3
SC_F2_1	1.000		
SC_F2_2	.793	1.000	
SC_F2_3	.681	.738	1.000

CVO managerial social capital (facet 3) (SC_F3)				
	SC_F3_1	SC_F3_2	SC_F3_3	SC_F3_4
SC_F3_1	1.000			
SC_F3_2	.574	1.000		
SC_F3_3	.517	.585	1.000	
SC_F3_4	.517	.454	.540	1.000

CVO managerial social capital (facet 4) (FC_F4)				
	SC_F4_1	SC_F4_2	SC_F4_3	SC_F4_4
SC_F4_1	1.000			
SC_F4_2	.863	1.000		
SC_F4_3	.787	.870	1.000	
SC_F4_4	.769	.814	.860	1.000

CVODL (CVODL)						
	CVODL_1	CVODL_2	CVODL_3	CVODL_4	CVODL_5	CVODL_6
CVODL_1	1.000					
CVODL_2	.873	1.000				
CVODL_3	.822	.885	1.000			
CVODL_4	.763	.826	.854	1.000		
CVODL_5	.765	.796	.818	.841	1.000	
CVODL_6	.731	.773	.765	.815	.829	1.000

<b>Sales performance (SALES)</b>			
	SALES_1	SALES_2	SALES_3
SALES_1	1.00		
SALES_2	.888	1.00	
SALES_3	.819	.885	1.00

<b>Intelligence responsiveness (RESP)</b>					
	RESP_1	RESP_2	RESP_3	RESP_4	RESP_5
RESP_1	1.000				
RESP_2	.862	1.000			
RESP_3	.799	.832	1.000		
RESP_4	.765	.798	.832	1.000	
RESP_5	.733	.715	.778	.847	1.000

<b>Innovativeness (INNV)</b>					
	INNV_1	INNV_2	INNV_3	INNV_4	INNV_5
INNV_1	1.000				
INNV_2	.784	1.000			
INNV_3	.649	.726	1.000		
INNV_4	.629	.663	.829	1.000	
INNV_5	.607	.643	.742	.767	1.000

<b>Risk-taking (RISK)</b>			
	RISK_1	RISK_2	RISK_3
RISK_1	1.000		
RISK_2	.588	1.000	
RISK_3	.564	.524	1.000

<b>Proactiveness (PRCT)</b>			
	PRCT_1	PRCT_2	PRCT_3
PRCT_1	1.000		
PRCT_2	.871	1.000	
PRCT_3	.821	.832	1.000

<b>Competitive intensity (COMP)</b>						
	COMP_1	COMP_2	COMP_3	COMP_4	COMP_5	COMP_6
COMP_1	1.000					
COMP_2	.773	1.000				
COMP_3	.674	.687	1.000			
COMP_4	.653	.726	.779	1.000		
COMP_5	.614	.653	.692	.751	1.000	
COMP_6	.622	.655	.683	.706	.776	1.000

<b>Market dynamism (MD)</b>					
	MD_1	MD_2	MD_3	MD_4	MD_5
MD_1	1.000				
MD_2	.600	1.000			
MD_3	.541	.514	1.000		
MD_4	.367	.313	.328	1.000	
MD_5	.448	.468	.527	.534	1.000

<b>Technological turbulence (TT)</b>					
	TT_1	TT_2	TT_3	TT_4	TT_5
TT_1	1.000				
TT_2	.862	1.000			
TT_3	.642	.664	1.000		
TT_4	.765	.827	.726	1.000	
TT_5	.705	.808	.637	.836	1.000

<b>Respondents' experience (EXPNC)</b>		
	EXPNC_1	EXPNC_2
EXPNC_1	1.000	
EXPNC_2	.828	1.000

<b>Informant quality (PQUAL)</b>					
	PQUAL_1	PQUAL_2	PQUAL_3	PQUAL_4	PQUAL_5
PQUAL_1	1.000				
PQUAL_2	.767	1.000			
PQUAL_3	.630	.705	1.000		
PQUAL_4	.651	.656	.763	1.000	
PQUAL_5	.668	.646	.660	.734	1.000

<b>Organisational performance (PERF)</b>			
	PERF_1	PERF_2	PERF_3
PERF_1	1.000		
PERF_2	.794	1.000	
PERF_3	.773	.793	1.000