Marketing and sales interface flexibility: a social exchange theory perspective

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MARKETING AND SALES INTERFACE FLEXIBILITY: A SOCIAL EXCHANGE THEORY PERSPECTIVE

By

MILENA MICEVSKI
(Doctoral Thesis)

Submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy of Loughborough University
(01/09/2014)

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ABSTRACT

To be successful in today's turbulent business environment it is very important for a company to exhibit flexibility in its processes, activities and interfaces. Such a flexible approach enables firms to adapt and improvise in order to achieve the best possible outcomes. In spite of there being ample research on how to achieve flexibility in a variety of business process and activities, there remains little understanding on how flexibility in managing the use of resources reveals itself in intra-organisational interfaces. This thesis sheds more light on this issue and investigates flexibility specifically in the relational context of cross-functional interfaces.

The importance of developing and investigating flexibility at the cross-functional relational interface is embedded in the recognition that the ability and willingness of departments to adapt and to accommodate deviations from original strategies through their cross-functional working is a critical factor for success. This research investigates flexibility at one such interface that is argued to be essential in achieving organisational success but that is characterised by conflict, lack of cooperation and distrust – the Marketing and Sales interface.

A literature review incorporating two broad literature streams; i.e., the Marketing and Sales cross-functional relationship literature and the literature on organisational flexibility helped develop a guiding definition of Marketing and Sales Interface Flexibility (MSIF). This definition was subsequently confirmed in the exploratory phase of the thesis, thereby providing a stronger conceptualisation of the MSIF phenomenon. The concept was found to be predicated on social exchange theory’s view on the M&S exchange relationship as a dynamic process in which both continuously adapt to each other’s needs through modification of their resources required to match those needs.

Consequently, a theoretical model was developed. This model argues for an inverted U-shaped relationship between MSIF and business performance. According to this model, beyond certain optimal point MSIF may reduce business performance. Based on the empirical testing of the model via a survey of 229 UK-based business organisations no support was found for the inverted U-shaped relationship between MSIF and customer performance. Results of the empirical testing indicated that MSIF
has an inverted U-shaped relationship with a firm’s market performance. These results imply that a firm’s market success is secured at lower levels of MSIF whereas further increases in investments in MSIF may, at some point, become detrimental to an organisation’s market performance (i.e., market share and sales volume). Therefore, the findings suggest that managers should manage MSIF wisely, hold themselves from over-investing in MSIF and seek to find the optimal level which will provide the best market performance. On the other hand, MSIF was found to have a linear, positive relationship to customer performance indicating that higher levels of MSIF will secure more a satisfied and loyal customer base.

The study also incorporates the contingency theory perspective and hypothesises the moderating effect of market dynamism on the MSIF - performance relationship. The results indicate that the value of MSIF for generating market performance decreases as technological turbulence in the market increases.

Based on the social exchange theory the relationship between four socially constructed antecedents and MSIF are proposed. The findings highlight the positive impact of, (1) trust in the Marketing and Sales relationship, and (2) rules and norms of social exchange between Marketing and Sales as reflected in compatible goals and joint rewards on MSIF. However, resource dependence asymmetry is found to be negatively related to MSIF suggesting that a misbalanced resource dependency between the two will hamper MSIF.

The theoretical and practical implications of the study findings are subsequently presented along with an acknowledgment of the study’s limitations and proposed future research to further explore this important area.

**Keywords:**
Flexibility, Marketing and Sales interface, intra-organizational, cross-functional, relational, Marketing and Sales resources
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Chapter 1: Introduction

This chapter seeks to introduce the reader to the study undertaken in this thesis. In this chapter aims, contributions and the content of the thesis are considered. Of particular interest is the current status of the literature on the Marketing and Sales relationship and the directions for the advancement of the existing body of research. In recent years a number of scholars and studies have investigated the relationship between Marketing and Sales (hereinafter M&S) departments, providing fruitful insights into the characteristics of the relationship and mechanisms for its improvement. Recently, the exploratory study of Malshe (2011) has pointed out the importance of flexibility to successfully satisfying changing customer needs. Building on the acknowledged importance of flexibility at the relational level of M&S, this study explores the nature of such flexibility and considers theoretical and methodological advantages of developing and applying the inter-functional relational flexibility concept. Grounded in the social exchange theory, this study sees M&S alignment as a dynamic process where success relies on the flexibility of both departments in responding to changing market conditions and changing customer requirements. Therefore, the key contribution of the thesis is the development and testing of the concept of flexibility at the relational level of M&S groups.

In this chapter, a preview of the research project is provided along with an overview of its importance to academics and to management practice. First, the relevance of the topic is discussed with particular emphasis on the importance of examining flexibility at the M&S relationship level. The section that follows highlights research gaps together with the research questions research acting as a means to accomplish the study’s general goal: examining the nature, determinants and potential consequences of Marketing and Sales Interface Flexibility (hereinafter MSIF). The chapter then briefly describes the potential contributions of this study, closing with the outline of the thesis structure.
1.1 Background

Ample research indicates a positive link between inter-functional collaboration and business performance (e.g., Griffin and Hauser 1996; Krohmer et al. 2002; Kotler et al. 2006). Much of this research involves exploration of the antecedents and consequences of Marketing’s relations with other functions, for example, R&D, Logistics, Engineering, Manufacturing, HR and Finance. More recently, academic attention has been drawn towards the importance of an effective interface between M&S departments (e.g., Dewsnap and Jobber 2000; Homburg et al. 2008). Increasingly often appearing as two organisationally separated departments (Workman et al. 1998), M&S develop and provide distinct specialisms (Workman et al. 1998; Dewsnap and Jobber 2000). Marketing specialises in longer-term strategic product issues, whereas the shorter-term customer perspective is typical for Sales departments. However, harmonising these two perspectives is essential in balancing the needs of increasingly demanding customers and complex markets with company’s longer-term objectives.

Importantly, empirical results indicate that a collaborative interface between M&S can deliver positive performance effects for a firm (Le Meunier-FitzHugh and Piercy 2007a; Homburg and Jensen 2007) whilst a lack of collaboration results in dissatisfied customers and lost business opportunities (Tjosvold 1988; Le Meunier-FitzHugh and Piercy 2007a). This is not a surprise when considering that M&S are highly dependent on each other’s resources for the achievement of their functional and/or organisational goals (Rouziès et al. 2005). Each function possesses resources required by the other, for example, Sales being on the frontline, plays a critical role in gathering and disseminating market information that Marketing requires for the development of an effective marketing mix (Cespedes 1993). In addition, Marketing is dependent on their sales colleagues for managing the company’s business - to - business relationships (Kotler et al. 2006). Marketing, on the other hand, provides Sales with the necessary tools - for example, products, promotions and pricing platforms - they require for reaching sales quotas and for meeting the needs of increasingly demanding customers (Matthyssens and Johnston 2006). Consequently,
such resource interdependence drives the need for integration between these two departments (Cespedes 1993).

Integration of the two complementary perspectives is critical for generating ideas with the highest market potential while at the same time avoiding misalignment of the company’s overall product portfolio and creation of individual customer solutions (Ernst et al. 2010). Therefore, by working together a firm ensures that customer needs go hand in hand with the actual market potential contributing to the firm’s overall strategic and marketing objectives.

In addition to the wide acceptance in the literature with regards to the importance that a more collaborative and effective interface between the two departments plays, recent exploratory research emphasises the need for their coordinative processes to incorporate the ability to respond to more dynamic business environments (Malshe 2011). Increasingly demanding customers (e.g., Rangarajan et al. 2004; Lane 2009), intense competition, shrinking product cycles, accelerated technological breakthroughs and progressively greater globalisation (e.g., Nadkarni and Herrmann 2010) all emphasise the need for firms to be flexible (Hart and Milstein 2003; Dreyer and Grønhaug 2012). Flexibility, considered an imperative for survival and success of firms faced with such changing business conditions (e.g., Sanchez 1995, 1997; Grewal and Tansuhaj 2001; Nadkarni and Narayanan 2007), enables firms to adapt and to improvise in order to achieve the best possible outcome (Moorman and Miner 1998).

Flexibility has been portrayed as an important factor in many areas of strategic and marketing research and a potentially important characteristic of M&S relationship. Recent exploratory research in the M&S identified their ability to modify plans and to adapt - in other words, to be flexible - as a determinant of a successful response to demanding and dynamic market environments (Malshe 2011). Although the marketing literature points to the importance of flexibility in M&S interfacing processes, the systematic analysis of what constitutes flexibility at the M&S interface is still lacking. Thus, identification of the context, substance and effects of such
flexibility in this relationship that needs to be managed effectively, but that often is not, represents a research agenda for this thesis.

This section that follows provides a detailed discussion on the research gaps that lead to the main focus of this research, i.e. flexibility in the M&S relationship.

1.2 Research Gaps

1.2.1 Flexibility at the M&S interface

Flexibility is a significant feature of any ongoing business relationship exposed to changing business conditions (e.g., Turnbull et al. 1996; Bello and Gilliland 1997; Brennan and Turnbull 1997; Brennan and Turnbull 1999). In an inter-organisational relationship context, flexible trading partners make necessary adaptations for responding to changes in market conditions and customer requirements (e.g., Duclos et al. 2003). Flexibility as a form of cooperative behaviour between two or more companies is a key factor in ensuring the continuance of such business relations (e.g., Turnbull et al. 1996; Bello and Gilliland 1997; Brennan and Turnbull 1997; Brennan and Turnbull 1999) and leads to higher performance outcomes than those generated by initial formal agreement (Doz and Hamel 1998). Fredericks (2005) asserts how in delivering more value to the final customer, organisations need to exhibit flexibility at the inter-firm level (inter-firm flexibility) and also, within functions in the firm (intra-firm flexibility). While the existing literature focuses on flexibility at the relational level between two or more companies, it can also be conceived that such flexibilities can occur at the functional unit level, e.g., M&S units (Johnson et al. 2003; Fredericks 2005). In this intra-organisational context, recent exploratory research in M&S points to the importance of flexibility between these two departments (e.g., Malshe and Sohi 2009; Malshe 2011). M&S flexibility is reflected in the ability of the two to accommodate deviations from their originally agreed strategy and respond to changing market needs (Malshe 2011). Despite the fact that flexibility at the interface of the two groups is posited to be important for success (Malshe and Sohi 2009; Malshe 2011), literature still lacks a systematic analysis of flexibility at this interface.
Little is known on the context, substance and effects of such flexibility at this important and yet often reported problematic interface; i.e. one that needs to be managed effectively, but that often is not (Dewsnap and Jobber 2000).

Investigations of flexibility at the M&S interface warrants study for several reasons. First, for M&S, flexibility may be of critical importance for conducting business with their customers and for satisfying their changing needs. These are two customer facing, revenue-generating functions, both responsible for customer satisfaction at some level (Cespedes 1994), whose collaborative, synchronised relationship is an essential step in responding to market and customer needs (Cespedes 1994; Dawes and Massey 2006; Guenzi and Troilo 2007). Although they offer distinct specialisms necessary to deal with different aspects of adding value to customers (Dewsnap and Jobber 2000), harmonising these two perspectives is critical for balancing the needs of increasingly demanding customers and changing market conditions with a company’s longer-term objectives (Dewsnap and Jobber 2000). Flexibility is expected to make both M&S more adaptable to changing business circumstances and, at the same time, as a form of collaborative behaviour, to enable them to consider and align both perspectives in an effective and satisfying way (McComb et al. 2007; Ernst et al. 2010). When investments in flexibility are high, responses are coordinated, and consensus between long-term and short-term perspectives is more easily reached as they jointly participate in creation of solutions and provision of required responses (Bello and Gilliland 1997).

Second, flexibility may have important implications for the continuance of their relationship. The lack of flexibility that partners exhibit within their business relationship will “sooner or later – threaten the continuity of any relationship” (Ivens 2005, p. 574). Rooted in the social exchange theory’s expectations of reciprocity (Blau 1964) - a theoretical underpinning of this study (please see Chapter 2 for more detailed discussion on SET) - adaptations made by Marketing will be reciprocated by adaptations made by Sales, and vice-versa (e.g., Gouldner 1960; Chen et al. 2009). Flexibility in the two will ensure that M&S remain unified in their efforts to respond to an opportunity or a threat and as flexibility brings about more flexibility, to ensure the commitment and the willingness of the two to exhibit flexibility in the future (Thibaut
and Kelley 1959; Homans 1961; Blau 1964; McComb et al. 2007). Such flexibility points to the relationship orientation of M&S, and the emphasis placed on their flexible behaviour where both adapt their own processes to accommodate each other (Ford 1980).

Third, higher flexibility levels between the two will ensure that their diverse competencies are made available to both departments and that they are combined. This creates space for creative and novel strategies to emerge with flexible adaptations accurately and appropriately targeted at customer needs (Diamantopoulos and Cadogan 1996; Håkansson and Ford 2002; Georgsdottir and Getz 2004; Rangarajan et al. 2004; Cadogan et al. 2012). Hence, M&S flexibility may support a firm’s competitiveness - i.e., when M&S exhibit flexibility to better serve a specific customer, this in turn may enable the two to become competitive in other customer relationships. However, this type of flexibility may also imply considerable investments for the firm as potential transaction costs that might occur in the form of time and effort spent negotiating over the adaptations. Therefore, the level of flexibility that M&S achieve may be resource constrained (Oktemgil and Greenley 1997). Building on the lack of research investigating potential trade-off between high levels of investments in flexibility in M&S and performance outcomes, this thesis takes into consideration the possible non-linear relationship between MSIF and firm performance outcomes.

1.2.1.1 Conceptualisation of Flexibility at M&S Interface

The strategy and marketing literatures widely accept the view that flexibility is a core competency of a firm and a means of enabling organisations to cope with changing and unpredictable environmental conditions (Genus 1995; Poppo and Zenger 2002; Dreyer and Grønhaug 2012). However, in the literature there is a lack of consensus in its definition, its level of analysis and its measurement. Research in organisational behaviour (e.g., Belk 1974), strategy (e.g., Bahrami 1996) and marketing (e.g., Weitz 1981; Bahrami 1996) argue that the context or the focus of the research largely determines the definition and approach to flexibility. This thesis focuses on the inter-
functional relationship context which has been ignored in the flexibility literature to date. As such, conceptualisation of flexibility in the unique setting of M&S inter-functional relationship represents the **first research gap**.

Research concentrating on flexibilities inherent in business relationships conceptualises flexible adjustments between firms as a bilateral relational construct; that is, a normative mechanism of coordination between inter-organisational actors (e.g., Young-Ybarra and Wiersema 1999). In this sense, the bilateral expectation of willingness of partner(s) to make adaptations as circumstances change is used to define flexibility in the inter-organisational relationship context.

In order to define flexibility within the context of the M&S cross-functional relationship, this study turns to social exchange theory (SET), which explicates movement of resources between M&S in imperfect market conditions via their social process (Emerson 1987). Organisations are internalised structures for resource allocation (Williamson 1975), in which none of the functions possess all of the necessary resources to complete their tasks (Ruekert and Walker 1987a), a situation that results in interdependencies and the need for resource exchange between organisational functions. The most frequent resource exchange will occur among those functions operating within similar domain (Ruekert and Walker 1987a). This applies particularly to M&S departments (Dawes and Massey 2006) as both are responsible for customer satisfaction on some level (Cespedes 1994; Homburg et al. 1999). Organisations often rely on these two boundary-spanning, revenue-generating departments to offer differentiated value propositions and to maintain competitive advantage in hyper-competitive business environments (Guenzi and Troilo 2007; Hughes et al. 2012). This, in turn, creates the highest level of resource interdependencies among the two and correspondingly, the requirement to cooperate closely and in sync (Thompson 1967; Dawes and Massey 2006; Matthyssens and Johnston 2006). Grounded in SET, M&S exchange relations are viewed as a dynamic process, where the attractiveness of such exchange is maintained by continuous adaptations to each other’s needs through modification of their resources required to match those needs (Newcomb et al. 1965). Therefore, embedded in the expectations of reciprocity (Blau 1964), adaptations made by Marketing will be reciprocated by adaptations made by
Sales and vice-versa. Exposure to changing business conditions will create the necessity for such modifications and mutual expectations of making the required adjustments within their on-going relationship in line with changes in their business environment (Heide and John 1992). It is argued, therefore, that flexibility of M&S units in moving resources from one use to another to address changing market demands will enable M&S to leverage their resources effectively through: a) flexibility in restructuring shared resources to reach solutions to complex market and customer-related problems or business opportunities; b) synchronised sharing of restructured resources inherent within their exchange relationship and c) mutually coordinated implementation of these newly structured resources.

In line with the reported importance of flexible management of marketing resources (e.g., Yuan et al. 2010) and the responsibility of both M&S in managing such resources (Dawes and Massey 2006), it is arguable that flexible use of resources, as it manifests itself at the level of this interface, is an integral part of their relationship and an important factor for successful organisational functioning.

Existing empirical studies on flexibility in a relational context have not exclusively focused their attention on intra-organisational inter-departmental relationships, making it difficult to increase our understanding of the potential theoretical distinctiveness of flexibility within this given context. Lack of conceptualisation and measurement tools hinder development of specific guidelines for managers on how to better manage such flexibility. Equally important, it hinders our ability to conduct empirically based assessment of the inter-departmental flexibility – performance relationship. This presents a second research gap, i.e. addressing MSIF: performance link.

1.2.2 The relationship between MSIF and performance

The general research position on the effects of flexibility on organisational performance argues for the positive impact of flexibility on different aspects of business performance. Within the extant marketing literature, flexibility is considered a key success factor in continuously creating customer value and achieving
competitive advantage (Matthyssens et al. 2005). Flexibility in inter-organisational relationships leads to increased productivity profits and sales, and improves customer retention, satisfaction and loyalty (Hernández-Espallardo and Arcas-Lario 2003; Samiee and Walters 2003). Nevertheless, empirical evidence of flexibility: performance link, although growing, is still scarce, especially in the area of inter- and intra- organisational relationships.

Intra-organisational research argues for the necessity of leveraging scarce organisational resources, and the creation of different types of resources, knowledge, capabilities and expertise through social interaction and joint action as a requirement for the successful management of changing business conditions (Zucker et al., 1995).

Organisations often rely on the combination of the resources held by M&S departments whose opposing, yet essential, worldviews play an important role in sustaining an organisation’s competitive advantage (Guenzi and Troilo 2007). In order to keep in line with the changes in business environments, M&S are required to modify and adjust their resources within their on-going relationship (Heide and John 1992). Flexibility enables the effective movement of resources from unproductive to productive uses (Ford and Randolph 1992) leading to an increase in task effectiveness and overall organisational performance (Bello and Gilliland 1997; Morgan et al. 2002; Johnson et al. 2003).

Given the suggested importance of flexibility in groups’ coordination processes in ensuring performance (Malshe 2011), and the lack of empirical evidence of M&S flexibility’s impact on performance outcomes, this area is defined as a second research gap.

1.2.3 Consideration of the environment as the key contingency

A third research gap that this study seeks to address is the identification and investigation of potential moderators of the MSIF: performance link. The broader flexibility literature puts an emphasis on the contingency view, indicating that the
flexible responses required depend on the organisation’s environmental context (e.g., McKee et al. 1989; Kessler and Chakrabarti 1996; Garg et al. 2003). Flexibility in the face of high levels of turbulence will enable firms to adapt to a newly formed situation in a well-timed and appropriate direction (Mintzberg 1979; Schindehutte and Morris 2001). The majority of firm-wide flexibility researchers argue for the importance of considering external environmental contingencies when examining flexibility as they are found to increase the value of flexibility to a firm (e.g., Sanchez 1995; Young-Ybarra and Wiersema 1999; Dreyer and Grønhaug 2004; Nadkarni and Narayanan 2007). Nadkarni and Narayanan’s (2007) empirical study, for example, confirms that flexibility more strongly predicts performance in more dynamic environments.

However, a contingency model, and specifically, environmental contingencies have not been addressed in a M&S relational context, even though flexibility at the M&S interface might be required more when environments are more difficult to handle. Consideration of the potential role that environmental contingencies may play in altering the strength and direction of the MSIF: performance linkages will increase research understanding on how much flexibility is required to best overcome complexities in the industry. Enriching our knowledge in this area is important as it will increase a researcher’s ability to provide recommendations to practice with regards to situations when adoption of MSIF drives (or hampers) business performance.

Considering the centrality of flexibility in explaining performance for this study and the empirically supported contingent effect of the environment on flexibility: performance link (e.g., Nadkarni and Narayanan 2007) this study also considers essential the inclusion and examination of the role the environmental contingencies have on the MSIF-performance link.

1.2.4 Levers to MSIF

Another (fourth) identified gap in the literature refers to the determinants of MSIF. In fact, the failure to address conceptualisation of flexibility in a cross-functional context creates an inability to offer tailored levers, specific to inter-functional work.
relationships. With the lack of theory driven and empirically tested levers to MSIF it is difficult to offer valid prescriptions from both practical and theoretical standpoint.

Current research in relational flexibility adopts a relational exchange perspective and investigates the social context under which flexibility emerges. Relational business aspects are seen as key drivers of flexibility in the supply-chain and alliance contexts (Wang and Wei 2007). For example, rooted in the SET, Young-Ybarra and Wiersema (1999) explore how aspects of the organisational context (i.e., trust and resource dependence asymmetry) affect flexibility in business alliances. Their results indicate strong support for the role SET plays in explaining the flexibility between partners in the alliance. The emphasis on the social aspects ensures supply chain partners’ adaptiveness and establishment of partnerships with good long-term and flexible cooperative relationship (Young et al. 2003; Wang and Wei 2007).

Despite these observations, our understanding of how the social context in which M&S operate influences their flexibility in decision making and operations is still lacking. It is perceived that the investigation of potential levers to MSIF will extend the knowledge on flexibility in cross-functional relationships, for it responds to the increasing recognition of the importance of flexibility in M&S inter-functional relationship context. In effect, the key stance of this research is that the completeness of the model is not achieved without addressing the drivers of MSIF and uncovering insights into which socially constructed bonds can serve as means to foster/hinder the development of MSIF.

### 1.3 Research Objectives

The overall aim of this study is to provide theoretical and empirical insights into the context, substance and causes and effects of flexibility at the cross-functional interface of M&S. The corresponding research objectives are:

1. Expansion of understanding of flexibility in the M&S relational setting, corresponding measure development and measure validation;
2. Conceptualising and testing the linkages between the MSIF and firm performance;

3. Conceptualising and examining the potential moderating effects of a firm’s external environment on the MSIF: performance relationship;

4. Examining socially constructed drivers of MSIF.

In order to address research objectives 1, 2 and 4, this thesis adopts a social exchange theory perspective (Blau 1964). Within the SET framework, under the term exchange one assumes "a transfer of something tangible or intangible, actual or symbolic, between two or more social actors" (Bagozzi 1979, p. 434). Within organisations characterised by specialisation of labour, exchange of resources is the inevitable result (Macneil 1985). Organisations are forums for transactions of resources (e.g., Cropanzano et al. 1997; Randall et al. 1999), where transactions occur within the configurations of social relations among the parties involved (individual and/or corporate) (Cook and Whitmeyer 1992). Dictated by the nature of MSIF explained through the lens of SET, this study focuses on social relations between M&S. This serves as a platform for the examination of the transaction of resources and more specifically, flexibility in such transactions. Their exchange relation is viewed as an adaptation process embedded within a series of resource exchange episodes between the two in which they simultaneously affect and are affected by each other (Newcomb et al. 1965; Anderson 1995; Cropanzano and Mitchell 2005).

Empirical results indicate that the flexibility: performance link becomes stronger in instances of higher market dynamism (Grewal and Tansuhaj 2001; Anand and Ward 2004; Nadkarni and Narayanan 2007). Therefore, to achieve the third objective of accommodating environmental dynamics as a moderator, this thesis is also underpinned by contingency theory (Donaldson 2001).
1.4 Contributions

1.4.1 Theoretical contributions

In addressing the identified research gaps, a number of benefits are expected to emerge on a theoretical front. First of all, although a number of studies have investigated the relationship between M&S, empirical research on the interface is still relatively limited. This research therefore adds to a few notable empirical studies (Le Meunier-FitzHugh and Piercy 2007a; Homburg and Jensen 2007) and contributes to knowledge on this highly important, yet often-cited dysfunctional relationship (Dewsnap and Jobber 2000; Homburg and Jensen 2007; Kotler et al. 2006). The extant empirical research underlines the importance of a collaborative M&S interface, and increasingly also, the importance of flexibility in marketing, to business performance. However, flexibility at the operational interface of M&S, its determinants and consequences, are yet to be addressed empirically. This is the first study addressing this opportunity thus making it the first contribution in this area for academics.

From a descriptive perspective, this study delivers valuable insights into the nature of flexibility at the inter-functional level. Therefore, this study adds to what within the marketing and strategy literatures, and more specifically within the extant exploratory studies on the M&S interface (e.g., Matthyssens et al. 2005; Malshe 2011), has been described as the increasingly important topic of flexibility for achieving competitive advantage and delivering customer value. This study presents a first step in addressing this opportunity.

From the methodological standpoint the explication and definition of MSIF led to development of a new measure that was subsequently used in the quantitative enquiry. Given the lack of empirical evidence on the outcomes of the flexible resource management at the M&S interface, the conceptualisation and the development of the MSIF measure is expected to advance our knowledge on the importance of MSIF for organisational success. In this way, this study adds to the literature by developing a valid measure of MSIF and by further adding to the debate
on, and development of, different forms of flexibility (e.g., Johnson et al. 2003). Although this research represents a contribution to knowledge in a particular context, i.e., the M&S interface, it is believed that this investigation paves the way for similar applications in a range of inter-departmental contexts; e.g., the Marketing-R&D interface.

On a conceptual level, this research contributes to the existing knowledge on inter-functional relations and flexibility by developing and testing a conceptual framework that incorporates MSIF antecedents, consequences and moderating effects. Consequently, by developing and rigorously testing the MSIF model it is believed that more fine-grained insights into the nature, determinants and outcomes of the MSIF are provided.

1.4.2 Managerial Implications

In an attempt to try and help managers better manage M&S relationship and flexibility at the M&S interface, this study provides several directions along which managers can generate more value from the M&S relationship. The study provides a set of practical guidelines managers may utilise to enhance organisational success and to achieve competitive advantage. From a strategy-making perspective, the reported unstable and unpredictable business conditions companies operate in force organisations to constantly revise their marketing plans (Kahn and Myers 2005). In the face of such constant need for change, guidelines on how to flexibly manage scarce M&S resources will be especially helpful. Although flexibility is seen as a key success factor in such environments, managers need to be careful of the potential dangers of placing too much emphasis on MSIF as it might not always result in performance improvement. Investments in maintaining extremely high levels of MSIF may represent a considerable cost and work against an increase in performance. For managers, this study investigates whether there is a specific ‘threshold’ after which benefits of MSIF begin to decrease and whether the point of reaching such cut-off point is affected by certain environmental conditions. MSIF may be less of a good choice in certain circumstances (e.g., high technological turbulence) and may
represent a higher cost than equally important, alternative orientations (e.g. innovativeness). Managers need to pay attention to such conditions, to assess the costs and benefits of investing in MSIF and make decisions accordingly. This study helps managers decide when they should foster MSIF and when MSIF should be discouraged. Specific recommendations are given to managers when flexibility is more or less beneficial and under which circumstances.

By providing a reliable and valid scale this study assists managers in assessing the level of MSIF in their M&S departments and making decisions accordingly. Managers could do this by answering the questions regarding how flexible their M&S departments are in managing the resources needed for seizing opportunities and minimising threats. In addition, this study provides advice to practitioners on how they might facilitate and nurture the abilities of the two departments to manage their resources flexibly within their coordinating interface and processes. In particular, this research suggests concrete and important insights for practitioners on the determinants of cross-functional flexibility that are currently non-existent in the literature. This research especially underlines the importance of social bonds and their influence on business performance through fostering higher levels of MSIF. Results shows that managers can rely on the social aspect of the M&S interface to enhance MSIF in order to deal with the increasingly uncertain business environment.

### 1.5 Research overview and the structure of the thesis

The thesis is divided into seven chapters. This first chapter serves the purpose of introducing the research and arguing its relevance and value. This chapter has also advanced the research problem, research objectives and presented a brief overview of the study’s intended contribution to both theory and practice. The rest of the chapters are organised as per the research layout process detailed in Figure 1.

The second chapter focuses on assessing the relevant (conceptual and empirical) literature on inter-functional relationships, with a specific emphasis on the M&S relationship, as well as the literature on relational flexibility. In so doing, and for gaining insights and identifying the key variables of importance, this study draws on
research from various relevant disciplines such as, for example, marketing, organisational behaviour and strategic management. In addition, a discussion of SET, as the core theory underpinning this study is concluded by a definition of MSIF and its corresponding determinants. Finally, an overview of contingency theory is presented and key contingencies identified.

The third chapter proposes the conceptual framework and develops hypotheses based on the results drawn from the preceding literature chapter (Chapter 2). This chapter also suggests how the chosen theoretical perspectives, i.e. SET and the contingency view of the firm, underpin the model and the hypothesised relationships among the key variables. The final conceptual framework examines the antecedents and consequences of MSIF and the moderating role of the environment with respect to the relationship between MSIF and performance.

Chapter four describes in detail the research methodology applied in the study. The justification for the cross-sectional research design, sampling procedure, data collection method, survey administration activities and bias assessment are presented. Also, details on the operationalisation of the study's key variables are given, together with the description of how the measurement instrument (that is, the questionnaire) and its associated measures were developed.

The subsequent chapter five contains the descriptive analysis of the response to the survey, i.e. details on respondent firm characteristics and descriptives on the measures applied in the questionnaire. This chapter also incorporates step one of the two-step model assessment approach proposed by (Anderson and Gerbing 1988). In Chapter five, measurement model estimation is presented, including the assessment of the psychometric properties of the scales and tests of reliability, validity and scale unidimensionality. This analysis is designed to further justify the inclusion of the chosen variables in the subsequent model testing process.

Chapter six describes in detail the structural model testing procedure, i.e. the second step of the two-step model assessment approach. The chapter begins with the description of the overall analysis strategy. This is followed by an explanation of the
model testing procedure. This chapter concludes with the reporting of the results of hypothesis testing and a discussion of the implications of these results.

The final chapter, chapter seven, discusses the study’s findings in relation to the objectives defined in this chapter. Particular emphasis is placed on the implications for theory and practice. A discussion on the limitations of the study together with corresponding proposals for future research concludes this chapter and the thesis.

Figure 1: Thesis Structure Overview

- **Literature Review (Chapter 2):**
  Marketing and Sales interface and flexibility: a literature based assessment

- **Conceptual Framework and Hypothesis (Chapter 3):**
  Conceptual framework and hypothesis development

- **Research Methodology (Chapter 4):**
  Description of the methodology utilised

- **Measures Development and Measurement Model Assessment (Chapter 5):**
  Measure development procedure and descriptive statistics of the response to the survey. Assessment of the psychometric properties of the scales

- **Hypothesis Testing (Chapter 6):**
  Results of the model testing procedure: Anderson and Gerbing’s (1988) two-way model assessment approach

- **Discussion and Implications (Chapter 7):**
  Synthesis of the relevant findings; Implications for theory and practice; study limitations and future research suggestions
Chapter 2: Literature Review

2.1 Chapter structure

This chapter seeks to analyse two main bodies of literature, namely the literature on M&S relations and that on organisational flexibility. This provides a basis for the conceptual synthesis of the two which is central to the present research. The review of the literature incorporates not only articles from the marketing area but also from the wider strategic management, organisational behaviour, sociology and psychology literatures. The notion of flexibility at the M&S relationship (hereinafter MSIF) is developed from this cross-disciplinary review.

Following this, the determinants and consequences of the flexibility deriving from the proposed theoretical bases are proposed and discussed. The variables applied in the study and presented in the conceptual framework are classified into the internal determinants of MSIF and the external environmental forces affecting the relationship between MSIF and organisational performance.

The structure of the chapter is as follows. The first section addresses the inter-departmental relations between M&S including both the M&S relationship in today’s dynamic and challenging business environments and also the need for flexibility at the level of the M&S inter-functional relationship.

The next section synthesises the numerous approaches to flexibility found in the various literature streams (e.g., strategic management, organisational behaviour research, psychology literature and so on). Several issues are discussed here, especially the problems associated with the lack of consensus in the literature on the definition and measurement of flexibility in the literature. A critical evaluation of those approaches and clarifications are offered as well as justifications for the proposed definition of MSIF.

After this the study’s theoretical underpinnings are introduced. Based on this the determinants of MSIF are developed and the moderating effect of environment is suggested. This section is further divided into sub-sections describing the proposed
internal determinants of MSIF and the external organisational forces affecting the MSIF: performance relationship. This part comprises five sub-sections addressing four antecedents to MSIF: 1) trust between M&S departments; 2) M&S resource interdependence; 3) M&S joint rewards and 4) the complementary goals of M&S. The final sub-section discusses the potential importance of taking into account the external organisational environment.

The final section deals with the potential consequences of MSIF. Accordingly, MSIF’s relation to customer satisfaction, market performance and financial performance are explained and justified on the basis of both the literature on M&S relations and the flexibility literature.

2.2 The M&S cross-functional relationship

Over the past two decades Marketing’s cross-functional relationship with other functional areas has received increasing research attention. This literature, collectively, indicates the positive performance outcomes of good collaborative relations between Marketing and other functional areas (Hughes et al. 2012). A cross-functional relationship that has received by far the most research attention is that between Marketing and R&D (e.g., Gupta et al. 1986; Ruekert and Walker 1987b; Kahn 1996). Research has also focused on the interfaces Marketing has with other functional areas such as: Finance (e.g., De Ruyter and Wetzels 2000a; Zinkhan and Verbrugge 2000), HR (e.g., Ewing and Caruana 1999; Chimhanzi 2004b; Chimhanzi and Morgan 2005), Logistics (e.g., Ellinger 2000; Schramm-Klein and Morschett 2006), Quality management (Morgan and Piercy 1998) and finally, Sales (e.g., Dewsnap and Jobber 2000, 2002). Contrary to Marketing’s relationship with functions such as R&D or Manufacturing, which are by and large different on the basis of their technical orientation, M&S functions are complementary to each other in that they require similar sets of skills and goals, and both are responsible for serving customers (e.g., Biemans et al. 2010).

The reason for this relatively late interest in Marketing’s relationship with Sales may be that, traditionally, authors presume Sales to be a part of the Marketing
department (Ruekert and Walker 1987a; Webster 1992; Cespedes 1993, 1994) reporting to a marketing executive (Ruekert et al. 1985). However, separate M&S departments are a common feature of today’s organisation for marketing (Workman et al. 1998). Separation of Marketing and Sales in the literature is relatively recent (e.g., Workman et al. 1998). In 2002 Krohmer et al. observed the misconception of marketing activities, discovering that the activities usually marked as Marketing activities are actually performed within the Sales department. M&S should be separate, specialised departments, because the functions they carry out necessitate important differences (Shapiro, 2002). “Marketing and Sales hear with different ears, and both perspectives are necessary” (Cespedes 1993, p. 54). As Cespedes (1996) explains, specialisation within each function is necessary for the company to manage more and more complex marketing problems, and such organisational differentiation reflects the need for M&S to develop and offer distinct specialisms (Dewsnap and Jobber 2000). Typically, Marketing focuses on stimulating customer/consumer demand and developing long term strategy (Rouziès et al. 2005). Marketing seeks to understand what the longer-term market trends are, what the actual end consumer’s needs are and tries to offer products/services accordingly (Kotler 1972; Dewsnap and Jobber 2000; Piercy and Rich 2009). Sales, on the other hand, has a short-term perspective, specialising in personal selling and negotiation efforts required to implement marketing strategies, and they develop and manage relationships with customers (e.g., Dewsnap and Jobber 2000; Rouziès et al. 2005). Sales provide value by selling products and/or services and by gathering valuable market information (Rangarajan et al. 2004). Marketing’s main purpose is building long-term competitive advantage, whereas Sales is very often short term focused to achieve sales quota (Rouziès et al. 2005). Each group has a focus on different aspects of the tasks and has different perspectives, but both groups are responsible in some way for delivering corporate volume and profitability objectives (Dewsnap and Jobber 2002). Each requires resources (i.e., distinct skills, information and/or more tangible deliverables) from the other in order to achieve their individual functional objectives and therefore overall organisational objectives (Cespedes 1993; Dawes and Massey 2006). This interdependence demands an effective interface between the two groups (Dewsnap and Jobber 2000; Rouziès et al. 2005). Effective coordination between
functional areas with distinct though complementary competences, such as M&S, enables firms to exploit synergistic benefits and to provide superior value to customers (Guenzi and Troilo 2007). In this regard, empirical research indicates that a collaborative M&S interface is beneficial to firm performance (Guenzi and Troilo 2007; Homburg and Jensen 2007; Le Meunier-FitzHugh and Piercy 2007a). An optimal interface between these two boundary spanning, customer facing functions is a strategic priority required for maintaining company’s competitive advantage (Cespedes 1995; Kotler et al. 2006; Rouziès et al. 2005). Conversely, non-collaboration is argued to result in dis-satisfied customers and to have a negative impact on business performance (Tjosvold 1988; Le Meunier-FitzHugh and Piercy 2007a).

Even so, the interface is often reported as conflictual, non-productive and lacking in coordination (Strahle and Spiro 1986; Strahle et al. 1996; Le Meunier-FitzHugh and Piercy 2007a). Poor coordination at the level of the M&S interface will result in fragmentation at the customer-company interface and failure to maximise customer value (Cespedes 1994; Corstjens and Corstjens 1995; Shapiro 2002). Furthermore, lack of coordination will result in discrepancies in following corporate strategy, inefficient and inconsistent strategy execution, loss of competitive position in the market, loss in productivity and waste of financial and human resources (Strahle et al. 1996; Donath 1999). This sub-optimal situation is attributed to the functional subgroups embracing different mindsets and to their focus on different time horizons (Kotler et al. 2006; Malshe 2011). For example, Marketing has a broad perspective, focusing on the entire product business and how it impacts the overall business in the long-run (Cespedes 1995). Sales activities, on the other hand, are by nature more operational and are concerned with satisfying their individual customers. However, the interdependent nature of M&S drives the need for integration between the two approaches (Cespedes 1993). Marketing need Sales on the frontline to manage the relationship with customers and gather market insights necessary to develop an effective marketing mix (Kotler et al. 2006). Sales are the gatekeeper between the company and the customer, and hence play a central role in understanding and sharing customer requirements (Piercy and Rich 2009). Sales, on
the other hand, are dependent on Marketing for provision of products, promotions and pricing platforms (i.e., the marketing mix) that enable Sales departments to hit their sales quotas and respond to the requirements of increasingly demanding trade customers (Matthyssens and Johnston 2006).

Integration of the two complementary perspectives - Marketing’s overall strategic product perspective and Sales’ customer perspective - is critical for generating ideas with the highest market potential that go hand in hand with actual customer needs and follow the trends of the broader market (Ernst et al. 2010).

Hence, M&S should work collaboratively to jointly develop strategies (Cespedes 1996; Dewsnap and Jobber 2000; 2002, 2009; Piercy 2006; Homburg et al. 2008, Biemans et al. 2010) and to enable their joint implementation (Strahle et al. 1996; Malshe and Sohi 2009; Malshe 2011) - what Cespedes (1996) calls “concurrent marketing”.

2.2.1 Approaches to investigating the M&S relationship

Acknowledging the problematic nature of the M&S relationships, scholars have made various attempts to bring these two functions closer together. A closer inspection of the literature implies that major differences between the two might be the main sources of friction, conflict and general lack of mutual respect. Specifically, scholars focusing on the characteristics of the interface have identified differences in thought worlds and social identities, marketplace perspectives, lack of communication or cultural mismatch as main obstacles to collaboration (e.g., Cespedes 1993; Dewsnap and Jobber 2002; Dawes and Massey 2005; Beverland et al. 2006; Homburg and Jensen 2007; Malshe and Sohi 2009; Le Meunier-FitzHugh and Piercy 2010). Problems may also be attributed to discrepancies in their goal orientations and activity scope, time horizons and misalignment of strategic objectives (e.g., Strahle et al. 1996; Dawes and Massey 2005; Le Meunier-FitzHugh and Piercy 2010). For example, while marketing personnel concentrate their efforts on products and brands with a goal of meeting the needs of the end consumers, the focus of Sales is on the retail channels with a goal of satisfying the needs of powerful
channel members. Inconsistencies in their goals and, prioritising needs of different sets of customers result in tension and ultimately conflict between the two. M&S people often question the value and contribution of the other to overall organisational success. Marketing, for example, often perceives their Sales counterparts as being of lesser status as they focus on a narrow area of selling, lacking the strategic knowledge and thinking typically possessed by Marketing (Beverland et al. 2006; Malshe and Sohi 2009). Sales, on the other hand, believes that the only valid source of knowledge is the one coming from the customers themselves and the actual experience they gain in the marketplace. Sales’ perception of the lack of the credibility of Marketing and Marketing’s view of Sales’ inability to see the bigger picture is a common cause of the sub-optimal performance between the two (e.g., Beverland et al. 2006; Matthyssens and Johnston 2006).

In addition to examining the factors driving M&S apart, the extant literature also focuses on integration mechanisms that might help build stronger connections between the two and, so, decrease the level of conflict. A close inspection of this literature suggests that organisational elements, such as structure, processes, senior management’s actions and operating characteristics could represent building blocks for a stronger connection between M&S (Cespedes 1993, 1996; Dewsnap and Jobber 2000, 2002, 2009; Workman et al. 1998; Rouziès et al. 2005; Dawes and Massey 2005; Kotler et al. 2006; Matthyssens and Johnston 2006; Homburg and Jensen 2007; Le Meunier-FitzHugh and Piercy 2008, 2010; Le Meunier-FitzHugh and Lane 2009). Scholars focusing on the elements of structure, e.g., formalisation, decentralisation, liaison units and physical proximity (e.g., Dewsnap and Jobber 2000; Cespedes 1996), assert how these organisational factors may be used by managers in forging stronger collaboration in M&S. Cespedes (1993, 1996) for example, explains how development of structural linkages (e.g., formal routine meetings, the creation of liaison units or the establishment of clear lines of responsibilities) in consumer goods companies may act as organisational initiatives that bring M&S closer together. Similarly, Matthyssens and Johnston (2006) conclude their qualitative research by advising the creation of the product management position and multifunctional teams for specific markets as potential
integrating mechanisms that may support a more effective cross-functional relationship. Other structural devices are mentioned in the literature as well, for example, de-centralisation and participative decision making that would aid the flow of high quality information between the two, mutual understanding and appreciation (Dewsnap and Jobber 2000) and location-wise closeness of the two that increases the perception of achieved integration (Le Meunier-FitzHugh and Piercy 2008; Le Meunier-FitzHugh and Lane 2009).

Scholars have also focused on processes and operational characteristics that might assist in synchronising and coordinating the activities of M&S. For example, collaboration is seen as an outcome of the process of involving both at every stage of strategy making (e.g., Matthyssens and Johnston 2006), sharing market intelligence (Le Meunier-FitzHugh and Piercy 2007b), facilitating organisational learning (Le Meunier-FitzHugh and Lane 2009) and developing smooth communication flows (Dawes and Massey 2005; Le Meunier-FitzHugh and Piercy 2007a). In addition, if both functions activities are steered towards supporting each other, both are clear with regards to the vested interests of the outcomes of their activities, and if they have aligned measurement system, they will exhibit high levels of collaboration (e.g., Le Meunier-FitzHugh and Piercy 2007a, b, 2010). Marketing exhibiting flexibility towards their Sales counterparts during the strategy implementation process, establishment of a social in addition to working bond, alignment on definitions of key terms used and harmonising knowledge differences are all additional process and operational characteristics proposed in the literature that might be used to foster stronger connections (e.g., Malshe 2011). At individual level, implications have been made with regard to responsibilities and actions that might be undertaken by marketing and sales managers in order to support stronger relationships between their departments. For example, marketing managers with experience in Sales will have a better overview and understanding of the concepts, issues, and practices of sales manager which in turn helps the two communicate and work more effectively (Dawes and Massey 2005; Massey and Dawes 2007a, b).

Senior management is another source of improvement of M&S staff’s relationship through, for example, (1) providing opportunities for collaboration and ensuring their
actions are transparent and understood by the other, (2) making sure their goals are in sync, and (3) that both sides strive towards the same goals and rewards (Le Meunier-FitzHugh and Piercy 2010). Senior managers can increase the chances for establishing good quality collaboration by ensuring that both sides approve and conform to existing systems and processes. The level of support they exhibit towards cooperation between departments, their efforts in instilling the values and the vision of the company into M&S, will be reflected in the actual cooperation achieved. Senior managers should be, therefore, taking the responsibility for improving the willingness of M&S to collaborate successfully (Dewsnap and Jobber 2000). Table 1 below summarises the existing approaches to investigating the M&S cross-functional relationship, whereas, Table 2 represents a summary of key constructs investigated in the M&S literature.
Table 1: Approaches to investigating the M&S interface

<table>
<thead>
<tr>
<th>Factors that help build stronger connections between M&amp;S</th>
<th>List of factors</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Structural</td>
<td>Formalisation; De-centralisation; Participation/cross-functional teams; Physical proximity; Methods of organising; Structure (separate or joint department); Liaison Units; Being a part of a large cooperation; Dispersion of influence</td>
<td>Dewsnap and Jobber 2000, 2002, 2009; Rouziès et al. 2005; Le Meunier-FitzHugh and Piercy 2008, 2010; Le Meunier-FitzHugh and Lane 2009; Cespedes 1993, 1996; Dawes and Massey 2005; Kotler et al. 2006; Homburg and Jensen 2007; Matthyssens and Johnston 2006; Malshe 2011; Workman et al. 1998; Troilo et al. 2009</td>
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<tr>
<td>Senior management</td>
<td>Values and vision integration; Provides opportunities; Personnel background; Joint rewards; Goal alignment (conflict); Management attitudes towards coordination; Fostering mutual understanding; Esprit de Corp establishment; Conformity to systems and processes; Process ownership</td>
<td>Dewsnap and Jobber 2000, 2002, 2009; Rouziès et al. 2005; Le Meunier-FitzHugh and Piercy 2007a, b, 2010; Le Meunier-FitzHugh et al. 2011; Le Meunier-FitzHugh and Lane 2009; Kotler et al. 2006; Malshe 2011; Hughes et al. 2012</td>
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<tr>
<td>Operating characteristics</td>
<td>Give-and-take; Early involvement; Interdepartmental conflict and resolution; Marketing planning; Marketing's flexibility; Knowledge; Decisions; Resources</td>
<td>Dewsnap and Jobber 2000; Le Meunier-FitzHugh and Piercy 2007a, 2010; Le Meunier-FitzHugh et al. 2011; Kotler et al. 2006; Malshe 2011; Hughes et al. 2012; Massey and Dawes 2007a, b</td>
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<tr>
<td>Categories of major differences between M&amp;S</td>
<td>List of differences</td>
<td>Authors</td>
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<tr>
<td>Orientation</td>
<td>Focus: Market vs. Sales; Goals: Activity scope: Planning Vs. Implementation; Sources of knowledge: Strategic focused knowledge Vs Operational knowledge; Type of knowledge: Market, Product knowledge and Interpersonal skills; Perceived status: Higher Vs Lesser; Relationship to business environment: Proactive Vs Reactive; Time: Long-term vs. Short-term; Hierarchies of attention: A single product/brand vs. Multiple products/brands; Psychological difference between marketing and sales managers (tolerance to risk; time required for making a decision; personal style in conflict resolution; understanding of customers; amount and type of information required prior to making a decision; belief that there is always a right answer)</td>
<td>Beverland et al. 2006; Le Meunier-FitzHugh and Piercy 2010; Cespedes 1994; Dawes and Massey 2005; Homburg and Jensen 2007; Malshe 2009</td>
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<tr>
<td>Culture</td>
<td>Norms and beliefs; Departmental identities; Philosophical linkages (customer commitment, organisational goals, partnership); Vision</td>
<td>Dewsnap and Jobber 2002; Rouziès et al. 2005; Le Meunier-FitzHugh and Piercy 2007a, b, 2010; Le Meunier-FitzHugh and Lane 2009; Cespedes 1993, 1994, 1996; Dawes and Massey 2005; Kotler et al. 2006; Malshe 2011; Massey and Dawes 2007a, b; Matthyssens and Johnston 2006</td>
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</table>
Several scholarly articles attempt to integrate a broad range of phenomena studied in the previous literature streams and clearly define several configurations of separate M&S units found in organisations (Homburg et al. 2008; Biemans et al. 2010). For example, based on differing levels of power, the extent and the direction of cross-functional intelligence dissemination and knowledge sharing, the extent to which formal structural platforms exist for interdepartmental activities and the present level of expertise found in M&S, Homburg et al. 2008 propose five organisational archetypes of M&S. According to their results, dimensions characterised by the highest level of cooperation are those with strong structural linkages established between the two and interdependence based on their complementary skills. Results indicate that the quality of M&S relationship and the outcomes of their collaboration will depend on how the interface is organised (Biemans et al. 2010).

Articles summarised in Table 1 represent a rich source of key constructs in the investigation of the M&S relationship. However, none of the studies investigating either factors that facilitate stronger connections between M&S or categories of major differences between the two do not provide any insights into the flexibility within their relationship. A sole study investigating the notion of flexibility within the M&S context views flexibility as a one-sided Marketing department’s agreement to accommodate the tactical changes in the original marketing strategy on behalf of Sales department (Malshe 2011). The other two studies (Malshe and Sohi 2009 and Biemans et al. 2010) are only a source of implicit evidence on the importance of these two departments to exhibit adaptiveness and responsiveness to the market requirements and changes. In conclusion the review of the existing literature implies the significance of M&S flexibility, but fails to conceptualise M&S flexibility and empirically investigate the antecedents and consequences of M&S flexibility.
Table 2: Summary of the M&S literature key constructs

<table>
<thead>
<tr>
<th>Authors</th>
<th>Empirical approach</th>
<th>Central focus/key construct(s) of the study</th>
<th>How the connections between M&amp;S may be strengthened/what affects the connections between sales and marketing</th>
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<tbody>
<tr>
<td>Cespedes 1993</td>
<td>Qualitative</td>
<td>Coordination between M&amp;S</td>
<td>Creating liaison units that link HQ with salesforce, multifunctional account teams, career paths and training programs that expose marketing personnel to sales activities (and vice versa)</td>
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<tr>
<td>Cespedes 1994</td>
<td>Qualitative</td>
<td>Coordination between M&amp;S</td>
<td>Creating liaison units that link HQ with salesforce, multifunctional account teams, career paths and training programs that expose marketing personnel to sales activities (and vice versa)</td>
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<tr>
<td>Cespedes 1995</td>
<td>Qualitative</td>
<td>Integration among product management, sales management, and customer service</td>
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<td>Cespedes 1996</td>
<td>Qualitative</td>
<td>The synchronization of marketing and sales activities</td>
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<tr>
<td>Strahie et al. 1996</td>
<td>Quantitative/qualitative</td>
<td>M&amp;S interface conflict</td>
<td>Marketing strategies and functional level sales objectives and activities (diss)alignment Goal congruency Communication</td>
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<tr>
<td>Dewsnaps and Jobber 2000</td>
<td>Conceptual Framework</td>
<td>Inter-group integration</td>
<td>Enhancing decentralisation, participation, physical proximity, engaging multiple groups Initiating actions by senior management such as values integration Providing opportunities, joint rewards</td>
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<tr>
<td>Dewsnaps and Jobber 2002</td>
<td>Conceptual Framework</td>
<td>Inter-group differentiation</td>
<td>Differentiation caused by goal conflict and strength of in-group identity and their effect on perceived relationship effectiveness</td>
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<tr>
<td>Krohmer et al. 2002</td>
<td>Quantitative</td>
<td></td>
<td>Cross-functional dispersion of marketing activities</td>
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<tr>
<td>Dawes and Massey 2005</td>
<td>Quantitative</td>
<td>Interpersonal conflict between marketing managers and sales managers</td>
<td>Variables that explain M&amp;S interpersonal conflict: Structural (Use of lateral linkage devices; Merging M&amp;S units; The firm being part of a large corporation) Individual (Training, experience, and education; Psychological distance) Communication (Communication frequency and bidirectionality)</td>
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<td>Reference</td>
<td>Year</td>
<td>Methodology</td>
<td>Framework/Integration</td>
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<td>Rouziès et al. 2005</td>
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<td>Conceptual</td>
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<td>Beverland et al. 2006</td>
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<td>Qualitative</td>
<td>Cultural frames that drive M&amp;S apart</td>
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<td>Marketing-sales relation</td>
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<td>Dawes and Troilo 2006</td>
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<td>Guenzi and Troilo 2006</td>
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<td>Qualitative</td>
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<td>Effectiveness of M&amp;S relations</td>
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<td>Qualitative</td>
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<td>Oliva 2006</td>
<td>2006</td>
<td>Conceptual</td>
<td>Connections between M&amp;S</td>
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<td>Smith et al. 2006</td>
<td>2006</td>
<td>Quantitative/ model</td>
<td>M&amp;S interface</td>
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<td>Biemans and Brencic 2007</td>
<td>2007</td>
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<td>M&amp;S configurations - four-stage evolutionary process towards market-oriented firm</td>
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<td>Homburg and Jensen 2007</td>
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<tr>
<td>Le Meunier-FitzHugh and Piercy, 2007a</td>
<td>Quantitative</td>
<td>Collaboration</td>
<td>Orientation differences, Competence differences, Senior management attitude, Reducing interdepartmental conflict, Improving communication, Instituting market intelligence systems and organisational learning practices</td>
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<tr>
<td>Le Meunier-FitzHugh and Piercy, 2007b</td>
<td>Qualitative</td>
<td>Collaboration</td>
<td>Integrators: Communication, Learning, Market intelligence, Marketing planning, Management attitudes toward coordination: Goal alignment, Mutual understanding, Esprit de Corp, Resource sharing, Common vision, Facilitators: Rewards, Training, Integration mechanisms</td>
</tr>
<tr>
<td>Massey and Dawes 2007a</td>
<td>Quantitative</td>
<td>Interpersonal conflict between M&amp;S staff</td>
<td>Communication quality, Communication frequency, Bidirectional communication</td>
</tr>
<tr>
<td>Massey and Dawes 2007b</td>
<td>Quantitative</td>
<td>Interpersonal conflict between M&amp;S staff</td>
<td>Trust: Cognition-based, Affect-based</td>
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<td>Homburg et al. 2008</td>
<td>Quantitative</td>
<td>M&amp;S configurations</td>
<td>Encouraging sharing of key information, Building structural linkages with sales functions through joint planning and team work</td>
</tr>
<tr>
<td>Le Meunier-FitzHugh and Piercy, 2008</td>
<td>Quantitative</td>
<td>Collaboration</td>
<td>Organisational size, Structure, Location</td>
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<td>Dewsnap and Jobber 2009</td>
<td>Qualitative</td>
<td>Collaboration between M&amp;S groups</td>
<td>Integrative devices: trade marketing and category management</td>
</tr>
<tr>
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<td>Methodology</td>
<td>Focus</td>
<td>Findings/Key Points</td>
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<td>Le Meunier-FitzHugh and Lane 2009</td>
<td>Qualitative</td>
<td>Collaboration</td>
<td>Effects of market intelligence systems and management attitudes towards coordination on collaboration</td>
</tr>
<tr>
<td>Le Meunier-FitzHugh and Piercy 2009</td>
<td>Qualitative/quantitative</td>
<td>Collaboration</td>
<td>Management attitudes to coordination Inter-functional conflict Communication Market intelligence Learning</td>
</tr>
<tr>
<td>Malshe 2009</td>
<td>Qualitative</td>
<td>M&amp;S interface</td>
<td>Differences in sales and marketing personnel’s perceptions about the role they and their counterparts may play in the strategic process</td>
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<td>Malshe and Sohi 2009</td>
<td>Qualitative</td>
<td>M&amp;S interface</td>
<td>Three stages of marketing strategy making within the M&amp;S interface: (1) Groundwork, (2) Transfer, (3) Follow-up</td>
</tr>
<tr>
<td>Troilo et al. 2009</td>
<td>Quantitative</td>
<td>Interaction and collaboration, role clarity</td>
<td>Dispersion of influence between M&amp;S</td>
</tr>
<tr>
<td>Biemans et al. 2010</td>
<td>Qualitative</td>
<td>M&amp;S interface</td>
<td>Marketing–sales interface configurations in B2B firms: (1) hidden marketing, (2) sales-driven marketing, (3) living apart together and (4) marketing–sales integration. There is no single best configuration. Instead, firms must develop the marketing–sales configuration that best matches the characteristics of the firm and its environment.</td>
</tr>
<tr>
<td>Ernst et al. 2010</td>
<td>Quantitative</td>
<td>Sales, Marketing, and Research-and- Development Cooperation</td>
<td>Effect of Stage-Specific Sales–R&amp;D and Sales–Marketing Cooperation on Overall NPD Project Performance</td>
</tr>
<tr>
<td>Le Meunier-FitzHugh and Piercy 2010</td>
<td>Qualitative</td>
<td>Collaboration</td>
<td>Management attitudes to coordination Interdepartmental culture Structure and orientation Inter-functional conflict Communications Market intelligence Learning</td>
</tr>
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<td>Malshe 2010</td>
<td>Qualitative</td>
<td></td>
<td>Salespeople’s interpretation of marketers credibility</td>
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<tr>
<td>Le Meunier-FitzHugh et al. 2011</td>
<td>Qualitative/quantitative</td>
<td>Collaboration</td>
<td>Senior managers support for coordination Inter-functional conflict Rewards alignment</td>
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<tr>
<td>Study</td>
<td>Methodology</td>
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<td>Hughes et al. 2012</td>
<td>Qualitative</td>
<td>M&amp;S interface</td>
<td>The role played by a collaborative M&amp;S interface in ensuring the firm is able to build, maintain, and utilise market-based capabilities en route to internal competitive advantage.</td>
</tr>
</tbody>
</table>
Two can be drawn from the above Table 2 with regard to the idea of flexibility in M&S. First, literature on M&S relationships still seems to suffer from the general lack of empirical insights into their relationship. Table 2 contains 37 empirical studies, out of which results of 15 quantitative studies. Eight quantitative studies stem from the same data set. Of these fifteen quantitative studies, none investigated (or conceptualised) flexibility in M&S or related constructs. What can also be gathered from Table 2 is the dominance of exploratory approach in M&S interface research. Twenty two studies applied this research design for gathering information on the interface. This is not a surprise as the increase in the interest in the interface started not long ago. Flexibility is, however, discussed in the exploratory research (e.g. Malshe and Sohi 2009; Biemans et al., 2010 and Malse 2011) but the conceptualisation, measurement and testing is still lacking.

To conclude the review of extant empirical work, there seems to be a lack of exploratory and large-scale empirical studies of M&S flexibility and its associated antecedents and outcomes.

Extant research on M&S interface shows that some differences between the two are required and are here to stay since these differences emanate from the different roles and responsibilities that each possess and carry out. Nonetheless, organisations may institute cross-functional processes, strategic and operational integrative devices, or joint M&S taskforces to harmonise this interface (Dewsnap and Jobber 2009; Piercy and Lane 2003). Additionally, firms may also aim to reduce turf barriers, intergroup differentiation, and intercultural and philosophical differences within this interface by engendering greater interface trust and cooperation (Piercy and Lane 2003; Ingram 2004; Oliva 2006).

Although the literature is in agreement with regard to the positive effects of collaborative and synchronised working between the two, recent exploratory studies emphasise the importance of flexibility and responsiveness in their coordination processes for ensuring further positive performance outcomes (e.g., Malshe 2011). The next section develops the rationale for studying flexibility at the M&S interface
and summarises the current state of the M&S literature that explores this phenomenon.

2.2.2 Introducing flexibility into the M&S relationship

A combination of increased competitor actions and shifting customer needs continuously disrupts organisational processes and products and pulls the company out of alignment with its markets and compromises its advantages (Day 1999). Currently effective marketing programmes quickly become incapacitated by such market dynamics (Johnson et al. 2003) and the traditional 4P marketing mix management becomes obsolete as it fails to incorporate the fundamental point of marketing, i.e. flexibility (McKenna 1990; Barnett and Pratt 2000). The literature acknowledges that firms that are highly successful in their product-market strategy implementation exhibit flexibility and are able to adapt to changing environmental conditions (Drazin and Howard 1984; Ruekert et al. 1985). Therefore, for a company to survive and prosper within turbulent markets, pressures are placed on adapting continuously to such environments (Teece et al. 1997; Dreyer and Grønhaug 2004; Andersen et al. 2007). Companies do so by instilling flexibility within their product and service offerings and repositioning those assets that have created past competitive advantage as they are no guarantee for future accomplishments (Harrigan 2001; Kumar et al. 2001; Mason and Mouzas 2012). However, flexibility will yield limited or no advantage if the integrated efforts of organisational sub-parts are not secured, and the integrated efforts will fail to achieve competitive advantage without responsiveness - situation referred to as "integrated flexibility" by Ahmed et al. (1996). Responsiveness and the adaptability¹ of a company, a crucial condition

¹ Krohmer, Homburg and Workman (2002), for example, address the concept of adaptiveness of marketing strategy in turbulent environments and define the concept as the ability of the organization to adapt to changes in its environment. Evans (1991, p. 73), on the other, defined makes a clear distinction between adaptability and flexibility. According to the author, adaptiveness is "a singular and permanent adjustment to a newly transformed environment, whereas flexibility enables successive, but temporary approximations to this state of affairs". Although Evans describes the difference between the two terms, i.e. adaptiveness and flexibility, authors have persisted in using them interchangeably. Having acknowledged the difference between the two, the use of adaptability and flexibility will be used interchangeably throughout this thesis and in line with abundance of research in flexibility.

Responsiveness measures the organization’s ability to respond to change within an appropriate time frame (Golden and Powell 2000). While responsiveness is an important metric of flexibility that measures speed to which the organization responds to environmental change, flexibility represents a higher order organizational ability. It is an ability to actively and proactively exploit existing and emerging opportunities and challenges presented by the environment (Harrigan 1985).
for success, require smooth coordination between organisational subunits (Hughes et al. 2012). The combination of diverse resources across organisational units effectively aids developing unique and novel applications for the resources and has a significant, positive effect on performance outcomes (e.g., Wernerfelt 1984; Song et al. 2005; Newbert 2007). Although integration is critical in sustaining competitive advantage, conditions of hyper competition ultimately lead to an erosion of all positions of competitive advantage by imitative or innovative competition (Grant 1996). As change introduces disruptions in current organisational activities, interdependent functions are also affected and the requirement for their dynamic integration as a reaction to the competitive environment is created (Frank and Fahrbach 1999; Rangarajan et al. 2004). Research focusing on dynamic nature of firms capabilities, for example, suggests competitive advantage and organisational performance is best achieved with the ability of firms to integrate and reconfigure key processes (e.g., Teece and Pisano 1994; Teece et al. 1997; Teece 2007).

Many requirements for adaptations, and hence flexibility, have inferences in marketing, relating to synchronising demand to supply and implementing changes in the product mix (Dreyer and Grønhaug 2004). The adaptive deployment of marketing resources may help firms maintain their advantages (Vakratsas and Ma 2009). The efficient leveraging of marketing-based resources and capabilities puts an organisation into a stronger position to succeed in the marketplace (e.g., Srivastava et al. 1998; Dutta et al. 2003; Morgan et al. 2009). Marketing-based resources and capabilities inherent in them are usually associated with M&S functions (e.g., Vorhies and Morgan 2005). M&S, usually in control of organisation’s marketing resources and the crucial activities of acquiring and utilising knowledge on customer needs, wants and behaviour, playing a vital role in successful product-market strategy making and implementation (Matthyssens and Johnston 2006; Goetz et al. 2013) should be given the most attention as they are the two departments directly responsible for customers (Cespedes 1996). Their ability and willingness to accommodate deviations from the original strategy, is seen as the prerequisite for success in this new reality, hence, their coordinative processes should reflect the ability to respond to changing market needs (Malshe 2011). Their ability to modify
plans and to adapt - in other words, to be flexible - was identified in Malshe and Sohi (2009) qualitative investigation as a determinant of successful strategy making across the M&S interface.

The cross-functional relationship between M&S as the research context is further justified by the conflicting and non-cooperative reputation of their relationship across the literature even though their synergistic relationship is a critical factor in the organisation’s ability to successfully serve its market(s) (e.g., Dewsnup and Jobber 2000). As organisations often rely on these two boundary-spanning, revenue-generating departments to offer differentiated value propositions and maintain competitive advantage in hyper-competitive business environments (Guenzi and Troilo 2007; Hughes et al. 2012) they maintain the balance between internal and external conditions enabling the organisation to handle/manage the environment (Aldrich and Herker 1977). As boundary spanners, they are advocates of change (Dubinsky et al. 2002) their support is required for change implementation across organisation (Homburg et al. 1999).

Extant research on M&S relations provides scarce qualitative evidence of the importance of flexibility at their interface. For example, research into the role of M&S functions in marketing strategy making indicates that adaptiveness and the willingness of M&S to accommodate deviations from the original strategy are important for strategic success (Malshe and Sohi 2009). In a qualitative, multinational study of the M&S interface in a business-to-business context, Biemans et al. (2010) examine the responsiveness levels of the different configurations of M&S. They find that companies with the highest levels of responsiveness (to both short and long-term needs) are those with integrated M&S departments in which a culture of collaboration and joint working prevail. Malshe's (2011) paper deals with the need for the Marketing department to exhibit flexibility towards the sales team during the strategy implementation phase. Flexibility is reflected in Marketing’s agreement to changes in tactical elements of the original strategy on behalf of Sales department. Here, flexibility is seen one-sidedly as Marketing’s flexibility and excludes the relational context in which this flexibility is exerted. Embedded within the acknowledged stance that benefiting from pooled resources, teams yield superior

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performance than that of individuals (e.g., Katzenbach and Smith 1993; Moore 1994), it is the M&S cross-functional relationship that is the unit of analysis in this study rather than separate Marketing or Sales departments. Flexibility presented in the works above indicates its very importance for company success. However, a systematic analysis of flexibility at the M&S interface is still missing. Therefore, the focus of this current research is flexibility at the coordinative relationship between M&S; i.e., Marketing-Sales Interface Flexibility (MSIF).

The importance of investigating flexibility at the level of the cross-functional relationship is that the very nature of the relationship becomes inherent in the idea of flexibility. Cross-functional flexibility is inextricably linked to the members’ cooperativeness (Wooldridge and Floyd 1990). Cross-functional coordination is tacit to the extent that flexibility will not achieve its advantages without co-ordinated efforts to achieve particular goals. Coordination difficulties in functional areas undermine the ability of the firm to utilise the flexibility required for building market advantages (Bowersox 1974; Ahmed et al. 1996). Cross-functional integration facilitates mutual adjustments (Thompson 1967), ensures the two functions’ willingness to work together (Guenzi and Troilo 2006) and the combination of different approaches to problem solving that are present can contribute to non-routine problem solving (Jehn et al. 1999). When M&S work in harmony, less time will be spent on conflict resolution (Menon et al. 1999), creating more opportunities for integrating their capabilities in ways difficult for competitors to detect and replicate (Chatzkel 2002). Shared values between the two and mutual understanding will assist in responding to changing customer needs more effectively (Beverland et al. 2006). Furthermore, unity of effort and commitment to implementing decisions will be secured (Lawrence and Lorsch 1967; Amason 1996; Homburg et al. 1999).

Having elaborated on the importance of exploring flexibility at the M&S interface, the next section addresses its definition and approaches taken in the literature to studying flexibility.
2.3 Flexibility

2.3.1 Introduction

Previous section introduced the importance of flexibility at the M&S interface. It showed how the idea of flexibility might be used as the basis for this empirical study of the relationship between M&S departments. This section looks at the delineation of flexibility in the inter-functional relationship context and how this differs to what has currently been offered by theory and practice. The section that follows is a summary of the approaches to flexibility and its measurement in the existing broad literature including strategy, marketing, operations, organisational behaviour, psychology, and so on. The overlapping points between these disciplines are laid out with the aim of providing support for the present empirical investigation of flexibility at the inter-functional relationship level.

2.3.2 Background

The analysis and development of flexibility has been addressed by writers from different academic and functional disciplines and perspectives. The very first discussion on flexibility dates as far back as 1921 when Levington drew a connection between unplanned changes and the importance of flexibility by taking into account the risks emerging from the rigidity of invested resources (Levington 2013). The subsequent rise of the interest in flexibility was triggered by changing realities in the business environment, now characterised as being in a chronic state of flux, faced with intense competition, shrinking product cycles, accelerated technological breakthroughs, and progressively greater globalisation (e.g., Nadkarni and Herrmann 2010). Due to changing market conditions, new types of uncertainties were created. This emphasised the need for firms’ to develop the ability for a prompt and flexible response (Hart and Milstein 2003; Dreyer and Grønhaug 2012). An uncertain environment will create an opportunity for those firms that successfully manage the flexible way of business conduct, whereas it will pose a threat to those who fail (Upton 1994; Lau 1996; Shimizu et al. 2004). A flexible approach affords a firm the
ability to adapt and to improvise so to achieve the best possible outcome (Moorman and Miner 1998). In addition to cost control, quality and innovation, flexibility has often been seen more often as a competitive priority (Upton 1994). Whilst low cost and high quality are essential for market entry, flexibility plays a key role in enhancing a firm’s competitive ability in creation of responses to change, especially in instances of limited resources available for investment (Upton 1994; Dreyer and Grønhaug 2012).

From a historical perspective, flexibility has been given a central place within management literature studies ever since the 1950s (Evans 1991). From that point until today a variety of definitions have been put forward, but in its broadest sense, flexibility has been defined as a firm’s general ability to adapt or change (De Toni and Tonchia 2005). Most definitions refer to flexibility as a means of enabling organisations to cope with changing and unpredictable market conditions (Genus 1995; Poppo and Zenger 2002; Dreyer and Grønhaug 2012). It has been described as an actual characteristic of the organisation rather than a temporary state (Heide and John 1992; Heide 1994; Martínez-Sánchez et al. 2009), a characteristic that enables the exploration of new segments and products more efficiently and less costly as compared to other strategic approaches of the firm (Das and Elango 1995).

The definition of flexibility and its measurement has been approached in a myriad of ways. Even though high in popularity, the term flexibility is not free from ambiguity. This results from differences in scope, in levels of analysis and in the situational context. For example, Zhang et al. (2002) define flexibility at the organisational level as the ability to meet an increasing diversity of customer expectations while at the same time keeping the associated costs, potential delays, organisational disruptions and performance losses at or close to zero. Lau (1996) defines flexibility as a swift reaction to changing internal and external conditions. Amoako-Gyampah and Acquaah (2008), focusing on a firm’s product mix, define flexibility as the ability to handle changes in product mix to provide required customised solutions to customers. Thurston and Runco (1999) differentiate between adaptive flexibility; i.e., flexibility as a response to pressures to adapt to a challenging environment, and spontaneous flexibility; i.e., an unplanned preference for change for intrinsic reasons.
In a similar vein, Jones (2005) and Georgsdottir and Getz (2004) talk about proactive and reactive flexibility. The former denoting the organisation’s ability to inflict change, to act in a proactive manner, and the latter as the organisation’s ability to respond to change in an adaptive manner.

Bahrami (1996) indicates that the focus of the research will determine the meaning of flexibility.

In the section below an attempt was made to summarise various definitions of flexibility found in the broader organisational research literature. The summary begins with definitions of flexibility in operations management literature as this is the first organisational research area to investigate flexibility. These studies mainly approach flexibility from a technological/procedural perspective. Another stream of literature defines flexibility as the organisational capability, where definitions cover individual employee flexibility and flexibility of the organisation as a whole. Within this area, real-options theory and dynamics capability theory are the most common theoretical underpinnings.

**Flexibility in operations management research**

Research in operations management focuses mainly on manufacturing flexibility (e.g., De Meyer et al. 1989; Gerwin 1993; Upton 1994; Heijltjes 2000). Within the field of operations management, manufacturing flexibility has received by far the most attention (De Toni and Tonchia 2005). The seminal works of Slack (1983, 1987), Gerwin (1987, 1993) and Upton (1994, 1995) marked the beginnings of flexibility investigations in manufacturing management. The main focus of this group of authors falls within the issues relating to technological equipment and its potential for flexibility (e.g., Sethi and Sethi 1990; Beach et al. 2000; Vokurka and O'Leary-Kelly 2000; De Toni and Tonchia 2005). The technological potential for flexibility is inherent in the extent of input resources and output products, routes materials take in the firm, and batch size, as well as the firm’s ability to adjust output volume according to changes in demand. In addition to the relation to processes and technology, flexibility is also related to products and services in terms of volume, alterations and development of products required for entering new markets (e.g.,
Özçelik and Taymaz 2004; Roehrich 2004; Woodside and Biemans 2005; Zúñiga-Vicente and Vicente-Lorente 2006). These abilities place companies ahead of their competitors by securing financial efficiencies through the successful avoidance of creating overcapacities and by properly matching demand with operational scheduling (e.g., Tang and Tikoo 1999; Jack and Raturi 2002; Aranda 2003; Rudd et al. 2008).

Organisation-wide flexibility

The organisational approach to the flexibility shifts its focus from manufacturing systems to human dimension on flexibility. In this vein, flexibility is argued to represent a firm’s ability to operate in a responsive manner within a rapidly changing environment. Operations are examined at the: 1) individual level (Atkinson 1985) and 2) team level2 (Meyer 1994) or at a more generic 3) firm-level, representing a firm’s ability to respond and adapt to changing environmental conditions (e.g., Evans 1991; Oktemgil and Greenley 1997).

- Individual level

At the individual level for example, an options-based framework serves as a basis for investigating managerial flexibility in adapting and revising previously made decisions as a response to changes in the business environment (e.g., Trigeorgis and Mason 1987; Trigeorgis 1996; Kogut and Kulatilaka 1994, 2001). An organisation’s real options are defined by Kogut and Kulatilaka (2001) as “investment in physical and human assets that provides the opportunity to respond to future contingent events” (p. 745). Thus, a firm’s investments in specific resources and capabilities provide an infrastructure for the creation, preservation and exercising of a firm’s real options. Research based on the real-options theory sees the value of flexibility in the difference between a passive and active project management (Santiago and Bifano 2005). The core assumption is that exhibiting managerial flexibility; i.e., active project management, is enabled by those decision makers who possess the options to impact the project throughout its development.

2 Team flexibility will be discussed in the Section 2.3.3.1
The options-based approach defines managerial flexibility as the set of ‘real options’ that managers have in terms of investment; for example, the options to abandon an investment, to expend it or to switch the investment into an alternative use (Trigeorgis 1993). Flexibility, as captured by real options theory, reflects the ability to change the course of action in the light of new information (Slade 2001). Investments in resources, capabilities and knowledge are central to the real options approach as they create the basis for future exploitation and contingencies in an unpredictable environment (Pandza et al. 2003).

At a more micro level, the cognitive style approach (e.g., Nutt 1993) investigates flexibility in terms of the decision maker’s cognitive decision making style. According to this approach, certain decision makers process information in a more flexible manner than others. This equips them with the ability to generate the decision-making options necessary for the achievement of flexibility for the firm (e.g., Sharfman and Dean 1997). The consideration of options (and flexibility) depends upon the cognitive models decision makers develop in order to make sense of the environment (e.g., Fahey and Narayanan 1989; Porac and Thomas 1990; Day and Nedungadi 1994; Hodgkinson and Johnson 1994). These models may hinder the successful exploitation of profitable opportunity as the interpretations of the environment made may misinterpret the very nature of change in the environment due to possession of a particular cognitive model that leads to such interpretation biases (Combe and Greenley 2004).

- **Firm level**

At a more generic firm level, two approaches to flexibility are developed: 1) a behavioural or activity based approach (e.g., Evans 1991) and 2) an ability approach (e.g., Aaker and Mascarenhas 1984; Dreyer and Grønhaug 2004). It is worth pointing out at this point that the majority of investigations at a firm level have examined flexibility from a strategic perspective; that is, they have conducted research into strategic flexibility. The main criticism of the study of flexibility within the operations management literature is its limited scope to operational and tactical changes (Martínez-Sánchez et al. 2009). For flexibility to be able to secure
sustainable competitive advantage it needs to be considered from the strategic level of the firm (e.g., Lau 1996). It is considered as one of the major critical success factors a firm can possess (Cox 1989; De Meyer et al. 1989; De Toni and Tonchia 2005). Strategic flexibility is argued to be closest to the general understanding of flexibility as it denotes a firm’s ability to do something other than that initially planned or intended (Roberts and Stockport 2014). Flexible firms should be able to reconfigure strategically, to switch from one strategy to another quickly and to exhibit diversity in their strategic responses (Slack 1983; Sanchez 1995).

1) From a behavioural approach, Evans (1991) suggests two dimensions for differentiating strategic flexibility: 1) temporal and 2) competitively intentional dimensions. Temporal dimensions can be further separated into ex ante (making preparations ahead of potential future transformation) and ex post (making modifications in a system after the change has occurred) approaches. Intentional dimensions can be further delineated into offensive and defensive approaches. While offensive strategic flexibility approach aims at creating and seizing an initiative, the aim of defensive strategic flexibility is to protect against unanticipated competitors actions and environmental eventualities. In following a defensive approach a firm participates in multiple product markets so as to have options in case one market collapses or is attacked by competitors (Aaker and Mascarenhas 1984). This approach then enables a firm to absorb any market shocks, to reduce their efforts or withdraw from a specific market without encountering permanent difficulties (Bahrami 1996).

Although the reactive approach to strategic flexibility dominates the literature (e.g., Das and Elango 1995; Lau 1996), several authors take into consideration Evans’s proactive dimension (e.g., Lei et al. 1996; Hitt et al. 1998; Nadkarni and Narayanan 2007). Hitt et al. (1998), for example, define strategic flexibility as “the capability of the firm to enact and respond quickly to changing competitive conditions and thereby develop and/or maintain competitive advantage” (p. 27). Consequently, a firm is in position to have a head start when an opportunity emerges and to be the first to seize it (Aaker and Mascarenhas 1984). The two approaches, however, are not mutually exclusive and are even required for a truly flexible firm (Bahrami 1996). The
defensive side of strategic flexibility will help a firm persist through the negative effects of change (Bahrami 1996). On the other hand, offensive flexibility allows for control attainment over changes in the environment in a way to achieve competitive advantage (Gerwin 1993; Avison et al. 1995).

Following the categorisation proposed by Evans (1991), Golden and Powell (2000) offer an extension in their summary of research on flexibility. According to the authors, in their attempt to provide a comprehensive summary of research on flexibility they provide following dimensions: temporal (time required for a firm to adapt); range (the number of option a firm has at its disposal for reacting to unanticipated events and for predicted change); intention (corresponds to Evans’s competitive intention dimension) and focus (internal vs external sources of flexibility). Table 3 summarises the dimensions of flexibility as proposed by various researchers. The Table 3 distinguishes between “scope” aspects of strategic flexibility (e.g., range, variety and the response degree) and “efficiency” (e.g., time, cost and effort invested in responding to change).

Table 3: Dimensions of organisational (strategic) flexibility in the literature

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Literature source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexibility scope</strong></td>
<td></td>
</tr>
<tr>
<td>Extent</td>
<td>Das and Elango (1995)</td>
</tr>
<tr>
<td>Variety</td>
<td>Volberda (1996); Bahrami (1996); Evans (1991)</td>
</tr>
<tr>
<td><strong>Flexibility Efficiency</strong></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Evans (1991); Pindyck (1991); Das and Elango (1995); Sanchez (1995); Nelson and Ghods (1998); Volberda (1996); Bahrami (1996)</td>
</tr>
<tr>
<td>Cost</td>
<td>Pindyck (1991); Schmutzler and Athey (1995); Das and Elango (1995); Sanchez (1995); Nelson and Ghods (1998)</td>
</tr>
<tr>
<td>Effort</td>
<td>Pindyck (1991); Das and Elang (1995); Sanchez (1995); Nelson and Ghods (1998); Young-Ybarra and Wiersema (1999); Tan and Sia (2006)</td>
</tr>
</tbody>
</table>

Taken and adapted from: Golden and Powell 2000

2) From a capability perspective, strategic flexibility has been defined as the ability to develop strategies to respond to environmental changes in a timely and appropriate manner (e.g., Barney 1991; Das and Elango 1995; Grant 1996). To investigate strategic flexibility from a capability perspective, authors have widely employed the dynamic capabilities approach according to which organisational and strategic
flexibility is enabled through the possession of dynamic capabilities (e.g., Teece et al. 1997; Rosenbloom 2000; Smith and Tushman 2005). Flexible firms are those that have the capability to “integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece et al. 1997, p. 516). High-flex firms are those that effectively manage to organise their technological, organisational and managerial processes within the firm and those that are successful in attaining a range of organisational and managerial capabilities that organisations apply in adapting quickly under environmental shifts (Teece et al. 1997; Eisenhardt and Martin 2000).

**Combining the two approaches**

The two approaches, individual and generic firm-level approach to flexibility, are not mutually exclusive. For example, for a firm to successfully adapt to environmental change decision makers are required to create different options in advance (Sanchez 1995; Sharfman and Dean 1997). That is, if decision makers do not possess capabilities for strategic flexibility, strategic flexibility will not exist. Hence, strategic flexibility has also been connected to strategic decision making and defined as the degree to which a firm takes into consideration and builds new and alternative options in strategic decision making (e.g., Aaker and Mascarenhas 1984; Sharfman and Dean 1997; Greenley and Oktemgil 1998; Fiegenbaum and Karnani 1991). The idea of resource de-commitment is a requirement for effectively applying strategic flexibility in modifying or creating new product-market strategy when an opportunity or a threat emerges (Harrigan 1980). Readiness of a firm to de-commit gives space to a new or altered strategy option and enables new strategic decision implementation success (Simonson and Staw 1992; Heath 1995). In addition, de-commitment and commitment of resources to alternative strategic decisions also promotes coordinative behaviour that enables the effective synchronisation of diverse activities in the implementation process (Guth and MacMillan 1986; Dooley et al. 2000). This approach connects strategic flexibility to the real options approach as it implies that although a firm freely assesses and controls for environmental
challenges it should also be proactive to secure additional assets and resources that create alternatives or options which, in turn, allow for more control to the firm. The following section will continue with the literature review with a special focus on the work done within the marketing area.

2.3.3 Flexibility within the marketing literature

Recently, literature has pointed out the importance of examining flexibility in marketing. A key assumption behind this approach is the connection of flexibility and adaptations to marketing issues that deal with the capacity to make changes in the product mix and in balancing supply to demand (Dreyer and Grønhaug 2012). The main challenge that companies face is keeping in touch with changing customer needs and competitor strategies by creating a flexible, responsive organisation (Combe and Greenley 2004; Chaudhury and Gray 2008; Lusch and Webster 2010; Mason and Mouzas 2012). These changes create new opportunities that require new ways of thinking and place requirements on firms to realign to the evolving markets. Recent studies have created an explicit link between issues in marketing and flexibility. Johnson et al. (2003) assert that without being market-focused, any type of flexibility will not afford sustainable competitive advantage and that even currently effective marketing programs can be derailed by the market environment. Market-focused strategic flexibility is defined in terms of a “firm’s ability to quickly change directions and reconfigure strategically, particularly with regard to products and markets” (Johnson et al. 2003, p. 74). Within a marketing context, a firm’s ability to redefine its strategies and to reconfigure and redeploy resources with respect to its products and markets, is defined as strategic flexibility (e.g., Sanchez 1995; Grewal 1996).

In addition to above discussed approaches and definitions of flexibility, literature has also investigated other types of organisational flexibilities such as financial flexibility (e.g., Rudd et al. 2008), structural flexibility (e.g., Huber and McDaniel 1986) or technological flexibility (e.g., Perry et al. 1995). Studies also examine inter-firm flexibility (e.g., Gassenheimer et al. 1995; Ivens 2005), supply chain flexibility (e.g., Cannon and Homburg 2001), flexibility enabled by Internet technology usage and flexibility in information technology infrastructure (e.g., Skjøtt-Larsen et al. 2003; Lee and Xia 2005), work-team and job flexibility (e.g., Campion et al. 1993, 1996; McComb et al. 2007; Günsel and Açıkgoz 2013), and flexibility in R&D projects (e.g., Huchzermeier and Loch 2001; Santiago and Bifano 2005; Buganza et al. 2010) etc.
and Tansuhaj 2001; Johnson et al. 2003). Sanchez (1995) further differentiates between ‘resource flexibility’ - the flexibility inherent in product-creating resources - and ‘coordination flexibility’ - the flexibility in coordinating the use of such resources. According to Sanchez, the flexible use of resources is of particular importance as the way in which firms use resources may enhance or put constrains on strategic flexibility.

Following Sanchez’s idea of strategic flexibility, Li et al. (2008) and Yuan et al. (2010) empirically investigate the impact of strategic flexibility on increasing indigenous firm innovation and on product innovation-related profit in uncertain and highly competitive environments. Importantly, they find a positive impact of flexibility in the coordinated use of resources on these outcome variables.

Given that firms are resource constrained, successfully leveraging of firm’s resources is considered fundamental in taking advantage of emerging customer needs and that the flexibilities in resource management further ensure that a firm keeps up with the changing customer and market needs (Johnson et al. 2003; Matzler et al. 2003), it is the flexible leveraging of existing resources that is of special interest in the present research.

**Importance of resources in research on flexibility**

Increasing external business environmental turbulence has emphasised the importance of resources and organisational capabilities as the main sources of sustainable competitive advantage (Grant 1996). A key specific issue that has emerged across all disciplines is the consensus (explicitly or implicitly) with regards to the key role played by a firm’s capabilities in flexible resource management (e.g., Grewal and Tansuhaj 2001; Johnson et al. 2003; Dreyer and Grønhaug 2004; Shimizu et al. 2004; Zúñiga-Vicente and Vicente-Lorente 2006; Li et al. 2008; Yuan et al. 2010; Cadogan et al. 2012). Distinctive firm’s competence can become quickly obsolete by continuous and considerable changes in the environment (Sirmon et al. 2007). A firm’s competence may not remain distinctive for long, or the advantage may remain but lose its value because competitors develop new competencies that create superior value for customers. Flexibility emerges as a response to difficulties
facing firms in such environments, enabling firms to maintain their advantage while making the most of its available resources (Martínez-Sánchez et al. 2009; Dreyer and Grønhaug 2012). Deployment of organisational resources in a diverse and frequent manner becomes critical for strategic flexibility (Fombrun and Ginsberg 1990; Nadkarni and Narayanan 2007). Indeed, strategic flexibility is argued to reflect firm’s ability to redeploy its assets with a synchronised effort across the organisation (Harrigan 1980, 2001; Aaker and Mascarenhas 1984). Firms require that ability to reconfigure resources and activities in order to capture and control for the effects of environmental uncertainty (Wright and Snell 1998; Adler 2000). Such successful control and exploitation of resources may be the reason why, for example, certain firms move quicker than competitors into new niches (Fombrun and Ginsberg 1990; Eisenhardt and Martin 2000).

Continuous renewal and reassembling of the existing resources into new types of capability is required for maintenance of superior firm performance (Grant 1996). In the context of product innovation, Sanchez (1995) asserts how flexibility in existing resources can be maximised by their re-synthesis through organisational structures. According to Kogut and Kulatilaka (2001), availability and deployment of resources in the firm are a pre-requisite for strategic flexibility and for securing the commitment to implementing a firm’s product-market strategy. A firm’s ability to reconfigure its assets and activities is, thus, considered a critical capability that will enable firms to respond to environmental challenges and to gain competitive advantage over those that are lacking such capability (Dyer and Singh 1998; Wright and Snell 1998). Flexibility enables uncertainty management through flexible resource utilisation and coordination (Fredericks 2005). Especially within the context of achieving superior product market positions, researchers have emphasised the importance of marketing resources and their deployment whose manipulation is aimed at satisfying customers’ ever changing needs (e.g., Dierickx and Cool 1989; Katila and Shane 2005). Previously valuable resources and capabilities can be easily rendered by changes in customer tastes, technology or industry structure. Deployment of marketing resources in a way to reflect adaptiveness to changing conditions in the market helps firms maintain their advantage (Vakratsas and Ma 2009). Henderson
and Cockburn (1994) contend that stability may result in locking the firm’s resources into out-of-date products and services which negatively affects performance (Nerkar and Roberts 2004).

Therefore, flexible management and leveraging of a firm’s resources is required for achievement and maintenance of a firm’s competitive advantage. Although literature argues for a variety of strategies that can lead to superior performance (e.g., sale of redundant resources, repositioning), the preceding discussion emphasises the importance of redeployment of resource as an additional way of performance enhancement (Capron and Hulland 1999).

For a flexible resource management to yield its potential advantages it also requires integrated efforts and a harmony across firm’s business relations (both internal and external) (Ahmed et al. 1996; Anand and Ward 2004; Hughes et al. 2012). In the inter-organisational context, partners’ cooperation is seen as a dynamic process in which partners continuously adapt to each other in the course of their relationship (e.g., Young et al. 2003; Ivens 2005; Wang and Wei 2007). Considering the argued importance of flexibility in business relations for successful exchange interactions between business actors, the next section will firstly focus on the literature on flexibilities in external business relationships. The attention will subsequently be given to discussion on intra-firm relationship flexibility. At the intra-firm level, literature includes works on flexibility in teams (e.g., McComb et al. 2007) and inter-departmental relationships (Cadogan et al. 2012).

2.3.3.1 Flexibility in inter-organisational relationships

Flexibility in inter-organisational business relationships has been studied in several research streams: supply chain management (e.g., Gassenheimer et al. 1995; Duclos et al. 2003; Young et al. 2003; Giunipero et al. 2005; Wang and Wei 2007), strategic alliances (e.g., Johnson 1999; Young-Ybarra and Wiersema 1999; Ivens 2005) and export trade alliances (e.g., Bello and Gilliland 1997). Research has identified flexibility as a core competency in relationships and a key factor in ensuring the continuance of industrial market relationships (e.g., Turnbull et al. 1996;
Bello and Gilliland 1997; Brennan and Turnbull 1997, 1999). Flexibility in inter-organisational relationships enables firms to acquire resources and to build competitive capabilities, it leads to increased productivity profits and sales, and improves customer retention, loyalty and satisfaction (Hailén et al. 1991; Hernández-Espallardo and Arcas-Lario 2003; Samiee and Walters 2003).

Researched from the relational contracting perspective (Macneil 1977; 1980b), inter-organisational relationship flexibility (including supply chain literature, export trade relations research and strategic alliances) is represented as the relational contracting norm that reflects the willingness and capability of trading partners to make alterations to their initial agreements in order to increase their adaptability to changes and challenges and to adjust to each other's needs and requests (e.g., Heide 1994; Bello and Gilliland 1997; Young et al. 2003; Wang and Wei 2007). Flexible adjustment processes (operationalised as a bilateral relational measure) reflect the normative mechanism of coordination between inter-organisational actors (e.g., Young-Ybarra and Wiersema 1999) (see Table 4 for definitions and operationalisation of flexibility in inter-organisational relations). From relational exchange perspective (usually applied as the theoretical background in these studies), flexibility is seen as the common mutual expectation and the insurance in the relationship that partners will act and make modifications in good faith (Heide and John 1992; Macneil 1980a; Ivens 2005). One actor's absence of flexibility will have an impact on the other actor experiencing the loss of value in the relationship (Ivens 2005). Flexibility serves as a relationship governance mechanism ensuring that the parties will remain in the relationship without exhibiting opportunistic tendencies or resorting to series of costly new contracts and renegotiations (Macneil 1980b; Volberda 1996a; Dyer and Singh 1998). Such flexibility implies the ability of partners to better explore and utilise their resources (Wang and Wei 2007).

Furthermore, flexibility at the level of the relationship is argued to reduce uncertainties in the relationship and increase the productivity of the existing knowledge (Young et al. 2003; Stevenson and Spring 2007). Inherent within flexible relationship is the mutual trust, information sharing and commitment between the partners (Pérez and Sánchez 2001). Flexibility in trading relationships is also argued
to stimulate the speed and ease of response to new knowledge, new technologies and market changes (Sanchez 1995; Sanchez and Mahoney 2002). With an increase in flexible behaviour trading partners increasingly adapt their obligations and responsibilities. This may lead to higher performance outcomes than those that can be yielded by strictly following the initial formal agreement (Doz and Hamel 1998). Within the export trading context, Bello and Gilliland (1997) see flexibility as the bilateral cooperation which takes the form of mutual adjustments made by both parties. They argue that flexibility restrains the parties from opportunist behaviour, that parties engage instead in coordinated and joint activities, and that their relationship is characterised by flexible negotiations based on developed shared values and norms. Within such an inter-organisational partnership each partner achieves its goals in a bilateral system through joint activities and mutual concern for the system’s long-term benefits, rather than pursuing their individual tendencies at the expense of the other (Heide 1994). More recently, research on flexibility in marketing has shifted to a focus on flexibility as it manifests itself in the intra-organisational relationship context. This is reviewed in the next section.

2.3.3.2 Flexibility in the intra-organisational context

In an intra-organisational context, investigations of flexibility are drawn from the human resources management and psychology literatures. The main issues discussed are those investigating non-standard employment forms, such as for example, part-time work (e.g., Atkinson et al. 1984; Atkinson and Meager 1986; Grenier et al. 1997). Studies also investigate flexibilities inherent in project teams in terms of their autonomy and diversity (Günsel and Açikgöz 2013), response efficiency and effectiveness (Lee and Xia 2005), job assignments (Campion et al. 1993, 1996) and the ability to efficiently and effectively respond to socio-technical changes during their participation in the software development project (Yuan et al. 2010). McComb et al. (2007) define project team flexibility as the entity’s ability to assess their behaviour and structure and to make the necessary modifications and radical alterations accordingly. In the project team context, flexibility is seen as the manner of team member’s functioning within a dynamic project environment. At a
team level (rather than at a team member’s level), flexibility is defined as the project-level organisational ability to effectively and efficiently respond and adapt to changes in the business environment (Yuan et al. 2010). It is a critical factor for project success (Lee and Xia 2005) as it is argued to assist team members’ find original, new and creative solutions to problems (Georgsdottir and Getz 2004). Project team flexibility enables the flexible utilisation of resources by team members for the duration of the project and as needed for responding to environmental changes (Lee and Xia 2005). It also allows for task shifting among team members, achievement of compromise between competing alternatives and movement of resources from unproductive to productive uses (Ford and Randolph 1992; Campion et al. 1993).

Project team flexibility is mostly measured in terms of team member’s (or employee) ability to perform different job roles (e.g., McComb et al. 2007), in terms of team’s autonomy and team’s diversity (Günsel and Açikgöz 2013) (see Table 4 for the operationalisation of team flexibility in the extant research). A key difference between project team flexibility and inter-functional flexibility warrant separate investigation of inter-functional relationship flexibility within the intra-firm context. Project teams, unlike functional groups, are created for finite time periods, they focus on a specific project, have short-term goals and work towards a predefined deadline (Kolodny 1979; Jerkovsky 1983; Ford and Randolph 1992). Environmentally stimulated issues that organisations face require complex and frequent responses that cut across departmental boundaries and require the interdependent co-working of different functional units (Kolodny 1979; Hughes et al. 2012). Yet, investigations of flexibility at the cross-functional relationship level are still scarce. The limited empirical research that exists in the area of flexibility in inter-departmental relationships investigated ‘export coordination flexibility’ and shows the positive effects of such coordination flexibility in enhancing business performance in export marketing (Cadogan et al., 2012). However, ‘export coordination flexibility’ is measured in terms of export employees’ collaborative relations with other departments in the organisation. Based on the acknowledged importance of flexible resource leveraging for achievement of sustainable competitive advantage, this thesis approaches intra-organisational relational flexibility from the aspect of flexible resource management.
while at the same time embedding the research within the specific inter-departmental relationship in the organisation, i.e., M&S relationship).
<table>
<thead>
<tr>
<th>Authors</th>
<th>Empirical approach</th>
<th>Focus of the study</th>
<th>Definition</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noordewier et al. 1990&lt;br&gt;Cannon and Homburg 2001</td>
<td>Quantitative</td>
<td>Supplier flexibility (Inter-organisational)</td>
<td>Supplier flexibility - ability to react to unforeseen (and unforeseeable) changes contingencies that could not have been predicted beforehand</td>
<td><strong>Supplier flexibility:</strong>&lt;br&gt;Supplier is flexible in response to requests we make.&lt;br&gt;Supplier can readily adjust its inventories to meet unforeseen needs that might occur.&lt;br&gt;Supplier handles change well.&lt;br&gt;Supplier can provide emergency deliveries.</td>
</tr>
<tr>
<td>Campion et al. 1993; 1996</td>
<td>Quantitative</td>
<td>Member flexibility (Intra-organisational)</td>
<td>Flexibility in job assignments (ability to perform each other’s jobs within a group)</td>
<td><strong>Flexibility:</strong>&lt;br&gt;Most members of my team know each other's jobs.&lt;br&gt;It is easy for the members of my team to fill in for one another.&lt;br&gt;My team is very flexible in terms of changes in membership.</td>
</tr>
<tr>
<td>Gassenheimer et al. 1995</td>
<td>Quantitative</td>
<td>Flexibility in supply chain (Inter-organisational)</td>
<td>Bilateral expectation of willingness to make adaptations as circumstances change</td>
<td><strong>Flexibility:</strong>&lt;br&gt;Ability to expedite and/or provide rush service on product orders.&lt;br&gt;Timely responses to requests for assistance from manufacturer's sales representative.&lt;br&gt;Action on complaints related to order servicing and shipping.&lt;br&gt;Manufacturer’s responsiveness to emergency/unusual needs.</td>
</tr>
</tbody>
</table>
| Bello and Gilliland 1997 | Quantitative | Flexibility in Export Channels (Inter-organisational) | Parties' expected flexibility in response to changing channel circumstances | **Flexibility:**<br>Flexibility in response to requests for changes is a characteristic of both parties.<br>Both parties are open to each other's request to modify a prior agreement.<br>When some unexpected situation arises, both parties would rather work out a new deal than hold each other to the
<table>
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<tr>
<th>Author(s)</th>
<th>Methodology</th>
<th>Concept</th>
<th>Definition</th>
<th>Original Terms</th>
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</table>
| Calantone and Dröge 1999  | Quantitative| Supply-chain flexibility (Inter-organisational) | The ability to adapt to change. Supply chain flexibility is defined to encompass those flexibilities that directly impact a firm's customers (i.e., flexibilities that add value in the customer's eyes) and are the shared responsibility of two or more functions along the supply chain, whether internal (e.g., marketing, manufacturing) or external (e.g., suppliers, channel members) to the firm. | Product flexibility (customization): The level of ability to handle difficult, nonstandard orders; to meet special customer specifications; and to produce products characterized by numerous features, options, sizes or colours.  
Volume flexibility:  
The ability to rapidly adjust capacity so as to accelerate or decelerate production in response to changes in customer demand.  
New product introduction (i.e., launch flexibility):  
The ability to rapidly introduce large numbers of product improvements/versions or completely new products.  
Widespread distribution (i.e., access flexibility):  
The ability to effectively provide widespread and/or intensive distribution coverage.  
Responsiveness to target market(s): The ability to respond to the needs and wants of the firm's target market(s). |
| Johnson 1999              | Quantitative| Flexibility in inter-firm relationships (Inter-organisational) | Firm's willingness to respond to changes and accommodate their partners as the need arises.                                                                                                               | Flexibility: In our relationship with our major supplier we are willing to make adjustments for any reasonable changes as the need arises.  
In our relationship with our major supplier we can readily adjust its inventories to meet unforeseen needs that might occur.  
In our relationship with our major supplier we handle change well.  
In our relationship with our major supplier we can provide emergency deliveries. |
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<tr>
<th>Author and Year</th>
<th>Methodology</th>
<th>Concept</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Wathne and Heide 2000</td>
<td>Quantitative</td>
<td>Flexibility in supply chain (Inter-organisational)</td>
<td>Flexibility describes the retailer's perception of the apparel company's flexibility in the focal relationship. In this relationship the apparel company is open to the idea of making changes even after we have made an agreement. In this relationship the apparel company makes it possible for us to make adjustments to cope with changing circumstances. This apparel company is open to modifying our agreement if unexpected events occur. If a situation arises in which we have different assumptions about our agreement this apparel company is open to working out a new deal that is acceptable to both of us. When unexpected situation arises and we disagree on how to proceed, this apparel company is open to working out a new deal that is acceptable to both of us. If our views differ regarding events in our relationship this apparel company is open to developing a common understanding.</td>
</tr>
<tr>
<td>Young et al. 2003</td>
<td>Quantitative</td>
<td>Governance flexibility (supply-chain context) (Inter-organisational)</td>
<td>Governance flexibility: If some unexpected situation had come, this relationship probably would have worked out a new deal rather than hold each other to the original terms If it had been considered necessary, then changes in fixed prices would not have been ruled out in this relationship If there had been any request for a change, then this relationship probably would have</td>
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<tr>
<td>Study</td>
<td>Methodology</td>
<td>Type of Flexibility</td>
<td>Description</td>
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<tr>
<td>Young-Ybarra and Wiersema 1999</td>
<td>Quantitative</td>
<td>Strategic Flexibility in IT Alliances (Inter-organisational)</td>
<td>Modification flexibility: ability of partners to adjust their behaviors or the terms of the agreement in response to changes in the environment or to the needs of their partners. Exit flexibility: ability to exit an alliance performing poorly.</td>
</tr>
<tr>
<td>Johnston et al. 2004</td>
<td>Quantitative</td>
<td>Strategic Flexibility in IT Alliances (Inter-organisational)</td>
<td>Modification flexibility: When an unexpected situation arises, the parties would rather modify the agreement than hold each other to the original terms. Exit flexibility: Flexibility in response to requests for changes is a characteristic of this alliance. The parties expect to be to make adjustments in the ongoing relationship to cope with changing circumstances.</td>
</tr>
<tr>
<td>Giunipero et al. 2005</td>
<td>Qualitative/Quantitative</td>
<td>Purchasing/supply chain management flexibility (Inter-organisational)</td>
<td>P/SM flexibility skills as the degree to which purchasers act entrepreneurially in managing risk, making decisions, planning, using interpersonal communication, applying influence and persuasion, being internally motivated, and finding creative solutions to business problems. P/SM flexibility skills in categories: (How flexible are you in:) (1) Planning; (2) Decision Making; (3) Creativity; (4) Risk Management; (5) Internal Motivation; (6) Influencing and Persuasion; and (7) Interpersonal Communication.</td>
</tr>
<tr>
<td>Ivens 2005</td>
<td>Quantitative</td>
<td>Flexibility in industrial service relationships (Inter-organisational)</td>
<td>Flexibility: The service provider shows flexible reactions to demands for modifications in data collection (e.g. sample size, content, timing, etc.). The service provider shows flexible reactions to demands for modifications in data analysis (breadth, depth, categories, etc.). The service provider shows flexible reactions to demands for modifications in data presentation (place, time, extent, etc.).</td>
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<tr>
<td>Author</td>
<td>Methodology</td>
<td>Category/Type</td>
<td>Description</td>
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<tr>
<td>Wang and Wei</td>
<td>Quantitative</td>
<td>Supply chain flexibility (inter-organisational relationship) (Inter-organisational)</td>
<td>Supply chain flexibility represents the willingness and capability of trading partners to modify their initial arrangements to improve their adaptability to new changes and challenges in supply chains (Evans, 1991; Young et al. 2003). Two types of supply chain flexibility, namely offering flexibility and partnering flexibility, are identified in the literature (Gosain et al. 2004). Offering flexibility refers to the ability of a supply chain to support changes in product offering with current partners, while partnering flexibility represents the ease of changing supply chain partners.</td>
</tr>
<tr>
<td>Lee and Xia</td>
<td>Qualitative/Quantitative</td>
<td>Information systems development projects (ISDP) team flexibility (Intra-organisational)</td>
<td>ISDP team’s ability to effectively and efficiently respond to business and technology changes. Two dimensions (1) extent of ISDP team response and (2) extent of ISDP team relationship.</td>
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</tbody>
</table>
effort required by the ISDP team to respond to change. The first dimension represents the extensiveness of ISDP team response and is related to such scope dimensions as range and variety. The second dimension represents the efficiency of ISDP team response and encompasses such efficiency dimensions as time, cost, and difficulty.

Response efficiency:
How much additional effort was required to incorporate each of the following changes?
- System scope
- Delivery time
- System input data
- System output data
- Business rules/processes
- Data structure
- User interface
- Programming tools/languages
- IT architecture
- Network/telecom environment
- Other interfaced systems
- IT infrastructure

**McComb et al. 2007**
Quantitative Team flexibility (project teams) (Intra-organisational)

**Flexibility**
Team members adapt their working style to complement the team.
Team members adjust their approach(es) to overcome obstacles.
Team members change the way they perform a task when necessary.
Team members easily handle a variety of...
The team frequently experiments with alternative ways we might accomplish our work. The team is highly imaginative in thinking about new or better ways to complete our task(s).

<table>
<thead>
<tr>
<th>Li et al. 2008</th>
<th>Quantitative</th>
<th>Resource flexibility</th>
<th>Capability flexibility (Intra-organisational)</th>
<th>Resource flexibility:</th>
<th>Capability flexibility:</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Resource flexibility - the range of alternative uses to which a resource can be applied; the cost and difficulties of switching from one use of the resource to another and the time required to switch one use of the resource to another.</td>
<td>Capability flexibility - firm’s ability to efficiently integrate and deploy internal and external resources by exploring ways to create much more value, rapidly seeking out new opportunities in uncertain environments to make extraordinary benefit, and to choose proactive strategies in new business areas to obtain competitive advantage.</td>
<td>The degree of utilisation of the same resources in developing, producing and selling different products and after-sales services is high. The difficulty of switching from one use of firm’s main resources to an alternative use is lower among different units of the firm. The process of finding new uses of existing main resources through communication between units does not require much time and cost.</td>
<td>The capability of creating first-mover advantage. The capability of shortening the time of R&amp;D and marketing for new products. The capability of managing in an uncertain competitive environment. The capability of dealing with changes. The capability of efficiently using human resources in R&amp;D. The capability of efficiently discovering new uses of technology resources and equipment.</td>
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<tr>
<td>Authors</td>
<td>Methodology</td>
<td>Type</td>
<td>Description</td>
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<tr>
<td>Li et al. 2010</td>
<td>Quantitative</td>
<td>Software development team flexibility (Intra-organisational)</td>
<td>The extent to which a software development team can effectively and efficiently respond to socio-technical changes in the course of a software development project.</td>
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<td></td>
<td></td>
<td><strong>Flexibility:</strong></td>
<td>The projects adapted software to changes in business with cost efficiency.</td>
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<td></td>
<td>The projects rapidly adapted software to changes in business requirements.</td>
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<td></td>
<td>The projects achieved overall long-term flexibility of software.</td>
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<tr>
<td>Yuan et al. 2010</td>
<td>Quantitative</td>
<td>Resource flexibility Coordination flexibility (Intra-organisational)</td>
<td>Resource flexibility – the range of alternative uses to which a resource can be applied; the cost and difficulties of switching from one use of the resource to another and the time required to switch one use of the resource to another. Coordination flexibility - firm's capability to effectively and efficiently integrate and deploy internal and external resources by exploring ways to create greater value, and rapidly obtain extraordinary benefit and competitive advantage in an uncertain environment.</td>
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<td></td>
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<td><strong>Resource flexibility:</strong></td>
<td>The degree of utilising the same resources in developing, producing, and selling different products and after-sale services is high. New uses of resources can be found easily. The difficulty and the cost of switching from one use of resources to another are low. The time of switching from one use of resources to an alternative one is short. <strong>Coordination flexibility:</strong> We often find new uses and/or new combinations of existing resources. We often find new uses and/or new combinations of external resources. We can rapidly deploy resources through organisational systems and processes to targeted uses. We can cope with emerging problems well to benefit from changing environmental conditions.</td>
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<tr>
<td>Cadogan et al. 2012</td>
<td>Quantitative</td>
<td>Export coordination flexibility (Intra-organisational)</td>
<td>Coordinated strategy definition Reconfiguration of internal resources to align with strategy Coordinated implementation of new marketing strategies</td>
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<td><strong>Export coordination flexibility:</strong></td>
<td>Employees in the export unit and those in other functional areas (e.g., R &amp; D) help each other out. In this company, there is a sense of teamwork going right down to the ‘shop floor’.</td>
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</table>
There is a strong collaborative working relationship between export and ‘production’. Functional areas in this company pull together in the same direction. The activities of our business functions (e.g., marketing/sales, manufacturing, R&D, finance/accounting, etc.) are integrated in pursuing a common goal. We resolve issues and conflicts through communication and group problem-solving.

<table>
<thead>
<tr>
<th>Günsel and Açikgöz 2013</th>
<th>Quantitative</th>
<th>Software teams flexibility (Intra-organisational)</th>
<th>Two dimensions of software team flexibility: software team autonomy and software team diversity. Software team autonomy refers to the extent to which the team has the freedom to make its own project-related decisions and conduct its work the way its members deem fit without interference from senior managers outside the team. Team diversity refers to the composition of the team in terms of the backgrounds and functional expertise</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Team Autonomy:</strong></td>
<td>The project team was allowed to freely choose tools and technologies. The project team had control over what they were supposed to accomplish.</td>
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<td></td>
<td></td>
<td><strong>Team Diversity:</strong></td>
<td>The members of the project team had skills that complemented each other. The members of the project team had a diversity of different experiences. The members of the project team varied in functional backgrounds.</td>
</tr>
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</table>
2.3.3.2.1 Flexibility within the M&S relationship context

Hughes et al. (2012) indicate that efficient resource exploitation and capabilities development necessitate harmony across a firm’s internal functions. In the context of inter-organisational relationships, Anand and Ward (2004) assert that inter-organisational partnership can be successful only if the two firms are able to leverage their resources through redeployment. Resources are defined as "the tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment or segments" (Hunt and Morgan 1995, p. 6). The working definition of ‘leveraging’ for the present study includes mobilisation, coordination and deployment of resources and capabilities to create solutions, to take advantages of market opportunities and to deal with market threats (Kazanjian et al. 2002). Therefore, the main interest of this thesis is leveraging of M&S resources in a flexible manner. Unlike prior theoretical and empirical work that measured flexibility in terms of the overall organisation’s capability to flexibly manage its resources (Li et al. 2008; Yuan et al. 2010), this thesis focuses on the cognitive attitudes and behaviours governing M&S in the process of flexible configuration of its resources. The term M&S (inter-functional) interface flexibility - MSIF - is used to denote the enactment of shared resource adjustments in inter-functional coordinative exchange efforts. As flexibilities that govern buyer-seller relationships are argued to have an impact on knowledge productivity (Young et al. 2003), interface flexibility is argued to have an impact on productivity of resources subject to the synchronised modification efforts of both parties. In the same way that organisations are urged to recognise that many performance aspects of their export activities are linked to the joint achievements of channel members and require collaborative adaptations of their external partners (Bello and Gilliland 1997), so too are organisations advised to acknowledge the importance of internal collaborative adaptations between departments within an organisation. Furthermore, as the complementary resource endowments collectively generate greater benefits than the sum of individual investments of the partners in the strategic alliance (Dyer and Singh 1998), this same synergy exists in the M&S exchange relationship. It can be argued that the resources of M&S highly
complement each other (e.g., Shapiro 2002; Rouziès et al. 2005) as these are the two functions that are traditionally responsible for managing market relationships (Homburg et al. 1999; Homburg et al. 2000) and customer satisfaction (Cespedes 1994). As Cespedes (1993, p. 54) asserts, although: "Marketing and Sales hear with different ears…both perspectives are necessary". Each group has a focus on different aspect of task and each has a different perspective, but both groups are responsible for delivering corporate volume and profitability (Dewsnap and Jobber 2002). In this thesis M&S interface flexibility - MSIF - is seen as flexibility that requires joint action; i.e., dyadic collaboration and coordination across a variety of activities (Gulati and Sytch 2007), and it is the shared responsibility of both functions. M&S acting jointly on environmental opportunities and threats and sharing responsibility in creating a response promotes the willingness of the two to carry out activities in a coordinated and cooperative manner (Heide and John 1990).

Such flexibility seen as a form of cooperative behaviour is associated with joint activities (Josi and Campbell 2003; Johnston et al. 2004) and encourages participative decision making. This, in turn, enables parties to adjust to marketplace uncertainty (Murphy and Poist 1992) increasing their willingness to search for innovative solutions to problems (Heide and John 1992). Greater flexibility will make M&S more adaptable in the face of market demands, enabling them to consider and handle both perspectives in an effective and satisfying way (O'Connor et al. 2003; McComb et al. 2007). Higher flexibility levels between the two will ensure that the diverse competencies residing in the two departments are made available to both departments and are combined to create the space for creative and novel strategies to emerge with flexible adaptations accurately and appropriately targeted at market opportunities and market threats (Diamantopoulos and Cadogan 1996; Håkansson and Ford 2002; Georgsdottir and Getz 2004; Rangarajan et al. 2004; Cadogan et al. 2012). Improved flexibility enables easy disengagement of their resources from unproductive to productive uses (Kolodny 1979; Jerkovsky 1983; Larson and Gobeli 1987; Ford and Randolph 1992). Bilateral investments become credible commitments in their exchange relationship (Zaheer and Venkatraman 1995). This results in joint motivation that further encourages flexibility in response to changes.
(Young-Ybarra and Wiersema 1999). When investments in MSIF are high, responses are coordinated and consensus is more easily reached as they synthesise their efforts and jointly determine required activities (Bello and Gilliland 1997). By jointly making decisions it is assured that the issues they face are correctly understood (Rouziès et al. 2005). Availability of functional inputs ensures that a sense of ownership of the decisions they make is shared, a sense of decision making consistency is created, and the required resources are more easily identified and aligned (Sethi 2000; Steward et al. 2010). Joint action provides support for sharing resources flexibly and ensures that their responses to demands of the environment are implemented cohesively and in timely fashion, all of which results in successful implementation of activities (Diamantopoulos and Cadogan 1996; Christopher 2000). Furthermore both perspectives - Marketing’s ostensibly strategic and Sales ostensibly tactical - are in alignment ensuring that the best interests of the organisation and the customer are taken into consideration (Ernst et al. 2010). Their points of views will be less entrenched in their approaches to projects and various judgements will play a role in the creation of solutions in a flexible manner (McComb et al. 2007). When M&S exhibit flexibility in their behaviour towards each other, good intentions towards the relationship are implicitly communicated (Johnson 1999). The relational contracting literature describes the relational norm of flexibility as good faith modification and, as a result, a sense of mutuality and connectivity is built (Macneil 1980b; Noordewier et al. 1990).

However, the literature is replete with warnings regarding the conflictual relationship between M&S (e.g., Kotler et al. 2006). Their different orientations and priorities of M&S creates a fruitful ground for conflict to emerge (e.g., Katz and Allen 1985; MatthysSENS and Johnston 2006; Homburg and Jensen 2007). It is not uncommon to find these two functions working at cross-purposes (Kotler et al. 2006). In such instances, redeployment of resources between the two will not be smooth, or guaranteed, and implementation may be impeded if they are in conflict, or are simply not aligned in their efforts to make the strategy work (Cadogan et al. 2005).

Lack of flexibility will “sooner or later–threaten the continuity of any relationship” (Ivens 2005, p. 574). Flexibility in the two will ensure that M&S remain unified in their
efforts to respond to an opportunity or a threat, and as flexibility brings about more flexibility, will ensure the willingness of the two to exhibit flexibility in the future (Thibaut and Kelley 1959; Homans 1961; Blau 1964; McComb et al. 2007).

In defining MSIF, the theoretical framework on strategic flexibility (e.g., Evans 1991; Bahrami 1996; Volberda 1999) is revisited and the measure of interface flexibility subsequently developed. MSIF is identified in terms of M&S’s utilisation of shared resources in a flexible manner to capture market opportunities and to minimise threats. It is the ability to generate new combinations of the existing resources - what Kogut and Zander (1992) refer to as ‘combinative capabilities’. Flexibility requires mutual effort, resources and knowledge and the ability to act within the limits of the resources that are at their disposal. Through MSIF, M&S are in continuous re-alignment, creating novel linkages in the resources and eliminating unproductive ones so as to deal with market exigencies. Their cross-functional exchange will focus on value-creating, coordinated interactions.

**MSIF reflects the Marketing & Sales redefinition, reconfiguration, realignment and redeployment of marketing and sales resources.**

MSIF in this case is seen as an integrative process in which M&S use their resources to fulfil the market related needs of business (Helfat and Peteraf 2003; Vorhies and Morgan 2005). Their flexible utilisation is seen as the continuous redesign of these resources into new configurations (Sirmon et al. 2007).

The term ‘resources’ is used broadly to reflect assets, knowledge, information, and processes and capabilities (Barney 1991, 2001; Day and Nedungadi 1994). MSIF reflects the degree to which their available resources can be re-combined into valuable outcomes (Dierickx and Cool 1989).

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4 As a detailed discussion on the classification of resources and capabilities is beyond the scope of this thesis, reader is addressed to read the works of Olavarrieta and Ellinger (1997), Barney (2001) and Srivastava et al. (2001) for a more detailed discussion.
Flexibility has been proven empirically to be more beneficial in turbulent environments (e.g., Grewal and Tansuhaj 2001; Nadkarni and Narayanan 2007). However, MSIF is argued to yield superior results regardless of the turbulence in the environment. Through enhancing their willingness to look for novel and creative ways to complete their tasks and to combine and integrate different approaches, they will create the basis for addressing multiple approaches to problem solving or opportunity taking (McComb et al. 2007).

To summarise, relational flexibility perspectives and specifically inter-organisational relationship flexibility, present an important point of difference with this thesis. With the exception of three empirical studies (Bello and Gilliland 1997; Young-Ybarra and Wiersema 1999; Wang and Wei 2007) the empirical research reviewed in connection with inter-organisational flexibility measures flexibility as the willingness of one partner when asked, to make adjustment for the other partner, thus focusing on one side modifications. Therefore, flexibility is assessed as one-sided willingness to make necessary adjustments. Second, the focus of these studies is not the ability to utilise resources, even though it is asserted that flexibility in inter-organisational relations imply the ability of partners to better utilise their resources (Wang and Wei 2007). The analysis and measurement of flexibility in this thesis is an attempt to approach relational (interface) flexibility from arguably the crucial aspect of flexible resource management. In this, this research draws from the social exchange theory (SET) and views the exchange of resources between the two as a dynamic process (e.g., Hailén et al. 1991). The next section introduces the SET and shows the relevance of applying this particular theoretical framework to investigate MSIF.

2.4 The theoretical underpinning of the study

The Oxford Companion to Philosophy (Honderich and Masters 2005) defines a ‘theory’ as "an attempt to bind together (in) a systematic fashion the knowledge that one has of some particular aspect of the world of experience" (p. 870).

In what follows, the reasons for the usefulness of social exchange theory and contingency theory are put forward, as well as the propositions these theories
contain. Thus, this provides an attempt to systematically bind together the knowledge of that part of the world this research is interested in exploring. The proposed research emerges from the theory of differentiation and integration which posits that when organisations exhibit differentiation based on departmentation, departments need to be integrated in order to achieve organisational goals (Lawrence and Lorsch 1967). Such specialisation and functional differentiation results in interdependencies among parties (Reve and Stern 1979). In the marketing context specifically, resource dependence is a key variable influencing the interactions between Marketing and other departments (Ruekert and Walker 1987a). This research focuses on the need for differentiation and integration between interdependent M&S and the accepted standpoint that the exchange of resources between the two departments is a pre-requisite for achieving organisational goals (Ruekert and Walker 1987a; Dawes and Massey 2005). These concepts are then extended by focusing on the issues of flexibility in the reciprocal coordination efforts and resource flows between these two departments embedded within the notion of MSIF. In order to address these issues and for explicating the exchanges of tangible and intangible resources between M&S departments (Homans 1961) it is proposed that the appropriate theoretical perspective to underpin this study is the social exchange theory (hereinafter, SET) (Blau 1964). Further, the research posits that the potential of MSIF to impact organisational performance will be contingent on the firm’s ability to accommodate the potential environmental impact on the relationship (Donaldson 2001). To explore this contingency, the research is also underpinned by the contingency theory (Donaldson, 2001).

2.4 Social Exchange Theory (SET)

Marketing as a discipline has been viewed as "a social process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others" (Kotler 1984, p. 4), making the exchange a social process central to the study of marketing as a discipline (Lambe et al. 2001).
A social exchange begins with the explanation of the exchange of tangible and/or intangible resources that are rewarding and costly for the parties involved in such an exchange (Homans 1961). Key concepts are a give-and-take exchange (Gupta et al. 1986), contribution of resources and efforts for expected rewards offered by the relationship, as well as the notion that the exchange is not always an explicit agreement (Blau 1964; Chadwick-Jones 1976).

Social exchange theory attempts to explain the non-economic aspect of social behaviour (Emerson 1976). According to Heckathorn (1983), one of the theory's objectives is to overcome the problems arising from the purely rational models of decision-making by arguing that an exchange process will induce social behaviour. Among the first authors to differentiate between economic and social exchange was Blau (1968). In his “Interaction: social exchange” he asserts that within both economic and social exchange, expectations of some future returns for contributions made are implicit [although the idea of separation between social exchange and economic exchange can been traced as far back as Aristotle’s Nicomachean Ethics (1162a34- 1163a24)].

Within social exchange, the nature of returns are not specified, and neither does exchange occur on a calculated or quid for quo basis. Economic and social exchange differ in their content, the strength of the obligation and the endurance of the relationship. Economic exchange is based on the transaction occurring within a given time frame and of specified and exact content and where both parties are able to calculate the potential benefits. The social exchange approach, on the other hand, attempts to overcome the problems arising from the purely rational models of decision-making (Heckathorn 1983) focusing on the movement of resources through a social process (Blau 1964; Chadwick-Jones 1976; Emerson 1976). Social exchange is the economic analysis of the non-economic social situation (Emerson 1976), where economic action is rooted within such social relations that serve as a balance between one’s pursuit of self-interest gain and motivation for sustainable relationship development (Granovetter 1985).
The exchange process will induce a social behaviour in that people respond in a positive manner to rewards, and negatively to costs (Homans 1961). Over time relationships developed from such exchange, and they evolve into trusting, loyal and mutual commitments (Cropanzano and Mitchell 2005). Exchange in such relationships does not assume a given time bounded period as it relies on the trust between the parties involved in such exchange (and not legal obligations) that the obligations arising from the exchange will be fulfilled in the long run; i.e., at some point in the future time (Holmes 1981). Such exchanges are more flexible and seldom involve explicit bargaining (Stafford 2008).

For a social exchange to occur, certain conditions need to be fulfilled. Kotler (1984) brings forward several conditions: at least two separate entities must be involved; each entity must possess and be able to offer something of value to another entity; they must be capable of communicating and delivering the offer; the entities must be free in being able to accept or reject the offer; and both must consider the exchange with the other appropriate. A successful exchange is one in which the value received corresponds to the value previously stipulated as the terms of the exchange. According to West and Turner (2010) the following assumptions regarding human nature precede the social exchange: humans strive for rewards and evade punishments; humans are rational beings, and the standards humans use for evaluating the rewards and costs of the exchange relationship will change over time and will differ from one person to another. The main assumptions regarding the nature of the relationship within the realms of the SET are the interdependence of the parties in the relationship and the view of the exchange relationship as a process (West and Turner 2010).

The development of SET was supported by the seminal works of Homans (1958), Thibaut and Kelley (1959), Blau (1960, 1964) and Emerson (1972). Homans applied behaviourist psychology within the sociological study of groups to systematically approach and observe social behaviour as exchange. This was named “theory of social behaviour” in the subsequent work of Blau (1964). According to Homans (1958, 1961), interactions are rewarding or costly for the parties involved in the exchange such that people respond in a positive manner to rewards and negatively
to costs. Emerson (1972) further contributed to theory development by proposing the importance and discussing the effects that power and dependence have in exchange relationships (this will be discussed in more detail in the section 2.6.2). While Homans took an individualistic approach to explicating the process of interaction among parties involved in the exchange, Thibaut and Kelley’s (1959) main focus was the dyad and small groups. Blau (1964) also acknowledges the possibility to research the exchange relationship at the group levels, between people who are members of social groups participating in the exchange (e.g., team, department). Thibaut and Kelley (1959) further advance the theory by developing the concept of comparison level of rewards and costs to explicate how parties in the exchange assess the benefits of the exchange relationship. This further guides them in defining the level of commitment to that relationship. According to Kelley and Thibaut (1978), firms evaluate the exchange relationship and project the costs and benefits of maintaining the relationship, based on the history of the exchange interactions. Homans also focuses on past behaviour of actors in the exchange relationship for anticipating the future outcomes. Homans argued that the rewarded past behaviour will result in continuance of such behaviour. However, according to his deprivation-satiation proposition, the value of the reward diminishes if the same reward is received several times. Blau on the other hand, focused on the anticipated reward coming from the subsequent social interaction criticizing the over-focus on the psychological concepts within the theory and emphasising technical economic analysis, or what Emerson describes as an economic analysis of non-economic social situations.

Although somewhat different in their views, consensus exists among theories with regards to the view of social exchange as a series of mutual (not necessarily simultaneous) interactions that generate reciprocal obligation in all parties involved in the exchange relationship (e.g., Blau 1964; Emerson 1976; Cropanzano and Mitchell 2005). These interactions are interdependent and conditional on the actions of another party in that when one party makes a certain contribution to the other party, this party develops an expectation of a return at a future time. The party on the
receive side of the relationship will, in turn, develop a sense of obligation to reciprocate.

The norms of reciprocity and mutual attraction are central premises on which the social exchange relationships are predicated (e.g., Gouldner 1960; Emerson 1972). Mutual reciprocation as the most basic form of human interaction (Homans 1961), reflects the general process established in the exchange relationship. The fundamental principle of reciprocity lies in the felt obligations and the expectations of returns resulting from the exchanges between parties involved in such exchange (Gouldner 1960; Chen et al. 2009). The process of reciprocity represent a mechanism by which the social interactions are initiated and maintained in such a way that an initial action of giving by one party will cause the reaction in the other party in the form of a sense of future obligation to reciprocate the benefit or favour (Gouldner 1960). Embedded within the norm of reciprocity is the ‘division of labour’ component. This implies that one party will reciprocate to the other goods and services that are perceived as valuable by the receiver and is within the capability of the donor to give (Gouldner 1960). Within inter-organisational research, the vast majority of literature assumes, either implicitly or explicitly, that relationships are developed and maintained on the basis of mutual reciprocity (Nevin 1995). For example, cooperation and coordination between organisations is rooted in the motivations for reciprocity. The object of such exchange represents another crucial element of social exchange theory: the resources exchanged. Social exchange theory focuses on the movement of resources through a social process, where the flow of such resources will be maintained provided valued returns are secured (Emerson 1976).

2.4.1 SET in a business context

Within the social exchange framework, under the term exchange one assumes "a transfer of something tangible or intangible, actual or symbolic, between two or more social actors" (Bagozzi 1979, p. 434). Within the business context, resources, required for the production of valuable market offerings comprise everything from
"stocks of knowledge, physical assets, human capital, and other tangible and intangible factors that a business owns or controls" (Capron and Hulland 1999, p. 42). Within organisations characterised by specialisation of labour, exchange of resources is the inevitable result (Macneil 1985). Organisations are forums for transactions of resources (e.g., Cropanzano et al. 1997; Randall et al. 1999), where transactions occur within the configurations of social relations among parties involved (individual and/or corporate) (Cook and Whitmeyer 1992). Parties must invest valuable resources, both economic and social, in order to be a part of the social exchange (Lambe et al. 2001).

Social exchange relationships are embedded within business and organisational activities in which the expected benefits are a result of contributions made in the past and comparable contributions anticipated in the future (Clark and Mills 1979). Developed as a general theory of social behaviour, its principles - i.e., reciprocity of actions, analysis of costs and rewards obtained through the exchange, trust in another party's intentions and the exchange of tangible and intangibles - have all been used to research various phenomena in business interactions (e.g., Anderson and Narus 1984; Dwyer et al. 1987; Crosby et al. 1990; Konovsky and Pugh 1994). The theory and its exchange process have been used extensively in a business to business relational exchange context, explaining the dyadic exchange between organisations (e.g., buyer-seller relationships in a study of Dwyer et al. 1987 as well as market relations study by Anderson and Narus 1984, 1990) and dyadic exchange within the organisation (Coyle-Shapiro and Conway 2004). SET has been used fruitfully as a framework for understanding, for example, organisational commitment behaviours (e.g., Konovsky and Pugh 1994; Van Knippenberg and Sleebos 2006; Hofmann and Morgeson 1999) perceived organisational support (e.g., Wayne et al. 1997; Eisenberger et al. 2004), employee-organisation relationships (e.g., Tsui et al. 1997), organisational citizenship behaviour (Coyle-Shapiro 2002) and cross-functional relationships (e.g., De Ruyter and Wetzel 2000a, b). Social exchange occurring in these dyadic relationships is best understood as a series of interactions which generate obligations to repay the given benefit or favour made (Cropanzano and Mitchell 2005). Repayment of the obligations derived from either implicit or
explicit promises of future reciprocity signals the fairness in the exchange relationship and the readiness to continue the relationship in the future (Blau 1964; Gouldner 1960). Continuance of the dyadic relationship will result into a creation of a continuing one as long as both parties successfully fulfil the perceived obligation that they have and feel towards each other. The ongoing character of the interaction, portrayed by the consistent and repeated patterns of action, will shape the perceptions of the other party's promises (Coyle-Shapiro 2002; Lambert et al. 2003; Montes and Irving 2008). Such perceived promises, reflected in the anticipation of the reciprocal action, become terms of exchange between the parties, which guide the interactions and influence the nature of the dyadic relationship. The received benefit is returned or the favour repaid based on the previously understood terms of exchange. Once such reciprocal process is initiated, a relational process is a continuous loop that the parties will continuously engage in (Gouldner 1960). The exchange parties will take into account previous behaviour of the dyadic partner when carrying out any future exchange. During a social exchange, the cooperative intentions of the other party will be perceived as positively inclined if the party is assessed to be doing its fair share of the social exchange (Gefen and Ridings 2002). When returning the received benefits the goodwill and helpfulness of the party that initiated the exchange is likely to be matched by the party returning the favour (e.g., Masterson et al. 2000). Obligations may decline over time in instances when the imbalance in the relationship occurs and the received reciprocations do not match the perceived promises (Robinson et al. 1994).

2.4.2 SET in the context of M&S inter-functional flexibility (MSIF)

For a relational exchange to be functional it requires a functional relationship between the exchange parties (Anderson and Narus 1984, 1990; Dwyer et al. 1987; Heide and John 1992; Morgan and Hunt 1994; Day 1995). Cosmides and Tooby (1987) define social exchange as the cooperation between two or more parties with the final aim of achieving mutual benefits. Assumed cooperative intentions, central to social exchange theory, serve as an assurance in social exchange that the expected reciprocation will occur (Blau 1964; Kelley and Thibaut 1978). As a result of the lack
of explicit rules and written obligations that could assure the equivalence in the exchange, parties involved need to have faith in each other’s cooperative intentions. Without such belief parties are less likely to voluntarily participate in a social exchange (Blau 1964). Therefore, collaboration refers to the willingness of the parties involved in the exchange to create a positive exchange relationship and to discourage self-serving behaviours (Goldberg and Erickson 1987; Heide and John 1992). Parties cooperate for the achievement of mutual benefits, where the willingness of parties to continue the engagement in such social exchange depends on the quality of such cooperation (Putnam 1993). The felt obligation, resulting from the cooperative process is the key mechanism and a driving force to reciprocate to the other party. The exchange resulting from that felt obligation becomes the basis for creation of the long-term relationship (Morgan and Hunt 1994). One such is that between the M&S departments. Within the realms of SET, one of the preconditions for the development of cooperation is that the probability of the parties meeting again is sufficiently high (Cosmides and Tooby 1987). Such pre-condition is achieved in the organisations being designed around the principles of differentiation and integration (Lawrence and Lorsch 1967; Thompson 1967). In this, each functional unit specialises in a different business aspect and each has an impact on organisational effectiveness, but each is a part of the wider organisation and co-exist within a collaborative working environment (e.g., Moenaert and Souder 1990; Souder and Moenaert 1992; Griffin and Hauser 1996; Maltz and Kohli 2000). A give-and-take attitude between functional units leads to the development of trust and problem solving and to higher levels of integration and collaboration (Gupta et al. 1986). Collaboration is a process that helps companies achieve unity of effort among departments required for accomplishing both functional and organisational objectives (Lawrence and Lorsch 1967). The research is rooted in the exchange of resources between interdependent M&S departments as a pre-condition for achieving their functional and organisational results (Ruekert, Walker 1987a; Dawes and Massey 2006). The exchange between M&S, their collaborative and co-ordinated working, occurs during the fulfilment of mutual tasks and for the achievement of their mutual benefit (Le Meunier-FitzHugh and Piercy 2010). Both are required to invest resources in order to complete their tasks successfully (e.g., Rouziès et al. 2005).
According to Rusbult and Farrell's (1983) view of social exchange, such investments will serve the purpose of stabilising their relationship. In fact, the higher these relationship investments made by M&S in their relationship are, the more stable their relationship will be. The need to exchange task resources in order to perform their activities leads to bonding between departments (De Ruyter and Wetzels 2000a). M&S will be willing to continue the exchange process, to interact and to reciprocate on the condition that both perceive the benefits of such an exchange relationship (Homans 1958). As long as both are involved in resource coordination and in the creation of customer satisfaction, they perceive the benefits of working in concert with each other (Mohr and Spekman 1994). All parts of the organisation need to be moving together in their joint and adjusting activities so as to create a working unit and not a collection of separate pieces (Follett and Urwick 1949). The process in which parts of the organisation affect each other simultaneously in an ongoing manner is also an adaptation process (Newcomb et al. 1952). When parties interact for a longer period of time they will most continuously adapt to each other’s needs (Hailén et al. 1991).

The exposure to changing business conditions necessitates adaptation as an elementary part of any ongoing relationship (Hailén et al. 1991). Exchange relations are a dynamic process in SET, where parties continuously adapt to each other through modifying their resources in order to maintain relationship attractiveness (Newcomb et al. 1965). Rooted in the SET’s expectations of reciprocity (Blau 1964), adaptations made by Marketing will be reciprocated by adaptations made by Sales and vice-versa. According to social exchange theorists (i.e., Thibaut and Kelley 1959; Homans 1961; Blau 1964) each party involved in the relationship will attempt to create a positive imbalance in the exchange relationship to avoid becoming indebted to the other party. Consequently, net obligations will increase over time as the cycle of positive imbalance creation will continue (Bishop et al. 2005). More specifically, when one party perceives that the other is concerned with their welfare, then the party is more inclined to reciprocate by putting an additional effort into the relationship. Such supporting behaviours will be inferred as representing the underlying value of the relationship and will become internalised. Therefore,
exchange and adaptation are seen as two closely related processes, in which, based on the norm of reciprocity, one party's adaptation will be responded by adaptations from the other party (Hailén et al. 1991). In an exchange process, parties are faced with various contingencies that will force them to modify their resources so to adapt to the newly created needs of the other. Based on their reciprocal interdependence, organisational subunits will receive inputs from and provide outputs to one another (Thompson 1967). The exchange within such a social system in which resources are held by different units, becomes the mechanism for resource combination (Nahapiet and Ghoshal 1998). Coordination between organisational units is best accomplished under this situation by the mutual adjustments required for reciprocal flows of resources (Thompson 1967). Highly collaborative behaviours are best reflected in the parties' flexibility in adjusting to each other's needs and requests (Heide 1994). Therefore, exchange and adaptation go hand in hand in exchange relationships. By making mutual adjustments, parties exhibit flexibility in the exchange process (Thompson 1967; Noordewier et al. 1990). Such flexibility demonstrates a commitment of parties to the relationship, where both adapt their own processes to accommodate each other (Ford 1980), which eventually becomes a common mutual expectation (Macneil 1980a). Once reciprocated, flexibility represents an insurance that the relationship will continue to develop in the direction of well-intended modifications on both sides (Heide and John 1992). Flexibility between the parties in a dyad, in this case, M&S, assumes shared anticipations of each party's willingness to make necessary adjustments within their ongoing relationship in line with changes in their relationship or in their business environment (Macneil 1980b; Heide and John 1992).

Because of the complexity of the M&S relationship and the importance of their mutual adaptations the objective of this study is to explain the role of flexibility in their exchange relationship. Therefore, dictated by the nature of the MSIF explained through the lenses of SET, this study adopts exchange relations between M&S as the basic unit of analysis. Their exchange relation is viewed as an adaptation process embedded within a series of resource exchange episodes between the two
in which they simultaneously affect and are affected by each other (Newcomb et al. 1965; Anderson 1995; Cropanzano and Mitchell 2005).

2.5 Contingency Theory

Classical theorists view organisational structure as the "a set of official standardised work relationships built around a tight system of formal authority" (Mintzberg 1979, p. 10). However, in the face of increasing environmental uncertainty and rapid changes, the contingency approach became a more promising alternative compared to the traditional closed-systems and rigid prescriptions view (Kreitner et al. 2001). In addition, Lavie (2006) asserts that having in mind the volatility of today’s business circumstances, the contingency approach may be a requirement rather than a choice. The contingency approach seeks to understand how organisations function under changing conditions and in specific circumstances (Kast and Rosenzweig 1973). The contingency theory is guided by the general stance that there is no absolute solution as once effective solution may well become inappropriate under different environmental conditions (Galbraith 1973; Wright and Snell 1998). The effectiveness of the eventual organising manner still varies depending on the situation and the context (Ginsberg and Venkatraman 1985). The contingency approach ultimately provides suggestions as to which organisational designs and managerial actions are most appropriate within a specific situational context (Kast and Rosenzweig 1973). The context in which firm operates plays a central role in determining the success of the firm (Robertson and Chetty 2000). The basic assumption of the congruence of context proposition is the fit between the organisational context and structure and processes (Drazin et al. 1985). According to the selection approach to fit, organisations need to adapt according to the particular contingent situation if they are to survive and prosper (Livari 1992). Fit with the market determines whether firm survives or fails since those firms that achieve a better fit will be more advanced in their ability to understand their environment and to adapt over time (Schindehutte and Morris 2001). From the natural selection perspective, fit is achieved through an evolutionary process of adaptation, where
only the fittest survive; i.e., those organisations that achieve the highest level of fit (Hannan and Freeman 1977; Comstock and Schrager 1979; Aldrich 1999).

In the flexibility literature, there is a clear consensus with regards to the importance of the role environmental dynamism plays (e.g., Sanchez 1995; Grewal and Tansuhaj 2001; Anand and Ward 2004; Fredericks 2005). The vast majority of the strategy and marketing literature examining various levels of organisational flexibility define the concept in terms of actions in anticipation of or in response to a change in the environment (e.g., Evans 1991; De Toni and Tonchia 2005). The literature on strategic flexibility puts an emphasis on the contingency view, indicating that the required flexible strategic responses depend on the level of environmental context (e.g., McKee et al. 1989; Kessler and Chakrabarti 1996; Garg et al. 2003). Flexibility may be more or less valuable depending on the environmental setting, where its highest worth for the organisation is within turbulent and unpredictable settings (e.g., Lau 1996; Volberda 1999; Dreyer and Grønhaug 2004). Considering the centrality in this study of flexibility in explaining performance and the empirically supported contingent effect of the environment on flexibility: performance link (e.g., Nadkarni and Narayanan 2007), this study considers essential the inclusion and examination of the role the environmental contingencies have on the MSIF’s: performance link.

To accommodate the impact of the environment and in line with the literature, this research turns to the contingency theory as the underpinning theory for explicating how M&S match resources within the corresponding environmental context (Ginsberg and Venkatraman 1985).

In summary, it is argued here that environmental conditions are likely to have an effect on the MSIF: performance relationship. Consequently, following directives from contingency theory arguing that the contingency factor should be considered as a moderator (Donaldson 2001), environmental turbulence is identified here as a key moderator shaping that relationship.
2.6 Antecedents to MSIF

This section proposes social and structural antecedents of a M&S inter-functional flexibility orientation. Given this research and social exchange perspective, it is proposed that several variables discussed in the section that follows will be associated with MSIF. These variables are drawn from SET and include: resource dependence asymmetry, trust, goal compatibility and joint rewards of M&S departments.

2.6.1 M&S resource dependence asymmetry

To engage into an exchange relationship means becoming dependent on the exchange partner (Möller and Wilson 1995). Interdependence between exchange parties creates the underlying basis for all exchange transactions (Emerson 1962; Skinner et al. 1992). From the structural perspective, exchange parties are more likely to cooperate if they are dependent on each other (Emerson 1962; Williamson 1975). The concept of interdependence has been defined and operationalised in various terms. Dependence has also been defined in terms of the need to maintain the exchange relationship with the partner in order to achieve desired goals (Frazier 1983; Kumar et al. 1995). Therefore, it is the extent to which exchange parties (two or more) have to take each other into consideration if they are to achieve their goals (Reve and Stern 1979). Wageman (1995) defines it as the extent of input parties are required to invest in order to complete a certain task or achieve a goal. Within the context of channel research, Etgar and Valency (1983) assert the commitment side of interdependence and claim that interdependence between channel exchange partners will reflect the extent to which they are committed to mutual exchange. Interdependent work groups “facilitate others task performances by providing each other with information, advice, help and resources” (Van Der Vegt et al. 1999, p. 202). Therefore, interdependence becomes a “defining characteristic of a group” (Allen et al. 2003, p. 717). Interdependence exists in any relationship as social relations are consisted of “ties of mutual dependence” (Emerson 1962, p. 32); that is, reciprocal dependence or interdependence (Thompson 1967; Pfeffer and Salancik
The provision of critical and important resources, difficult to obtain elsewhere outside of the exchange relationship, is at the core of the definition of dependence (Emerson 1962; Pfeffer and Salancik 1978). That is, the higher the extent of the dependence on such resources between the exchange parties, the higher the interdependence. Definitions underline the economic exchange characteristic of interdependent relationships, as parties engage in such exchange to acquire resources that are outside of their control but that are needed for achievement of their goals (Gundlach and Cadotte 1994).

Interdependency from social psychology (the interdependence theory of Thibaut and Kelley 1959) and sociology (the power-dependence theory of Emerson 1962) captures differing levels of interdependencies between actors in the exchange, as well as the associated consequences of the division of labour. Specialisation and functional differentiation relative to task performance results in interdependencies among parties (Reve and Stern 1979).

Interdependency is explained on the basis of requirements for the actions of one, for the actions of others, and the requirements for the joint action (McCann and Ferry 1979). The underlying assumption is that parties are not self-sufficient when it comes to the required resources they become dependent on the parties from whom they may obtain those resources (Emerson 1962). Additionally, dependence is seen as the need to maintain the exchange relationship with a party in order to achieve desired goals (Frazier 1983). Furthermore, the extent to which parties are dependent on each other will affect their motivation, their behaviours and the perceptions they hold of each other and the exchange process (Gundlach and Cadotte 1994).

Emerson (1962) distinguishes between the: 1) magnitude and 2) the asymmetry of the dependence. *Magnitude* is defined as the total dependence in the exchange, and is a characteristic of established exchange associations (Gundlach and Cadotte 1994). Low magnitude interdependencies will not require much effort from the exchange parties, nor will they require high investments of time in the relationship (Anderson and Weitz 1989). The higher the joint dependence the more the parties will rely on each other for performance and resources (Buchanan 1992). As the
magnitude of interdependence increases so does the sharing of resources and decision making between the exchanges parties and the so too does the opportunity for opportunistic behaviour which may have a detrimental effect on relationship longevity (Vaughan et al. 1981). However, research, in fact, shows that high interdependence decreases risk of opportunistic behaviour, since neither party can afford to damage the relationship (Buchanan 1992; Lusch and Brown 1996; Provan and Skinner 1989). In essence, a culture in which parties become mutually reliant is created (Williamson 1985); the costs of opportunistic behaviour increase as the magnitude of mutual dependence increases, implying that one side’s opportunistic behaviour will provoke a reaction in the partner’s behaviour (Provan and Skinner 1989). This will further jeopardise the relationship in which both parties have a mutual stake in which both have invested a great deal of time and effort in the relationship (Anderson and Weitz 1992; Lusch and Brown 1996). As none of the parties are willing to make the sacrifice, high interdependence will further imply a long-term orientation towards the relationship (Morgan and Hunt 1994). High bilaterally dependent relationships are proven to have a positive impact on commitment and trust among the parties involved (Subramani and Venkatraman 2003; Weber et al. 2004). Lawler and Yoon (1993, 1996), for example, show how high levels of interdependency increases cohesion and relationship commitment through the enhancement of exchange frequency. Additionally, parties are interested in maintaining a high quality relationship (Dwyer et al. 1987) and develop mutual empathy, the focus on mutual success (DiMaggio and Powell 1991) and the pursuit jointly coordinative activities (Zaheer and Venkatraman 1995; Lusch and Brown 1996). Parties are willing to sacrifice their immediate self-interest in favour of adaptive problem solving (Rusbult et al. 1991; Gundlach and Cadotte 1994).

Where total interdependence reflects the sum of interdependencies of the parties involved in the exchange relationship, interdependence asymmetry denotes the imbalance between the dependency levels of one party on its partner (Emerson 1962; Lawler and Bacharach 1987). Relationships become unbalanced in instances where one party supplies more resources than the other part, and/or the resources of one party are valued more than those of the other party (Astley and Zajac 1990;
Buchanan 1992). The less dependent party has little or no benefit from the resources of the more dependent party and can easily replace those resources (Gundlach and Cadotte 1994). By contrast, a less dependent party is highly valued and perceived as more effective by the more dependent party. The more dependent party is still obliged to repay the obligation created by resource investments in some manner, and one potential way is to comply with the other party’s wishes (Astley and Zajac 1990). Hence, in asymmetric relationships dominance belongs to the less dependent party in the exchange (Buchanan 1992). Such dominance equates to the power that the less dependent party has over the more dependent party (Emerson 1962; Lawler and Bacharach 1987; Frazier and Rody 1991). Embedded in SET, power-dependence theory developed by Emerson (1962) posits the inextricability of the concepts of dependence and power, in that within a dyadic relationship one party’s dependence on other party’s resources to achieve its desired goals would result in the possession of power of for the less dependent party. Power is therefore the function of dependence, the extent to which one department is relatively more dependent, the other department is relatively more powerful (Rusbult and Van Lange 2003). Balanced interdependence implies that the power of one party is held under constraint by the other party’s equal level of power (Thibaut and Kelley 1959). Balanced interdependency decreases the motivation for competitive bargaining and cooperation is favoured instead (Gundlach and Cadotte 1994). As dependence between the parties diverges, a situation of one party’s power advantage is created (Emerson 1962). Hence, asymmetries in the relationship reflect differences in power between parties in the dyadic relationship. The notions of power and dependence according to this perspective are inextricably related to the extent that one actor is more powerful in the relationship if it is less dependent on the resources of the other party, and vice-versa (e.g., Emerson 1962; Rusbult and Van Lange 2003). This situation, on the other hand, has implications for the nature of the relationship between the more and less dependent party. More dependent parties are considered less effective (Wilkinson and Kipnis 1978), their efforts in the relationship are devalued and are even attributed to the less dependent party’s endeavours (Kipnis 1976; Gundlach and Cadotte 1994). Anderson and Weitz (1992) found resource dependency asymmetry to negatively affect the channel relationship. Imbalanced
relationships will be characterised by low cooperation and high conflict (Dwyer et al. 1987; Anderson and Weitz 1989; Frazier et al. 1989), they are less stable and less trusting (Anderson and Weitz 1989, 1992). In addition, discrepancies in their goals, responsibilities in the exchange and even perceptions they have of the environment will emerge (Anderson and Narus 1990). Lower status of the more dependent partner may also be reflected in the perceived poor performance compared to more important (i.e., less dependent) partner.

Also, the motivation to committing to the relationship will also differ: the more dependent party will have more incentive to commit to the relationship as opposed to the less dependent party (Buchanan 1992). More dependent party will be more concerned about the relationship and will give more attention to that relationship, whereas the more powerful party will be less inclined to reciprocate and will even be tempted to take advantage of the relationship and to attain the higher share of resources (McAlister et al. 1986; Anderson and Narus 1990). For instance, a less powerful party may request the more powerful partner to provide information or exhibit flexibility in response to changes in the environment, which may be denied from the more powerful party (Lusch and Brown 1996; Sell et al. 2004).

This leads to a situation where the dependent partner becomes unable to control everyday activities which require the coordination of interdependent activities. The results of Kumar et al. (1995) indicate that in a relationship it is necessary to decrease dependence asymmetry and increase total dependence.

The marketing literature provides extensive evidence linking interdependence and cooperation in an inter-organisational context (e.g., Hailén et al. 1991; Skinner et al. 1992; Sirmon et al. 2007), in a work group context (e.g., Argyle 1991; Stewart and Barrick 2000) and in a cross-functional context (e.g., Kahn 1996; Dawes and Massey 2006).

Within the intra-organisational, marketing context specifically, the concept of differentiation and required coordination of the organisational sub-units’ efforts and resources has widely been accepted, as well as the implication of the high dependencies between organisational units for the achievement of the organisational
and functional goals as a necessary result of such division of labour (Lawrence and Lorsch 1967; Ruekert and Walker 1987a). Considering that each functional area holds distinct resources, skills and capabilities, they become mutually dependent on exchange to do their jobs successfully (Ouchi 1980; Ruekert and Walker 1987a). Managing resource dependencies is argued to be an underlying reason why functional units coordinate and interact (Ruekert and Walker 1987a; Malone and Crowston 1994). For example, Marketing and R&D are interdependent to an extent that R&D does not hold the market related information held by Marketing and Marketing does not possess technical expertise it requires for creating successful product offerings (Souder and Moenaert 1992). The underlying interdependence structure between functional units will determine the interpretation of their relative positions in the broader organisation and the nature of the interaction between them (Lawler 1992; Kumar et al. 1995). For example, under conditions of unilateral dependency, relational behaviour will not be fostered (Lush and Brown 1996) as the dependence (power) asymmetry will pose a threat to the cross-functional relationship (Griffin and Hauser 1995).

The power of functional units has been addressed by several scholars (e.g., Workman et al. 1998; Homburg et al. 2000; Krohmer et al. 2002; Verhoef and Leeflang 2009; Goetz et al. 2013). This power is grounded in the resources and capabilities that units possess (Voss and Brettel 2013). Most of the studies focus on the power differences between organisational units, specifically comparing the power position of the marketing unit compared to other departments and discussion marketing’s influence stemming from that power (Gaski 1984; Elias 2008; Merlo 2011; Auh and Merlo 2012; Voss and Brettel 2013). Scholars have used power to explain the influence of organisational units, with the most attention given to the comparison of Marketing’s power (and hence influence) compared to other units (e.g., Krohmer et al. 2002). Studies have concluded that an increase in a non-marketing function’s power decreases the influence of the marketing unit (Homburg et al. 1999). This corresponds to the notion of power as a ‘zero-sum-game’ where an increase in Marketing’s power has led to a decrease in the power of other functions, which Gaski (1984) refers to as “countervailing power” (p. 14) (also Von Ungern-
Sternberg 1996). These studies view power in terms of the influence that organisational units hold over marketing-related activities (e.g., communication tasks; distribution tasks; price-related tasks in Homburg et al. (2008).

Therefore, these studies investigate relative power of the marketing unit compared to other units. An organisational unit will have maximal power if marketing activities are completely concentrated within that unit. Within the dyadic relationship of M&S, power imbalance has been defined as the difference in influence M&S hold over market-related activities (Homburg and Jensen 2007; Homburg et al. 2008).

Although the results of these studies imply that power imbalance will have a detrimental effect on the relationship (Anderson and Weitz 1989; Bucklin and Sengupta 1993), levels of their relational interdependencies are not addressed by these studies. Power is a feature of the structural location of the functional unit compared to other units in the organisation (Astley and Zajac 1990). This is referred to as power one holds within the system of others rather than power over others. Power over others is captured in Emerson’s notion of asymmetrical resource dependence, the obverse of power asymmetry (1962). Regardless of the organisational structure, organisational units are more or less mutually dependent (McCann and Galbraith 1981). Interdependence is a relational construct (Anderson and Narus 1990) with the main implication being the need for the dependent parties/departments to coordinate their activities (Ruekert and Walker 1987a).

Resource dependencies between functional units have shown to be highly important in improving product development performance (Song et al. 1997) and improving the amount of interaction in R&D-Marketing interface (Ruekert and Walker 1987b). The Marketing and Finance relationship characterised by high resource and competence interdependence fosters favourable attitudes of each other (DeRuyter and Wetzels 2000a). In their qualitative study, DeRuyter and Wetzels (2000a), observe the Marketing-Finance relationship has been perceived as symmetrical and high in interdependence contrary to the proposition of Ruekert and Walker (1987b). Within marketing, resource interdependencies are highest between M&S departments since they operate within a similar domain (Dawes and Massey 2006) with both responsible for customer satisfaction on some level (Cespedes 1994). Both functions
control resources that overlap with each other (Guenzi and Troilo 2007); hence the need for the two to cooperate is very high (e.g., Massey and Dawes 2006). Given the mutual dependence between M&S department for, not only, satisfying customer needs but also for delivering volume and achieving profitability and therefore company’s overall strategic objectives, the requirement for close, cooperative and synchronised relationship between these two customer facing departments is the highest (Cespedes 1994; Dawes and Massey 2006; Malshe 2011).

2.6.2 Trust

Within the psychology literature, trust is defined from the angle of expectations. According to Rotter (1967), trust denotes a fulfilment of an expectation an individual or a group has with regards to the promise (or a verbal or a written statement) made by another party. Within the social theory perspective trust has been described as a central dimension in relational exchange (e.g., Kumar et al. 1995). Social exchanges as unspecified social rather than contractual obligations, will require trust to govern the relationship (Blau 1968). Thus, trust is seen as essential for creating obligations between the actors in the exchange and for maintaining such a relationship (Jin 2001; Lambe et al. 2001). Trust is basically a gamble on the future actions of the other party (Sztompka 1999). When one provides benefits to another party, one needs to trust that the receiver party will return the benefit in time; i.e., to reciprocate (Homans 1958; Blau 1964). Psychology and social psychology disciplines have mainly addressed the importance of trust at the level of interpersonal dyads (e.g., Schlenker et al. 1973). On this level, management and marketing research has placed trust within the interpersonal relationship between representatives of collaborating organisations (e.g., Zaheer et al. 1998; Costa e Silva et al. 2001), between individuals collaborating horizontally across departments within organisations (e.g., Massey and Kyriazis 2007; Rodríguez et al. 2007) or within vertical levels (leader-subordinate relationship) (e.g., Wayne and Green 1993; Flaherty and Pappas 2000). Trust has also been investigated at a higher level of inter-organisational and intergroup trust with particular attention given to the trust within the relational business context. However, defining trust at a group level is a
source of methodological issue according to Ring and Van de Ven (1994) as organisations and groups are unable to trust; it is the individual who trusts. Confirming this issue, Zaheer et al. (1998) explain that although trust is a micro-level phenomenon, individuals within an organisation (or group, department) share an orientation toward individuals of another organisation (group or department). In this vein, "interorganisational trust describes the extent to which organisational members have a collectively held trust orientation toward the partner firm" (p. 142). Therefore, most studies investigating trust within the business-to-business context and the scant studies within the intra-organisational group level context use key informant reports to represent their organisation’s (department’s) level of trust in the other party.

Within the marketing literature, trust has mostly been investigated within the business-to-business relationship context and has been widely connected to firm performance (Krishnan et al. 2006; Skarmeas and Robson 2008). Extensively investigated within the marketing channels literature, trust is seen as a major contributor to an effective relationship between channel partners (e.g., Anderson and Weitz 1989). Equally, trust has been identified as a key variable mediating an effective relational exchange within the relational marketing literature (Morgan and Hunt 1994).

Definitions of trust, however, vary across researchers. Two general approaches to the concept of trust can be distinguished: 1) trust as a belief, sentiment or an expectation and 2) trust as a behavioural intention. From the first perspective, the definition of trust is based upon the other party’s trustworthiness; that is, the belief, the feeling or the expectation a firm holds with regards to how trustworthy the other party (Dwyer et al. 1987; Anderson and Weitz 1992; Ganesan 1994). Trustworthiness is a product of perceptions of past behaviour, perceptions of expertise and perceptions of reliability of the partner in the relationship. Another approach to trust defines it in terms of the reliance on the partner (e.g., Deutsch 1962; Zand 1972). In order to rely on a partner, a party needs to accept the level of risk associated with it, therefore consenting to being vulnerable and uncertain about the other party’s behaviour. Trust is only meaningful if the uncertainty is present,
otherwise in instances when a party has the ability to fully control and possess complete knowledge of the partner’s actions, trust will be useless (Coleman and Coleman 1994).

Finally, Moorman et al. (1992) define trust by combining the two views and argue that trust is “a willingness to rely on an exchange partner in whom one has confidence” (p. 315). The perceived credibility of a partner as well as the belief of the partner’s benevolence are both incorporated in this definition Kumar et al. (1995). In this sense, a firm believes that the other party possesses the required expertise, will fulfil its promises and will be concerned with the other party’s welfare.

Trust as a multi-dimensional construct has also attracted a significant degree of academic interest. Different approaches to trust sub-dimensions are available in the literature. Sako (1992), for example makes a distinction between three levels of trust: 1) trust at the level of the contract, 2) trust at the level of competency and 3) goodwill based trust. Currall and Judge (1995) define trust in terms of the activities inherent in a relationship that is characterised by high levels of trust. These activities include: communication between the parties, informal agreements, task co-ordination and the absence of monitoring or surveillance. The distinction between trust and trusting behaviours that are dependent on the development of trust is a framework developed by Smith and Barclay (1997). According to these authors, individual trust is comprised of three components: character/motives, role competence, and judgment. Each of these result in positive outcomes (or the absence of negative ones). These include: restraint from opportunistic behaviour, openness in the communication and investments in the relationship.

Regardless of the level of trust (inter-personal, inter-organisational, multilevel) most definitions of trust reflect two basic elements: 1) positive expectations and 2) vulnerability or reliance on a partner (e.g., Ganesan 1994; Mayer et al. 1995; Bhattacharya et al. 1998; Doney and Cannon 1997; Rousseau et al. 1998). In a more formal manner, Rousseau et al. (1998) provide the following definition of trust: “Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another” (p. 395).
Rousseau et al. 1998) assert an additional pre-requisite for the emergence of trust besides uncertainty: the interdependence between the parties. Only in instances when a party needs the input of another party to achieve its interests will trust be required. In this situation the focal party is reliant on the partner and vulnerable to the extent it is dependent on the other party to provide those inputs. Deutsch (1962) defines trust in terms of the actions that lead to one party’s increase in vulnerability in the relationship. A party in a relationship can increase its vulnerability by placing its resources or control over its resources at the disposal of another party (Coleman and Coleman 1994). The main assumption is that the other party will act in the other’s best interest even when no formal control mechanisms are put in place to assume this (Zaheer et al. 1998; Baker et al. 1999) what Smith and Barclay (1997) refer to as “forbearance of opportunism” (p. 5).

The literature exploring marketing relations, by far mostly uses definition of trust that draws on Rotter’s (1967) classical view of the willingness to rely on the exchange partner; that is, the willingness to exhibit vulnerability. Trust is seen as an essential building block of the relational attitude (Wilson 1995). Literature examining inter-organisational relationships approach trust from the relational governance perspective (e.g., McNeil 1980) and argue that established trust between the parties mitigates the opportunistic tendencies of both parties (Ganesan 1994; Nevin 1995; Dyer and Singh 1998). Indeed, trust is argued to have a significant impact on the channel’s financial performance as trust induces partners to take higher risks and make more investments in the relationship deemed necessary for the economic growth. Beale and Dugdale (1975), for example, in their study of buyer-seller relationships found that partners’ reliance on trust is less expensive and constraining than reliance on formal contracting, that the cost of monitoring is decreased and that the relationship is more effectively sustained compared to one with actual contracts. A number of scholars agree that goodwill trust between the partners in the relationship will, in fact, facilitate the complex exchange between them and act as a safeguard of the investments made within the course of the relationship (Sako 1991; Hill 1995; Uzzi 1997; Dyer and Singh 1998). It is also connected to superior information sharing and the joint efforts of the exchange partners in decreasing
inefficiencies (Dyer and Chu 2003). Similarly, Sarkar et al. (2001) and Lambe et al. (2002) suggested that when the relationship is characterised with informal, non-contractual trust partners’ willingness and the ability to integrate their disparate individual capabilities and resources are also increased.

In the intra-organisational context also several authors acknowledge the importance of trust as well (Souder 1988; Gupta and Wilemon 1990; Moenaert and Souder 1990; Song and Parry 1996; Jin 2001; Rodríguez et al. 2007). However, apart from a few empirical studies in this context the literature to date is still scarce (Maltz and Kohli 1996; Sivadas and Dwyer 2000; Massey and Dawes 2007b; Massey and Kyriazis 2007; Rodríguez et al. 2007). Among the existing empirical literature only two focus on inter-departmental trust at a group level (Sivadas and Dwyer 2000; Rodríguez et al. 2007). Sivadas and Dwyer (2000) focus their study on the project team trust (created out of individuals from different functional groups) rather than dyadic trust. Nevertheless, both conceptual and empirical work asserts that creating a trusting working atmosphere between the members of different functions is highly important as it supports informal cooperation and coordinative social interaction (Hutt 1995; Shaw et al. 2004; Massey and Dawes 2007a).

Existing studies demonstrate the importance of trust between cross-functional groups and individuals for the establishment of positive outcomes such as: perceived relationship effectiveness, new product performance success and functional conflict (Sivadas and Dwyer 2000; Massey and Dawes 2007a; Massey and Kyriazis 2007; Rodríguez et al. 2007). High quality relationships are associated with high levels of trust (McAllister 1995). Trust increases mutual commitment to the relationship, reflects the level of care and concern for each other’s welfare in the relationship, eventually decreases dysfunctional conflict (Allen and Meyer 1990; Hultink and Atuahene-Gima 2000; Massey and Dawes 2007b), and increases the willingness of functions to understand and share good quality information and knowledge, ideas and assistance (Maltz and Kohli 1996; Tsai and Ghoshal 1998; Lane et al. 2001; Liang et al. 2008).
Trust is also considered a major factor in building and maintaining highly interdependent reciprocal exchange relationships (Jin 2001; Chiu et al. 2006). Consequently, trust between highly interdependent departments, such as M&S, would create a fruitful ground for the synthesis of their knowledge, skills and abilities (Sethi 2000; Hansen et al. 2005). Trust will also shape the manner in which their exchange is conducted (Nevin 1995). The lack of trust will inhibit coordination and collaborating behaviour, thus hurting their relational exchange (Pruitt 1981; Ring and Van de Ven 1994).

The significance of trust at the cross-functional level highlights the importance of psycho-social phenomena for the functioning and performance of cross-functional interfaces. Definitions of trust within the intra-organisational context reflect those applied within the inter-organisational exchange relationship and incorporate both reliability on a partner and the belief in a partner's benevolence (Kumar et al. 1995). Madhok (1995) suggests that both views need to be incorporated as the existence of reliability on the partner alone may not be sufficient for the creation and maintenance of the relationship as one partner may become more reliant on the other because of unequal dependence. The foundation for defining trust for the purposes of this study originates from the research into buyer-supplier relationships as well as studies on the effects of trust within intra-firm relationships (Smith and Barclay 1997; Baker et al. 1999; Rodríguez et al. 2007). Therefore, in defining trust, this thesis draws on prior literature where trust reflects confidence of the parties in the exchange relationship that their vulnerability will not be exploited (e.g., Ring and Van de Ven 1992; Barney and Hansen 1994; Zaheer et al. 1998). In line with Mayer et al. (1995), such confidence will emerge in situations where the "trustworthy" party in the exchange relationship can be relied upon to make good-faith efforts within the relationship, to make fair necessary adjustments as business conditions change and restrain itself from taking advantage of the exchange partner even if such opportunity exists. Therefore, trust in this thesis is characterised by reliability, good-will and fairness shared between M&S departments.
2.6.3 Joint rewards and Goal compatibility

Controlling employee’s attitudes and behaviours has been addressed by various literature streams (e.g., psychology, social psychology, strategy, marketing, human resources etc.). In a marketing context, control over marketing a employee’s behaviour reflects an organisation’s attempt to influence their activities and behaviour in order to accomplish desired outcomes (Jaworski 1988). Controlling marketing employee’s behaviour is seen as a prerequisite for the control of marketing activities. Control mechanism often investigated across the marketing literature are reward systems designed at various organisational levels (e.g., strategic, cross-functional, individual). However, when conceptualising and measuring rewards, the marketing literature often explains rewards through goal accomplishments. For example, Galbraith (2002) asserts that the aim of joint rewards is to align goals of employees with those of the organisation. “Rewards control goal-directed behaviour….is… associated with pleasant feelings, which give incentive value to the goal-object” (Martin-Soelch et al. 2001, p. 140). Cadogan et al. (2005) further acknowledge that export market-oriented reward systems will foster organisation-wide cross-functional cooperation as the employees will be oriented towards the accomplishments of common organisational goals. However, social psychology and psychology literature studies show that these incentives can affect performance independent of goal level (Pritchard and Curts 1973; London and Oldham 1976; Terborg 1976; Terborg and Miller 1978; Campbell 1984; Huber 1985; Locke et al. 1988). Within social interdependence theory, a clear distinction is made between joint rewards interdependence and goal interdependence (e.g., Ortiz et al. 1996; Johnson and Johnson 2009). Positive reward interdependence denotes the situation in which each member within the cooperative group gets the same reward for a successful completion of a joint task (Mesch et al. 1988). Positive goal interdependence exists in instances in which members of cooperative actions share the same goals and perceive that group cooperation is essential in achieving these goals (Mesch et al. 1986). Ambiguities come from the fact that implementing positive goal interdependence in the absence of positive reward interdependence is possible, however, reward interdependence cannot be implemented without goal
interdependence (Mesch et al. 1988). In addition, these two goals and rewards tend to be additive and even though goal interdependence is sufficient to yield higher accomplishments, combining it with joint rewards interdependence will produce even higher achievements (e.g., Lew et al. 1986; Ortiz et al. 1996; Mesch et al. 1986; 1988).

Following these studies, a clear distinction is made between joint rewards and the goal complementarity of M&S. Further both are expected to separately affect flexibility at the M&S interface and this will be discussed in more detail in the next chapter.

The aim of this section’s aim is to provide a deeper understanding of joint rewards and compatible goals and how they fit into the overall conceptual framework. The two are subsumed within the same section as both represent behavioural control mechanisms. The section begins with review of the literature on joint rewards. Insights from psychology, social psychology, medical and marketing literature are used to explain the notion of joint rewards. After that, the following section reviews existing literature on compatible goals.

2.6.3.1 Joint rewards

As mentioned earlier, according to SET M&S will be willing to continue the exchange process, to interact and to reciprocate on condition that both perceive the benefits of such exchange relationship (Homans 1958). According to Thibaut and Kelley (1959) parties in the exchange assess the benefits of the exchange relationship and this guides them in defining the level of commitment towards that relationship. The higher the perceived benefits the higher the commitment to the relationship.

Literature on control is replete with positive and negative effects on employee attitudes and behaviour (Jaworski 1988; Jaworski and MacInnis 1989). Reliance on financial incentives for performance, for example, may have counterproductive consequences (Guzzo and Noonan 1994). Financial incentives are shown to have an impact on the performance quantity (Guzzo and Noonan 1994) rather than
performance quality (Kohn 1993). For example, at the strategic level, short-run financial controls are shown to actually render the competitiveness of US firms more vulnerable as it creates an atmosphere in which failure cannot be tolerated. Thus, employees become unwilling to take risks and to assume responsibility (Hayes and Abernathy 1980). Ouchi (1992) asserts that mismatch of control systems with the organisation’s unique context will be detrimental to organisational performance in the long run. Control systems have also been investigated at the individual level. The psychology literature is replete with assertions that rewards actually decrease intrinsic task interest and individual's creativity (e.g., Deci 1971; Lepper et al. 1973; Condry 1977; McCullers 1978; McGraw 1978; Lepper and Gilovich 1981; Schwartz 1982; Amabile et al. 1986; Kohn 1993). In fact, intrinsic interests and creativity are dependent on personally motivated investigations rather than by any form of social control. Incentives do not have the ability to alter the attitude underlying individual's behaviour or to create long-lasting commitment (Kohn 1993). Rewards can only temporarily affect an individual's behaviour. In fact, as a result of controls, employees are shown to work against the organisation's best interest in the sense that they manipulate the data and submit reports replete with false information (Merchant 1990; Maas and Van Rinsum 2013).

Deci (1971) and Lepper et al. (1973) were among first the authors to argue that reinforcements will have a detrimental effect on intrinsic task motivation. In their study they revealed that rewarded participants tend to invest less time and effort in the interesting task than those who did not receive any rewards. Explanations for such claims were sought and found within the basic views on human nature. Within this view, sources of human happiness and development originate from the individual pursuit of self-discovery and creative potential, and not from the outside forces (Silvernail 1992).

In support of such implied primacy of the individual (rather than the collective), behaviourally oriented psychologists assert that individuals perceive themselves as unique, rather than as a part of a social collective. Their potentials are better fostered by self-determined investigations than by social control and any constraints to their freedom or action will result in aversion. Therefore, task performance reward
systems will interfere with one’s potential, and negatively affect the spontaneous and flexible behaviour required for creativity (McGraw 1978; Amabile et al. 1986).

On the other hand, equity theory suggests that an individual can indeed be motivated by external sources, and it is the over-rewarding that will have a positive effect on performance and the inclination to cooperation with other team members (Harder 1992). Under-rewarded team members, will expectedly, behave in a less cooperative and more selfish manner.

An additional view argued through overjustification hypothesis, asserts that the underlying reason for a decrease in intrinsic motivation through rewards could be found in the shift of individual’s focus when a reward is introduced. An individual who is already performing a task he/she finds interesting will shift his/her focus from self-initiated task conduct to one that is triggered and guided by extrinsic causes, i.e. reward (Lepper et al. 1973; Lepper and Greene 1975; Lepper and Gilovich 1981). Expectation of such external rewards (and existence of external motivation) will undermine the role of intrinsic motivation.

Behavioural theorists argue that rewards that are properly applied will, in fact, have a positive effect on fulfilment of human potential (Balsam and Bondy 1983). Such rewards will have no harmful effects on intrinsic task interests. However, if, for example, reward frequency or quantity suddenly reduces, individuals will exert negative emotional reactions and will temporarily lower the level of performance (Dunham 1968; Williams 1983). Agency theory also posits that the principle needs to design and implement appropriate incentive systems that will motivate an agent to invest the expected amount of effort and behave appropriately (Balabanis 1998).

From the channel governance perspective, Wathne and Heide (2004) assert that designing proper incentive design with long-term gains in mind will work towards relationship maintenance and will guard the relationship from potential opportunism and from striving toward short-term gains.

According to behaviourist studies, rewards strengthen the divergent thinking that enables individuals to provide alternative solutions and varied responses to problems or questions and serves as an indicator that such novel performance is desirable
Eisenberger and Selbst (1994) argue that rewards can either increase or inhibit creative performance depending on the manner with which rewards are administered. If, for example, rewards are presented in a repetitive and non-intrusive manner, they will have a positive impact on an increase of divergent thinking and task creativity (Eisenberger 1992). On the other hand, if non-creative and non-original thinking is rewarded, a decrease in subsequent and general task creativity will occur (Reiss and Sushinsky 1975).

On the contrary, the cognitive-social view sees rewards as inhibitors of novel behaviour and reduces creativity of tasks (e.g., Amabile et al. 1986). The underlying assumption in the cognitive-social approach is that rewards divert the attention of individuals from the creative approach and away from any stimuli from the environment that may trigger novel behaviour to a goal-achievement focus (Balsam and Bondy 1983). Rewards promote repetition. In a sense, what proved successful will be rewarded; hence, individuals will continue the same, previously rewarded actions in anticipation of future reinforcements (Schwartz 1982). Consequently, rewards constrain the spontaneity and flexible performance that lead to creative solutions.

One reason for reward failure may be the lack of cause and effect link given to employees; hence, they may often seem conflicting and arbitrary to employees (Milgrom and Roberts 1995). Therefore, it is essential that employees clearly understand the gains of rewards as rewards are created by organisations for people (Suri 1998).

Although control devices are designed to steer an individual’s actions towards positive performance outcomes, the literature warns about the negative effects that might occur and the importance of appropriate reward design. On the other hand, control systems have been widely acknowledged as the prime management tool for signalling desired behaviour to employees, thus ensuring successful strategy implementation (Hrebiniak and Joyce 1984). The quality management literature perceives control systems as central to quality strategy effectiveness (Morgan and Piercy 1998). The marketing literature documents the positive effects that reward
systems have on the stimulation of better relationships between various organisational departments and business working relationships (e.g., Kahn 1996; Kahn and Mentzer 1998; Kahn et al. 2004; Cadogan et al. 2005). For example, collective rewards designed around task interdependent groups will motivate members to collaborate on such goals (Fraser and Hvolby 2010). Reward systems that the concerns reflect of both parties can play the role of effective integration mechanisms (Crittenden et al. 1993). On the other hand, reward systems designed in such a manner to favour one group over the other would be regarded as unfair and will reinforce inter-group differentiation (Norvell and Worchel 1981). If perceived fair, the rewards will modify an employees' behaviour towards contributing their efforts to the organisation (Allen et al. 2003). Rewards play an important role in shaping the behaviour of trading parties in terms of the effort they invest in the relationship and they may induce cooperative behaviour and inhibit conflict (Balabanis 1998; Cadogan et al. 2005). Reward systems ensure that commitment to actions among employees is secured (Locke et al. 1988). In the context of Marketing’s relationships with other functions, they are considered a mechanism for enhancing coordination and integration of marketing with other business units as well (Ruekert and Walker 1987a; Hutt 1995; Rouziès et al. 2005).

In a cross-functional context the importance of rewards is attributed towards a decrease in functional identification which is usually connected with non-collaborative intergroup working (Brewer 1991; Cadogan et al. 2005). Rewards decrease conflict and increase inter-departmental connectedness (Menon et al. 1997). They have been shown to foster feelings of joint responsibility between marketing and R&D departments for the project’s success or failure (Souder and Chakrabarti 1978; Gupta et al. 1986). Rewards have also been argued to facilitate knowledge sharing (Bartol and Srivastava 2002) and knowledge exchange (Cabrera et al. 2006) thus developing sense of reciprocity (Bartol and Srivastava 2002). Rewards increase interpersonal communication (Chimhanzi 2004a) and alleviate sociocultural differences among people from various functional units (Cho and Hahn 2004).
The conventional approach in measuring joint rewards between functional units is based on the assessments of their joint involvement during the course of their collaboration (e.g., Song et al. 1997; Chimhanzi 2004a). Aligning reward systems to strategy content is essential for achieving higher levels of strategy implementation success and desired organisational performance (Jaworski 1988; Schaap 2006). Shared responsibility between team members fosters innovative thinking, problem solving and learning as members are more inclined to identify and discuss key emerging issues (Manz and Sims 1993).

2.6.3.1.1 M&S joint rewards

M&S, two departments equally responsible for success or failure of marketing strategy (Malshe and Sohi 2009), should work collaboratively to jointly develop strategy (Cespedes 1996; Dewsnap and Jobber 2000, 2002, 2009; Piercy 2006; Homburg et al. 2008; Biemans et al. 2010), to enable joint planning and implementation (Strahle et al. 1996; Malshe and Sohi 2009; Malshe 2011) - what Cespedes (1996) calls “concurrent marketing”. Research in the realm of marketing strategy posits that offering superior value to customers and the achievement of competitive advantage will be highly dependent on the assurance of M&S joint efforts of M&S (Slater and Olson 2000; Cross et al. 2001; MatthysSENS and Johnston 2006). The extant literature examining the M&S interface identifies joint rewards between the two as a key tool for improving of their relationship (Dewsnap and Jobber 2000; Rouziès et al. 2005; Kotler et al. 2006). As the success of each is facilitated by the achievements of the other, thus the adoption of joint reward systems between M&S will encourage them to invest more effort (Dewsnap and Jobber 2000; Rouziès et al. 2005). Joint rewards ensure unity of efforts among a firm’s subsystems, and they assure that firm is characterised by unified direction, orchestrated activities and commitment to strategy (Dess and Priem 1995). Unifying two complementary perspectives - Marketing’s overall strategic product perspective and Sales’ customer perspective - is critical for generating ideas with the highest market potential while at the same time avoiding misalignment of the company’s overall product portfolio and creation of individual customer solutions (Ernst et al.
However, the two are traditionally being rewarded on separate basis, according to their own function specific evaluation metrics, thus pulling the two in different directions (Hauser et al. 1994; Alldredge et al. 1999; Le Meunier-FitzHugh and Piercy 2007b). This causes a degree of animosity and jealousy between M&S, further reinforcing inter-group differences and finally causing a loss in productivity (Norvell and Worchel 1981; Donath 1999). Differences in orientations are reflected in the reward metrics set for these two departments. Sales actions, often heavily influenced by commission based rewards that emphasise performance only, directs their attention towards short-term gains rather than long-term account relationship development linked to a company’s long-term marketing strategy (Ryans and Weinberg 1982; Wood 1995). Therefore, Sales’ rewards are most widely placing an emphasis on achieving sales targets (Wood 1995; Baldauf and Cravens 1999). Marketing personnel, on the other hand, are traditionally evaluated on the basis of increases in business profitability and the successful introduction of new products (Alldredge et al. 1999; Löning and Besson 2002). M&S in most organisations are still rewarded separately on the basis of their respective functional performance only (Coombs and Gomez-Mejia 1991; Le Meunier-FitzHugh et al. 2011). Joint rewards implementation between M&S removes any difficulties caused by individually set and rewarded targets (Le Meunier-FitzHugh et al. 2011). Rewards can create positive interdependencies between the functions, stimulate “give and take” behaviour and overshadow the need to pursue actions directed towards individual gains (Jap and Anderson 2003; Johnson and Johnson 2009). Joint rewards will ensure that both M&S perceive the benefits of engagement in the mutual exchange activities and will bring about the willingness of M&S to remain and further invest in such exchange process (Lawrence et al. 1967; Souder 1986; Clark 1991; Nahapiet and Ghoshal, 1998).

### 2.6.3.2 M&S goal compatibility

“A goal is what the individual is trying to accomplish, the object or aim of an action” (Locke et al. 1981, p. 2). The term goal is closely connected to the concepts of purpose and intent (Locke 1969). Essentially, goals are regulators of human
behaviour as they are designed to guide humans in a desired direction (Locke et al. 1981). Every organisation develops a set of goals that guide the activities and actions of its employees (Pinto et al. 1993). Based on the differentiation-integration stance (Lawrence and Lorsch 1967), the larger the difference in organisational subsystem, the more difficulty the organisation will encounter in integrating its subparts (Lawrence et al. 1967). Functional units across organisations need to have complementary goals derived from a more general, organisational goal (Pinto et al. 1993). The incompatibility of cross-functional goals will foster tension and conflict between departments and will cause different perceptions as to where the scarce resources should be allocated (Menon et al. 1997; Morgan and Piercy 1998; Cadogan et al. 2005). If synchronised, goals will ensure no duplication of efforts occurs between departments as employees engage in frequent and effective interaction (Tjosvold 1988; Kahn and Mentzer 1998).

Overall, the literature suggests that M&S share equal responsibility in the success of marketing strategy (Matthyssens and Johnston 2006). In order to do so the two need to be aligned in their efforts (Malshe and Sohi 2009). Alignment is achieved through the establishment of goal congruity (Hughes et al. 2012). Goals help focus M&S activities in the desired direction (Rouziès et al. 2005), rather than each function pursuing their own functionally-specific strategies and performance outcomes (Strahle et al. 1996). However, M&S in many organisations are pulled apart by differing goals (Alldredge et al. 1999). Goal incompatibility is caused by senior management setting differing goals to M&S (Le Meunier-FitzHugh et al. 2011). Often independent goals pursued by M&S prevent the two from synchronising their efforts and successful implementing the company’s marketing strategy (Strahle et al. 1996; Olson et al. 2001). Marketing focus ostensibly on long term, strategic product management issues (Homburg and Jensen 2007). By contrast, Sales focus on the short term expedients of achieving sales targets and satisfying the short term demands of their customers. Pursuing differing goals, and working at odds from each other results in fragmentation at the customer-company interface and the failure to maximise customer values. This, in turn, will have a negative effect on performance and even the potential to harm overall company success (Cespedes 1994; Shapiro 2001).
2002). Given the nature of the dependence of Sales department on the Marketing department (and vice-versa) in not only satisfying customer needs but also in delivering volume and profitability targets, a close, synchronised relationship between these two customer facing departments will play a key role in responding to changing market and customer needs (Cespedes 1994; Dawes and Massey 2006; Malshe 2011). Compatible M&S goals will drive unity of effort between M&S (Lawrence and Lorsch 1967; Kahn and Mentzer 1996) and create an atmosphere where both work in cooperation, rather than competition and where their resources are not wasted in conflict and time spent on bargaining (Anderson et al. 1999; Lambe et al. 2001; Olson et al. 2001).

However important the congruence may seem, functional area goals are seldom compatible (Anderson 1982). Consequently, the goals of one function are achieved only if the goals of another function are sacrificed or compromised (Pinto et al. 1993). Although the immediate goals of M&S are different as they reflect the fundamental and necessary differences, it is essential that they are compatible; i.e., that they are simultaneously attainable. Incompatible goals between interdependent parties will induce inter-departmental friction, competition and a lack of understanding (White 1961; Seiler 1963; Assael 1969; Homburg and Jensen 2007). In instances of goal incompatibility, members from different units do not perceive their units to be interdependent as each has preferences incompatible with one another (Schmidt and Kochan 1972, 1977). Goal incompatibility reflects the desire of one party to obtain personal gains and act self-interestedly in the exchange (Bowen and Jones 1986). One department’s activities need to be compatible with the activities of the related departments so as to ensure that the results of activities of each are not undermined or made more difficult by the actions of the other (Pinto et al. 1993). On the other hand, if compatible, goals of M&S will ensure that both their activities are directed towards achieving organisation’s goals.
2.7 MSIF performance outcomes

Under performance measurement one assumes the development of indicators and data collection for reporting and analysing performance (Marshall et al. 1999). It has been defined as the process through which firms can assess progress towards the achievement of the pre-defined goals (Amaratunga and Baldry 2003). Performance measurement is argued to be a function of both efficiency and effectiveness of a firm’s activities (Neely et al. 1995). Accounting measures of performance, although a conventional approach to performance assessment (Ambler et al. 2004; Ambler 2005) are generally short-sighted, only partially reflecting past and current activities, therefore, they do not provide an appropriate indication of good performance nor are they satisfactory for firms seeking competitive advantage (Neely et al. 1995; Kaplan 1992; Wouters et al. 1999). Financial measures do not provide a good overview and control over the success of various strategies such as customer satisfaction, flexibility or quality (Ghalayini and Noble 1996). They have been criticised for neglecting intangible assets and for not being appropriate for all levels in the firm (Martinsons et al. 1999; Norreklit 2000). As a response to this criticism, the literature has advocated the inclusion of non-financial performance measures for assessing a firm’s activities (e.g., Keegan et al. 1989). Non-financial measures are argued as superior predictors of long-term performance and a helpful tool managers can use for monitoring progress towards strategic objectives (Kaplan and Norton 2001). However, no single measure can fully reflect all aspects of a firm’s performance (Snow and Hrebiniak 1980). Govindarajan and Gupta (1985) suggest that non-financial measures should not be seen as an alternative to financial measures but as an additive to financial measures. Thus the inclusion of both provides a more balanced impression of the firm’s overall performance. Furthermore, Neely et al. (1995) considers measures of both efficiency and effectiveness to be a function of performance. The distinction between the two has also been noted in researching marketing performance (e.g., Clark 2002; Sheth and Sisodia 2002)

Measures of efficiency focus on costs and benefits, the efficiency of transforming resources into goods or services and the output quality (Amaratunga and Baldry
Measures of efficiency most commonly used in the marketing literature are financial ratios such as return on assets and return on equity (Ramaswamy 1993). Effectiveness measures, on the other hand, focus on revenue generation, and measure the contribution of firm’s activities to organisational objectives (Kahn and Myers 2005). Most commonly used measures of effectiveness are sales and market share. Focusing on operational measures such as sales growth and market share helps explain factors that go beyond and above financial or accounting factors (Otley and Fakiolas 2000). Sales growth and market share, for example, capture the company’s responses as the operating environment changes. Operational measures of performance have been proven to lead ultimately to financial performance (e.g., Hooley et al. 2005).

In addition to using market share and sales growth as indications of market performance, following previous literature on flexibility and M&S relations, customer satisfaction is also included in this investigation (e.g., Buzzell and Gale 1987).

Thus, this research focuses on both effectiveness and efficiency measures and non-financial performance indicator of customer satisfaction. Finally, this research also follows the majority of research in both the flexibility area and the inter-departmental relationship area by focusing on strategic business unit level performance (e.g., Homburg and Jensen 2007; Cadogan et al. 2012).

2.7.1 Approach to performance in flexibility and cross-functional relations literature

Within the extant marketing literature, flexibility is considered a key success factor in continuously creating customer value and achieving competitive advantage (Matthyssens et al. 2005). Nevertheless, even though there is a strong research tradition based on the assumption that flexibility enhances organisational performance, empirical evidence on the flexibility-performance link is still scarce in the literature. The basic argument is that a higher degree of MSIF increases business performance. That proposition is consistent with prior empirical findings which, at a more general level, found the positive performance implications of
relational flexibility on different performance outcomes. At a more generic, organisational level impacts of flexibility on performance fall within following themes: ROI, ROA, ROE, sales growth, achievement of sales and profit goals and market share (e.g., McKee et al. 1989; Fombrun and Ginsberg 1990; Li and Ogunmokun 2000; Grewal and Tansuhaj 2001; Schindehutte and Morris 2001; Dreyer and Grønhaug 2004; Rudd et al. 2008; Nadkarni and Herrmann 2010), innovation performance (Gatignon and Xuereb 1997; Zhou and Wu 2010) and customer satisfaction and loyalty (e.g., Theoharakis and Hooley 2003). The limited empirical research that exists in this area of flexibility in business relationships shows the positive effects of intra-organisational flexibility in: 1) enhancing export sales volume and market share (Cadogan et al. 2012), 2) market performance (Günsel and Açıkgöz 2013) and facilitating job/role outcomes (e.g., employee productivity, goal achievement, team cohesion) (Campion et al. 1993, 1996; McComb et al. 2007) (see Table 5). Several studies investigate the impact of flexibility embedded within inter-organisational relationships on: 1) innovation and financial performance (Martínez-Sánchez et al. 2009); 2) export channel performance (Bello and Gilliland 1997); 3) strategic customer integration and business performance (Johnson 1999); 4) transaction costs and customer intention to expand purchases from the supplier (Cannon and Homburg 2001) and 5) satisfaction with the channel relationship (Gassenheimer et al. 1995; Ivens 2005) and trust and commitment between channel members (Ivens 2005) (see Table 5).
<table>
<thead>
<tr>
<th>Researcher(s); Journal</th>
<th>Type of flexibility researched</th>
<th>Flexibility definition</th>
<th>Context</th>
<th>Outcomes investigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swamidass and Newell 1987;</td>
<td>Manufacturing flexibility</td>
<td>Ability of the plant to switch quickly from one product to another</td>
<td>Organisational (manufacturing)</td>
<td>Economic performance: • growth in ROA • growth in ROS • growth in sales</td>
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<tr>
<td>Noordewier et al. 1990;</td>
<td>Supplier flexibility</td>
<td>Suppliers reaction to unforeseen (and unforeseeable) changes contingencies that could not have been predicted beforehand</td>
<td>Inter-organisational relations</td>
<td>Buyer transaction performance: indicators of possession costs and acquisition costs associated with exchange relationship</td>
</tr>
</tbody>
</table>
| Fiegenbaum and Karnani 1991; | Output flexibility | Flexibility in output volume | Organisational (small firms focus) | Return on assets
Return on sales |
| Campion et al. 1993, Campion et al. 1996; | Job flexibility | Ability of employees to perform each other’s jobs | Intra-organisational relationships | Employee productivity: • Quality of work done
• Customer service provided
• Productivity
• Completing work on time and
• Within the budget
• Providing innovative products/services
• Responding quickly to problems/opportunities
• Overall performance
Employee satisfaction: N/A
Management judgements: N/A |
| Gassenheimer et al. 1995; | Flexibility | Bilateral expectation of willingness to make adaptations as circumstances change | Inter-organisational relationships | Satisfaction:
• Profits generated from manufacturer’s product lines
• Overall manner in which you were treated by manufacturer’s regional office or headquarters
• Overall “sales support”/relationship with manufacturer’s local sales representative
• New product market opportunities manufacturer provided you |
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<tr>
<th>Source</th>
<th>Category</th>
<th>Description</th>
<th>Export channel performance</th>
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<tbody>
<tr>
<td>Bello and Gilliland 1997</td>
<td>Flexibility</td>
<td>Ability of channel partners to adjust to each other's needs and requests</td>
<td>• Sales growth potential from carrying manufacturer's product lines</td>
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<td>• Overall fairness and honesty of manufacturer</td>
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<td></td>
<td>• Interest and concern manufacturer has displayed in helping you accomplish your goals and objectives</td>
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<tr>
<td>Sharfman and Dean 1997</td>
<td>Flexibility in strategic decision making; Openness; Recursiveness</td>
<td>Openness – the extent to which the decision makers are open to new ideas, information sources and roles Recursiveness – re-examination of assumptions and alternative in decision makers</td>
<td>Export channel performance: 1) strategic effectiveness of the foreign market's promotion, distribution, pricing, and marketing strategies</td>
</tr>
<tr>
<td>Johnson 1999</td>
<td>Flexibility</td>
<td>Willingness of firms to respond to changes and accommodate their partners as the need raises</td>
<td>2) selling effectiveness of calling on foreign customers, maintaining personal contact with customers, and servicing customers</td>
</tr>
<tr>
<td>Badri et al. 2000</td>
<td>Flexibility</td>
<td>The ability to respond to rapid changes of the product, service, or process, often identified as mix or volume</td>
<td>3) economic performance accomplishment of sales, profit, growth, and economic goals</td>
</tr>
<tr>
<td>Li and Ogunmokun 2000</td>
<td>Manufacturing flexibility; Marketing</td>
<td>Manufacturing flexibility - flexibility of the firm to change its technology mix, its production volume, and its physical distribution activities in response to environmental</td>
<td>Export venture performance: • sales</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Description</td>
<td>Inter-organisational Relationships</td>
<td>Customer Intention to Expand Purchases from the Supplier:</td>
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<tr>
<td>Financial flexibility</td>
<td>Marketing flexibility - flexibility of the firm to change its international marketing mix in response to environmental changes</td>
<td>Supplier flexibility</td>
<td>The extent to which the supplier is willing to make changes to accommodate the customer's changing needs</td>
</tr>
<tr>
<td>Organisational flexibility</td>
<td>Financial flexibility - flexibility of the firm to change its international payment and receipt arrangements in response to environmental changes</td>
<td>Strategic flexibility</td>
<td>Ability of an organisation to manage economic and political risks by promptly responding in proactive and reactive manner to market threats and opportunities</td>
</tr>
<tr>
<td>Planning flexibility</td>
<td>Organisation's ability to change plans as environmental opportunities or threats emerge</td>
<td>Manufacturing flexibility: Mobility</td>
<td>Mobility - the ability to alter production Range - the ability to manage product and / or process diversity</td>
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<td></td>
<td>Organisational (manufacturing)</td>
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<td>Market share</td>
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<td>Sales growth</td>
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<td>Firm profitability (a=.81)</td>
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<td>Overall profit levels achieved compared to competitors</td>
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<td>Profit margins achieved compared to competitors</td>
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<td>Return on investment compared to competitors</td>
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<td>Customer performance</td>
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<td>Levels of customer satisfaction achieved compared to competitors</td>
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<td>Levels of customer loyalty achieved compared to competitors</td>
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<td>Customer performance</td>
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<td>ROI goals</td>
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<td>profit goals</td>
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<td>growth goals</td>
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<tr>
<td>Range</td>
<td>Labour flexibility (numerical, functional)</td>
<td>Volume flexibility</td>
<td>Product flexibility</td>
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<tr>
<td>Dreyer and Gronhaug 2004</td>
<td>Numerical - adjusting volume to changes in demand</td>
<td>Functional - the spread of functions</td>
<td>Financial - how strongly economic incentives motivate numerical and functional flexibility</td>
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<tr>
<th>Range</th>
<th>Manufacturing flexibility:</th>
<th>Product mix flexibility</th>
<th>New product introduction flexibility</th>
<th>Modification flexibility</th>
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</thead>
<tbody>
<tr>
<td>Pagell and Krause 1999, 2004; Claycomb et al. 2005;</td>
<td>Product mix flexibility – ability of a plant to produce a wider array of products</td>
<td>New product introduction flexibility - ability to introduce new parts</td>
<td>Modification flexibility - ability to easily redesign products</td>
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<tr>
<th>Range</th>
<th>Marketing-base flexibility (Applied customer knowledge)</th>
<th>The use of physical characteristics, operating policies, and managerial practice to cope with market change</th>
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<tbody>
<tr>
<td>Claycomb et al. 2005;</td>
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<tr>
<th>Range</th>
<th>Flexibility</th>
<th>An actor’s willingness to modify an agreement in order to bring it in line with environmental conditions</th>
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<tbody>
<tr>
<td>Ivens 2005;</td>
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<thead>
<tr>
<th>Range</th>
<th>Organisational (manufacturing)</th>
<th>Plant performance relative to major industry competitors based on:</th>
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</thead>
<tbody>
<tr>
<td>Pagell and Krause 1999, 2004; Claycomb et al. 2005;</td>
<td></td>
<td>• unit price of manufacturing</td>
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<td></td>
<td></td>
<td>• total cost</td>
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<td>• product quality,</td>
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<td>• delivery speed</td>
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<td>• delivery dependability</td>
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<td>• flexibility</td>
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<td>• new product introduction</td>
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<tr>
<th>Range</th>
<th>Organisational</th>
<th>Financial performance:</th>
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<tbody>
<tr>
<td>Claycomb et al. 2005;</td>
<td></td>
<td>• Average return on investment over the past 3 years</td>
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<td></td>
<td>• Average profit over the past 3 years</td>
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<td></td>
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<td>• Profit growth over the past 3 years</td>
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<tr>
<th>Range</th>
<th>Inter-organisational relationships</th>
<th>Satisfaction with . . .</th>
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<tbody>
<tr>
<td>Ivens 2005;</td>
<td></td>
<td>• The way the service provider does his job</td>
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<td></td>
<td></td>
<td>• The quality of the data</td>
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<td>• The price of the data in relation to their quality</td>
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<td>• The customer orientation of the service provider</td>
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<td>• The friendliness of the service provider</td>
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<td>• Their interest for me as a person</td>
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<td>• Their respect for me and my company</td>
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<td></td>
<td></td>
<td>• Extent and quality of communication with me and my company</td>
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<th>Range</th>
<th>Trust:</th>
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<td>Ivens 2005;</td>
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<thead>
<tr>
<th>McComb et al. 2007;</th>
<th><strong>Team flexibility</strong></th>
<th>Means by which team members function within a dynamic project environment</th>
<th><strong>Intra-organisational relationships</strong></th>
<th><strong>Goal achievement:</strong></th>
</tr>
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<td>This team will be able to overcome all technical hurdles.</td>
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<td>This team will meet all of its technical objectives.</td>
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<td>This team will provide a technical solution that can be implemented.</td>
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<td>This team will meet all of its business goals.</td>
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<td>This team will provide its expected commercial value to the firm.</td>
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<td>This team will complete its objectives in time to achieve its strategic value</td>
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<td><strong>Project efficiency:</strong></td>
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<td>This project is more costly than expected.</td>
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<td>Estimated project costs have been adjusted</td>
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</table>

- This service provider is not always honest with us
- We believe in information this service provider supplies us with
- This service provider is sincerely interested in our own success
- This service provider is trustworthy
- When dealing with this service provider we always remain careful

**Commitment:**
- We intend to maintain the relationship with this service provider as long as possible
- We do our best not to threaten the relationship with this service provider
- We are willing to put more effort into this relationship than usual
- Problems rarely arise in the relationship
- From time to time, we are looking for alternative suppliers for the service this company provides us with
| Author(s)                | Strategic flexibility | Organisational flexibility | | |
|-------------------------|-----------------------|-----------------------------|---|
| Nadkarni and Narayanan 2007; | Strategic flexibility | The ability to precipitate intentional changes and adapt to environmental changes through continuous changes in current strategic actions, asset deployment, and investment strategies | Organisational Strategic performance: |
|                         |                       |                             |   * sales growth  
|                         |                       |                             |   * return on investment  
|                         |                       |                             |   * net income growth  
| Brouthers et al. 2008;  | Strategic Flexibility | Strategic flexibility defined through strategic options or ‘portfolio of investments’ that may increase the value of current option-based decisions because they provide flexibility | Organisational Satisfaction with subsidiary’s: |
|                         |                       |                             |   * Marketing  
|                         |                       |                             |   * Reputation  
|                         |                       |                             |   * Market access  
| Li et al. 2008;         | Resource flexibility  | Resource flexibility: (1) the range of alternative uses to which a resource can be applied; (2) the cost and difficulties of switching from one use of the resource to another; and (3) the time required to switch one use of the resource to another. Capability flexibility: Firm’s ability to efficiently integrate and deploy internal and external resources by exploring ways to create much more value, rapidly seeking out new opportunities in uncertain environments to make extraordinary benefit, and to choose proactive strategies in new business areas to obtain competitive advantage | Organisational Indigenous firm innovation: |
|                         | Capability flexibility|                             |   * High rate of new products (services) developed by using the firm’s own resources and capabilities  
|                         |                       |                             |   * High number of the patents designed by the firm have been authorised  
|                         |                       |                             |   * The innovation activities are organised without cooperating with external  
|                         |                       |                             |   * Organisations strong innovative abilities of the managers and R&D staffs who implement innovation projects.  

...
<table>
<thead>
<tr>
<th>Source</th>
<th>Flexibility Type</th>
<th>Definition</th>
<th>Inter-organisational relationships</th>
<th>Innovation performance:</th>
</tr>
</thead>
</table>
| Martinez-Sánchez et al. 2009 | Functional flexibility, Internal numerical flexibility, Strategic flexibility | **Functional flexibility**: a process through which firms adjust to changes in the demand for their output by an internal reorganisation of workplaces based on multitasking, teamwork and the involvement of employees in job design and the organisation of work. **Internal numerical flexibility**: adjusting work volume to changes in demand through part-time contracts or flexible working hours. **Strategic flexibility**: the ability of the organisation to adapt to uncertain and fast-occurring environmental changes that have a meaningful impact on the organisation’s performance | | • Innovative performance in product and process innovations (compared with others in their sector)  
• SBU seeking technical leadership  
• Commitment to product and process innovation  
• Success in promoting innovation  
• among its suppliers and customers  

| Yuan et al. 2010;   | Resource flexibility, Coordination flexibility | **Resource flexibility**: (1) the range of alternative uses to which a resource can be applied; (2) the cost and difficulties of switching from one use of the resource to another; and (3) the time required to switch one use of the resource to another  
**Coordination flexibility**: firm’s capability to effectively and efficiently integrate and deploy internal and external resources by exploring ways to create greater value, and rapidly obtain extraordinary benefit and competitive advantage in an uncertain environment | | **Product innovation:**  
• Increasing the variety of product/service  
• Improving qualities of product/service  
• Extending the market coverage of product/service  
• Enhancing the manufacture technology of new products  

| Cadogan et al. 2012 | Export coordination flexibility | (a) coordinated strategy definition, (b) reconfiguration of internal structures to align with strategy, and (c) the coordinated implementation of new marketing strategies | | **Export sales performance:**  
• Satisfaction with export sales volume during the past 3 years  
• Satisfaction with export market share during the past 3 years  

| Kouropalatis et al. 2012 | Strategic flexibility | Firm’s ability to respond to uncertainties by adjusting its objectives with the support of its superior knowledge and capabilities | | **Market Performance:**  
• Market share  
• Customer satisfaction  
• Competitive position  
• Customer retention  

Financial Performance:
| Günsel and Açıkgöz 2013; | **Team flexibility** | The collective ability of a work group or a team to respond effectively and efficiently and to adapt to business and technological changes | **Intra-organisational relationships** | **Market performance:**  
Our product (software):  
- Met or exceeded volume expectations  
- Met or exceeded the first year number expected to be produced and commercialized  
- Met or exceeded overall sales expectations  
- Met or exceeded profit expectations  
- Met or exceeded return on investment expectations  
- Met or exceeded senior management expectations  
- Met or exceeded market share expectations  
- Met or exceeded customer expectations | **Speed-to-market:**  
Product (software):  
- Was developed and launched faster than we expected  
- Was developed and launched (fielded) faster than the major competitor for a similar product  
- Was completed in less time than what was considered normal and customary for our industry  
- Was launched on or ahead of the original schedule developed at initial project go-ahead  
- Top management was pleased with the time it took us from specs to full commercialization |
<table>
<thead>
<tr>
<th>Researcher(s); Journal</th>
<th>Sample</th>
<th>Type of Firm</th>
<th>Outcomes investigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strahle et al. 1996;</td>
<td>367 (78.6%)</td>
<td>consumer grocery product manufacturers</td>
<td>The questionnaire asked the sales managers to: a) indicate the most important and second most important of the five sales objectives for the randomly assigned product, Effectiveness: Achieving customer satisfaction? Providing value for customers? Attaining desired growth? Securing desired market share? Keeping current customers? Attracting new customers? Implementing your current marketing strategy? Performance of marketing on an overall basis? Marketing thinking at the top down the line? Efficiency: Earning profits? Achieving better marketing results at less costs? Working productively with all departments in the business unit? Achieving efficiency in all marketing activities? Performing marketing activities right the first time? Adaptness: Adapting your marketing strategy adequately to changes in the business environment of your business unit? Adapting your marketing strategy adequately to changes in competitors’ marketing strategies? Adapting your products quickly to the changing needs of customers? Reacting quickly to new market threats?</td>
</tr>
<tr>
<td>Krohmer et al. 2002;</td>
<td>280 (19.9%) US and 234 (19.4%) Germany Total response rate 19.7%.</td>
<td>Not specified</td>
<td>Effectiveness: Satisfaction with the working relationship; Belief that the marketing/sales manager M(S)M carried out their responsibilities and commitments; Value of the time spent developing and maintaining the relationship;</td>
</tr>
<tr>
<td>Dawes and Massey 2006;</td>
<td>201 (34.1%)</td>
<td>NS</td>
<td>Perceived relationship effectiveness: Satisfaction with the working relationship; Belief that the marketing/sales manager M(S)M carried out their responsibilities and commitments; Value of the time spent developing and maintaining the relationship;</td>
</tr>
<tr>
<td>Study</td>
<td>Sample Size</td>
<td>Industry Focus</td>
<td>Customer Performance:</td>
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<td>-------------------------------------------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
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<tr>
<td>Luo et al. 2006;</td>
<td>163 (49.5%)</td>
<td>e.g., electronics, information technology, biotechnology</td>
<td>• Customer loyalty.</td>
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<td></td>
<td></td>
<td></td>
<td>• Customer satisfaction.</td>
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<td></td>
<td></td>
<td></td>
<td>• Customer lifetime value.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Customer retention.</td>
</tr>
<tr>
<td>Guenzi and Troilo 2007;</td>
<td>396 (46%)</td>
<td>30% sell pure goods, 17% pure services, 53% a combination of goods and services.</td>
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<tr>
<td></td>
<td></td>
<td>Financial services, chemical and pharmaceutical, machinery, utilities, electronics, consumer packaged goods, and automotive</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Homburg and Jensen 2007;</td>
<td>337 (20%)</td>
<td>Financial services, chemical and pharmaceutical, machinery, utilities, electronics, consumer packaged goods, and automotive</td>
<td>Market performance:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Achieving customer satisfaction and loyalty,</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Achieving or maintaining the envisioned market share,</td>
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<td></td>
<td></td>
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<td>• Making profits,</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Fast reaction to opportunities and threats in the market.</td>
</tr>
<tr>
<td>Le Meunier-FitzHugh and Lane 2009;</td>
<td>146 (14.8%)</td>
<td>industrial manufacturers (42%); consumer goods manufacturers (28%); and wholesalers (30%).</td>
<td>Business performance:</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>• How successful is the organisation at generating a high level of sales revenue?</td>
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<td></td>
<td>• How successful is the organisation at generating high market share?</td>
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<td></td>
<td></td>
<td></td>
<td>• How successful is the organisation at selling those products with the highest profit margins?</td>
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<td></td>
<td></td>
<td></td>
<td>• How successful is the organisation at exceeding all sales targets and objectives during the year?</td>
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<td></td>
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<td></td>
<td>• How successful is the organisation at generating sales of new products?</td>
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<td></td>
<td></td>
<td></td>
<td>• How successful is the organisation at producing sales with long-term profitability?</td>
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<tr>
<td>Source</td>
<td>Sample Size</td>
<td>Description</td>
<td>Superior customer value:</td>
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<td>-------------------</td>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
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<tr>
<td>Troilo et al. 2009;</td>
<td>326 (37.5%)</td>
<td>Chemical, pharmaceutical and medical; electronics, ICT and telecommunications; from food and beverages industry; constructions and industrial goods; retailing; banking and insurance</td>
<td>• Proficiency in responsiveness to customer needs,</td>
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<td></td>
<td></td>
<td></td>
<td>• Creativity in developing solutions to customer needs,</td>
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<td></td>
<td></td>
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<td>• Speed to market,</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Innovation.</td>
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<tr>
<td>Ernst et al. 2010;</td>
<td>36 companies, 424 questionnaires (18.1%)</td>
<td>Mechanical engineering medical devices, automotive, consumer products and software</td>
<td>Overall NPD project performance</td>
</tr>
<tr>
<td>Verhoef et al. 2011;</td>
<td>Data from six countries. The average response rate 21.8%</td>
<td>Not specified</td>
<td>Business performance (formative):</td>
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<td></td>
<td></td>
<td></td>
<td>• Customer satisfaction</td>
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<td></td>
<td></td>
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<td>• Customer loyalty</td>
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<td></td>
<td></td>
<td></td>
<td>• Turnover</td>
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<td></td>
<td></td>
<td></td>
<td>• Profitability</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Market share</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Cost level</td>
</tr>
<tr>
<td>Goetz et al. 2013;</td>
<td>152 (20%)</td>
<td>Automotive, cosmetic, electronics, financial services and food</td>
<td>Business performance:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Overall performance relative to competitors</td>
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<td></td>
<td></td>
<td></td>
<td>• Attaining higher market share relative to competitors</td>
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<td></td>
<td></td>
<td></td>
<td>• Attaining higher market growth relative to competitors</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Profitability relative to competitors</td>
</tr>
</tbody>
</table>
Concerning the outcome dimensions employed in this study, in keeping with strategic marketing and management literature a multidimensional conceptualisation of performance was used (Snow and Hrebiniak 1980; Li and Ogunmokun 2000). Examination of financial and market performance seems to be commonly accepted in both the literatures on both flexibility and cross-functional relations (Table 5 and Table 6). These are a function of: customer performance, market share and financial performance (e.g., Johnson 1999; Homburg et al. 2008; Le Meunier-FitzHugh and Piercy 2010; Kouropalatis et al. 2012). Market share and financial indicators (e.g., return on investment) are two widely used economic measures of organisational performance (Dess and Robinson 1984). Market share has a long-term orientation and allows for cross-industry comparisons (Bhargava et al. 1994). Growth in sales reflects successful expansion of a firm’s product-market scope while keeping in touch with its business environment. Firms achieving large market share are seen as being able to achieve scale efficiencies and market power (Buzzell et al. 1975; Szymanski et al. 1993). Large market share has mostly been related positively to firm’s profitability and is applied as a common measure of marketing effectiveness (e.g., Reichheld and Sasser 1990; Anderson and Sullivan 1993). However, increasing market share may come at the expense of short-term profits since an increase in share requires short-term investments (e.g., additional advertising efforts) (Walker and Ruekert 1987; Bhargava et al. 1994). Therefore, a certain trade-off in resource allocation and goal setting might be necessary (Walker and Ruekert 1987; Morgan et al. 2002). Vorhies and Morgan (2003), for example, suggested that it might be extremely hard to achieve both effectiveness and efficiency in marketing activities at the same time and found marketing effectiveness to be negatively related to marketing efficiency. However, Day (1984) places an emphasis on market share saying that the core of every business strategy should be its pursuit of competitive advantage through an integrated set of actions (Clark 2002). Therefore, regardless of the equivocal relationship with profitability found in the literature, market share is examined as an outcome of the integrated efforts of M&S. As Morgan et al. (2002) assert, the ability of a firm to respond to environmental changes is the precursor of both efficiency and effectiveness.
Financial measures have been criticised for not being useful as an indicator whether the firm is successful in meeting customer needs (Ghalayini and Noble 1996). Considering that the process of creation and delivery of superior customer value is very relevant to both M&S functions (LaForge et al. 2009) and based on the exploratory study results, an indicator of the level of customer satisfaction and loyalty is also used as an additional outcome variable. Also, these measures have been argued to capture more proximal effects of market-related decisions (e.g., Guenzi and Troilo 2006). Further, Theoharakis and Hooley (2003) assert, customer satisfaction reflects the ability of the firm to satisfy customers and ensure a loyal customer base.

Importantly also, the marketing literature suggests a strong link between customer satisfaction and profitability (e.g., Anderson and Sullivan 1993). Namely, an increase in customer satisfaction achieved by improvements in a firm’s product and service attributes (Wittink and Bayer 1994; Mittal et al. 1998) increases customer future intentions (e.g., retention) (Anderson et al. 1994; Zeithaml et al. 1996), which in turn generates more profit (e.g., Yi 1990; Anderson and Sullivan 1993; Anderson and Mittal 2000).

Customer retention has received much attention in the marketing literature as the marketing domain shifted from a transactional to a relationship approach that highly values long-term relationships and repeated purchases (e.g., Reichheld et al. 2000). The impact of customer retention on firm profitability is explained through lower costs of retaining the existing customer compared to expenses connected to new customer attainment (Reichheld and Sasser 1990; Anderson and Sullivan 1993). In order to attract new customers firm needs to make investments in advertising and promotion activities, in addition to the start-up operating costs. These initial expenditures will make new customer unprofitable, at least for a certain period of time after the acquisition (Rose 1990). However, if not completely satisfied, customers become extremely inclined to switching as soon as the opportunity arises (Jones and Sasser 1995). Satisfied and loyal customers, on the other hand, will be less likely to consider other suppliers (Srinivasan and Ratchford 1991). Prevo et al. (1999) assert that customer satisfaction plays a key role in making the connection between the current behaviour and future customer behaviour. If a firm wants to attract and retain
customers it will have to evoke feelings of satisfaction with the firm first (Oliver and DeSarbo 1988; Oliver 1993; Reichheld et al. 2000). Martensen et al. (2000), however, argue that customer satisfaction must not be a goal in itself and should be viewed as a way for improving a firm’s performance. Empirical results demonstrate the role that customer satisfaction and loyalty play in enhancing firm’s economic performance (e.g., Reichheld and Sasser 1990; Anderson et al. 1994; Eklof et al. 1999). Therefore, customer satisfaction and loyalty are chosen ahead of retention for this study. Its connection to MSIF and impact on financial performance will be examined in following chapters of this thesis.

Therefore, this study incorporates all three dimensions of performance, arguing that an increase in customer satisfaction and market share will eventually lead to an increase in financial performance (e.g., Buzzell and Gale 1987; Anderson and Sullivan 1993; Hooley et al. 2005).

2.8 Chapter summary

In this chapter, literatures on cross-functional relationships and flexibility are presented and merged in order to develop a conceptualisation of MSIF. First, the importance of studying the M&S relationship is presented, with a specific emphasis on the recently acknowledged importance of flexibility at the interface. Second, a wide literature on flexibility was examined: conceptualisations, operationalisations and the outcomes of flexibility are reviewed. This demonstrated that no studies to date have examined flexibility specifically in the context of intra-organisational dyadic relationships. Concerning the acknowledged stance that the research context will highly influence the definition and measurement of flexibility, the argument is made that the dyadic cross-functional relationship context is an important one to consider. Borrowing from various literature streams, flexibility is seen as a part of the collaborative process of M&S departments. Grounded in the SET, focus on the resource exchange process between M&S is suggested as the context for exploring flexibility.

Based on this literature review and the theoretical underpinnings, a conceptual model is developed. However, in order to assure that MSIF as defined here actually
occurs in the real-world, qualitative research was conducted. Results from this study confirm the existence and relevance of MSIF for the M&S interface. These qualitative research results are summarised in Chapter 4.

The chapter that follows then presents the conceptual model of MSIF and explains in more detail the relationships between the variables discussed here.
Chapter 3: Conceptual Development

3.1 Introduction

The section that follows integrates existing knowledge from the key literature streams discussed in the previous chapter: marketing’s cross-functional relations and strategic literature on flexibility. Embedded in the two theoretical perspectives, social exchange theory and contingency theory, a set of formal hypotheses is put forward regarding the antecedents of MSIF and the impact of MSIF on performance in different environmental conditions. The conceptual framework resulting from the hypotheses is shown in Figure 2. In addition, the conceptual framework also presents a set of competing hypotheses of the potential non-linear relationship between MSIF and organisational performance, where the form of this relationship is dependent upon environmental conditions; specifically, on competitor intensity and technological turbulence.

The development of the proposed conceptual framework (presented in section 3.2. of this Chapter) was guided by the literature (see Chapter 2) and the exploratory study conducted in cooperation with M&S managers (see Chapter 4). This chapter is organised into the following sections.

The first section justifies the hypothesised relationship between MSIF and performance outcomes. The section begins by explicating the link between MSIF and three dimensions of performance: customer, market and financial. Although the impact of flexibility on performance has received much attention in the strategic and marketing literatures, as discussed in the previous chapter it is burdened with differing definitions of flexibility, its types, its context and its measurement (e.g., Sushil 1997; De Toni and Tonchia 2005). As a consequence, research is without consensus on the nature of the flexibility: performance link. Aside from the difficulties connected with the operationalisation of flexibility there is also equivocality in terms of how performance has been operationalised. This renders any comparison with past studies difficult.

The following sections develop the rationale for investigating of non-linear effects of MSIF on performance and how this quadratic relationship is further impacted by
environmental conditions. Most of the research on flexibility has examined its linear relationship with performance; however, this would imply that performance will always be increased with flexibility. This stance neglects the realities in which firms operate; for example limited budgets, the costs of developing flexibility and its potential trade-off with other strategic options available to a firm (Cadogan et al. 2009).

The section that follows discusses how environment impacts on the non-linear MSIF: performance relationship. Underpinned by contingency theory, competitive intensity and technological turbulence are hypothesised as important moderators of this relationship.

The final section addresses the antecedents to MSIF. These are derived from the main theoretical framework that underpins the study. In this respect, the impact of trust, interdependence, mutual goals and joint rewards on MSIF is discussed through the lenses of social exchange theory.

3.2 Conceptual model and hypothesis development

3.2.1 Conceptual model: Graphical presentation

Figure 2: Conceptual model
3.2.2 The MSIF: Performance relationship

Grounded in social exchange theory (SET) this study proposes that the cooperation between M&S in the form of reciprocated resource adjustments will lead to an increase in the effectiveness with which their tasks are performed (Bello and Gilliland 1997; Morgan et al. 2002). MSIF is argued to help leverage internal resources across M&S departments in ways that result in need satisfaction (market and/or customer) as the driving force behind this exchange (Houston and Gassenheimer 1987). By investing in MSIF, M&S will also become more successful in effectively managing the coordinated implementation of the newly leveraged resources (Buckley and Casson 1998; Cadogan et al. 2012).

According to Katz and Kahn (1978), good organisational effectiveness is achieved in instances when employees carry out tasks that are innovative, cooperative and beyond the bounds of their job description. Within channel research, flexible adjustments made by parties involved in the dyadic relationship are argued to increase the effectiveness and efficiency of tasks they perform together (Bello and Gilliland 1997). Furthermore, for a firm to successfully manage market changes it is faced with, creation of different types of resources, knowledge, capabilities and expertise through the social interaction and joint action is required (Zucker et al. 1995). When investments in MSIF are high, M&S are able to share the workload between them allowing different points of views and new ideas to emerge and integrate the diverse competencies found in both departments which will evoke greater solidarity among them, unity of effort and willingness to cooperate on future projects (Sundstrom et al. 1990; Campion et al. 1993). For example, in the qualitative study, the key account manager in the FMCG sector explained how flexibility helped create a successful response to an anticipated competitor product launch. In this instance Marketing resources were reconfigured to work outside of normal product development and launch lead times to work with Sales to introduce a new product to counter the competitor launch. In addition, “…Sales shifted all their efforts into selling this product and it was a big success.” The insights from the qualitative study show that enhancing firm performance (e.g., dealing with under-performance versus target, securing a product listing or meeting a customer’s request for tailored promotions) is central to M&S interface flexibility. The overall
outcome of the qualitative research was the ability to confirm the importance of MSIF for practice. All the respondents indicated positive consequences of such interface flexibility. For example, the Marketing manager in one of the pharmaceutical companies (R20) said: “It really did impact on performance, because actually this year we are on target, and feedback from the customers and the doctors is phenomenal, and representatives are really enthusiastic as well”. The qualitative insights on Marketing’s and Sales flexibility in redeploying their resources discussed in Chapter 4 show that enhancing firm performance (e.g., dealing with under-performance versus target, securing a product listing or meeting a customer’s request for tailored promotions) is central to such interface flexibility.

The effect of MSIF on market share and sales growth is best described by the respondent in the publishing company. This was in the context of securing sales of a bespoke (custom) book that M&S co-designed in order to meet a large customer’s request and against the background of a slow competitor response: “So I took that business because the competitor was very slow and they hadn’t delivered as they said they would. Whereas, I phoned the marketing manager and said I have a situation here and they agreed to help out.” A marketing manager in a gas supplies company described how a short-term task force with representatives from both functions was put together to fix brand problems (i.e., under-achievements versus plan and falling market share). Marketing’s input had been cash resources to support local selling campaigns and, where needed, people resource to secure selling appointments for their sales colleagues. Sales on the other hand refocused their attention and realigned their schedule according to the needs of this newly formed task force. The reciprocal flexibility worked to “pull things around” and to regain lost market share. As such, MSIF is expected to play a key role in M&S ability to increase sales over time with an associated improvement in its market share.

MSIF was also described as a potential way of assuring customer satisfaction by solving customer-based problems, where in pharmaceuticals, marketing’s unplanned working with the sales department derived the solution to the problem. As an example of MSIF to counter competitor inactivity and ensure customer satisfaction, a respondent in publishing explained how against the background of a slow competitor response a bespoke (custom) book that marketing and sales quickly co-designed to
meet a major customer’s request and secured an adoption at the expense of the competitor. In one of the pharmaceuticals companies marketing’s unplanned co-working with field sales gave the sales additional reassurance and knowledge they needed in selling their products, which they used when it was decided that sales would be re-calling on sceptical customers to re-assure them on the basis of the product’s core values: “So what we did, we didn’t just lower our price, we made sure that the reps were absolutely clear and aware of… our own strategy, which is based on other (non-price) values.... We [marketing] just spent the time with the reps, making sure that they knew the data, that they knew the strategy and that they were confident. We enhanced their ability to try and handle objections… to go back to our prescribers and see what is really most important for the patients”. A similar response to resource deployment was observed in the second pharmaceutical company, this time in the face of customer objections/non-receptiveness: “So, say you’re rolling out a new campaign…but the customer doesn’t agree with some of the materials that you have provided. What you need to do therefore is to work with the sales force…the reps to understand what the needs of the customer really are…why they don’t agree with your data or what you’re saying…and come up with a solution with the sales force to see how you can either convince the customer, or find out a new solution to help them”.

Bringing together different capabilities found in the two departments and focusing their joint efforts on satisfaction of market needs will enable them to move resources more successfully from unproductive to productive uses (Ford and Randolph 1992). Thus, high levels of MSIF imply high levels of connectivity between M&S personnel, and a sense of mutual support and togetherness, which can then be extended to customers, making sure that the best customer opportunities are exploited. As such, it is the expectation here that an increase in MSIF levels would lead to an increase in organisational performance (Johnson et al. 2003).

The next section deal with the relationship between MSIF and the various performance dimensions in more detail.
3.2.2.1 A quadratic relationship MSIF²: Performance

“Nonlinearity begets completeness; misjudgement creates linearity” (Lao Tzu, circa 600 BC, quoted in Tong (1990, p. 1)).

Extant empirical research has shown a positive link between flexibility and company productivity (e.g., Suarez et al. 1995). However, a recent study of Dreyer and Grønhaug (2004) found opposing evidence with respect to flexibility’s impact on firm productivity. Considering these opposing results, it was deemed logical to assume that equivocal results stem from the possibility of non-linearity. As any discussion of the impact of flexibility is highly dependent on the context and the type of flexibility researched (e.g., DeToni and Tonchia 2001; Dreyer and Grønhaug 2004), no direct causal relationships could be drawn from the prior literature due to lack of research on flexibility at the inter-functional interface of M&S. In a M&S interface context, it can be assumed that although MSIF should be beneficial for the company, it might come with a cost (McKee et al. 1989). In order to fully understand and capture the complex dynamics inherent in the flexibility process, this thesis goes beyond the linear model as its approximation is argued to potentially fail to fully apprehend the complexities of MSIF’s impact on performance (Losada and Heaphy 2004). MSIF’s effect on performance might not reflect the linear model’s basic assumption of proportionality between the input and output of a system. More specifically, it is the contention here that different levels of MSIF might have adverse effects on customer, market and financial performance; i.e., either very low or very high levels of MSIF are posited to yield a below average (customer, market and financial) performance, whereas performance is highest in the middle. Whereas flexible resource management offers a great opportunity for M&S and for organisations, it may present a great challenge and a cost to the firm as well. The logic underlying the potential negative effects of MSIF could be found in the inability of very low levels of flexibility to serve its purposes and, similarly for there be costs in sustaining very high levels of flexibility. This is in accordance with Snow and Hrebinia (1980) who assert that market adaptability positively influences performance, but only up to a point after which a negative association occurs. Therefore, it is not clear whether all levels of MSIF are good for performance or that the good effects deteriorate after certain point.
Recent empirical studies on expertise diversity in teams, for example, suggest the non-linear effects of a diverse team’s cooperation on various performance outcomes (e.g., Hitt et al. 2001). Flexibility at the inter-functional interface level of M&S may be expensive (Von Hippel 1978; Ford 1980; Frazier et al. 1989), such as when reconfiguration of their resources is needed, it might be connected to a requiring transaction-specific investment (Pilling et al. 1994) and there could be opportunity costs (Ford 1980). A transaction cost might occur in the form of time and effort spent negotiating over the changes needed (Oktemgil and Greenley 1997). For example, higher levels of flexibility between two differently oriented departments (different orientations and competencies) may require additional time investments from both sides resulting from pro-longed debates on alternative courses of action where differences between the two may become more obvious and intense (Homburg and Jensen 2007). Consequently, time consuming debates on alternative ways of resource redeployment will increase information-processing demands and may inhibit the positive effects of MSIF; for example, it could result in missed market opportunities or delayed responses to customer demands. Diverse perspectives and opinions resulting from fundamental differences typical for M&S departments and ways of approaching problems (Cespedes 1995) may also lead to information overload and increase the general complexity of the problem solving in terms of resource reconfiguration, reallocation and redeployment between the two (Ancona and Caldwell 1992; Milliken and Martins 1996). Consequently, the costs associated with the resource reconfiguration (reallocation and redeployment) and the complexity with which departments are now faced will undermine the potential benefits of MSIF. In addition, investments in MSIF, in companies that are systems with limited resources, may come at the expense of investments in other orientations that may secure higher performance outcomes (e.g., market orientation, innovation) (Cadogan et al. 2009). Therefore, positive performance outcomes of MSIF will be exceeded by the potential reductions in performance that might have come from the (reduced) investments in alternative organisational orientations. Medium-flexibility levels would be therefore better in the sense that M&S would have greater capacity to balance each other’s needs and to achieve the full potential of the resources being reconfigured, reallocated and redeployed (Losada and Heaphy 2004). At a medium-level of flexibility M&S may find more efficient and effective uses of their resources.
This model, therefore, implies that there is a specific “threshold” after which benefits of MSIF begin to decrease. MSIF might be positively associated with performance up to a certain point, after which a negative association takes place. If the offerings created provided by the flexible resource management of M&S are delivered at a medium level of MSIF, an increase in customer satisfaction, market share, sales growth and profit will occur.

In summary, while marginal returns may exceed marginal costs for moderate levels of MSIF, beyond an optimal point the marginal returns enter negative territory. Thus, M&S may be able to successfully manage resource flows and balance their differing views relatively easy, while reaping the benefits of flexible resource management up to a certain point. They can therefore be expected to enjoy returns that exceed the costs incurred at the margin. After a threshold is reached, practising MSIF escalates costs and erodes firm performance. For example, in markets with multiple competitors with differing strategies, M&S may be required to redesign their responses to customer needs to stay ahead of the competition and to operate effectively in different markets. At a certain point the internal governance costs will exceed the benefits provided by the MSIF. With continued discussion and further increase in resource reconfiguration, the complexities of managing the resource reconfiguration process among these two units may result in costs escalating at a faster rate than returns. The logic presented above suggests the following hypothesis.

**H1**: The relationship between MSIF and performance will be nonlinear with a) Customer, b) Market and c) Financial Performance increasing up to an optimal level beyond which higher levels of MSIF lead to a) Customer, b) Market and c) Financial Performance decline.

### 3.2.2.2 Customer and Market Performance: Financial Performance control path

Customer and market performance have been proven to have a positive effect on financial performance (e.g., Buzzell, Gale 1987; Reichheld and Sasser 1990; Anderson and Sullivan 1993; Homburg et al. 2000; Hooley et al. 2005).
For example, according to Lambin (1972) market share precedes profit, whereas customer satisfaction and loyalty have also been investigated with a connection to profitability (e.g., Fornell 1992; Anderson et al. 1994). Customer satisfaction and loyalty are argued to increase profitability through longer customer life (Rust et al. 2004) and the associated removal of costs connected to acquisition of new customers (Anderson and Sullivan 1993; Reichheld et al. 2000). In addition, an increase in market share and sales growth will have a direct link to firm profitability through the achievement of economies of scale as the market leaders will most likely have lower investment/sales, receivables/sales, inventory/sales, purchases/sales, manufacturing/sales, marketing/sales, and R&D/sales ratios (Buzell and Gale 1987).

Therefore, to be complete and in line with previous studies, the paths between Customer Performance, Market Performance and Financial Performance are also acknowledged in this study and, are, accordingly, specified as control paths.

3.3 Competitive Intensity and Technological Turbulence as moderators

In this section, the flexibility literature and contingency theory are integrated to argue that the success of MSIF will be influenced by the level of competition and technological turbulence in the environment.

Based on contingency theory, the prediction is that the organisation’s external operating environment will have a major impact on M&S ability to flexibly manage their resources. The complexity in an industry created by the changes in the environment may be overcome by reconfiguration of the existing resources or through reallocations of the existing resources into new and more promising markets (George 2005). The majority of literature on flexibility agrees that the importance of flexibility rises as uncertainty in the competitive environments increases (Sanchez 1995; Young-Ybarra and Wiersema 1999; Eisenhardt and Martin 2000). Such arguments have also been supported empirically in studies which found that flexibility more strongly predicts performance in more dynamic environments (Grewal and Tansuhaj 2001; Anandø Ward 2004; Dreyer and Grønhaug 2004; Nadkarni and Narayanan 2007). Consequently, it is expected that depending on the market context
within which an organisation is operating, the value of interface flexibility capabilities will have to be re-evaluated (Barney 2001). Because of the intensity of technological and competitive changes in the environment, opportunities available for M&S to exploit are abundant (Garg et al. 2003). They will be prompted to reach out to customers (Li and Calantone 1998). When the rate of change is high and competitive advantage is difficult to sustain, stable and persistent patterns of resource deployment may lock M&S resources into products and processes that may become obsolete, consequently harming performance (Nerkar and Roberts 2004). In such instances, M&S would be better off if they were to switch to the creation of situation-specific new resources through changes and modifications (Nadkarni and Narayanan 2007). Flexibility in high levels of turbulence will enable firms to adapt to newly formed situation in a well-timed and appropriate way (Mintzberg 1979; Schindehutte and Morris 2001).

However, unpredicted environmental changes may put constraints on the ability of M&S to make collaborative adaptations as delays in reaching a consensus may occur (Bello and Gilliand 1997). The different thought-worlds of M&S may lead to the creation and proposal of different solutions and ideas on how to best approach a situation. What might seem optimal for Marketing may well be seen as suboptimal to the Sales department, thus making the flexible adjustments difficult to accomplish (Bello and Gilliand 1997). Therefore, more time is required for reaching an agreement on the right kind of answer in situations where agility of response is of crucial importance (Cadogan et al. 2012).

Following the existing empirical research on flexibility (e.g., Grewal and Tansuhaj 2001), it may be expected that higher degrees of environmental turbulence would require greater MSIF and therefore that MSIF in such environments would have a greater impact on performance than in more stable environments. At the same time, unforeseen contingencies may disturb the coordinative harmony of M&S, prolonging the required time to create flexibility-based answers. Because it is anticipated that the impact of MSIF will vary under different levels of environmental uncertainty, the moderating effect of environmental uncertainty on the MSIF-performance relationship is proposed. The strength of the curvilinear relationship between the
MSIF and performance is argued to be affected by the degree of competition and technological turbulence in the company’s operative environment.

3.3.1 The Competitive Environment as a moderator

Competition uncertainty makes flexibility valuable (Dreyer and Grønhaug 2004). However, competition uncertainty imposes on the organisation a set of conflicting demands (Khandwalla 1973). When uncertainty in potential competitor actions is high, companies are faced by ambiguities with regard to the type and amount of resources in their resource portfolio needed to outperform their rivals (Ireland et al. 2003). In such instances, an increase in the value of a firm’s resources may be created through flexibilities (Li et al. 2008). When competition increases, the hostility in the environment increases. In this situation, a company experiences competitor attacks on a variety of fronts (e.g., pricing, promotion, distribution and product development) (Golden et al. 1995). Companies are faced with higher pressures and requirements for identifying customers’ changing needs and delivering superior value to customers (Kohli and Jaworski 1990; Steel and Webster 1992). To succeed in such environments, organisations will need to adapt accordingly and to engage frequently in new and diverse competitive actions in the form of solutions that can be provided by resource modification (Dreyer and Grønhaug 2004; Auh and Menguc 2005; Auh and Merlo 2012). In these instances, MSIF is expected to reap higher benefits for the firm. Reconfigured resources will place the company ahead of its competitors and enable a quicker and smoother route to customers and to customer satisfaction, at the expense of competition.

In line with this logic, a positive relationship between MSIF and performance (customer, market and financial) is expected to become greater in magnitude as competitive intensity increases. At the same time, the negative part of the slope will also become steeper. In moderately competitive environments, M&S are expected to harness the rewards from their ability to balance adaptive capability with efficiency requirements (McKee et al. 1989). As competition continues to increase, the difficulties inherent in M&S resource exchange will become more intense. Time pressures will require quick solutions which will be disabled by the higher time and
effort investments required for getting to a decision (Cespedes 1995) and by reconfiguration, reallocation and redeployment barriers resulting from opposing world-views. Competitive conditions have also been found to strengthen the people’s sense of group identity and to cause hostile outgroup behaviour (Sharfman and Dean 1997). In particular, threatening environmental conditions will command greater loyalty within the group and will result in stronger competition between groups. Finally, competitive intensity may be better addressed by application of orientations other than MSIF, for example by adopting an entrepreneurial orientation. This is argued to be particularly fruitful in instances of high market dynamism (e.g., Lumpkin and Dess 2001). Hence:

\textit{H2: The inverted U-shaped relationship between MSIF and a) customer, b) market and c) financial performance becomes greater in magnitude as the degree of Competitive Intensity increases.}

\subsection*{3.3.2 Technological Turbulence as a moderator}

Similar to the effect of competitive hostility, in instances of high technological turbulence the speed of change and the instability of the technological environment (Atuahene-Gima and Murray 2004) will negatively impact the effectiveness of marketing resource deployments (and hence also, redeployment) (DeSarbo et al. 2005; Vorhies et al. 2009). On such occasions, it is expected that the ability of M&S to flexibly recalibrate and refocus their resources with different ‘rules of engagement’ will help adequately respond to a newly created market situation, to provide a more creative response to environmental challenges and to win over customers with the innovatively combined resources (Bahrami and Evans 1989). Flexibility is, therefore, expected to help M&S to explore ways to generate more value with the existing resources (Li et al. 2008). Further, it will ensure a common vision is shared among M&S people as to which customers to serve and which quality standards are to be provided (Day and Nedungadi 1994). At the same time, MSIF can be helpful only up to a point as further increases might be mitigated by the inability of MSIF to fully address changes in manufacturing and new product technologies. In these instances other orientations, such as a firm’s technological orientation, will most probably be
more beneficial to performance (Gatignon and Xuereb 1997). Thus, in technologically turbulent environments it is expected that the negative section of the slope will become steeper (that is, greater in magnitude). Therefore:

\[ H3: \text{The inverted U-shaped relationship between MSIF and a) customer, b) market and c) financial performance becomes greater in magnitude as the degree of Technological Turbulence increases.} \]

### 3.4 Antecedents to MSIF

This section deals with the impact of antecedents on MSIF. The potential impact of each study variable on MSIF is discussed and hypotheses developed accordingly.

#### 3.4.1 The Marketing and Sales Resource Dependence Asymmetry: MSIF relationship

Specialisation and functional differentiation between M&S departments, as a common feature of today’s organisation for marketing (e.g., Workman et al. 2003; Kotler et al. 2006) result in interdependencies among the two (Reve and Stern 1979; Victor and Blackburn 1987). Neither is self-sufficient with respect to the resources required to fulfil their tasks. This creates inevitable dependencies between the two (Emerson 1962; Rouziès et al. 2005). Resource dependency between Marketing and other functions (in this case, Sales) has been seen as a key variable influencing their interactions (Ruekert and Walker 1987a). Such interdependencies are expected to be highest between M&S departments as both, on some level, are highly responsible for customer satisfaction and both are incapable of fulfilling their goals without mutual resource inputs in expertise, time, budget, effort, and so on (Cespedes 1995; Dawes and Massey 2006). Dependence, therefore, results from the need of one party to obtain resources from the other party and to maintain the exchange relationship with that other party necessary for the achievement of desired goals (Frazier 1983; Gundlach and Cadotte 1994). Relationship maintenance of two dependent parties on each other's resources will also require mutual adaptations between the two (Pfeffer and Salancik 1978). Interdependencies encourage
cooperation and reduce potential relationship risks that may occur in instances when one party’s actions become contingent on the other party’s behaviour (Molm 1994).

Interdependence is considered a central characteristic of social exchange (Molm 1994; Lambe et al. 2001). Social exchange takes place within structures of mutual dependence where parties perceive mutual benefits from interacting, and depend on the combination of each other’s efforts for obtaining valued outcomes (Levine and White 1961; Blau 1964; Molm et al. 2000). Building on SET, and specifically Emerson’s (1962) power-dependence theory, the less dependent the party is in the exchange relationship, the more power that party has over the other party involved in the relationship. Therefore, when dependency is unilateral, one party will have more power over the other (Emerson 1962). These two concepts, dependence and power, are highly related in the sense that one party’s higher dependence will result in another party’s higher power over the first party (Rusbult and Van Lange 2003). Consequently, control over needed resources creates the potential of that party to influence the party that is in need of those resources (Pfeffer and Salancik 1978; Willer et al. 1997). It enables the achievement of positive outcomes at the expense of the other (Willer et al. 1997).

On the other hand, in the research that incorporates the social exchange view, power/dependence equilibrium has been found to be a predictor of cooperative relationships, driving parties in that relationship to act in a manner consistent with their mutual interests (Anderson and Weitz 1989). In situations where dependence equality exists, neither party is willing to endanger their relationship by acting opportunistically (Buchanan 1992). Balanced interdependency leads to mutual solidarity and feelings of togetherness (Nevin 1995); it results in higher resource flows (Ruekert and Walker 1987a). The disequilibrium will occur as soon as one side invests more resources than the other (Astley and Zajac 1990). This will create dependence asymmetry in which one party will have more power than the other (Emerson 1962). Authors assert that the asymmetrical interdependence relationships, with unequal contributions of resources from parties in the exchange, induce opportunistic behaviours and exhibit low cooperation (Dwyer et al. 1987; Anderson and Weitz 1989; Frazier et al. 1989; Stern and Reve 1980; Gundlach et al. 1995). In such cases, the dominant partner is unwilling to make specific investments.
with the dependent partner (Buchanan 1992). This leads to a situation where the dominant partner influences decisions and actions of the more dependent party (Ruekert and Walker 1987a) creating the potential for exploitation (Kumar et al. 1995). These relationships are less cooperative (Anderson and Weitz 1992), reflect a lower capability for joint problem solving (McAlister et al. 1986) and are generally characterised by more conflict (Dwyer et al. 1987). This eventually leads to lower levels of performance (Wilkinson 1979). Results from Kumar et al. (1995) indicate that for a relationship to work well it is necessary to decrease dependence asymmetry as the asymmetry and disproportionate power between parties evokes feelings of apprehensiveness in the weaker party with regards to stronger the party's intentions in the relationship (Dwyer and Oh 1987). On the other hand, dependency symmetry motivates the parties to exhibit flexibility and to adjust to change (Young-Ybarra and Wiersema 1999). This occurs because in the balanced relationship, the motivation to achieve joint outcomes is not over-shadowed by the pursuit of self-interest (Anderson and Weitz 1989). In the absence of such symmetric dependence, an individual party will have little or no incentive to show flexibility, because no guarantee exists that such actions will be reciprocated (Heide 1994). The one in power, i.e., the less dependent party, will have no incentive to pay attention to signals coming from the more dependent party (Fiske 1993), so that when the latter attempts to signal extra-role behaviour the less dependent party will not recognise this effort and will not reciprocate (Sirmon et al. 2007). On the other hand, when balanced in their dependencies, parties focus more attention on their joint interests, recognise the significant interest they have in information sharing and they exhibit flexibility (Dwyer et al. 1987). As both parties are equally affected by exchange requirements, symmetrical dependence will motivate the parties to engage in flexible adjustment processes to maintain their relationship (Heide 1994). Once reciprocated, such behaviour will further stimulate their relational behaviour and their further willingness to make adaptations in the relationship (Hailén et al. 1991).

Earlier findings imply that adaptive behaviour is, indeed, negatively affected by the power imbalance between the parties (Bello and Gilliland 1997; Brennan and Turnbull 1999).

Hence:
**H4: Resource Dependence Asymmetry at the M&S interface will have a negative impact on MSIF.**

### 3.4.2 The M&S Trust: MSIF relationship

In addition to M&S interdependence, another necessary part for ensuring a successful social exchange is trust between the M&S personnel in this relationship.

Social exchanges as unspecified obligations require trust that the other party will reciprocate the obligations to an unspecified timeline (Blau 1968). Trust is the central construct within SET, essential for the social exchange process with its main role of creating and maintaining an exchange relationship (Blau 1964; Jin 2001). Trust creates an atmosphere where functional departments are more willing to engage in cooperative activity (Hutt, 1995; Nahapiet and Ghoshal, 1998). This, in turn, leads to the sharing of resources (Liang et al. 2008). A relationship built on trust enables both sides to look beyond their short-term individual gains and to concentrate instead on long-term mutual achievements (Blau 1964). In such a relationship, parties are motivated to invest in and contribute to the relationship because both share the expectations of reciprocation (Rousseau 1989). As the level of mutual trust increases, so does the extent of exchange (Thibaut and Kelley 1959; Blau 1964). In organisational settings, trust is argued to facilitate access to combinations and the sharing of resources and it induces joint efforts and exchange among organisational units (Gambetta 1988; Ring and Van de Ven 1994; Tsai and Ghoshal 1998; Ireland et al. 2003). When trust is established, partners in the relationship maintain open communication and dialogue and exhibit tolerance to different opinions (Misztal 2013).

As asserted previously, SET views exchange relations as a dynamic process, where in order to maintain the attractiveness of the relationship, M&S continuously adapt to each other’s needs through modifying their resources in order to match those needs (Newcomb et al. 1965; Hailén et al. 1991). Therefore, exchange and adaptation are argued to be closely related processes within dynamic settings, where, embedded within the SET’s central notion of reciprocity, Marketing’s adaptations will be reciprocated by adaptations by Sales (and vice-versa) (Hailén et al. 1991). According
to SET, trust (in addition to inter-dependence) is one of the two mechanisms explaining such adaptations, where one party demonstrates its trustworthiness by adapting to the other party (Emerson 1962; Blau 1964). Trusting exchange relationships will demonstrate greater adaptability to changing environmental demands or to sudden problems that may arise (Williamson 1985; Young-Ybarra and Wiersema 1999). A positive relationship between trust and flexibility may be expected because people are more willing to take risks and are more open to the potential value creation through the exchange and combination of resources (Nahapiet and Ghoshal 1998; Ivens 2005).

Trust is defined as “the willingness to rely on an exchange partner to whom one has confidence” (Moorman et al. 1992, p.315). Lack of trust can manifest itself in feelings of hostility between the departments and to assumptions that the other department is gaining all the rewards. These in turn may inhibit the integration between the two and diminish the effectiveness of joint problem solving (Child 1972; Zand 1972; Souder 1988). Trust has been found to be positively and significantly related to adaptability and survival for longer time periods in the context of business alliances (Morgan and Hunt 1994; Doz 1996).

Although within the organisational literature trust is seen as both antecedent to and an outcome of successful collective action, the actual causal ordering depends on the position within the relationship ‘cycle’ (as relationships are seen as consisting of series of interactions over time) (Gundlach and Murphy 1993). For example, trust is required for assuring team members’ cooperation (e.g., Leana and Van Buren 1999), but also cooperation is found to positively influence trust, as successful project completion leads to greater trust between workgroups (Anderson and Narus 1990). However, parties need to trust one another initially in order to undertake activities that generate more trust (Johnston et al. 2004). Grounded in the qualitative work, M&S trust is here seen as an antecedent to MSIF. Specifically, the qualitative study supports the notion of trust being a prerequisite of M&S willingness to engage in reciprocal resource adaptation in order to fulfil (their own and) each other’s needs and expectations. The qualitative study revealed how, according to the marketing director in an energy company, lack of trust inhibits M&S acting in a flexible way: “All
of a sudden if you are then responsible for something, accountable for something you know it wasn't going to work, you then have to change the way you deal with Sales... You have to protect yourself first because you've got to keep your job...

Even if you did it [exhibit coordination flexibility] you wouldn't necessary do it in as much a positive way as you would have done it previously ...." A substantial body of research also confirms how parties high in trust are more willing to engage in social exchange processes (e.g., Gambetta 1988; Putnam 1993; Ring and Van de Ven 1992, 1994; Fukuyama 1995; Nahapiet and Ghoshal 1998; Kramer and Tyler 1996). Examining the impact of trust on flexibility and applying social exchange theory, Young-Ybarra and Wiersema (1999) and Hailén et al. (1991) found that trust has an impact on the increase of flexibility in an inter-organisational context. By contrast, lack of trust may cause resistance and an unwillingness to initiate and implement flexible response (Das and Elango 1995). Applying these arguments to M&S, it is hypothesised that:

H5: Trust between M&S departments will have a positive effect on MSIF.

3.4.3 Structural antecedents: Joint Rewards and Compatible Goals

For the majority of social exchange theorists, exchange refers to interaction processes that involve reciprocal acts of benefit(s) (Blau 1964). In such exchange, interaction represents any set of observable behaviour where the parties involved are responding to each other (Newcomb et al. 1965). In order to secure reactions among the parties, certain rules and norms of exchange exist and have to be obeyed as ‘the guidelines’ of the exchange (Emerson 1976). Expectations of reciprocity are the most commonly applied exchange rule principle within most management and marketing research. The results of this research imply that reciprocity is essential in a relationship as the exchange partners tend to end up in a relationship in which an equal sharing of outcomes for both partners is achieved (Gupta et al. 1986). When parties perceive high levels of benefit coming out of such relationship, they will be interested in maintaining such a relationship (Gassenheimer et al. 1995).

Parties will remain in the relationship as long as the incentives to do so outweigh the cost of remaining in the relationship (e.g., Homans 1958). Exchange theory focuses
on incentives, arguing that incentive structures make the exchanges profitable (Emerson 1972). Even when opportunities and the perceived benefits of the exchange are in place, parties in the relationship need to feel that the engagement in the activities of resource sharing and combination will be worth their effort (Nahapiet and Ghoshal 1998). Based on the norm of reciprocity, the notion that social exchange is contingent on the rewarding reactions of others and that parties take part in the exchange when they expect their rewards from such exchange (Homans 1958; Blau 1964), it is argued that compatible goals and joint rewards will play a role as guidelines for the exchange, creating the grounds for developing ‘give and take’ behaviour (Jap and Anderson 2003), and bringing about a willingness to work together and to encourage sharing of resources (Lawrence et al. 1967; Souder 1986; Clark 1991). This will further enhance the exchange by providing directions for the activities and efforts of M&S (Jap and Anderson 2003). “Both will have equal interest in the outcomes and will be convinced they can develop final positions that represent the convictions of both” (Blake et al. 1964, p. 90).

3.4.3.1 Joint Rewards

Within the social exchange process, the parties involved seek to minimise the costs and to maximise the benefits of exchanging resources (Molm 2001). M&S may not be fully aware of the impact of their actions on each other (Cespedes 1993) and therefore, may not fully comprehend the cost:benefit ratio that could be realised through their exchange. Shared common interests will ensure M&S fully understand the value of the process of resource exchange and resource combination (Tsai and Ghoshal 1998). As both will have a clearer perception of the value of their interaction this, in turn will, create fruitful ground for the exchange ideas and resources, and for misunderstandings to be avoided. Consequently, synchronous decision making between M&S will be established (Hughes et al. 2012). Homburg et al. (2000) assert the unwillingness of sales people to share information in instances where ignorance of the potential benefits of such actions exists. Salespeople will be motivated to share such information about customers and competitors’ actions as long as there is an expectation of rewards coming out of such actions (Day and Nedungadi 1994). Reward systems motivate functions to expand their joint efforts and may influence
cooperative behaviour (Wood 1995; Menon et al. 1997). When such systems are in alignment, the positive effects on inter-departmental collaboration will be achieved (Dewsnap and Jobber 2000). Following an example related to the R&D and marketing relationship, joint rewards between M&S would not only ensure unity of their efforts, but also make sure both feel responsibility for the success or failure of those efforts (Gupta et al. 1986). Within the dynamic context of SET relationships, joint reward systems would ensure unity in M&S efforts in dealing with the dynamic aspects of their relationship and would provide an incentive for expanding their efforts if needed, thus enabling the process of adaptation and modification of resources as an on-going part of the social exchange process between the two departments (Newcomb et al. 1965; Hailén et al. 1991). Thus:

H6: Joint M&S Rewards will have a positive effect on MSIF.

3.4.3.2 Compatible Goals

Exchange is the result of goal-seeking behaviour (Houston and Gassenheimer 1987). Within the realm of SET, literature has argued the importance of differing goals or expectations for the exchange relationship and the need for reconciling such differences (Lambe et al. 2001). Similarly, literature on M&S relationship has emphasised the dangers of M&S having goals that are at odds - one such example of non-congruence being the pursuit of diverse strategies (Strahle et al. 1996; Olson et al. 2001). Compatible goals between M&S would, arguably, create an atmosphere where shared appreciation of the interdependencies between the two is fostered, their interests aligned and the actions of the two departments channelled in the best direction (Rouziès et al. 2005). Compatibility of their goals would ensure agreement on the perceptions of desired future outcomes and circumstances (Bandura 1997). This in turn would set up the scene for an exchange in which M&S take into consideration, pursue and are motivated by those compatible and synchronised goals.

Compatible goals create an internal environment that is characterised by cooperation, rather than competition, ensuring that the departments do not work at cross purposes and that resources are not wasted in conflict and time spent on
bargaining (Anderson et al. 1999; Lambe et al. 2001; Olson et al. 2001). This is especially relevant in the case of flexible inter-departmental resources management as the lack of unity of efforts between departments leads to misapplication of resources and a failure to make the most out of market opportunities (Shapiro 1988). The dynamic nature of the M&S relationship, reflected in the need for constant adaptation to each other’s needs through resource modifications would require both to exhibit mutual efforts in maintaining the attractiveness of their interaction (Hailén et al. 1991). Compatible interdepartmental goals will drive unity of effort between M&S (Lawrence and Lorsch 1967; Kahn and Mentzer 1996), thus avoiding the situation described as “each function marching to its own drum” (Shapiro 1988, p.5). Thus:

H7: Compatible M&S Goals will have a positive effect on MSIF.

3.5 Chapter summary

This chapter has presented a discussion of the study’s theoretical underpinning and has developed a conceptual framework and corresponding hypotheses. The conceptual framework explicates the relationship between MSIF and performance outcomes, the moderating effects of environmental dynamism, and the antecedents of MSIF. As part of this, the variables contained within the framework and their inter-relationships are discussed and justified. Furthermore, the nonlinear character of the MSIF: performance link is hypothesised. Variables affecting MSIF and causing the variations on MSIF: performance link are drawn from SET and contingency theory. Drawing on SET theory and its reciprocity norm, this study argues the central role of trust and interdependence as causes and enablers of MSIF. Furthermore, goal compatibility and a joint reward system are seen as two additional factors with potential to change levels of MSIF in an organisation. Based on contingency theory, the model argues the key contingencies that may moderate the MSIF: performance link; that is, competitive intensity and technological turbulence. The chapter that follows presents the research methodology used for data collection for this study.
Chapter 4: Research Methodology

4.1 Introduction

This chapter is dedicated to the research design employed in this study. The chosen research design presented in this chapter served as a basis for data collection and for the analysis phase. The defined research design guided the type of data to be collected, the sources of data and the data collection procedure. Accordingly this chapter is organised as follows. Firstly, the sampling process and chosen method for data collection are described. Within this section a detailed explanation of the questionnaire development process is provided including the operationalisation of constructs. Second, the process of collecting data for the purposes of this study is described. Questionnaire pre-testing process is discussed and issues relating to the main survey study are explained.

4.2 Research design

Research can generally be classified as either exploratory or conclusive (Malhotra and Birks 2007). Consequently, different research designs may emerge depending on the type of research conducted. If an exploratory research design is followed, then the researcher is concerned with discovering ideas and insights (Churchill 1999). This type of research assists a better understanding of the problem allowing for exploration of the topic with varying levels of depth (Bell 2010). Exploratory research is claimed to be an initial research step leading to and forming the basis of more conclusive research (Singh 2007). Within this thesis, exploratory research was employed for the purposes of confirming the existence and relevance of MSIF and confirmation (or rejection) of the literature based definition of MSIF.

Conclusive research serves either the purpose of determining the relationships between variables – so called descriptive conclusive research - or it can serve the purpose of determining the cause and effect relationships, in which case it falls under the category of causal conclusive research (Iacobucci and Churchill 2009). Considering that this research is interested in determining relationships with
variables affecting and resulting from MSIF, this research adopts a descriptive research design. The choice of a conclusive research design usually leads to application of statistical tests, analytical techniques, larger sample sizes and usually quantitative rather than qualitative techniques as is the case with this study (Nargundkar 2003). In order to obtain the large amounts of data required, the predominant method among marketing researchers and practitioners is survey most often based on questionnaires (Hussey and Hussey 1997; Rindfleisch et al. 2008). This allows for theory testing and comparisons by the use of statistical analysis.

Depending on the type of research chosen (exploratory, descriptive or causal), different research designs may emerge as a result. Figure 3 summarises the choices available to researchers and Table 7 summarises types of research designs emerging from exploratory, descriptive or causal research.

Figure 3: Research design process
Table 7: Types of research designs

<table>
<thead>
<tr>
<th>Research</th>
<th>Uses</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory</td>
<td>Formulate problems more precisely</td>
<td>Literature search</td>
</tr>
<tr>
<td></td>
<td>Develop hypothesis</td>
<td>Experience surveys</td>
</tr>
<tr>
<td></td>
<td>Establish priorities for research</td>
<td>Analysis of selected cases</td>
</tr>
<tr>
<td></td>
<td>Eliminate impractical ideas</td>
<td>Focus groups</td>
</tr>
<tr>
<td></td>
<td>Clarify concepts</td>
<td>Interviews</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Projective tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethnographies</td>
</tr>
<tr>
<td>Descriptive</td>
<td>Describe segment characteristics</td>
<td>Longitudinal study</td>
</tr>
<tr>
<td></td>
<td>Estimate proportion of people who behave in a certain way</td>
<td>True panel</td>
</tr>
<tr>
<td></td>
<td>Make specific predictions</td>
<td>Omnibus panel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sample survey</td>
</tr>
<tr>
<td>Causal</td>
<td>Provide evidence providing causal relationships by means of:</td>
<td>Laboratory experiment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field experiment</td>
</tr>
<tr>
<td></td>
<td>• Concomitant variation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Time order in which variables occur</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Elimination of other explanations</td>
<td></td>
</tr>
</tbody>
</table>

Source: (Churchill and Iacobucci 2005)

When examining the relationship between organisational variables, the researcher is faced with the choice between a number of research methods, such as experimental, factorial, cross-sectional, longitudinal designs (Kerlinger 1973). Within the marketing area the methods applied most often are cross-sectional, which takes a sample of the population at one point in time, and longitudinal, where a fixed sample (or samples) of population elements are measured repeatedly on the same variables (Lee and Lings 2008). Longitudinal study implies repeated measures on the same sample over time allowing for sufficient temporal insight, thus enabling the researcher to assess the change in variables of interest over time (Bagozzi 2000). It is often praised for being able to deal with issues such as common method bias and causal inferences in a more effective manner than cross-sectional study (Rindfleisch et al. 2008). A longitudinal research design does this by allowing for the employment of multiple respondents’, the attainment of multiple data types and the acquisition of data over multiple periods.

A longitudinal research study was not, however, undertaken for several reasons. Time and cost constraints are one of the factors influencing the choice of cross-
sectional method. The benefits of a longitudinal study are often jeopardised by the inability to capture a large sample size as it requires follow up on the same respondents used initially (Weiss and Heide 1993). More importantly, the cross-sectional method often criticised as being susceptible to method bias problems has actually been demonstrated to not be as severe as previously thought (Rindfleisch et al. 2008). Rindfleisch and colleagues assert that method bias may not be as much of an issue under cross sectional research conditions in instances where relationships between constructs are expected to be quite large in magnitude.

Furthermore, this study used procedures and suggested remedies for dealing with potential method bias problems which are described later on in the Chapter (Podsakoff et al. 2003). Additionally, the cross-sectional design is in accordance with the main aim of this study, built as it is on a strong conceptual and theoretical basis and seeking to measure constructs of interest and assessing patterns of associations between these constructs. If designed well, it can be a powerful tool for survey data collection (Rindfleisch et al. 2008). Hence, particular attention was paid when designing the survey questionnaire.

Considering that this study seeks to develop and test a new measure of MSIF, and that the measures development process requires use of a representative sample (Spector 1992), a cross-sectional study is the most appropriate approach in designing this research survey.

This study used two types of research: exploratory and descriptive. Exploratory research was undertaken through a review of literature and experience surveys. Experience surveys or key informant survey (Churchill and Iacobucci 2005) were conducted with 28 marketing and sales managers in 17 UK-based business-to-business and business-to-consumer companies operating in a range of sectors (fast moving consumer goods [FMCG], heating, electrical components, rail technology, automotive and publishing) (please see Table 8 for more details). The sole goal of the exploratory phase of this research was the reassurance of the existence and relevance of the MSIF concept to practice as well as gaining insights into the nature of the MSIF. Considering that the definition of MSIF was theory and literature based, a confirmation (or rejection) of the concept in real life was deemed crucial for the
continuance of the study. In order to gain an in-depth understanding of the concept of MSIF, qualitative research was conducted based on the grounded theory approach. The key reason for choosing this particular approach was that the existing literature did not offer adequate insight into the MSIF concept. This approach enabled the researcher to obtain sufficient amount of information required for generating an in-depth understanding of phenomena coming from the participants who have experienced the phenomena themselves (Strauss and Corbin 1998). Therefore, the aim of the qualitative research was not to impose theoretically and literature based definitions on MSIF on the research participants but to enable them to provide their own explanations based on their own experiences.

Following this is the need to test a model of MSIF which makes specific predictions of the relationships among variables specified in the MSIF conceptual framework. Therefore, a descriptive research design is used and methods emerging from it as a tool for collecting primary data for testing the MSIF conceptual model.

### 4.2.1 Sampling process

Once the research design was defined, the step that followed was determining the population from which data will be collected. This section discusses the sampling process undertaken.

When making a decision on how to approach the sampling process, certain steps suggested by Malhotra and Birks (2007) were followed:

1. Definition of target population;
2. Determination of sampling frame;
3. Selection of sampling technique;
4. Determination of sample size; and
5. Execution of sampling process.
4.2.1.1 Definition of the target population

**Exploratory study**

The participants were chosen non-randomly by means of theoretical sampling (Corbin and Strauss 2008). In this way, respondents were targeted based on their knowledge and ability to provide insights on MSIF. In order to recruit the respondents several sources were used: 1) existing personal contacts, 2) referrals made by academic colleagues, and 3) management seminars and executive teaching. 28 key-informants from 17 UK-based business-to-business selling organisations participated in the in-depth interviews, which lasted approximately between 45 minutes and 2 hours (Churchill and Iacobucci 2005). A wide spread of product/industry sectors and company sizes were included in the qualitative process, with a broad spectrum also of both marketing and sales roles at different hierarchical levels ranging from director to middle manager. Considering that MSIF was central to this research and based on previous research in M&S (e.g., Homburg et al. 2008) only companies with separate Marketing and Sales departments were deemed eligible and only those respondents that had an experience in cooperating with and/or working in both departments were selected for interview. Table 8 below provide descriptive information on the respondents. By the 28th interview it was felt that the point of theoretical saturation was achieved and that sufficient data was obtained (Strauss and Corbin 1990). Hence, the qualitative phase was concluded.

**Table 8: Respondent profile**

<table>
<thead>
<tr>
<th>Respondent Company</th>
<th>Product Sector</th>
<th>Respondent Code/Job Title (Function)</th>
<th>Number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heating</td>
<td>R1: Commercial Director (S)</td>
<td>51-100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R2: Key account manager (S)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Heating</td>
<td>R3: Head of UK domestic sales (S)</td>
<td>51-100</td>
</tr>
<tr>
<td>3</td>
<td>Heating</td>
<td>R4: Marketing manager (M)</td>
<td>&gt;1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R5: Sales Manager (S)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>FMCG</td>
<td>R6: Sales manager (S)</td>
<td>&gt;1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R7: Key account manager (S)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>R8: Head of customer marketing (S)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>FMCG</td>
<td>R9: Key Account Manager (S)</td>
<td>&gt;1000</td>
</tr>
<tr>
<td>6</td>
<td>FMCG</td>
<td>R10: Logistics manager</td>
<td>&gt;1000</td>
</tr>
<tr>
<td>7</td>
<td>Trucks</td>
<td>R11: Marketing Manager (M)</td>
<td>51-100</td>
</tr>
<tr>
<td>8</td>
<td>Automotive</td>
<td>R12: Sales manager (S)</td>
<td>101-250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R13: Marketing Manager (M)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Publishing</td>
<td>R14: Senior Sales Rep (S)</td>
<td>101-250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R15: Field sales manager (S)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10</td>
<td>Publishing</td>
<td>R16: Product Manager (M)</td>
<td>251-500</td>
</tr>
<tr>
<td>11</td>
<td>Publishing</td>
<td>R17: Sales Manager (S)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Pharmaceutical</td>
<td>R18: Sales consultant (S)</td>
<td>&gt;1000</td>
</tr>
<tr>
<td>13</td>
<td>Pharmaceutical</td>
<td>R19: National sales manager (S)</td>
<td>&gt;1000</td>
</tr>
<tr>
<td>14</td>
<td>Electrical Components</td>
<td>R20: Marketing manager (M)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Steel Industry</td>
<td>R21: Marketing manager (M)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Rail technology</td>
<td>R22: Sales manager (S)</td>
<td>&gt;1000</td>
</tr>
<tr>
<td>17</td>
<td>Gas supplies</td>
<td>R23: Marketing &amp;Sales Director (M)</td>
<td>21-50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R24: National sales manager (S)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>R25: Marketing Manager (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>R26: Sales Manager (S)</td>
<td>&gt;1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R27: Business development manager (M&amp;S)</td>
<td>251-500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R28: Marketing director (M)</td>
<td>&gt;1000</td>
</tr>
</tbody>
</table>

**Cross-sectional Study**

Given the focus of the study, the relationship between M&S departments, this study’s intent was to provide a large amount of quantitative data from the organisations that have separate marketing and sales departments. On the basis that specialisation and differentiation between marketing and sales departments can be usually found in larger organisations (Workman et al. 1998), the population of interest were large companies operating within various industry sectors in the UK. The initial selection was based on annual turnover, where large companies, those with the annual turnover above 10 million pounds, were included in the sample (Le Meunier-FitzHugh et al. 2011).

The second step was including a variety of industries in the target population. The sample did not include retailers as M&S have different roles and responsibilities in this sector (Workman et al. 1998). Therefore, the target population included manufacturing firms, wholesalers and services (e.g., financial companies, catering companies).

Finally, the source of information was given a particular attention in this study as it is considered important for the accuracy and depth of the insights gathered. This, in turn, would ensure the results and conclusions drawn could be further generalised to the intended population. Considering the objective of the study, to attain information on the relationship between M&S departments, the most effective way to generate such information was to target those employees who have a good overview over both departments. Previous studies on the M&S interface have used various
respondents including general managers/directors, marketing/sales directors and managers, business development managers, communication managers, product managers as well as managers from other departments (e.g., HR) (e.g., Le Meunier-FitzHugh and Piercy 2007a; Homburg et al. 2008). The majority of these studies have used a single respondent in the target organisation, making sure that prior to engaging respondents into data collection process, they had a good overview over both departments (e.g., Homburg and Jensen 2007). In line with previous studies, managers from targeted companies were selected based on their eligibility to fill the questionnaire - the process will be discussed in more detail in the sections that follow.

4.2.1.2 Determination of the cross-sectional study sampling frame

For the purposes of creating a list of eligible sampling units, the Kompass database was used. Based on the selected target population characteristics, the search produced 16 698 companies. The following step was designed to ensure that equal number of companies based on their size, i.e. turnover, were included in the initial sampling frame. The Kompass database splits turnover categories into 10-20 million, 20-50 million, 50-75 million, 75-125 million, 125-250 million, 250-500 million, 500-1000 million and over 1000 million. Equal number of companies by random selection was then taken as the initial representative sample, resulting in 428 companies from each category. In the end, the objective was to make sure that each category had an equal opportunity to be included in the final sample. This resulted in 3424 potential target companies. Further cleaning of the data resulted in 857 companies being removed due to multiple entries within and across turnover categories. The final sample included 2567 companies, which were used for both mail pre-test and main survey study.

4.2.1.3 Selection of sampling technique, determination of the sample size and execution of the sampling process for the cross-sectional study

The majority of studies on the M&S interface have achieved a response rate between 15% and 20%. Taking into consideration the length of the survey and the aim of
obtaining at least 200 responses for the purpose of structural equation modelling, a
decision was made to include the entire sampling frame. Therefore, after the initial
sampling process was applied to make sure all the clusters were represented with an
equal chance in the study, sampling without replacement followed (Malhotra and
Birks 2007).

4.2.2 Cross-sectional study data collection method

As a first step in data collection method the choice had to be made between multiple
and individual respondents. The value and the benefits of multiple respondents are
well documented in the literature (e.g., Ernst and Teichert 1998). However, such an
approach is accompanied with an increase in research cost and time (Wilson and
Lilien 1992; Luo et al. 2007). Considering that variations in results may be controlled
as long as the key informant is located and made sure that he/she is reasonably
knowledgeable on the research subject (Wilson and Lilien 1992), the use of a single
informant in each of the sampled companies was the method applied in this study.

4.2.2.1 Questionnaire design

In designing the questionnaire for this study, the following steps suggested by
Churchill and Iacobucci (2005) were followed:
4.2.2.1 Information to be sought

In order to obtain the information for this research, where possible, the existing scales were taken and adapted. The development of new scales was based on literature review and consequently confirmed by field interviews. Items for the scales used in this research are summarised in Table 9 together with the sources of items where applicable. The existing scales were adapted to fit the context of the M&S relationship. The following sections provide detailed information on the measures for the study.

<table>
<thead>
<tr>
<th>Table 9: Information sought from Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Dependency (Marketing)</td>
</tr>
<tr>
<td>Resource Dependency (Sales)</td>
</tr>
<tr>
<td>Trust between M&amp;S departments</td>
</tr>
<tr>
<td>Joint Rewards</td>
</tr>
<tr>
<td>Compatible Goals*</td>
</tr>
</tbody>
</table>

*
Resource Dependency (Marketing and Sales)

Based on the works of Ruekert and Walker (1987a) and Fisher et al. (1997) resource dependencies between M&S were measured by 3 items comprising a formative scale capturing the dependence of each department on the other's resources, supports and output as per Fisher et al. (1997). The items were measured on a 7-point Likert scale, ranging from 1="not at all" to 7="to an extreme extent". In asking the questions, care was taken to provide respondents with departmental specific examples to help them distinguish between resources, outputs and support. This strategy came out as a result of the pre-testing stages of the questionnaire and was advised by both the academics and practitioners interviewed.

Table 10: Resource Dependency scale

<table>
<thead>
<tr>
<th>RESOURCE DEPENDENCY</th>
<th>Adapted from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Sales to accomplish its goals and responsibilities (in your business unit/company), how much does it need Marketing’s:</td>
<td>(Fisher et al. 1997)</td>
</tr>
<tr>
<td>• Resources (e.g., promotional material or information regarding product strategy).</td>
<td></td>
</tr>
<tr>
<td>• Support (e.g., technical assistance regarding products).</td>
<td></td>
</tr>
<tr>
<td>• Outputs (e.g., new product designs, promotional material)</td>
<td></td>
</tr>
<tr>
<td>For Marketing to accomplish its goals and responsibilities (in your business unit/company), how much does it need Sales:</td>
<td></td>
</tr>
<tr>
<td>• Resources (e.g., sales personnel time/expertise that Marketing may require for launching new products).</td>
<td></td>
</tr>
<tr>
<td>• Support (e.g., Sales advice regarding customer needs, assistance with promotional material development).</td>
<td></td>
</tr>
<tr>
<td>• Outputs (e.g., achieving sales targets, relationships with their customers, securing distribution for new products).</td>
<td></td>
</tr>
</tbody>
</table>

Trust

Trust is defined as “the willingness to rely on an exchange partner to whom one has confidence” (Moorman et al. 1992, p.315). The scales used to capture the notion of
trust between M&S departments were taken from (Rodríguez et al. 2007) who measured interdepartmental trust in their study of inter-functional relationships between Marketing and R&D departments. All the items were measured on a 7-point Likert scale, ranging from 1="strongly disagree" to 7="strongly agree".

Table 11: Trust scale

<table>
<thead>
<tr>
<th>TRUST</th>
<th>Adapted from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing and Sales:</td>
<td>(Rodríguez et al. 2007)</td>
</tr>
<tr>
<td>• are sincere in interfacing with each other.</td>
<td></td>
</tr>
<tr>
<td>• believe the information they provide to each other is reliable.</td>
<td></td>
</tr>
<tr>
<td>• fulfil the promises they make to each other.</td>
<td></td>
</tr>
<tr>
<td>• are genuinely concerned about each other’s interests.</td>
<td></td>
</tr>
<tr>
<td>• have trust in their working relationship.</td>
<td></td>
</tr>
<tr>
<td>• are honest in interfacing with each other.</td>
<td></td>
</tr>
<tr>
<td>• trust each other’s ability to do carry out their work appropriately.</td>
<td></td>
</tr>
<tr>
<td>• Marketing’s and Sales’ actions always meet each other’s expectations.</td>
<td></td>
</tr>
</tbody>
</table>

Joint Rewards

Reward systems motivate functions to expand their efforts and may influence behaviour (Wood 1995; Menon et al. 1997). When such systems are in alignment, positive effects on inter-departmental collaboration will be achieved (Dewsnap and Jobber 2000). Joint rewards are therefore associated with the alignment of efforts between M&S functions. To capture the joint rewards construct, scales from Song et al. (1997), were adapted for this study. Two additional items were added to tap the aspects of joint rewards systems that came out from the pre-testing interviews with academics and practitioners. One item taps into the sharing of M&S departments in achievement of their joint financial targets (reverse coded item), sourced from Menon et al. (1997) and an additional item added based on the practitioners insights from the pre-test stage, i.e. tapping the degree of their collaboration as a part of their remuneration system. All items comprising joint rewards scale were measured on a 7-point Likert scale, with anchors ranging from 1 = “not at all” to 7 = “to an extreme extent”

Table 12: Joint rewards scale

<table>
<thead>
<tr>
<th>JOINT REWARDS</th>
<th>Adapted from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent do following statements refer to the situation in your company?</td>
<td>(Song et al. 1997)</td>
</tr>
<tr>
<td>Marketing and Sales.....</td>
<td></td>
</tr>
<tr>
<td>• share equally in the rewards from a well implemented market strategy.</td>
<td></td>
</tr>
</tbody>
</table>
Performance measures

Studies on the inter-functional relationship between M&S have used both non-economic, e.g., perceived relationship effectiveness (Dawes and Massey 2006) and economic, e.g., market and business performance (e.g., Guenzi and Troilo 2007; Homburg and Jensen 2007; Le Meunier-FitzHugh and Piercy 2007a) dimensions of performance. In addition, all exploratory studies investigating performance in the area of the M&S inter-functional relationship have used subjective measures of performance as opposed to using both objective and subjective measures. Although benefits of using objective measures are documented in the literature as a way to avoid method bias (particularly in the case of using single informant), the disadvantages associated with objective measures influenced the choice of subjective measure for the present study. For example, using objective measures makes generalisation across companies and industries difficult since what can be considered as financial success for one company might be considered as failure for another firm. This may raise concerns regarding the comparability of financial data (Lages and Lages 2004). Another valid argument is the sensitivity of questions asking respondents for objective measures and hence their reluctance to disclose company figures to the researcher (Leonidou et al. 2002). In addition, information on a company’s ROI and ROA are typically derived from the company’s balance sheet, which is not usually available at the business unit level of most multidivisional companies (Homburg and Pflesser 2000). Finally, evidence in the literature shows a strong positive correlation between subjective and objective measures of performance (e.g., Pearce et al. 1987; Naman and Slevin 1993; Hart and Banbury 1994; Ketokivi and Schroeder 2004; Morgan et al. 2004).

The subjective performance measures used focused on three domains: market performance, customer performance and financial performance. Market performance refers to the company’s perceived market performance, whereas customer
performance refers to perceived measures of customer loyalty and satisfaction. Financial performance reflects the respondent's perception of the company profit achievement. Market and customer performance scales were measured on the range from 1="very dissatisfied" to 7="very satisfied", whereas financial performance was measured on scales ranging from 1="far less than we expected" to 7="far greater than we expected". The scale items are presented in Table 15 below. In order to provide a frame of reference for respondents, they were asked to rate market, customer and financial performance of their company in relation to their competitors (Moorman 1995; Homburg and Pflesser 2000).

Even though the use of objective data has already been argued to be prone to errors and lack of standardisation in reporting, this study collected objective data where possible for the companies that participated in the survey. Data was collected from the published balance sheet figures downloaded from the FAME database, to which Loughborough University subscribes. Financial data on 176 companies were available. Data from the balance sheet (i.e. turnover and number of employees) was compared with those provided by respondents. T-tests were performed for both annual turnover and number of employees. The multiple t-tests yielded no significant differences between the two sets of data at the conventional levels (p < 0.05). Consequently, use of subjective data as acceptable performance indicators was justified and validated (Kuivalainen et al. 2007; Racela et al. 2007).

Table 13: Performance scales

<table>
<thead>
<tr>
<th>Market Performance</th>
<th>Adapted from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with sales volume during the past 3 years</td>
<td>(Hooley et al. 2005)</td>
</tr>
<tr>
<td>Satisfaction with market share during the past 3 years</td>
<td></td>
</tr>
<tr>
<td>Average annual sales growth/decline during the past 3 years compared to the industry average was....[much worse....far better]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Performance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of customer loyalty compared to competitors</td>
<td>(Hooley et al. 2005)</td>
</tr>
<tr>
<td>Levels of customer satisfaction compared to last year</td>
<td></td>
</tr>
<tr>
<td>Levels of customer loyalty compared to last year</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Performance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall profit levels achieved compared to competitors</td>
<td>(Hooley et al. 2005)</td>
</tr>
<tr>
<td>Profit margins compared to competitors</td>
<td></td>
</tr>
<tr>
<td>ROI compared to competitors</td>
<td></td>
</tr>
</tbody>
</table>
**Competitive Environment**

Based on the initial Maltz and Kohli (2000) environmental scale, the scale for measuring speed of change in the competitive environment was adapted. The scale consisted of three items tapping into the changes of competitors’ products/services, selling strategies and promotion/advertising strategies as shown below. All the items were measured on a 7-point Likert scale ranging from 1 = "very slowly" and 7 = "very quickly".

**Table 14: Competitive Environment scale**

<table>
<thead>
<tr>
<th>Competitive Environment</th>
<th>Adapted from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How quickly do following factors in your environment change?</td>
<td>(Maltz and Kohli 2000)</td>
</tr>
<tr>
<td>• Competitors’ products and models</td>
<td></td>
</tr>
<tr>
<td>• Competitors’ selling strategies</td>
<td></td>
</tr>
<tr>
<td>• Competitors’ promotion/advertising strategies</td>
<td></td>
</tr>
</tbody>
</table>

**Technological Turbulence**

The technological turbulence scale was adapted from the Maltz and Kohli (2000) study which investigates the relationship between Marketing and other departments. It reflects the degree of change in new product and manufacturing technology in the external environment. The construct was measured on a 7-point Likert scale, where 1 = "very slowly" and 7 = "very quickly". The Technological turbulence scale items are presented in Table 17:

**Table 15: Technological Turbulence scale**

<table>
<thead>
<tr>
<th>Technological Turbulence</th>
<th>Adapted from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How quickly do following factors in your environment change?</td>
<td>(Maltz and Kohli 2000)</td>
</tr>
<tr>
<td>• The manufacturing technology in the industry</td>
<td></td>
</tr>
<tr>
<td>• The new product technology in the industry</td>
<td></td>
</tr>
</tbody>
</table>

**Eligibility scale**

To assess the knowledge of the respondents filling in the questionnaire and to assure that the variation among respondents is controlled for (Wilson and Lilien 1992) an eligibility scale was included at the end of the questionnaire. The scale was adapted from Homburg and Jensen (2007) and measured on 7-point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree".
Table 16: Eligibility scale

<table>
<thead>
<tr>
<th>Eligibility</th>
<th>Adapted from:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• I have a good overview of marketing and sales in our company</td>
<td>(Homburg and Jensen 2007)</td>
</tr>
<tr>
<td>• I am competent to answer the above questions</td>
<td></td>
</tr>
<tr>
<td>• I have a good overview of the company’s situation (e.g., performance,</td>
<td></td>
</tr>
<tr>
<td>strategy, environment)</td>
<td></td>
</tr>
<tr>
<td>• My job role qualifies me to answer questions about the sales and marketing</td>
<td></td>
</tr>
<tr>
<td>interface in my company</td>
<td></td>
</tr>
</tbody>
</table>

Compatible Goals and Marketing & Sales Interface Flexibility (MSIF) scale
development

Scales for Compatible Goals and MSIF were developed for the purposes of this study. In developing these scales, the following guidelines in scale development were followed (Figure 4) (Churchill 1979; DeVellis 2011):

Figure 5: New scale development guidelines

Source: Churchill (1979)
Step 1: Specifying the domain of the construct

According to Rossiter (2002), the first step in scale development involves the conceptual definition of the construct. MacKenzie (2003) warns about the possible consequences of poor construct conceptualisation. According to the author, “poor construct conceptualisation makes it difficult to avoid measure deficiency and contamination, often leads to measurement model misspecification, and raises doubts about the credibility of the hypothesis” (p. 324). Consequently, construct validity and statistical conclusion validity are weakened. At this stage of scale development it is necessary to identify what the construct is intended to represent conceptually as well as to be clear on how the construct of interest differs from other related constructs (Spector 1992; Nunnally and Bernstein 1994).

MacKenzie (2003) suggest some guidelines in developing good constructs: 1) specify the construct’s conceptual theme; 2) in unambiguous terms; 3) in a way that is consistent with previous research; 4) clearly distinguish the construct from related constructs and, finally 5) specify the extent to which the construct is expected to differ across cases, conditions and time.

Compatible Goals

To develop new measures of compatible goals, a conceptual work on M&S interfunctional relationship by Rouziès et al. (2005) was used as a basis for item development. This conceptual article follows the definition developed by Fisher et al. (1997) and defines compatible goals as those objectives that are superordinate to the interests of individuals (or subunits) within a company. Fisher et al. (1997) developed a formative measure of compatible goals in their study. However, their notion of compatible goals differs from the one followed in this study. Their measurement of compatible goals is closely related to the above notion of joint rewards and is measured by the dependence of an individual’s compensation on the division’s performance, the project group’s performance, the company’s performance and the individual’s contribution to other functions in the division. Unfortunately, these measures did not reflect the aim of this particular study which was to measure the level of compatibility of the goals between the two departments, and not the level of reliance/dependence of one side on the other for the attainment of rewards as per
Fisher et al. (1997). Considering that this study does not define or measure compatible goals through the matters of dependence or reward achievement but from the structural/managerial point of actual goal compatibility, it was deemed necessary to develop new measures of goal compatibility between M&S departments. Because previously developed scales of compatible goals was not considered psychometrically sound for the purposes of this study (Churchill and Peter 1984), a scale development procedure was implemented and new scales for measuring compatible goals was developed (e.g., Spector 1992; DeVellis 2011) consisting of following 4 items:

Table 17: Compatible Goals scale

<table>
<thead>
<tr>
<th>COMPATIBLE GOALS</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing department goals are in harmony with the goals of the Sales department.</td>
<td></td>
</tr>
<tr>
<td>The objectives pursued by the Marketing department are incompatible with those of the Sales department.</td>
<td></td>
</tr>
<tr>
<td>The goals of Marketing and Sales departments can be described as being synchronised.</td>
<td></td>
</tr>
<tr>
<td>Marketing and Sales goals are closely aligned.</td>
<td></td>
</tr>
</tbody>
</table>

All items comprising the integrated goals scale were measured on the 7-point Likert scale, with anchors from 1 = “not at all” to 7 = “to a very great extent”.

*Marketing & Sales Interface Flexibility (MSIF)*

The MSIF was specified on the basis of a comprehensive literature review and underpinned in SET. In-depth interviews then followed with the main purpose of testing the suggested definition (MacKenzie et al. 2011). The main purpose of the literature review was to identify any previous uses of the term, existing definitions of the construct or any constructs that might be related to MSIF. For reasons discussed in earlier chapters, the existing measures of flexibility at the relational level were deemed inappropriate for measuring the concept of MSIF as defined in this study.

*Exploratory process for the scale development*

To support the development of the construct, exploratory interviews with 28 key informants (Churchill and Iacobucci 2005) in 17 UK-based business-to-business selling organisations were conducted. In the spirit of the exploratory enquiry and to gather extensive data about the phenomenon of interest, open-ended questions
were used. The intention of the researcher was to stay focused on the respondent’s own interpretation of MSIF. The initial question referred to the informants’ perception of the working relationship between Marketing and Sales (M&S) groups. Following this, respondents were asked whether M&S exchange resources as a part of their collaboration and if yes, what type of resources is exchanged and in which manner are those resources exchanged. Also, respondents were asked what experience or knowledge they had of situations where M&S plans needed adjustments and whether resources were redeployed/reallocated as a consequence. If they answered positively, they were asked to explain how these resources were redeployed/reallocated. Reference was also made to the context (e.g., aspects of the firm’s market environment) against which plan revisions and changes to use of resources were considered. As a result, researcher was able to gain deeper insights and a full understanding into the relevance of the flexibility construct in the context of M&S flexible resource management. The interview guide was designed for the duration of 30 minutes. However, respondents who were not limited to that specific time frame. All interviews were tape-recorded and transcribed verbatim. The ethical approval was acquired before each interview from the Loughborough University Ethical Advisory Committee so to ensure the confidentiality of the respondents and their approval for recording the interviews. All respondents received a letter prior to the interview (i.e. research information sheet) clearly explaining the purpose of the study, the interview process (expected duration, recording process and the link to the Loughborough University research ethical guidelines) and the benefits of the project for both parties involved (managers were offered a managerial report coming out of the overall study). They also received a consent form which was signed by the principal researcher and the respondent. Each received one copy of the consent form. The consent form clearly indicated that the respondents are under no obligation to take part in the study, that they can withdraw at any time and that the information provided will be treated in strict confidence and will be kept anonymous and confidential to the researcher.

Following Miles and Huberman (1994), data was coded, and analysed accordingly. Both within- and cross-case analysis were conducted. In the spirit of the exploratory enquiry, in-vivo codes rather than pre-selected literature based codes were used
(Denzin and Lincoln, 2000). As such, it was made sure that no restrictions were imposed on the analysis with ideas that had been established in the literature previously. After data coding, within-case analysis was conducted and matrix-based data displays created (see Miles and Huberman 1994). Matrix-based data displays were produced for each respondent, for each issue investigated, and for each theoretical code. Table 18 shows the within-case matrix for one respondent, based around the coding for MSIF. Preliminary descriptive understanding of the MSIF concept originating from each respondent was drawn from this stage of the qualitative analysis. Insights into why certain behaviours, phenomena and situations existed could also be generated at this stage. Following this, cross-case comparisons of the data was conducted in order to detect potential similarities and differences between respondents and between firms. An extract of a cross-case matrix on MSIF is shown in Table 19. Based on the statements made by the respondents and the data, a pool of items for measuring MSIF was generated.

The attention was paid to the wording of the items to correspond to the managerial language and the examples of inter-functional flexibility given by the respondents.

*Exploratory study results*

In analysing the data the main purpose of this qualitative phase of the study was kept in mind – i.e., detailed exploration of the constituents and the context of flexibility at the M&S interface. The results indicate that a common trigger for MSIF is requests from marketing and sales personnel (to their colleagues in the counterpart Sales or Marketing function) for the reconfiguration of their time/people, knowledge/expertise and budgetary resources. Such requests were based on the need to seize market opportunities and/or to deal with existing/potential performance issues. The examples of MSIF provided by the respondents guided item development and helped in the process of wording the items in the MSIF scale.

Reallocation of M&S resources (e.g., time, people, expertise and budget) was often indicated by respondents as an example of MSIF. Such resources were successfully redeployed by one of them and used in some way by the other function. As the marketing manager in the automotive industry indicated: " …So the salesmen might
be great at introducing and having contact with a customer, but he doesn't have the product expertise or whatever and so will call us (Marketing) in so we’re helping him get a sale”. Such flexibility could also be longer-term if this was in the company’s greater interest: “….we (Marketing) might take that salesforce headcount position for 6 months...” (R20). The Sales department required marketing resources for helping new salespeople develop their business networks: “...the first thing we (Marketing) did was to provide them with a little bit of funding so they could do their local campaigns…What we also did was to use the resource to make appointments for them; we changed the emphasis to make appointments for the new people...” (R28).

As described by a respondent from the pharmaceutical sector, Sales people could also be deployed by Marketing as-and-when-required, to provide their knowledge and insights: “And the situation could be, for example, that one of the salesforce roles can be covered by somebody else [in Sales], so that the salesforce had the counter position and could come to the office and work on medical education programmes …perhaps to disseminate some new fresh clinical data” (R19). In one of respondent companies operating in the automotive sector, Marketing knew that they could tap into and use Sales’ resources when in need: “…We (Marketing) can borrow a couple of people to help us sort out at a conference…” A key account manager (R9) explained how Marketing could use salespeople to assist them in delivering their own marketing objectives (for the benefit of the firm’s overall objectives): “This was the gold launch, so everything else had to be put on hold”. Even though Sales missed other (sales) opportunities (as they refocused their attention to the launch) this refocusing of Sales resource was seen to benefit the greater good, and the opportunity cost to Sales was lower than the cost to Marketing if Sales had not been flexible with their time.

In addition, examples were given where both Marketing and Sales were able to change the way they allocate resources between them to make the best use of these resources. For example, the Marketing Director in a gas supplies company (R28) gave an example where a short-term task force with representatives from both functions was put together to fix brand problems, to regain lost market share and to “pull things around”. In this particular example, Marketing reallocated some of their cash and people resources to support local selling campaigns and to secure selling
appointments for their sales colleagues. Sales on the other hand refocused their attention and realigned their schedule according to the needs of this newly formed task force. The Marketing Manager in the heating industry (R4) explained the situation in which collective M&S resources were redirected based on the newly created need. In this example, M&S realigned their joint resources and redirected their efforts away from selling more innovative type of products in an economic downturn if customers/ distributors were being unreceptive to listing or selling of such products. As a result, they would refocus and place more immediate attention on selling their more mainstream products. In the same spirit, a Sales manager in a publishing company described a situation where both Marketing and Sales were able to quickly re-design and produce a bespoke (custom) book in order to meet a large customer’s request, and against the background of a slow competitor response. The key account manager in the FMCG sector (R5) gave an example of how Marketing and Sales, as a response to an anticipated competitor product launch, reconfigured their resources to work outside of normal product development and launch lead times in order to develop and launch a new product to counter the competitor launch.

Respondents used words such as, “re-deployment”, “re-allocation” of resources or “pulling resources together”.

**Table 18: Extract from a within-case matrix**

<table>
<thead>
<tr>
<th>Example</th>
<th>Resource</th>
<th>Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>marketing was concentrating on this product, sales shifted all their efforts into selling this product</td>
<td>People/budget</td>
<td>Anticipated competitor product launch</td>
</tr>
<tr>
<td>marketing benefited from it, because they would never had done it if they didn't come (with me sales) to see the buyer</td>
<td>People: Co-calling on key account leading to marketing developing exclusive retailer promotion</td>
<td>Request from key account manager/identified sales opportunity in customer meeting</td>
</tr>
</tbody>
</table>

**Table 19: Extract from a meta cross-case matrix**

<table>
<thead>
<tr>
<th>Co.</th>
<th>Sector</th>
<th>Example</th>
<th>Resource</th>
<th>Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pharmaceutical</td>
<td>spent time with the reps, making sure that they knew the data, that they</td>
<td>People</td>
<td>Competitor price decrease</td>
</tr>
<tr>
<td>2</td>
<td>Pharmaceutical</td>
<td>knew the strategy work with the sales force...the reps to understand what the needs of the customer really are...why they don't agree with your data</td>
<td>People</td>
<td>Non-receptive customer</td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------</td>
<td>------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Heating R4</td>
<td>That’s a shared expenditure... They [trade events] weren’t truly scheduled.</td>
<td>People/Promotional budget</td>
<td>Poor economic environment</td>
</tr>
<tr>
<td>4</td>
<td>Publishing R18</td>
<td>I phoned the marketing manager and said I have a situation here and they agreed to help out</td>
<td>People/time</td>
<td>Customer demand for custom book</td>
</tr>
</tbody>
</table>

The next step in measure development utilised the procedure recommended by DeVellis (2011):

1. items that reflect the scale’s purpose were chosen
2. redundancy recommendation was taken into consideration
3. number of items was aimed to be as large as possible
4. attention was paid to the simplicity of wording and phrasing
5. multiple negatives and double-barrelled items were avoided

Particular attention was also paid to the adequate number of indicators to measure the latent construct. A recommended minimum of three to four items was followed (e.g., Baumgartner and Homburg 1996). However, it was also important not to include too many items as this may result in difficulty of representing the measurement structure that underlines the set of observed variables parsimoniously, which in turn results in difficulty in finding a model that fits the data well (Baumgartner and Homburg 1996). In addition, when developing measures of MSIF, the aim was for all key aspects of the conceptual definition to be reflected in the measurement, that the items are not contaminated by the inclusion of things that are not part of the conceptual domain (MacKenzie 2003). Hence the measure of MSIF was captured by following items:
MARKETING AND SALES INTERFACE FLEXIBILITY

The marketing and sales departments contain many resources (e.g., people’s time, manpower, financial resources, informational resources, knowledge, expertise). Please CIRCLE THE NUMBER that best reflects the extent to which you agree/disagree with the following statements, giving special consideration to the potential flow of resources that might happen - from Marketing to Sales AND from Sales to Marketing

- Our marketing and sales functions are capable of redeploying resources possessed by one of them so they can be used (in some way) by the other function.
- If our marketing or sales functional areas are in need of resources, then either one of the functions can tap into and use the resources possessed by the other functional area.
- The resources at the disposal of the marketing and sales function are a collective pool of capabilities and assets whose relative deployment varies depending on the strategic or operational needs of the company.
- The marketing and sales functions in our company can change the way their combined resources are allocated between them, allowing both functions to make use of these resources should this be necessary.
- Both the marketing and sales functions can pull in resources that are being used by the other functional area if this is in the broader business interest.

To avoid measurement design errors, guidelines provided by Hunt et al. (1982) were followed. These guidelines are summarised in Table 14 below:

Table 21: Avoiding design measurement error

<table>
<thead>
<tr>
<th>Rule</th>
<th>Explanation - example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Loaded questions</td>
<td>Questions which, through their wording, bias the responses, e.g., &quot;Don't you think it's time that America stood up to foreign despots?&quot;</td>
</tr>
<tr>
<td>2. Double questions</td>
<td>Two questions to which the respondent is asked to provide a single answer, e.g., &quot;Do you believe in God and church?&quot;</td>
</tr>
<tr>
<td>3. Ambiguous questions</td>
<td>Questions with two or more interpretations, e.g., &quot;In your opinion, who killed Kennedy?&quot;</td>
</tr>
<tr>
<td>4. Inappropriate vocabulary</td>
<td>Questions using terms with which the subjects are not familiar, e.g., &quot;Would you be willing to try a weight loss program that works by increasing your basal metabolism?&quot;</td>
</tr>
<tr>
<td>5. Missing alternatives</td>
<td>Multiple choice questions in which some possible answers are not included among the alternatives, e.g., &quot;In your opinion which political party is best? a) Democratic b) Republican&quot; (p. 271)</td>
</tr>
</tbody>
</table>

Source: Hunt et al. (1982)

Finally, it was important to establish both face and content validity of the newly developed measure of Compatible Goals and MSIF (Bryman 2012). In order to ensure that there is a common theme shared throughout all of the items of the scales, i.e. face validity, the scale was presented to three academics and three practitioners. They assessed whether a common thread could be found among the scale items. It was deemed important that raters have both the intellectual ability and belong to the main population of interest (Anderson and Gerbing 1991), hence the inclusion of both academics and practitioners in the scale pre-test process. This pre-test returned a good face validity of the MSIF measure. Same academics and
practitioners, regarded as specialist in the area (Moser and Kalton 1971), helped assess the content validity of Compatible Goals and MSIF. Content validity assessment offers a more systematic approach and refers to the degree to which the items in the newly developed scale reflect the “content universe to which the instrument will be generalised” (Straub et al. 2004, p. 424). Again, all questions were independently tested for content validity by three marketing academics and three senior M&S managers. The pre-test returned a number of adjustments to the scale regarding the layout of the questions. In addition, the question introduction needed some rewording to achieve greater clarity (Hunt et al. 1982). Specific changes made to the scale will also be discussed in the later sections. Scale purification and refinement procedures will be described in more detail in the following chapter.

**Profiling variables**

In sum, 16 profiling variables were used in this study for the purpose of profiling the organisations that participated in the study. In accordance with the prior research (e.g., Maltz and Kohli 2000; Yuang et al. 2010), one of these variables, firm size, was used as a control variable in the conceptual model. Firm size has been shown to have an effect on performance as larger companies have more resources at their disposal and can more easily alleviate potential negative effects from the environment (Lee and Makhija 2009). On the other hand, younger and smaller firms typically have the advantage of being able to shift from one strategy to another more easily, thus achieving greater flexibility compared to larger companies that tend to be more bureaucratic in nature and more focused on already tested strategies and maintaining the status quo (Nadkarni and Herrmann 2010).

In accordance with previous studies (e.g., Smith et al. 2005), firm size was measured on basis of number of employees and company total annual turnover. Consistent with the M&S and wider literature in inter-departmental relationships literature (e.g., Maltz and Kohli 2000; Homburg and Jensen 2007) the following profiling variables were included:
### Table 22: Profiling Variables

<table>
<thead>
<tr>
<th>Question</th>
<th>Marketing</th>
<th>Sales</th>
<th>Marketing &amp; Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your job title?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is your main functional responsibility?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the hierarchical level of your role?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the length of your experience in working in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Please insert the appropriate number)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please circle the option that refers to your company</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the composition of the board of directors in your company?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Please circle the appropriate answer)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How long have you been with the company?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>And how long within the current role?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Which industry does your firm operate in?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How many full-time staff are employed by your company in the UK?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of these, how many work in the Sales or Marketing department?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What year was your company founded?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximately what percentage of your firm’s sales is</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>generated by: (TOTAL 100%)</td>
<td>Physical goods</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Approximately what percentage of your firm’s sales is</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>generated by: (TOTAL 100%)</td>
<td>Services</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Business-to-business goods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer goods</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Approximately, what was your average **ANNUAL turnover** last year? Amounts are in **million £**

- 10-20
- 21-50
- 51-75
- 76-125
- 126-250
- 251-500
- 501-1000
- >1000

On average, what was the annual return on sales (operating profit before tax) of your company over the last 3 years?

- negative
- 0% to <2%
- 2% to <4%
- 4% to <6%
- 6% to <8%
- 8% to <10%
- 10% to <12%
- 12% to <16%
- 16% to <20%
- > 20%
For example, type of industry was used following all the exploratory studies in M&S relationships (e.g., Le Meunier-FitzHugh and Piercy 2007a; Homburg et al. 2008) to determine industries in which responding firms operated and to test whether a variety of industries are captured. These profiling variables helped develop initial impressions of the characteristics of the sample firms and are described in more detail at the end of chapter 5.

**Other Variables**

For the purposes of future research a number of additional variables were included in the questionnaire. For example, another set of questions examining two additional dimensions of interface flexibility in M&S were included in the study. In addition, identity measures based on the works of Ashforth and Mael (1989) and Fisher et al. (1997) were also included. Several additional variables capturing organisational structure (e.g., formalisation, centralisation), culture (e.g., market orientation, entrepreneurial orientation) and role stressors were also incorporated. A copy of the full questionnaire can be found in Appendix 1.6.

**4.2.2.2 Response Format**

Special consideration was given when choosing the appropriate response format for the study. In addition, a well-formatted and designed questionnaire will improve response rate by enabling respondents’ ease of completeness and comprehension (Bradburn et al. 2004). Hence, due care was given to questionnaire design. In order to collect answers from previously identified survey participants, a close-ended answer format was selected for several reasons (Churchill and Iacobucci 2005). Unlike open-ended and multi-dichotomous response formats, close-ended answers reduce the potential for misinterpretation of questions (Churchill and Iacobucci 2005). In addition, response options were designed in order to reduce the time required to complete the questionnaire. This lowers the potential for respondents fatigue (DeVellis 2011). This was an especially important considering the length of the questionnaire. Finally, the close-ended format was deemed appropriate for use in
the subsequent data analysis procedures as responses would be comparable across multiple respondents (Churchill and Iacobucci 2005).

Podsakoff et al. (2003) suggest that errors connected to the chosen scale format are more likely to cause common method bias. More specifically, surveys employing a single format scale anchors, such as “strongly agree” versus “strongly disagree” are most prone to causing common method bias. Lindell and Whitney (2001) suggest measurement separation by employing different formats and scales for predictors versus outcomes. However, Cox III (1980) suggests that “five alternatives tend to frustrate [respondents] whereas some alternatives tend to be underutilised when as many as nine are provided” (p. 408). Following the recommendation of Cox III (1980) and considering that all the variables adapted from previous literature were measured using a 7-point Likert-type scale, this research also used a 7 point Likert-scale. The same example was followed for the newly developed measurements in this study. At the same time, different format scale anchors were also used in the study to minimise the potential for common method bias (Podsakoff et al. 2003). In addition to variations in the format of scale anchors, throughout the questionnaire different answer formats were also utilised to avoid the repetitiveness. Hence, respondents were asked to either circle the number that would best reflect their opinion or to fill in boxes with offered numerical values placed on the right hand side of the questionnaire to enhance pattern recognition (Dillman 2000).

4.2.2.3 Questionnaire design

After defining the aims of the survey, the target population, questions to be asked, the selection of questionnaire and question type, consideration of wording, question sequence and overall questionnaire layout then followed (Churchill 1979). For the purpose of this study a structured, undisguised survey was chosen. A survey is considered the most efficient data collection technique in instances where the researcher has already defined the information to be sought and the variables to be measured as is the case with this study (Sekaran 2000). Although self-administered surveys have plenty of advantages, such as completion at respondents’ convenience, potential for data collection from a wide range of respondents on a
large number of variables and large samples as well as ensuring respondents anonymity (Churchill 1999; Zikmund and Babin 2006; Malhotra and Birks 2007), self-administered surveys are not without their disadvantages. Considering the standardised nature of the questionnaires, additional explanations potentially required by the respondents are not available (Hair et al. 2006). In the present study, a pre-test process was undertaken to make sure that the questionnaire contained necessary directions designed to avoid any misinterpretation. Another disadvantage is the low response rate associated with the self-administered surveys (Malhotra and Birks 2007). In order to minimise the potential danger of not acquiring sufficient data, response rate enhancement techniques were utilised (see later section of this chapter). In addition, respondents may answer questions superficially, especially in instances where long questionnaires are used. Several methods were used to make sure that this situation was avoided and that respondents were motivated to pay attention to what is being asked and answer the questions in a truthful manner. These methods are connected to questionnaire design and will be discussed in the following section.

Considering the need for a large amount of data to be collected, the mail questionnaire was deemed appropriate as an administration method as it is lower in cost and time in comparison with other potential methods; i.e., interviews and telephone interviews (Churchill 1999). Self-administered surveys were mailed to previously identified and discussed respondent sample.

4.2.2.3.1 Physical characteristics of the questionnaire

Churchill (1999) argues for the importance of the physical appearance of the questionnaire for respondents' willingness to engage in the process. Considering the quantity of data required for the analysis and the length of the survey, it was deemed necessary to avoid poor questionnaire design, and where possible, to avoid any impressions of complexity or high demands in time and effort (DeVellis 2011). To enhance willingness to respond and also minimise inaccuracies/incomplete information attention was paid to: 1) achieving an appealing physical format; 2) ease of understanding questionnaire layouts and question groupings, 3) order effects and
4) navigational paths and page design (Tull and Hawkins 1993; Dillman 2000). As part of this, a pattern recognition concept was utilised (Dillman 2000) such that questions were visually separated using boxes. This ensured a questionnaire design that was both practical and appealing. The design was also consistent, making recognition and recall easier. In addition, to further enhance questionnaire appeal, the questionnaire was printed on an ivory paper as opposed to commonly used white paper (Denscombe 2009).

Another aspect of the questionnaire that is argued to have a significant impact on response rate is questionnaire length. Very long questionnaires may result in extremely low response rates since they require high investments in respondent’s time for completion (DeVellis 2011). Very short questionnaires, on the other hand, may reduce reliability; hence the need for a trade-off when considering survey length. For the purpose of this research, high reliability was considered more important and therefore a longer, 12 page questionnaire was designed. Questions were printed using double-sided printing as this is argued to make the questionnaire appear shorter and hence appears less time consuming (Jobber 1989).

4.2.2.3.2 Consideration of Common Method Variance and different types of measurement errors

Common Method Variance (CMV)

The validity of constructs used in any study is a prerequisite for developing and testing organisational theories (Doty and Glick 1998). When developing a questionnaire for testing hypothesised relationships, due consideration should be given to potential problems that may emerge as a result of common method variance - CMV (Podsakoff et al. 2003). CMV caused by the measurement approach used in the study, is one of the primary threats to construct validity and occurs in instances where systematic error is introduced into the measure (Campbell and Fiske 1959). This systematic error may cause a difference between the observed and true relationships among the constructs by either inflating or deflating the observed correlation (Cote and Buckley 1988; Doty and Glick 1998). Considering that cross-sectional studies mostly involve single respondents at a single point in time, the
issue of CMV is of special concern (Rindfleisch et al. 2008). The presence of CMV implies the existence of alternative explanations to observed relationship between measures of different constructs to those hypothesised by the researcher (Bagozzi and Yi 1993; Podsakoff et al. 2003). The magnitude of these discrepancies between the observed and true relationships between the constructs resulting from CMV is known as common method bias (Doty and Glick 1998). However, it is important to consider that in cases where correlations between the variables are expected to be large in magnitude, method bias may not be as important issue in cross-sectional research (Rindfleisch et al. 2008).

Podsakoff et al. (2003) summarise four broad sources of method bias: 1) having a single rater (e.g., social desirability, leniency), 2) poor quality item design (e.g., item ambiguity), 3) item context effects (e.g., priming effects, grouping of items), and 4) measurement context effects (e.g., simultaneous measurement of predictor and criterion variables).

Having a single rater for both independent and dependent variables in this study may raise concerns regarding the potential for introducing CMV, as false internal consistency might be present in the data. This could mislead the researcher into accepting or rejecting hypothesised relationships (Podsakoff et al. 2003; Rindfleisch et al. 2008). Such method effect errors may be caused by so called halo effects, social desirability, acquiescence, leniency effects or yay - and - nay saying” (Bagozzi and Yi 1991). For these reasons the literature suggests employing multiple respondents in answering the questionnaire at different points in time (Podsakoff et al. 2003). Considering that this method was not employed in this study due to cost and time constraints, several procedural and design remedies were used as a method of pre-empting the CMV problem rather than dealing with it ex-post (Podsakoff and Organ 1986). Initially, the design and questionnaire development processes were conducted with special care. For example different rating scales were used, the order of the questions in the questionnaire was mixed and response formats differed (Appendix 1.6). According to Podsakoff et al. (2003, p. 888), “still another way to diminish method biases is to use different scale endpoints and/or formats for the predictor and the criterion measures”. For certain questions in the questionnaire, semantic differential scales were used to minimise, what Podsakoff et
al. (2003) call, artifactual covariation caused by the same scale format utilisation throughout the questionnaire. Also, both close-ended and open-ended questions were used in the study. Close-ended questions were mainly used in the study to avoid any potential for misinterpretation of the questions by the respondents (Huber and Power 1985), to enable comparisons of results across multiple respondents (Churchill 1999) and finally, to reduce the time and cost of data collection (Malhotra and Birks 2007). Open-ended questions, such as industry type, company size etc., were also used in the questionnaire as an additional method of pre-empting CMV. In addition, the questionnaire contained reverse-coded items as well as breaks between the questions and pages. To further avoid method effect errors, the respondent was made clear of the confidentiality of the information they provided (Lindell and Whitney 2001) as well as the fact that no right or wrong answers exist; i.e., it was their honest and accurate opinions that the questionnaire was asking for (Podsakoff et al. 2003). Ex-post, this study reported results from two tests as an exploration and explanation of the inter-correlation of the variables of interest, namely Harman’s one-factor test and marker variable test (see chapter 6 for the results of both tests).

One of the above mentioned issues, social desirability, was also addressed in this study. Social desirability may cause serious problems to drawing conclusions on the validity and unidimensionality of measures as it reflects the respondent’s need for social approval based on expressing culturally acceptable and appropriate behaviours that have the potential to distort study results (Crowne and Marlowe 1964). Hence, the researcher will not be able to make certain judgement on whether his/her scales are measuring the intended construct or socially desirable behaviour (Spector 1992). In order to tackle this potential issue an established social desirability scale to test for social desirability was included in the questionnaire. In order to examine the potential effect of social desirability on the hypothesised relationships, the social desirability variable was correlated with all of the variables from the original structural model. Since all the correlations were low and non-significant, this was an indication that none of the items were contaminated. This was taken to suggest that social desirability bias is not an issue in the study data.
Errors emerging from poor construct development were minimised by, where possible, sourcing the items used in this study from well-established scales and strictly following measurement development procedures for new scales (e.g., Churchill 1979). Pre-testing procedures assisted in avoiding any potential misinterpretation of questionnaire items which led to survey instrument error (Hair et al. 2006). Hence, results of protocols and debriefs during the pretesting stage uncovered potential item ambiguity, double-barrelled questions and resulted in using questions that were more comprehensible and straightforward for the respondent.

Other types of errors were also identified as potential threats to the study. First, there is always the threat of sampling error, which implies limited sampled units of the survey population. Second, the researcher must be aware of non-sampling error, such as respondent errors, measurement/design errors, faulty problem definition, or project administration errors. Finally, non-response error can also threaten a study’s conclusions. These errors occur in instances where respondents included in the initial sampling do not respond to the questionnaire (Dillman 2000; Hair et al. 2006).

As possible as sampling error decreases as the sample size increases, sampling error was minimised by an attempt to generate as large a respondent sample (Hair et al. 2006). Having a larger sample increases the probability of sample size being representative of the population in question. Non-sampling errors caused by respondent errors, faulty measurement/design were discussed previously. Faulty problem definition error was minimised by conducting an extensive literature review, which enabled further identification of constructs and relationships among them (Hair et al. 2006). Finally, during the entire project close attention was paid to accuracy and to keeping a correct log of all steps undertaken throughout the data collection process. This included the log of all the dates connected to the sending of questionnaires, reminder-cards and a log of questionnaire return-dates. While entering data in the SPSS software double-checking of all entries was undertaken to eliminate the risk of administration errors.

Finally, non-response error was dealt with by conducting a non-response bias test (Armstrong and Overton 1977). So called late respondents, those that replied after receiving (at least) the first reminder card were compared to early respondents that
answered the questionnaire within the first 15 days of receiving the questionnaire. In total, 102 early responses and 127 late responses were located in the study. Late respondents; i.e. those who answered after the first follow-up, are considered to be no different from non-respondents (Churchill and Iacobucci 2005). The following step used the two sets of data in assessing the non-response bias. T-tests were performed for early and late respondents and the results indicated that there were no significant differences between the two groups at the conventional levels (p<0.05). This implied that non-response bias did not cause any major impact on the variables in this study (Churchill and Iacobucci 2005).

Another type of non-response error is the error connected to non-response to individual items within a survey; i.e., item non-response (Dillman 2000). These types of errors are more frequently found in lengthy surveys (as here) or those surveys whose questions relate to sensitive topic and issues. Most often, item non-response error is caused by respondent concerns with confidentiality issues preventing them to disclose information required (Booth-Kewley et al. 2007). In order to avoid this type of error respondents were repeatedly reminded of the strict Loughborough University information disclosure principles that guided the research.

4.3 Data collection

4.3.1 Pre-testing

4.3.1.1 Protocol and debrief interviews

Prior to administering the questionnaire, protocol and debrief pre-testing was conducted with three marketing academics and two marketing practitioners. In the protocol analysis, two marketing academics and two practitioners were asked to discuss any potential topics, to provide any general comments and to think out loud while filling in the questionnaire (Diamantopoulos et al. 1994). On the other hand, in debrief, respondents were given the questionnaire beforehand and the interview occurred once the questionnaire had already been looked at and completed by the respondents. These techniques help the researcher spot any potential misinterpretations, they highlight required changes in question wording or order and
finally they give the researcher an indication of the time required to complete the questionnaire (Churchill 1999). The priority was given to the protocol interviews since they give greater volume of information and are considered more useful in instances where long questionnaires are used (Reynolds et al. 1993). In debrief method there is a real threat to any issues that emerged at the beginning of the questionnaire being overshadowed by the questions at the end. This becomes especially important in lengthy questionnaires. Hence, more attention was paid to protocol testing. However, for maximum overall effectiveness, both methods were applied.

After conducting all protocol and debrief interviews the following changes were introduced to the questionnaire. With all the respondents the main comment was in respect of the length of the questionnaire. However, there was no option to withdraw any of the items. The length of the questionnaire therefore remained the same. Regarding comments about questionnaire layout, following changes were implemented:

1. The questionnaire was redesigned to achieve a better distinction between the sections and the questions. Questions were boxed and items were clearly separated by dotted lines.

2. As a suggestion to potentially increase the response rate and to personalise the questionnaire, photographs, together with the contact information for the PhD student and both supervisors were inserted in the cover of the questionnaire.

3. Instructions were added at the beginning of the questionnaire

4. Additional reminders of confidentiality were added as well as additional notes within the questionnaire (e.g., notes giving the methodological reasons for repetitiveness) as per respondents’ suggestions.

5. In section five, page 8-10 of the questionnaire, the questions asking for answers that refer separately to both Marketing and Sales departments were redesigned and boxes were provided for functionally specific answers. Instead of having both boxes on the right hand side next to each other, boxes were now placed to the left of the items for responses that refer to the marketing
department and to the right for the sales department responses. Also, in re-designing these questions, attention was paid to clear navigation to both left hand side and right hand side boxes.

Regarding the text within the questionnaire the following changes were made:

6. In some instances, comments were made that the question explanations were too long and tiring. Hence they were made simpler. For example, in Section two, question number one, the text was made clearer and smaller. Instead of previously: “The marketing and sales functions of companies contain many resources (e.g., manpower, financial resources, informational resources, knowledge, expertise). On occasion, changes in the business environment, unexpected opportunities or threats, or simply under-resourcing issues might mean that the resources that a firm’s sales function possesses could, potentially, be usefully redeployed (temporarily or permanently) by the firm’s Marketing function. Likewise, at times, a business might benefit if some of its marketing function resources were to be redeployed (temporarily or permanently) by the sales”, the text was changed into: “The marketing and sales departments contain many resources (e.g., people’s time, manpower, financial resources, informational resources, knowledge, expertise). PLEASE INSERT THE NUMBER that best reflects the extent to which you agree/disagree with the following statements, giving special consideration to the potential flow of resources that might happen from Marketing to Sales AND from Sales to Marketing”

7. On occasions, additional explanations to items were also given by providing examples. For instance, in Section One, question number three, the following explanation was added to the item “Marketing and Sales stick to clear guidelines when cooperating with each other” – “Marketing and Sales stick to agreed guidelines when cooperating with each other (e.g., regular monthly meetings)”

8. Following the comment implying that questions were of a leading nature and had the potential to introduce bias, all the instructions were double-checked and where necessary they were re-phrased to make them neutral and simple.
For example, the question: “To what extent do the following statements refer to the situation in your company?” was changed into: “How much do the following statements describe your company?”

9. Operational examples were given for two questions referring to marketing and sales resource dependencies in Section Two. For example, the question referring to Sales’ dependence on Marketing resources was given additional operational explanations in brackets: Sales resources? (e.g., sales personnel time/expertise that marketing may require for launching new products) Sales support? (e.g., sales advice regarding customer needs, assistance with developing promotional material) Sales outputs? (e.g., achieving sales targets, relationships with trade customers, securing distribution for new products)

10. In Section One, a marketing manager suggested a change to the following item for the sake of clarity: “Marketing managers’ evaluations are based on joint performance with sales managers, and vice versa”. This item was rephrased into: “Collaboration between marketing and sales is a part of the marketing and sales performance targets”.

4.3.1.2 Pilot study

A pilot study was carried out between November and December 2011 on a 201 randomly selected companies from the Kompass database. The sampling process was explained in the previous sections. The process to enhance the response rate suggested by Dillman (2000) was followed. The respondents were pre-notified and follow-up methods were used.

The following steps were followed in the pilot study:

1. All companies were contacted by telephone, personnel named the individuals knowledgeable of marketing and sales department cooperation were located and requested. In instance where a company had one person in charge of both departments, details on this person were requested. As a part of “no-name” company policy, 26 companies refused to reveal or allowed for
managers from marketing and sales (or M&S manager) to be contacted. They also refused to give their names up. In such cases, envelopes were sent addressed to ‘Head of Sales or Head of Marketing’.

2. 2 companies from the list belong to the same company now.

3. 22 companies did not have separate marketing and sales departments and were therefore not eligible for the study.

4. 11 managers refused to participate without giving any special reason.

5. 17 managers said they had no time to participate in the study.

6. 9 companies do not take part in any kind of research, not even academic.

7. After this initial data cleaning, a package containing the cover letter, questionnaire and a pre-addressed, pre-paid envelope for returning the questionnaire was mailed to the remaining 141 firms in the UK that were previously contacted and whose names and/or agreement to participate in the study had been obtained (please see Appendix 1.1).

8. The cover letter explained the purpose of the study, the fact that the results were to be used only for academic purposes and that a managerial report was offered to managers. Additionally, the letter informed and emphasised the fact that the research was completely confidential and that Loughborough University research confidentiality guidelines were followed. As per the recommendations of Diamantopoulos and Schlegelmilch (1996), the cover letter also contained the ‘altruistic appeal’ aimed at the respondent’s conscience to help the researcher with her investigation.

9. After one week, reminder cards were sent to respondents to remind them and asking them to complete and return the questionnaire if they had not already done so (please see Appendix 1.5).

10. Finally, a reminder questionnaire package containing the second cover letter and freepost reply envelope was mailed out to those firms who have not replied one week after sending the reminder card (please Appendix 1.2).
Out of 141 questionnaires sent out, 23 completed and useable questionnaires were returned, generating the response rate of 16.31%. In order to determine reasons for non-response, 20 companies from the final sample of 141 eligible companies that did not return the questionnaire were randomly selected for a telephone follow-up. The reasons for not participating in the research were the following:

1. Eight out of twenty five contacted managers named the length of the questionnaire as the reason for not participating.

2. Ten managers claimed that they were not able to find the time to participate in the study as they were either preparing for the Christmas period, as due to the nature of their business, this was the busiest part of their year, or they were travelling and mostly out of the office.

3. Three managers could not be reached by the telephone.

4. Three managers refused to give any particular explanation for not completing and returning the survey.

The results indicated the importance of considering the time period for conducting the survey. However, considering that the sample consisted of companies operating in a variety of industries, the decision was made to continue the survey as soon as possible after the holiday session.

**4.3.2 Main survey**

Considering that the minimum of 200 responses were required for the adequate evaluation of reliability and validity of measure, a number of steps were undertaken to ensure that the targeted minimum of 200 responses was achieved (Spector 1992). In the previous section, sampling techniques were described in detail and were subsequently followed in the main survey. The final sample included 2567 companies, which were used for both the mail pre-test and main survey study. Having randomly selected 201 companies from this sample for the pilot test, left 2366 companies for the final sample and for use in the main survey. Considering that the pilot study returned an acceptable response rate of 16.31%, 1250 companies would have been theoretically sufficient for achieving a desired 200 responses.
However, all 2366 companies entered the final sample to make sure that the size of the sample was sufficient in the event that the 16.32% response rate was not due to chance. The same process was followed as in the pilot study with the pre-notification of respondents (DeVellis 2011). This was for reasons of ensuring respondent commitment, for further cleaning of the data and to ensure the companies’ eligibility.

As a way to ensure the commitment and participation of respondents, as well as to determine the competence of the potential respondent all the companies were contacted by telephone before sending the initial questionnaire package. Each respondent was asked to identify their position in the company as well as their involvement in the working with the other department. They were also asked whether they would be knowledgeable of the relationship between Marketing and Sales departments in their company and were assured confidentiality. In order to increase the motivation for participation respondents were guaranteed a managerial report coming out of the study (Dillman 2000).

Having secured the agreement of potential respondents to participate in the study, the Dillman (2000) process that was followed in the pilot test phase was also followed here. First, a package containing the cover letter (Appendix 1.3), questionnaire (Appendix 1.6) and freepost envelope was sent to the companies. Seven days after the package was sent, respondents receive a reminder postcard (Appendix 1.5). Fourteen days after the initial questionnaire was sent out and seven days after the reminder card was mailed to respondents, a second round of mailing was implemented. All of the non-responding firms were mailed the package again with slightly different cover letter (Appendix 1.4) that appealed for their participation in the study.

4.3.3 Response Analysis

Data collection lasted from January 2012 until May 2012. During that period a total of 2366 companies were contacted by phone and e-mail out of which 1890 companies were found eligible to participate in the study. A total number of 252 questionnaires were returned. 23 questionnaires were discarded for reasons of lack of respondent knowledge and incompleteness. In addition, 6 questionnaires were returned without
any information given. Finally, total number of 229 useable questionnaires was obtained resulting in a response rate of 8.25%.

The mean rating for respondent quality resulted in final 6.02/7.00, indicating that respondents answering questionnaire had a high level of relevant knowledge. Approximately eight weeks after the final round of reminder questionnaires were sent out to companies, 100 companies were telephoned and emailed to discover the reasons for not returning their questionnaires. Reasons for their non-response are listed in Table 20.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>No time to fill in questionnaire/questionnaire too long</td>
<td>46</td>
</tr>
<tr>
<td>Passed on to someone else and lost in the system</td>
<td>6</td>
</tr>
<tr>
<td>Respondents felt ineligible</td>
<td>5</td>
</tr>
<tr>
<td>No questionnaire received</td>
<td>2</td>
</tr>
<tr>
<td>Felt company was too small for the survey to be applicable</td>
<td>7</td>
</tr>
<tr>
<td>Not interested</td>
<td>17</td>
</tr>
<tr>
<td>Confidentiality issues</td>
<td>6</td>
</tr>
<tr>
<td>Was unreachable/couldn’t take my call</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

### 4.3.4 Response rate enhancement

A good response rate is important for the representativeness of a sample (Churchill et al. 2001). In order to improve response rate guidelines provided by Diamantopoulos and Schlegelmilch (1996) were followed. First of all, all cover letters accompanying the questionnaire were personally addressed to the respondent with a hand written signature of the prime researcher. Second, several appeals were used to help boost the response rate. A so called “social utility” appeal emphasised the importance of the research topic, an “altruistic appeal” aiming at the respondent’s conscience to help the student researcher with her investigation, and finally an “egoistic appeal” underlining the expert knowledge of the respondent on the research topic. According to Diamantopoulos and Schlegelmilch (1996), the combination of all three appeals to bolster the cover letter and produced as described above should help create a positive attitude towards the research and the questionnaire. Third, all respondents were assured anonymity. The assurance was incorporated in the
telephone pre-notification calls, in the cover letter and in the questionnaire itself. The use of strict research confidentiality guidelines prescribed by Loughborough University was emphasised. In addition, the questionnaire did not request any information that could subsequently lead to the identification of the respondent. Telephone pre-notifications, as mentioned above, assured that appropriate respondents were chosen as potential respondents. Also, telephone pre-notifications gave the researcher opportunity to further explain the research. This was designed to ensure that potential respondents understood its value and to further motivate potential respondents to respond to the questionnaire once they received it (Churchill and Iacobucci 2005). Fourth, by sending the questionnaire to potential respondents who are involved in the relationship between marketing and sales it was assured that questions in the questionnaire were of interest to the respondent and related to his/her experience and knowledge, thus making the questionnaire more appealing and increasing the likelihood of questionnaire completion. Fifth, in designing the questionnaire, an attempt was made to create an attractive and easy-to-navigate-through questionnaire as this is also shown to have a positive effect on the response rate. Sixth, as monetary incentives have no effect on response rate they were not used in this study. Instead this study opted out for the summary of key findings coming from the research as an alternative incentive. This is shown as the only non-monetary reward that has a positive effect on response rate (Jobber and O'Reilly 1998). Finally, as described above, Dillman (2000) process was followed and included the additional steps to the initial questionnaire postage; i.e., a reminder card sent to respondents and a duplicate package including the cover letter and a questionnaire.

4.3.5 Missing values treatment

Before commencing to further analysis of the collected data it was necessary to analyse and deal with missing values in the dataset. Missing data; i.e., where valid values on one or more variables are missing from the survey, is a common problem in survey research (Lee and Lings 2008). Firstly, it was necessary to identify whether values were missing intentionally or unintentionally (Hair et al. 2006). If missing intentionally, any statistical results based on such data may be prone to bias. In
In order to analyse the randomness of missing values in the data, Little and Rubin’s (1989) missing value completely at random (MCAR) test was performed. This test provides results by comparing the actual pattern of missing data with that which would have been would be expected if the data were completely normally distributed (Hair et al. 2006). In instances where the non-significant statistical level of the t-value is returned, the research may conclude that the data is missing completely at random (Hair et al. 2006). Consequently, if data are missing completely at random, any missing data replacement method can be applied (Allison 2002). The non-significant level of the MCAR test was returned which shows that the pattern of the missing data was MCAR. Their results imply that the largest missing value was 7.9% (annual turnover), 1.6% for items 2 and 3 (related to financial performance) and 1.2% related to item 1 (technological turbulence). There were no missing values in the newly developed scale of marketing and sales interface flexibility. Tabachnick and Fidell (2007) suggest that ≤5% of randomly missing values do not pose a serious problem to study validity. However, considering that missing values in these 4 cases of financial performance belong to outcome variables, these cases were deleted for the further analysis. Hair et al. (2006) suggest deletion of these variables since they may produce an artificial increase in relationships with independent variables later on in model testing. In addition, the rule of the thumb is that missing data under 10% of individual cases can be imputed if they are missing at random. Variables missing at less than 15% can be imputed. The values of missing data in this dataset fall far below the suggested 10% for individual cases and the 15% for variables; hence, the next step of data imputation was undertaken.

In order to impute data, the Expectation-Maximisation (EM) algorithm was applied as it has been argued to be able to produce estimates and efficient missing values regardless of whether the missing data pattern is MCAR or MAR (Little and Rubin 1989). In addition, it is argued to be a process superior to other available imputation methods (e.g., Schafer and Graham 2002).

The imputation by means of EM algorithm method is based on a two-step iterative process (Hair et al. 2006). Firstly, an expectation step is performed, where a function of expectation of missing values is created based on the initial covariance matrix. After that, the maximisation step follows, where parameters based on the first step
are computed through maximum likelihood estimation based on the produced mean vector and covariance matrix. Finally, these estimates are recalculated until the differences between the two fall below the convergence criterion (Enders 2001).

4.3.6 Sample characteristics of the responding companies

This section provides general information about the companies that participated in the study, namely the size of the companies participating in the study, their business experience as well as the market offering and their target customer groups. This section also provides an analysis of respondent characteristics, such as, respondent status (i.e., hierarchical position and management experience). This information was designed to provide a fundamental understanding of the companies and respondents that participated in the study and to generate initial impressions of the sample characteristics.

4.3.6.1 Company size

Company size has already been used as a control variable in other studies examining the relationship between marketing and sales departments (e.g., Homburg and Jensen 2007). Company size has been assessed by using two types of information: 1) number of full-time employees and 2) total annual turnover of the firm (Cooper and Kleinschmidt 1985). Average revenue fell within the range of 76-125 million £. The mean of the revenue also fell within the same range of annual turnover.

The distribution of firm size shows a good distribution. Hence, it can be concluded that in regards to turnover aspect of the companies in the dataset a good variation among company size has been achieved.

<table>
<thead>
<tr>
<th>Annual Turnover</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-20</td>
<td>29</td>
<td>13.1</td>
<td>13.1</td>
<td>13.1</td>
</tr>
<tr>
<td>20-50</td>
<td>45</td>
<td>19.7</td>
<td>19.7</td>
<td>32.8</td>
</tr>
<tr>
<td>50-75</td>
<td>24</td>
<td>10.5</td>
<td>10.5</td>
<td>43.3</td>
</tr>
<tr>
<td>75-125</td>
<td>18</td>
<td>7.9</td>
<td>7.9</td>
<td>51.2</td>
</tr>
<tr>
<td>Company Size</td>
<td>Count</td>
<td>Mean</td>
<td>Median</td>
<td>Total</td>
</tr>
<tr>
<td>--------------</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>125-250</td>
<td>22</td>
<td>10.4</td>
<td>10.4</td>
<td>61.6</td>
</tr>
<tr>
<td>250-500</td>
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With regards to the distribution of company size in terms of total number of full-time employees, this dataset is positively skewed. 79.1% of the companies in the sample have number of employees < 1000 within a wide of range from 5 to 25000 full-time employees, a median of 300 and a mean of 1237.04 full-time employees.

**4.3.6.2 Business experience**

In examining the experience that respondents have with their company the results indicate that responses to this question range from 1 year (10.5%) to 37 years of this company experience (1.3%). The responses are slightly positively skewed towards the left hand side, indicating that the majority of responses fall within the shorter business experience (mean of 10.9 years; standard deviation of 9.21). Considering that only 10.5% of respondents indicated that they had one year’s experience in the company, this can be taken as an implication that the vast majority of the respondents have been with the company long enough to create stable impressions and opinions about their company.

**Figure 6: Business experience**
4.3.6.3 Market offerings

Table 22 below indicates that the majority of companies in the sample (10.9%) generate their sales by means other than goods. By close inspection of data and a cross-comparison of respondent answers, these companies generate their sales completely by means of providing services. The vast majority of these companies belong to the financial services sector. Outside of these companies, the second largest population are companies with 100% generation of their sales by means of goods as opposed to services (32.3% of companies in the sample). This is closely followed by companies with 80-95% generation of their sales from goods as opposed to services (18.3% of companies in the sample).

Table 25: Market offerings

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<td>100</td>
<td>74</td>
</tr>
<tr>
<td>Total</td>
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</table>

188
4.3.6.4 Target customer groups

As far as targeted customers are concerned, 53.3% of companies (123 companies in the sample) claimed that 100% of their company’s sales is generated by selling B2B goods as opposed to B2C. 13.1% companies generated their sales by means of selling directly and only to their consumers. These companies belong mostly to construction and engineering sectors, as well as pharmaceuticals and health providers. This variable had no missing values in responses; hence, 229 responses were obtained.

Table 26: Target customer groups

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<th>Sales generated by doing business with B2B goods</th>
<th>Sales generated by doing business by B2C goods</th>
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<td>99</td>
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</table>
4.3.6.5 Respondent status

As can be seen in Table 24 below, more than half of the responses (66.8%) came for managers at a very senior level, i.e. senior managers or CEOs/Directors/Owners with job titles such as managing directors, marketing directors, sales directors, commercial directors, marketing managers and sales managers. The lowest proportion of respondents were junior managers (only 4.8% of total respondents).

Table 27: Respondent profile

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<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>Senior manager</td>
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<td>Middle manager</td>
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<tr>
<td>Total</td>
<td>229</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The final information on the respondents’ status tackled the issue of their company and role experience. Company experience range was from 1 year to 37 years with their company. The average experience of the respondents with their respective companies was 10.86 years. More than half of the sample had company experience of less than 10 years (59.4%) and 75.1% of respondents reported their experience with the company of less than 16 years. With regard to role experience, the majority of the sample (91.7%) had less than 10 years in their respective roles. The average role experience of the respondents was reported as 4.75 years. 23.1% had only 1 year experience in their role, and 18.3%, 2 years of role experience.

4.4 Chapter Summary

Chapter four described in detail the research methodology applied in the study. In this chapter a justification for the cross-sectional research design, sampling procedure, data collection method, survey administration activities and bias assessment are presented. In addition, descriptive profile of the sample was
presented as well as the description of the scale development strategy undertaken. Also, the procedure for dealing with missing values was also described and sample statistics discussed. The following chapter discusses statistical analysis in detail, more specifically, the process of item selection through exploratory factor analysis (EFA), as well as the assessment of reliability and validity of scales by using confirmatory factor analysis (CFA) output. The results of scale development strategy are presented in the succeeding chapter.
Chapter 5: Measurement model

5.1 Introduction

This study incorporates a two-step approach to structural equation modelling (Anderson and Gerbing 1988) together with the eight-step process in LISREL modelling proposed by Diamantopoulos and Siguaw (2000). The chapter that follows discusses the results of the assessment of constructs applied in this study together with discussion of their respective items included in the measurement model. The chapter begins with discussion on the procedural decisions that guided the analysis as well as explanation of the data screening procedures undertaken in the study. Actual assessment of the measurement model follows and the chapter is concluded with four classes of tests; namely, dimensionality, convergent validity, reliability and discriminant validity.

5.2 Procedural considerations

Anderson and Gerbing’s (1988) two-step approach applied in this research involved evaluation of the measurement model followed by testing of the structural model. The evaluation of the measurement model started with exploratory factor analysis (EFA) as a procedure of measure purification from a non-confirmatory perspective, followed by item analysis (inter-item correlations and item-scale correlations). Once EFA and item analysis were finalised, confirmatory assessment of dimensionality, convergent validity, reliability and discriminant validity under the principles of structural equation modelling (SEM) followed. Finally, testing of the structural model was conducted also using SEM for the purpose of assessing nomological validity.

In order to perform the above mentioned tests, two statistical software packages were used: SPSS 19 to perform EFA and LISREL 8.71 for performing CFA and later for structural model evaluation. The advantages of SEM over multiple regression informed the usage of both software. Namely, SEM procedures, estimating a series of separate, but independent multiple regression equations, allow for simultaneous incorporation of both observed and latent variables of interest in the analysis (Hair et
al. 2006; Byrne 2013). By applying SEM procedures, a researcher is able to measure the extent to which a system of variables of interest and hypothesised relationships among them is consistent with the data through providing various goodness-of-fit indices (Byrne 2013). Considering the above-mentioned advantages of SEM procedures, SPSS was deemed insufficient for the purposes of this study and LISREL software was applied accordingly.

The first step undertaken in the analysis was, as mentioned above, EFA. In order to perform EFA, a researcher needs to make sure that the required/recommended sample size-variable/parameter ratios are achieved. According to Hair et al. (2006) the minimum sample size to variable ratio requirement is five to one. Taking into account the number of variables (40) and constructs (9) to be examined in this study (49), the minimum required sample size was 245 cases. Considering that final the sample size was 229 cases, it was considered safe for entering all the constructs and indicators into a single EFA. The minimum sample size to parameter ratio was considered to be achieved and all the scales were analysed in a single set from the beginning.

5.2.1 Exploratory factor analysis – procedure and results

EFA (and CFA) statistical technique assumes unidimensionality as an essential property of measurement (Segars 1997). As a basic assumption of measurement theory, unidimensionality assumes that the set of items is measuring a single trait (Churchill Jr 1979). In cases where unidimensionality is not achieved, there is a potential for introducing error and negative evidence of validity. Consequently, and as is implied in the domain sampling theory (DeVellis 2011), such items cannot be used in the process of creating a single construct by means of summing or averaging the items. There are several methods for examining unidimensionality of multi-item scales. One approach is the examination of social desirability bias (SDB), which was explained in detail in Chapter 4. In cases where SDB is present, measures cannot be said to be either unidimensional or valid (Spector 1992). Another technique that can suggest presence or lack of dimensionality is EFA. By using inter-item correlation, the EFA technique taps into the unidimensionality issue by determining the
underlying latent variables responsible for the patterns of correlations observed in data (Sharma 1995).

Before commencing to EFA analysis, item analysis was performed as a means of uncovering those items that form an internally consistent scale (Spector 1992). By examining correlations between individual items in each scale those items that correlate highly are an indication of what is considered good quality in any reflective scale and an indication for moving those items into further analysis (Churchill 1999).

5.2.1.1 Item analysis

Potential lack of unidimensionality can be detected by internal consistency analysis which investigates whether items from a scale have low or high inter-correlations with each other, as well as with the total of all the items (DeVellis 2011). Items measuring the same construct should be able to demonstrate high levels of inter-item correlations and item-scale correlation as well as reliability (Churchill Jr 1979). Therefore, in order to establish measurement properties, the next step in the measure development process involved performing item analysis for the 10 scales. Inter-item correlations, corrected item-correlations and Cronbach’s alpha were estimated to further identify any items that should potentially be eliminated from their respective scales. The next paragraph summarises the results of item analysis for 9 constructs (resource dependence is a formative construct and as such was excluded from this section of the study).

The table of inter-item correlations below (Table 25) summarises all of the inter-item correlations produced for all items in the study. The recommended minimum of 0.4 implies a strong internal consistency (Hair et al. 2006). According to the results below, several items did not reach the recommended threshold. The first two items belong to the Joint Rewards scale: items JR5 and JR6. Another questionable item belongs to the Trust scale, where item number 8 did not reach the cut-off point of 0.4. Finally, item 3 in the Compatible Goals scale was also excluded. Based on low values, these items were deleted and were not transferred into further EFA analysis.
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</tbody>
</table>
The table of item-scale correlations provided below (Table 29) shows results consistent with the findings from inter-item correlation analysis. All 4 items: two belonging to the Joint Rewards scale (JR5 and JR6), one belonging to the Trust scale (TRUST8) and one belonging to the Compatible Goals scale (GOALS 3) did not reach the recommended minimum of 0.5 (Hair, Bush et al. 2006). The remainder of the items in the results imply evidence of good item-scale correlations in all 9 scales. In addition, Cronbach’s alpha for all scales was above the critical recommended value of 0.7 (Nunnally and Bernstein 1994). Finally, all items showed fairly normal distribution and a good spread around their respective mean values. Consequently, all items, except the abovementioned4 were taken for further analysis in EFA.
<table>
<thead>
<tr>
<th>Scales</th>
<th>Scale items</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Rewards</td>
<td>JR1</td>
<td>0.726</td>
<td>0.881</td>
<td>3.96</td>
<td>1.77</td>
</tr>
<tr>
<td></td>
<td>JR2</td>
<td>0.833</td>
<td></td>
<td>3.31</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>JR3</td>
<td>0.779</td>
<td></td>
<td>3.13</td>
<td>1.86</td>
</tr>
<tr>
<td></td>
<td>JR4</td>
<td>0.758</td>
<td></td>
<td>3.03</td>
<td>1.89</td>
</tr>
<tr>
<td></td>
<td>JR5</td>
<td>0.144</td>
<td></td>
<td>4.24</td>
<td>2.04</td>
</tr>
<tr>
<td></td>
<td>JR6</td>
<td>0.491</td>
<td></td>
<td>2.13</td>
<td>1.45</td>
</tr>
<tr>
<td>Trust</td>
<td>TRUST1</td>
<td>0.759</td>
<td>0.927</td>
<td>5.35</td>
<td>1.28</td>
</tr>
<tr>
<td></td>
<td>TRUST2</td>
<td>0.728</td>
<td></td>
<td>5.5</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>TRUST3</td>
<td>0.715</td>
<td></td>
<td>5.04</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td>TRUST4</td>
<td>0.702</td>
<td></td>
<td>4.9</td>
<td>1.39</td>
</tr>
<tr>
<td></td>
<td>TRUST5</td>
<td>0.868</td>
<td></td>
<td>5.24</td>
<td>1.32</td>
</tr>
<tr>
<td></td>
<td>TRUST6</td>
<td>0.808</td>
<td></td>
<td>5.50</td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td>TRUST7</td>
<td>0.795</td>
<td></td>
<td>5.15</td>
<td>1.34</td>
</tr>
<tr>
<td></td>
<td>TRUST8</td>
<td>0.294</td>
<td></td>
<td>4.31</td>
<td>1.38</td>
</tr>
<tr>
<td>Compatible Goals</td>
<td>GOALS1</td>
<td>0.873</td>
<td>0.926</td>
<td>4.83</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>GOALS2</td>
<td>0.893</td>
<td></td>
<td>4.72</td>
<td>1.44</td>
</tr>
<tr>
<td></td>
<td>GOALS3</td>
<td>0.109</td>
<td></td>
<td>5.6</td>
<td>1.46</td>
</tr>
<tr>
<td></td>
<td>GOALS4</td>
<td>0.781</td>
<td></td>
<td>5.6</td>
<td>1.46</td>
</tr>
<tr>
<td>MSIF</td>
<td>MSIF1</td>
<td>0.757</td>
<td>0.931</td>
<td>4.35</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>MSIF2</td>
<td>0.814</td>
<td></td>
<td>4.16</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>MSIF3</td>
<td>0.845</td>
<td></td>
<td>3.88</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>MSIF4</td>
<td>0.83</td>
<td></td>
<td>3.76</td>
<td>1.78</td>
</tr>
<tr>
<td></td>
<td>MSIF5</td>
<td>0.839</td>
<td></td>
<td>4.31</td>
<td>1.63</td>
</tr>
<tr>
<td>Technological Turbulence</td>
<td>ENVTECH1</td>
<td>0.713</td>
<td>0.832</td>
<td>3.55</td>
<td>1.46</td>
</tr>
<tr>
<td></td>
<td>ENVTECH2</td>
<td>0.713</td>
<td></td>
<td>4.03</td>
<td>1.46</td>
</tr>
<tr>
<td>Competitive Environment</td>
<td>ENVCOMP1</td>
<td>0.529</td>
<td>0.783</td>
<td>3.91</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>ENVCOMP2</td>
<td>0.650</td>
<td></td>
<td>4.15</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>ENVCOMP3</td>
<td>0.695</td>
<td></td>
<td>4.23</td>
<td>1.53</td>
</tr>
<tr>
<td>Market Performance</td>
<td>MPERF1</td>
<td>0.798</td>
<td>0.878</td>
<td>4.75</td>
<td>1.54</td>
</tr>
<tr>
<td></td>
<td>MPERF2</td>
<td>0.779</td>
<td></td>
<td>4.66</td>
<td>1.57</td>
</tr>
<tr>
<td></td>
<td>MPERF3</td>
<td>0.723</td>
<td></td>
<td>4.85</td>
<td>1.31</td>
</tr>
<tr>
<td>Customer Performance</td>
<td>CPERF1</td>
<td>0.730</td>
<td>0.865</td>
<td>4.84</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td>CPERF2</td>
<td>0.713</td>
<td></td>
<td>4.85</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>CPERF3</td>
<td>0.791</td>
<td></td>
<td>4.76</td>
<td>1.22</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>FPERF1</td>
<td>0.818</td>
<td>0.929</td>
<td>4.55</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td>FPERF2</td>
<td>0.874</td>
<td></td>
<td>4.59</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td>FPERF3</td>
<td>0.875</td>
<td></td>
<td>4.60</td>
<td>1.22</td>
</tr>
</tbody>
</table>
5.2.1.2 EFA results

As the next step in the analysis, a single EFA was run on separate scales first and then an overall EFA on the remaining 31 items belonging to constructs in the hypothesised model was performed. The main assumption of EFA was that within the observed variables, in this case 31 items, a set of underlying factors (smaller than the observed variables) exists that can explain the interrelationships among those variables (Kim and Mueller 1978). Therefore, a large set of variables may be reduced to few underlying dimensions, which are referred to as “factors” (Hair et al. 2006; DeVellis 2011). Related items are expected to load on their respective factors in a manner that maximises variance within the data explained by that factor. Consequently, the factors that emerge may represent a construct (Hair et al. 2006).

In determining the significance level for interpreting loadings for the sample size of 229 cases, Hair et al.’s (2006) rule of thumb was applied. According to this rule, factor loadings of 0.4 and above are required for significance. Hence, all factor loadings above 0.4 on their respective factors were contained. Items that did not perform well in terms of the level of their factor loadings were excluded from further analysis.

The procedure used in EFA was common factor analysis, more specifically principal axis factoring with an Oblimin oblique rotation. Common factor analysis using principal axis factoring (PAF) was deemed more appropriate to the alternative principal component analysis (PCA). In PCA, variables form a composite index rather than the reflective one which is the underlying aim of the study – i.e., explaining variance in a data set by creating a set of reflective indicators (Sharma 1995). PCA seeks to reduce the number of variables to a minimum while explaining for the maximum amount of variance in the data. On the other hand, PAF’s main assumption is that any covariation in a dataset is caused by a set of common factors (Sharma 1995; Hair et al. 2006). In Oblimin oblique rotation latent constructs are allowed to correlate (Hair et al. 2006), which is considered to be the case in this study as well. This study takes the stance that there is no reason to believe that real world influences are not correlated (Ho 2006) and there is no theoretical reason for suggesting that factors in this study are uncorrelated and independent of each other.
In addition, oblique rotation represents the clustering of variables more accurately. The alternative, orthogonal rotation assumes zero correlation between factors and was rejected as a rotation option for the same reasons Oblimin oblique rotation was accepted.

5.2.1.2.1 EFA of single scales

Trust

Seven items of the Trust scale (item 8 was excluded based on the previous analysis) were run in EFA analysis. All factor loadings exceeded the 0.4 threshold, with 64.74% of variance explained (see Table 30). As can be seen from the table, the KMO and Bartlett’s test both indicated suitability for factor analysis.

Table 30: EFA results – Trust scale

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUST1</td>
<td>Marketing and Sales: are sincere in interfacing with each other</td>
<td>0.795</td>
</tr>
<tr>
<td>TRUST2</td>
<td>believe the information they provide to each other is reliable</td>
<td>0.758</td>
</tr>
<tr>
<td>TRUST3</td>
<td>fulfil the promises they make to each other</td>
<td>0.743</td>
</tr>
<tr>
<td>TRUST4</td>
<td>are genuinely concerned about each other’s interests</td>
<td>0.731</td>
</tr>
<tr>
<td>TRUST5</td>
<td>have trust in their working relationship</td>
<td>0.91</td>
</tr>
<tr>
<td>TRUST6</td>
<td>are honest in interfacing with each other</td>
<td>0.845</td>
</tr>
<tr>
<td>TRUST7</td>
<td>trust each other’s ability to carry out their work appropriately</td>
<td>0.834</td>
</tr>
</tbody>
</table>

KMO = 0.916; Bartlett's Test = 1139.778, df: 21, p = 0.000

Joint Rewards scale

The procedure for EFA analysis for all scales was according to method discussed above; i.e. principal axis factoring with an Oblimin oblique rotation. Regarding the Joint Rewards scale, four items were added into EFA (two items were previously removed based on inter-item and inter-scale reliability analysis). All of the four remaining items loaded on a single factor above the 0.4 cut-off point. Furthermore, this single factor explained 69.17% of variance. Additionally, after evaluating the correlation matrix, the results suggested its factorability as the criteria set in Bartlett’s test of sphericity and Kaiser-Meyer-Olkin test (KMO) were. The significance for Bartlett’s test of sphericity was significant (p < 0.05) and the achieved KMO statistic
(Kaiser 1974) indicated a “meritorious” score \((\text{KMO} = .826)\). Quality of scale items can be, therefore concluded. Results of item analysis and dimensionality assessment of Joint rewards scale provide strong evidence of internal consistency and unidimensionality.

### Table 31: EFA results – Joint Rewards scale

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>JR1</td>
<td>Marketing and Sales share equally in the rewards from a well implemented market strategy</td>
<td>0.773</td>
</tr>
<tr>
<td>JR2</td>
<td>Marketing and Sales are rewarded for the efforts they make to work together closely</td>
<td>0.905</td>
</tr>
<tr>
<td>JR3</td>
<td>Collaboration between Marketing and Sales is a part of their Marketing and Sales performance targets</td>
<td>0.837</td>
</tr>
<tr>
<td>JR4</td>
<td>Marketing and sales managers’ performance indicators are based on their joint performance</td>
<td>0.806</td>
</tr>
</tbody>
</table>

KMO = 0.809; Bartlett's Test = 570.861, df: 6, \(p = 0.000\)

**Compatible Goals**

Compatible Goals scale was examined following the same procedure. The three items remaining after the initial analysis (item number 3 was excluded) were entered into the EFA. The results indicate that all items loaded significantly on one factor with a total of 81.28% of variance explained. Therefore, it can be concluded that the Compatible Goals scale also exhibits good quality and can be used in further analysis.

### Table 32: EFA results – Compatible Goals scale

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOALS1</td>
<td>Marketing department goals are in harmony with the goals of the sales department</td>
<td>0.932</td>
</tr>
<tr>
<td>GOALS2</td>
<td>Sales and Marketing goals are closely aligned</td>
<td>0.962</td>
</tr>
<tr>
<td>GOALS4</td>
<td>The goals of Marketing and Sales departments can be described as being synchronised</td>
<td>0.803</td>
</tr>
</tbody>
</table>

KMO = 0.728; Bartlett's Test = 583.197, df: 3, \(p = 0.000\)

**Marketing and Sales Interface Flexibility (MSIF)**

Table 30 below summarises the results of EFA for MSIF. A single factor solution was extracted, all items loaded significantly on that factor and a total of 73.03% of variance was explained. Table 33 below also summarises items of the scale as well as values of Bartlett's test, which imply that correlation matrix is not an identity matrix.
and KMO results indicate that sample size is sufficient for analysis relative to number of items in scale.

Table 33: EFA results – Marketing and Sales Interface Flexibility scale

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSIF1</td>
<td>Our marketing and sales functions are capable of redeploying resources possessed by one of them so they can be used in some way by the other function</td>
<td>0.787</td>
</tr>
<tr>
<td>MSIF2</td>
<td>If our marketing or sales functional areas are in need of resources, then either one of the functions can tap into and use the resources possessed by the other functional area</td>
<td>0.849</td>
</tr>
<tr>
<td>MSIF3</td>
<td>The resources at the disposal of the marketing and sales function are a collective pool of capabilities and assets whose relative deployment varies depending on the strategic or operational needs of the company</td>
<td>0.886</td>
</tr>
<tr>
<td>MSIF4</td>
<td>The marketing and sales functions in our company can change the way their combined resources are allocated between them, allowing both functions to make use of these resources should this be necessary</td>
<td>0.869</td>
</tr>
<tr>
<td>MSIF5</td>
<td>Both the marketing and sales functions can pull in resources that are being used by the other functional area if this is in the broader business interests</td>
<td>0.878</td>
</tr>
</tbody>
</table>

KMO = 0.867; Bartlett's Test = 940.292, df:10, p = 0.000

Competitive Environment

According to the EFA results for the Competitive Environment scale, significant factor loadings were achieved for all three items pertaining to the scale with a total 56.77% variance explained. Also, the results of KMO and Bartlett’s test imply factorability of the scale. Hence, the entire scale was used in further analysis.

Table 34: EFA results – Competitive Environment scale

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVCOMP1</td>
<td>Competitors’ products and models (change quickly in your environment)</td>
<td>0.587</td>
</tr>
<tr>
<td>ENVCOMP2</td>
<td>Competitors’ selling strategies</td>
<td>0.772</td>
</tr>
<tr>
<td>ENVCOMP3</td>
<td>Competitors’ promotion/advertising strategies</td>
<td>0.873</td>
</tr>
</tbody>
</table>

KMO = 0.666; Bartlett's Test = 212.764, df:3, p = 0.000

Technological Turbulence

In the case of assessing unidimensionality of Technological Turbulence, the results obtained results good scale quality with both items loading significantly on a single factor with a total 71.218% variance explained. According to the EFA results, the
measure of sampling adequacy belongs to the ‘mediocre’ range (Hair et al. 2006). However, it is important to consider that the measure of sampling adequacy does increase with the number of items in a scale. Considering that only two items are used to tap into the Technological Turbulence construct, the level of 0.51 is deemed acceptable in this case and the conclusion was made that the solution was indeed factorable. Consequently, the Technological Turbulence scale was used in subsequent analysis.

**Table 35: EFA results – Technological turbulence scale**

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVTECH1</td>
<td>The manufacturing technology in the industry (change quickly in your environment)</td>
<td>0.844</td>
</tr>
<tr>
<td>ENVTECH2</td>
<td>The new product technology in the industry</td>
<td>0.844</td>
</tr>
</tbody>
</table>

KMO = 0.505; Bartlett’s Test = 160.741, df:1, p = 0.000

**Market Performance**

According to the results of EFA principal axis factoring with an Oblimin oblique rotation, the Market Performance scale shows evidence of unidimensionality and is therefore used for further analysis. As Table 36 shows, all items loaded significantly on a single factor with a total 70.88% variance explained.

**Table 36: EFA results – Market Performance scale**

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPERF1</td>
<td>Satisfaction with the company’s sales volume during the past 3 years</td>
<td>0.888</td>
</tr>
<tr>
<td>MPERF2</td>
<td>Satisfaction with the company’s market share during the past 3 years</td>
<td>0.856</td>
</tr>
<tr>
<td>MPERF3</td>
<td>Company’s average annual sales growth during the past 3 years compared to the industry average</td>
<td>0.779</td>
</tr>
</tbody>
</table>

KMO = 0.733; Bartlett’s Test = 363.096, df:3, p = 0.000

**Customer Performance**

Closely following the example of the Market Performance scale, the Customer Performance scale also shows signs of good quality. As shown in Table 37, all factors on this unidimensional loaded significantly on a single factor and 68.55% of total variance was explained.
Table 37: EFA results – Customer Performance scale

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPERF1</td>
<td>Levels of customer loyalty compared to competitors</td>
<td>0.799</td>
</tr>
<tr>
<td>CPERF2</td>
<td>Levels of customer satisfaction compared to last year</td>
<td>0.778</td>
</tr>
<tr>
<td>CPERF3</td>
<td>Levels of customer loyalty compared to last year</td>
<td>0.902</td>
</tr>
</tbody>
</table>

KMO = 0.723; Bartlett's Test = 331.892, df:3, p = 0.000

Financial Performance

Finally, the scale for Financial Performance also resulted in concluding unidimensionality and was used in the next step of analysis in its entirety. This scale achieved significant factor loadings on a single factor and 81.65% of total variance was explained. Additionally, as with all other scales, KMO and Bartlett's test returned good results indicating factorability of the scale.

Table 38: EFA results – Financial Performance scale

<table>
<thead>
<tr>
<th>Item code</th>
<th>Scale item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPERF1</td>
<td>Overall profit levels achieved last year compared to competitors</td>
<td>0.851</td>
</tr>
<tr>
<td>FPERF2</td>
<td>Return on investment last year compared to competitors</td>
<td>0.928</td>
</tr>
<tr>
<td>FPERF3</td>
<td>Overall profit margins last year compared to competitors</td>
<td>0.930</td>
</tr>
</tbody>
</table>

KMO = 0.754; Bartlett's Test = 560.594, df:3, p = 0.000

5.2.1.2.2 Overall EFA

After conducting individual purification procedures above, all remaining items were entered into a single EFA. Items on the scale initially forced into a cluster of nine factors with significant loadings. The KMO measure of sampling adequacy (result, 0.864) and Barlett's tests of sphericity obtained confirmed the data as factorable, with chi-square value of 5685.127, df = 528, at p < 0.01.
Table 39: EFA results – Overall EFA: initial result

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>JR1</td>
<td></td>
<td>-0.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JR2</td>
<td></td>
<td>-0.858</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JR3</td>
<td></td>
<td>-0.876</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JR4</td>
<td></td>
<td>-0.754</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST1</td>
<td>0.745</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST2</td>
<td>0.822</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST3</td>
<td>0.666</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST4</td>
<td>0.596</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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KMO = 0.864; Bartlett's Test χ² = 5685.127, df: 528, p = 0.000

The initial solution of overall EFA indicated that the first item of Competitive Environment cross-loaded significantly with Technological Turbulence. A decision was made to delete this item and to run EFA again. The second EFA returned a 9 factor solution with all items loading significantly on their respective factors. A total of 73.23% cumulative extracted variance was explained. The result of KMO and
Bartlett’s test show the factorability of data and hence the entirety of items was used in further analysis.

Table 40: EFA results – Overall EFA: final result

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<th>Factor 3</th>
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KMO = 0.885; Bartlett's Test t = 5560.738, df: 496, p = 0.000
5.3 Measure construction and purification: Dimensionality and Validity assessment in Confirmatory Factor Analysis (CFA)

According to Spector (1992), it is always desirable for any scale to have good psychometric properties; i.e., dimensionality, reliability and validity. As outlined previously, the issue of dimensionality is central to scale development. CFA is considered a rigorous approach to scale dimensionality assessment (DeVellis 2011) and, as such, was followed in this study. Through CFA, further assessments of reliability of scales are also possible. These are the assessments of composite reliability (CR) and average variance extracted (AVE) that were applied here. Finally, CFA allows for assessment of scale validity; i.e., convergent and discriminant validity, which will be discussed later in this chapter (Gerbing and Anderson 1988; Ping 2004).

In summarising the primary distinction between the two methodologies, “one could say that whereas EFA operates inductively in allowing the observed data to determine the underlying factor structure a posteriori, CFA operates deductively in postulating the factor structure a priori” (Byrne 2005, p. 18). In conducting CFA, several approaches can be applied, among which, the most commonly used ones are maximum likelihood (ML), partial least square (PLS), generalised least square (GLS) and the symbiotic distribution free approach (ADF). This study applies the ML method for model testing and estimation. ML assumes that observed variables are continuous and normally distributed (e.g., Bollen 1998). However, ML (and GLS) generate most the reliable statistical results and ML is considered to be quite robust in instances where reasonable violations of normality are present (Chou and Bentler 1995). Even under conditions of severe non-normality of data, in the ML method, Kline (2011) finds parameter estimates (e.g., path estimates) still fairly accurate but the corresponding significance coefficients to be too high. That said, it is worth noting that there are no major violations of normality in this study.

First and foremost, in SEM it is essential to consider issues of normality. Severe violations of the normality assumption may lead to potential inflating of chi-square statistics. This results in bias in the critical values for determining coefficient significance and affects standard errors (Baumgartner and Homburg 1996). In order
to assess normality, values for skewness and kurtosis of the observed variables were examined (Bollen 1998). According to Bollen, large kurtosis is more problematic than skewness. To say that the variables are reasonably close to normal, the rule of thumb is to have skewness values between $-2.0$ and $+2.0$ and kurtosis between $-3.0$ and $+3.0$ (Tabachnick and Fidell 2007). As the results indicate, no severe violations of normality are present. In addition, in terms of multivariate normality tests, all variables revealed significant kurtosis and skewness p-values, indicating a potential problem with data normality. Nevertheless, as mentioned earlier, ML is robust to several types of violation of the multivariate normality assumptions (Bollen 1998). This method shows superior performance in terms of 1) Type I error rates, 2) power and 3) bias in parameter estimates (Cortina et al. 2001). Furthermore, all estimates of kurtosis and skewness are relatively small, with highest values of 1.8 and 1.2 respectively (Table 41). This indicates that even though items may not show univariate normality, multivariate distribution is reasonably normal (Benson and Bandalos 1992). In addition, variables derived from a 7-point Likert scale are rarely normally distributed, in fact, they are often skewed towards one or other end of a scale (Barnes et al. 2001). Therefore, considering that no severe violations of normality are present, ML can be used as a reliable estimation technique (Barnes et al. 2001).

**Table 41: Skewness and Kurtosis values**

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</table>
Estimation and testing of models in SEM is based on the asymptotic theory and the validity of tests statistics and parameter estimates depend on large sample size. Hence, the second concern regarding the CFA is sample size and whether compared to the numbers of parameters included, a sufficient number of cases exists. There are several rules of thumb regarding what is a ‘large’ enough sample size (Baumgartner and Homburg 1996). According to Hair et al. (2006) a recommended minimum for the sample size parameter ratio is 5:1. Given the 10 constructs and 33 indicators in the present study, it was estimated that the sample size of 229 was sufficient enough for entering the data into a single CFA.

### 5.3.1 Assessing dimensionality using CFA

In the previous section, issues of dimensionality have been tackled by investigating traditionally used tests of inter-item correlations, item-scale correlations and the EFA procedure. In order to assess the external consistency of measures used, which previous techniques do not account for (Gerbing and Anderson 1988), CFA was applied. In contrasts to the previous tests, CFA allows not only for assessment of relationships between all items in the study in relation to their respective scales, but also allows for assessment of relationships with all other items outside of their respective scales in the overall measurement model (Gerbing and Anderson 1988).
Hence, CFA’s interpretations of unidimensionality are considered more sophisticated compared to traditional methods (Gerbing and Anderson 1988).

In order to make assessments of CFA models, it is often recommended that a researcher use different evaluative criteria such as fit indices, standardised residuals, modification indices, significance of parameter estimates and average variance extracted. These evaluative criteria help determine the extent to which the implied model fits the dataset. Each of these criteria will be assessed in the sections that follow. However, before presenting the results of the CFA model and discussing the evaluative criteria applied, it is necessary to specify the model; i.e., the specific relationships to test in the model.

### 5.3.2 Model specification

As mentioned earlier, “CFA operates deductively in postulating the factor structure a priori” (Byrne 2005, p. 18). Each factor in a CFA model acts as an antecedent to a mutually exclusive subset of items (Sharma 1995). In the case of this study, the model presented in Figure 6 was pre-specified and included items and factors that emerged from the EFA analysis (Note: for clarity and image visibility, the model includes items for only four scales). The model below indicates that CFA was performed on items relating to 10 constructs of interest with the aim of assessing unidimensionality of each construct, as well as construct validities and reliabilities.
In assessing the measurement model fit, the chi-square statistic ($\chi^2$) was used as the most popular fit index and as the best inferential test of overall model fit, together with its associated degrees of freedom (df) (e.g., Diamantopoulos and Siguaw 2000). The chi-square test measures discrepancy between the data and the hypothesised model (Bagozzi and Heatherton 1994). In conducting the chi-square test, the researcher actually tests for the null hypothesis, which implies that deviations of estimated variance-covariance matrix from the sample variance-covariance matrix is due only to sampling error (Baumgartner and Homburg 1996). In the case of obtaining a significant result, the researcher would have to reject the model since the results imply strong divergence of the data from the model. However, the chi-square test has been criticised to be influenced by sample size, model complexity and non-normality of data (Hu and Bentler 1999). Hence, (MacKenzie et al. (2011))

5 The correlations between latent variables are normally represented by $\Phi^*$. For example, in this case, the correlation between the Joint Rewards latent variable and the Trust latent variable is represented by $\Phi 21$, the correlation between Joint Rewards and Compatible Goals would be represented by $\Phi 31$, between Trust and Compatible Goals $\Phi 32$, and so on. Due to lack of space these relationships are omitted.
recommend relying on other goodness of fit indices if the objective is to evaluate the
degree to which the hypothesised relationships in the measurement model are
consistent with the sample data. According to Hu and Bentler (1999), it is best to
calculate, report and rely on multiple goodness of fit measures from different fit
indices families. Based on previous studies and suggestions, several additional fit
indices were chosen for this study. Some of these belong to the absolute fit indices
family. These determine how well the pre-specified model [both structural and
measurement model] (Table 39) fits the sample data (Hair et al. 2006). They also
demonstrate which model has superior fit. Included in this category are: the Chi-
Squared goodness-of-a-fit test (χ²), the ratio of χ² to degrees of freedom (χ²/df),
RMSEA, GFI, AGFI, the RMR and SRMR. The final two belong to incremental fit
indices and measure how well the model fits the data in comparison to the baseline
model in which the observed variables are assumed to be non-correlated (Jöreskog
and Sörbom 1993). The normed-fit index - NNFI - and Comparative fit index - CFI -
belong to this family of fit indices. Although Hu and Bentler (1999) argue that it is
difficult to determine specific cut-off points for each goodness of fit index, they
suggest cut-off values presented in Table 39 as indication of a good-fitting model.

Table 42: Goodness-of-fit indices: recommended thresholds and descriptions

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Threshold</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>χ²</td>
<td>P &gt; .05</td>
<td>Indicates the discrepancy between the data and the hypothesised model; tests for the null hypothesis that implies that the deviations of the estimated variance-covariance matrix from the sample variance-covariance matrix is only due to sampling error. Considering the sensitivity of the chi-square test to sample size, multivariate normality and based on the assumption that the model fits the population perfectly, its value becomes meaningful only if divided by the number of degrees of freedom.</td>
</tr>
<tr>
<td>χ²/df</td>
<td>2 to 2 and 3 to 1</td>
<td>How well does the model fit the population covariance matrix taking into account the degrees of freedom.</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;.05: good fit; &lt;.08: reasonable fit</td>
<td>How well does the model fit the population covariance matrix taking into account the degrees of freedom.</td>
</tr>
<tr>
<td>GFI</td>
<td>&gt;.90</td>
<td>Compares the actual data with the squared residuals from prediction. Not adjusted for the degrees of freedom.</td>
</tr>
<tr>
<td>SRMR</td>
<td>≤.05</td>
<td>Fitted residuals divided by their estimated standard errors. Indicates the proportion of improvement of the hypothesised model to the baseline model. Adjusted for the degrees of freedom. Not affected by small size.</td>
</tr>
<tr>
<td>CFI</td>
<td>&gt;.90</td>
<td>Indicates the proportion of improvement of the hypothesised model to the baseline model. Adjusted for the degrees of freedom.</td>
</tr>
<tr>
<td>NNFI</td>
<td>&gt;.90</td>
<td>Indicates the proportion of improvement of the hypothesised model to the baseline model. Adjusted for the degrees of freedom.</td>
</tr>
</tbody>
</table>

Source: Bagozzi and Yi 1988; Diamantopoulos and Siguaw 2000; Cote et al. 2001; Ping 2004
5.3.3 Analysis using CFA

In CFA model assessment it is not uncommon that on the first estimation the initial or implied model does not fit the observed data well (Kelloway 1998). As a recommendation, author suggests deletion of poorly performing items for a better model fit, which, on the face of it, implies that analysis is not purely confirmatory (Anderson and Gerbing 1988). However, model re-specification will achieve two major goals: (1) improvement to model fit, and (2) improvement for achieving parsimony (Kelloway 1998). In order to improve the model, several options are available. One approach is to delete non-significant paths from the model (Pedhazur 1982). Another approach is the examination of modification indices and expected model improvement in instances where non-significant paths are deleted. Also, researcher has the option of examining the values in residual matrices, taking into account that large residuals related to specified items in CFA are indicators of a model’s inability to adequately explain relationships in the model (Sharma 1995). These items are candidates for deletion (Anderson and Gerbing 1988). In all instances, the researcher has to base his/her decision on a theoretical basis (Kelloway 1998). In order to achieve satisfactory model fit Kelloway (1998) proposes a series of iterative processes which were also followed here.

The CFA model presented in the Figure 7 returned a converged solution with an acceptable fit: $\chi^2 = 635.94 \ (P = 0.00)$, df = 452, RMSEA = 0.05, GFI = 0.859; AGFI = 0.824; SRMR = 0.05; CFI = 0.970; NNFI = 0.968. The model achieved acceptable fit with only exception: GFI and AGFI failed to reach the recommended threshold of 0.9. Further inspection of the CFA output, specifically, the modification indices, showed several items with large standardised residuals. In order to achieve a better model fit to the data, 3 variables were removed from further analysis for CFA. The order of item deletion is represented below:
Having removed three items (i.e., JR1, TRUST1 and TRUST3) and re-specifying and re-estimating the CFA, a better converged solution was obtained as shown in Table 40 below. In this instance the value of GFI is still slightly below the 0.9 threshold. However, it is very close to it. All factor loadings are high and significant (p > 0.01), obtaining significant t-values (see Table 44 for more detail), and satisfying criteria for convergent validity. These results are discussed in the next section (Fornell and Larcker 1981a; Bagozzi and Yi 1988). The results of the model can be taken as proof of robustness of the measurement items used in this study.

Table 43: Final model fit indices

<table>
<thead>
<tr>
<th>Model (CFA)</th>
<th>$\chi^2$</th>
<th>$\Delta \chi^2$</th>
<th>DF</th>
<th>$\Delta$DF</th>
<th>$\chi^2$/DF</th>
<th>p</th>
<th>RMSEA</th>
<th>NNFI</th>
<th>IFI</th>
<th>CFI</th>
<th>Stand. RMR</th>
<th>GFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFA</td>
<td>479.26</td>
<td>-</td>
<td>361</td>
<td>-</td>
<td>1.33</td>
<td>0.000</td>
<td>0.038</td>
<td>0.978</td>
<td>0.982</td>
<td>0.981</td>
<td>0.04</td>
<td>0.89</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>MSIF1</td>
<td>0.780 fixed</td>
<td>0.392</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSIF2</td>
<td>0.832 (9.05)</td>
<td>0.308</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSIF3</td>
<td>0.889 (7.88)</td>
<td>0.209</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>MSIF4</td>
<td>0.886 (8.01)</td>
<td>0.215</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>MSIF5</td>
<td>0.879 (8.23)</td>
<td>0.227</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>JR2</td>
<td>0.887 fixed</td>
<td>0.213</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>JR3</td>
<td>0.865 (6.97)</td>
<td>0.252</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>JR4</td>
<td>0.798 (8.62)</td>
<td>0.363</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>GOALS1</td>
<td>0.933 fixed</td>
<td>0.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>GOALS2</td>
<td>0.958 (3.73)</td>
<td>0.082</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>GOALS4</td>
<td>0.810 (9.61)</td>
<td>0.343</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>TRUST2</td>
<td>0.715 fixed</td>
<td>0.489</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TRUST4</td>
<td>0.752 (9.75)</td>
<td>0.435</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>TRUST5</td>
<td>0.938 (5.30)</td>
<td>0.121</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>TRUST6</td>
<td>0.840 (8.88)</td>
<td>0.294</td>
<td></td>
<td></td>
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<tr>
<td>TRUST7</td>
<td>0.842 (8.82)</td>
<td>0.291</td>
<td></td>
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</tr>
<tr>
<td>MPERF1</td>
<td>0.870 fixed</td>
<td>0.244</td>
<td></td>
<td></td>
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<tr>
<td>MPERF2</td>
<td>0.851 (6.94)</td>
<td>0.276</td>
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</tr>
<tr>
<td>MPERF3</td>
<td>0.806 (8.11)</td>
<td>0.351</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>CPERF1</td>
<td>0.805 fixed</td>
<td>0.352</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>CPERF2</td>
<td>0.782 (8.17)</td>
<td>0.388</td>
<td></td>
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</tr>
<tr>
<td>CPERF3</td>
<td>0.894 (4.28)</td>
<td>0.201</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>FPERF1</td>
<td>0.855 fixed</td>
<td>0.269</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>FPERF2</td>
<td>0.930 (5.55)</td>
<td>0.134</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>FPERF3</td>
<td>0.925 (5.87)</td>
<td>0.145</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>AVE</td>
<td>0.931</td>
<td>0.888</td>
<td>0.929</td>
<td>0.911</td>
<td>0.88</td>
<td>0.867</td>
<td>0.931</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CR</td>
<td>0.73</td>
<td>0.725</td>
<td>0.815</td>
<td>0.674</td>
<td>0.71</td>
<td>0.686</td>
<td>0.817</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach’s α</td>
<td>0.931</td>
<td>0.886</td>
<td>0.926</td>
<td>0.908</td>
<td>0.876</td>
<td>0.864</td>
<td>0.93</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Further dimensionality assessments

Although CFA results are enough to imply unidimensionality of each construct, further dimensionality assessments were undertaken. One possible indicator of potential threats to scale dimensionality is the number of absolute values that are greater than > 2.58 in the matrix of standardised residuals (Gerbing and Anderson 1988). The cut-off point of 2.58 corresponds to a p-value < 0.01. Although, some authors suggest a cut-off (absolute) value greater than 3 (Jöreskog and Sörbom 1993), a more stringent criterion was adopted in this study. In addition, modification indices > 5 may also serve as an additional indicator of potential threats to unidimensionality (Anderson and Gerbing 1988; Gefen 2003). In instances where potential issues with dimensionality are detected, the researcher has the option to deal with the most problematic pairs of items by adding error covariances between problematic pairs for improving model fit (Diamantopoulos and Siguaw 2000; Ping 2004). In the LISREL output, 4.5% of standardised residuals of total pairs of the matrix exceeded the recommended threshold of 2.58 and 3.17% of modification indices of total pairs of the matrix exceeded the suggested cut-off point of 5.0. This may represent a threat to discriminant validity. The decision had to be made whether the number of these potentially problematic cases justifies the addition of error covariances. In making the decision, several criteria were taken into account. First, adding error covariance might imply capitalising on chance when it comes to improvement of model fit. Second, some authors argue that within-factor correlated measures may actually prevent constructs from being unidimensional (Cote et al. 2001). In addition, in creating summated scales (which is the case for several
constructs in this study), addition of error covariances will become irrelevant. Hence, the decision was made not to address these potential threats to unidimensionality. The decision was supported by the fact that all items loaded strongly and significantly on their respective factors and therefore suggested sufficient evidence of dimensionality.

Assessing unidimensionality is a necessary and crucial condition for construct validity (Anderson and Gerbing 1988), but not a sufficient one. Literature recommends further analysis of scales properties; more specifically, analysis of convergent and discriminant validity and reliability.

5.3.5 Assessing discriminant and validity

Discriminant validity is degree to which a construct is truly distinct from other constructs (e.g., Campbell and Fiske 1959; Churchill et al. 1985). Discriminant validity was assessed in two ways. First, chi-square differences between two nested models are compared (Anderson and Gerbing 1988; Gerbing and Anderson 1988). Two CFA models are run, in which the first model correlations between two constructs are constrained by fixing them to 1. By constraining correlations between two constructs it is actually implied that items creating two separate constructs could just as well be reflecting one single construct (Ping 2004). Chi-square differences between this constrained model and the standard model (the parameter is freely estimated) was compared. In this method, discriminant validity is supported if the constrained model returns a significantly higher $\chi^2$ than the unconstrained model, thus providing further support for discriminant validity (e.g., Anderson and Gerbing 1988).

To further assess discriminant validity the more robust approach suggested by Fornell and Larcker (1981b) is undertaken. In this method AVE scores of constructs are compared with square of correlations between constructs. Squared correlations between constructs represent shared variance and the latent construct should be explaining its item measures better than it can explain another construct (Hair et al. 2006). If this is the case, the AVE value for a specific construct should be greater in value than the shared variance of that construct and also greater than any other
construct in the analysis. In instances where this is not the case, a construct would have more in common with other constructs (and their items) than it does with its own measures. Hence, discrimination between constructs becomes difficult to argue. Before assessing discriminant validity in this manner, the correlation matrix was analysed to locate any correlations between factors that are significantly above 0.80 (Grewal et al. 2004). None of the factor correlations exceeded the 0.80 cut-off point, which was taken as a signal of measure distinctness. Furthermore, correlations are significantly different from unity, which provides evidence of discriminant validity (Steenkamp and Van Trijp 1991). The highest correlations are between Competitor Environment and Technological Turbulence (0.569). Following the above-mentioned more stringent procedure for assessing discriminant validity, final conclusions could be drawn. As Table 42 indicates, all AVE estimates are greater than the squared correlation estimates. It is therefore concluded that discriminant validity has been achieved in the study. With respect to a high correlation between Competitor Environment and Technological Turbulence, discriminant validity can be argued as the smallest AVE was 0.676 and the largest squared correlation 0.324.
Table 45: Correlations and discriminant validity test

<table>
<thead>
<tr>
<th></th>
<th>JR</th>
<th>TRUST</th>
<th>GOALS</th>
<th>RESDIFF</th>
<th>MSIF</th>
<th>MPERF</th>
<th>CPERF</th>
<th>FPERF</th>
<th>ENVCOMP</th>
<th>ENVTECH</th>
<th>TURNOVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>JR</td>
<td>0.724</td>
<td>0.252</td>
<td>0.296</td>
<td>0.084</td>
<td>0.211</td>
<td>0.018</td>
<td>0.053</td>
<td>0.015</td>
<td>0.000</td>
<td>0.000</td>
<td>0.009</td>
</tr>
<tr>
<td>TRUST</td>
<td>0.502</td>
<td>0.674</td>
<td>0.298</td>
<td>0.024</td>
<td>0.157</td>
<td>0.015</td>
<td>0.061</td>
<td>0.012</td>
<td>0.007</td>
<td>0.010</td>
<td>0.003</td>
</tr>
<tr>
<td>GOALS</td>
<td>0.544</td>
<td>0.546</td>
<td>0.815</td>
<td>0.031</td>
<td>0.176</td>
<td>0.016</td>
<td>0.037</td>
<td>0.012</td>
<td>0.000</td>
<td>0.009</td>
<td>0.016</td>
</tr>
<tr>
<td>RESDIFF</td>
<td>-0.290</td>
<td>-0.154</td>
<td>-0.177</td>
<td>0.7</td>
<td>0.094</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
<td>0.003</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>MSIF</td>
<td>0.459</td>
<td>0.396</td>
<td>0.420</td>
<td>-0.307</td>
<td>0.73</td>
<td>0.012</td>
<td>0.013</td>
<td>0.011</td>
<td>0.001</td>
<td>0.002</td>
<td>0.015</td>
</tr>
<tr>
<td>MPERF</td>
<td>0.133</td>
<td>0.123</td>
<td>0.128</td>
<td>-0.025</td>
<td>0.108</td>
<td>0.71</td>
<td>0.011</td>
<td>0.263</td>
<td>0.001</td>
<td>0.005</td>
<td>0.003</td>
</tr>
<tr>
<td>CPERF</td>
<td>0.231</td>
<td>0.247</td>
<td>0.193</td>
<td>0.035</td>
<td>0.116</td>
<td>0.107</td>
<td>0.686</td>
<td>0.005</td>
<td>0.000</td>
<td>0.007</td>
<td>0.002</td>
</tr>
<tr>
<td>FPERF</td>
<td>0.124</td>
<td>0.110</td>
<td>0.108</td>
<td>0.009</td>
<td>0.103</td>
<td>0.513</td>
<td>0.005</td>
<td>0.817</td>
<td>0.000</td>
<td>0.008</td>
<td>0.001</td>
</tr>
<tr>
<td>ENVCOMP</td>
<td>-0.010</td>
<td>-0.081</td>
<td>0.007</td>
<td>-0.051</td>
<td>-0.032</td>
<td>0.025</td>
<td>-0.084</td>
<td>0.016</td>
<td>0.676</td>
<td>0.324</td>
<td>0.001</td>
</tr>
<tr>
<td>ENVTECH</td>
<td>0.021</td>
<td>0.101</td>
<td>0.095</td>
<td>0.012</td>
<td>-0.040</td>
<td>0.074</td>
<td>-0.005</td>
<td>0.092</td>
<td>0.569</td>
<td>0.727</td>
<td>0.002</td>
</tr>
<tr>
<td>Turnover</td>
<td>0.094</td>
<td>0.057</td>
<td>0.128</td>
<td>0.009</td>
<td>-0.121</td>
<td>0.058</td>
<td>0.046</td>
<td>0.037</td>
<td>0.034</td>
<td>0.047</td>
<td>---</td>
</tr>
</tbody>
</table>

Note: Correlations are below the diagonal, squared correlations are above the diagonal, and AVE estimates are presented on the diagonal.
Therefore, after conducting above the described test for discriminant validity, the conclusion was made that satisfactory discriminant validity was achieved for the study.

5.3.6 Assessing convergent validity

Convergent validity was assessed through average variance extracted (AVE). Fornell and Larcker (1981a) suggest that a critical value of 0.5 and above for AVE for each scale is an indicator of construct convergent validity. This holds true for all of parameter estimates, supporting further conclusions on robustness of the measurement model. The lowest AVE estimates are for TRUST = 0.674 and CUSTOMER PERFORMANCE = 0.686. These values are, however, much higher than the recommended threshold of 0.50 and do not jeopardised the conclusions made regarding support for convergent validity.

5.3.7 Assessing nomological and criterion validity

The final type of validity assessed in the study is nomological validity. This reflects the degree to which theoretical frameworks, formerly assessed in the literature, (and consisting of constructs under this particular study) are confirmed (Netemeyer et al. 2003). Nomological validity relates to the ability of new measures to perform as expected in a network of known causal relationships. As such, nomological validity is demonstrated if relationships among constructs in the conceptual framework are as expected. Association between constructs is presented in detail in the following chapter. Nomological validity can be confirmed based on the results in Chapter 7. Where nomological validity assessment requires a theoretical basis for the associations made (Churchill 1999), criterion-validity does not require such assumption (DeVellis 2011). Therefore, the same procedure can be used to prove both nomological and criterion validity (DeVellis 2011). Considering that criterion-validity is implied if a solid proportion of specified associations from the conceptual framework exists, by assessing nomological validity, criterion validity is also implied in the study.
5.3.8 Assessing CMV using the CFA output

Although the issue of CMV has been indicated and tackled in Chapter 4, further assessments were made to safely reject suspicions of CMV’s threat to the study results. As such, two more tests are conducted: Harman’s single factor test and the marker variable test. Harman’s single-factor tests is based on the idea that CMV is present in data if a single factor is able to explain all common variances shared by all observed variables used in the study. Therefore, the model fit of pre-specified model (Figure 6) was compared with a single-factor constrained model. If the unconstrained model does not fit the data significantly better than constrained single-factor model then CMV is present. As presented in Table 46, the unconstrained model performed significantly better than constrained model.

Table 46: Harman’s single-factor test

<table>
<thead>
<tr>
<th>Model (CFA)</th>
<th>²</th>
<th>DF</th>
<th>²</th>
<th>DF</th>
<th>p</th>
<th>RMSEA</th>
<th>NNFI</th>
<th>IFI</th>
<th>CFI</th>
<th>Stand. RMR</th>
<th>GFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFA</td>
<td>479.26</td>
<td>361</td>
<td>1.33</td>
<td>0.000</td>
<td>0.038</td>
<td>0.978</td>
<td>0.982</td>
<td>0.981</td>
<td>0.04</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>Harman’s single-factor model</td>
<td>3904.145</td>
<td>3441.249</td>
<td>350</td>
<td>34</td>
<td>11.1547</td>
<td>0.00</td>
<td>0.211</td>
<td>0.613</td>
<td>0.643</td>
<td>0.642</td>
<td>0.157</td>
</tr>
</tbody>
</table>

Another method of testing for absence of CMV is the marker variable technique. In this test a marker variable was identified, one that is not conceptually associated with any of the constructs in the model tested (Lindell and Whitney 2001). As a variable lacking conceptual associations with any construct in the model, the product innovation intensity measure was chosen - “On average, each year we introduce more new products/services in our markets than our key market competitors”. Table 47 below indicates the results of the correlation matrix. Results show the highest correlation value of 0.118 between the marker variable and rest of the constructs in the study. All correlations are non-significant and low and hence it can be concluded that CMV does not pose a threat in this study.
Table 47: Marker variable test

<table>
<thead>
<tr>
<th></th>
<th>JR</th>
<th>TRUST</th>
<th>GOALS</th>
<th>RESDIFF</th>
<th>MSIF</th>
<th>MPERF</th>
<th>CPERF</th>
<th>FPERF</th>
<th>ENVCOMP</th>
<th>ENVTECH</th>
<th>MV</th>
</tr>
</thead>
<tbody>
<tr>
<td>JR</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST</td>
<td>0.502**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOALS</td>
<td>0.544**</td>
<td>0.546**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESDIFF</td>
<td>-0.290**</td>
<td>-0.154*</td>
<td>-0.177**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSIF</td>
<td>0.459**</td>
<td>0.396**</td>
<td>0.420**</td>
<td>-0.307**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPERF</td>
<td>0.133*</td>
<td>0.123</td>
<td>0.128</td>
<td>-0.025</td>
<td>0.108</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPERF</td>
<td>0.231**</td>
<td>0.247**</td>
<td>0.193**</td>
<td>0.035</td>
<td>0.116</td>
<td>0.107</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPERF</td>
<td>0.124</td>
<td>0.11</td>
<td>0.108</td>
<td>0.009</td>
<td>0.103</td>
<td>0.513**</td>
<td>0.005</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVCOMP</td>
<td>-0.01</td>
<td>-0.081</td>
<td>0.007</td>
<td>-0.051</td>
<td>-0.032</td>
<td>0.025</td>
<td>-0.084</td>
<td>0.016</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVTECH</td>
<td>0.021</td>
<td>0.101</td>
<td>0.095</td>
<td>0.012</td>
<td>-0.04</td>
<td>0.074</td>
<td>-0.005</td>
<td>0.092</td>
<td>0.569**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>MV</td>
<td>-0.014</td>
<td>0.103</td>
<td>0.018</td>
<td>-0.041</td>
<td>0.118</td>
<td>0.044</td>
<td>-0.022</td>
<td>0.078</td>
<td>-0.039</td>
<td>0.011</td>
<td>1</td>
</tr>
</tbody>
</table>

MV = Marker variable
5.3.9 Assessment of construct reliability

In the previous section, reliability assessment for items coming out of EFA was calculated and discussed. After trimming some additional items through CFA, Cronbach’s alpha, inter-item correlations and item-scale correlations were recalculated. As can be observed in Table 48, Cronbach’s alphas for all of the constructs are above Nunnally’s (1978) threshold. Furthermore, inter-items correlations values provided information on internal consistency of scales, where all items correlated strongly and met the minimum recommended threshold value of 0.35 (Table 49) (Hair et al. 2006). Finally, analysis of item-scale correlations indicate that all correlations are above the critical value of 0.5 (Table 48), indicating support in claiming strong associations of items to their respective scales.
Table 48: Cronbach’s alpha, inter-item correlations and item-scale correlations

<table>
<thead>
<tr>
<th>Scales</th>
<th>Scale items</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>TRUST2</td>
<td>0.684</td>
<td>0.908</td>
</tr>
<tr>
<td></td>
<td>TRUST4</td>
<td>0.699</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TRUST5</td>
<td>0.879</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TRUST6</td>
<td>0.796</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TRUST7</td>
<td>0.790</td>
<td></td>
</tr>
<tr>
<td>Joint Rewards</td>
<td>JR2</td>
<td>0.793</td>
<td>0.886</td>
</tr>
<tr>
<td></td>
<td>JR3</td>
<td>0.800</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JR4</td>
<td>0.799</td>
<td></td>
</tr>
<tr>
<td>Compatible Goals</td>
<td>GOALS1</td>
<td>0.873</td>
<td>0.926</td>
</tr>
<tr>
<td></td>
<td>GOALS2</td>
<td>0.893</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GOALS4</td>
<td>0.781</td>
<td></td>
</tr>
<tr>
<td>MSIF</td>
<td>MSIF1</td>
<td>0.757</td>
<td>0.931</td>
</tr>
<tr>
<td></td>
<td>MSIF2</td>
<td>0.814</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSIF3</td>
<td>0.845</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSIF4</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSIF5</td>
<td>0.839</td>
<td></td>
</tr>
<tr>
<td>Competitive Environment</td>
<td>ENVCOMP1</td>
<td>0.674</td>
<td>0.805</td>
</tr>
<tr>
<td></td>
<td>ENVCOMP2</td>
<td>0.674</td>
<td></td>
</tr>
<tr>
<td>Technological Turbulence</td>
<td>ENVTECH1</td>
<td>0.713</td>
<td>0.832</td>
</tr>
<tr>
<td></td>
<td>ENVTECH2</td>
<td>0.713</td>
<td></td>
</tr>
<tr>
<td>Market Performance</td>
<td>MPERF1</td>
<td>0.798</td>
<td>0.878</td>
</tr>
<tr>
<td></td>
<td>MPERF2</td>
<td>0.779</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MPERF3</td>
<td>0.723</td>
<td></td>
</tr>
<tr>
<td>Customer Performance</td>
<td>CPERF1</td>
<td>0.73</td>
<td>0.865</td>
</tr>
<tr>
<td></td>
<td>CPERF2</td>
<td>0.713</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CPERF3</td>
<td>0.791</td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td>FPERF1</td>
<td>0.818</td>
<td>0.929</td>
</tr>
<tr>
<td></td>
<td>FPERF2</td>
<td>0.874</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FPERF3</td>
<td>0.875</td>
<td></td>
</tr>
</tbody>
</table>

Table 49: Inter-Item Correlation Matrices

<table>
<thead>
<tr>
<th>Trust</th>
<th>TRUST2</th>
<th>TRUST4</th>
<th>TRUST5</th>
<th>TRUST6</th>
<th>TRUST7</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUST2</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST4</td>
<td>0.529</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST5</td>
<td>0.672</td>
<td>0.715</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUST6</td>
<td>0.602</td>
<td>0.615</td>
<td>0.787</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>TRUST7</td>
<td>0.611</td>
<td>0.594</td>
<td>0.787</td>
<td>0.729</td>
<td>1.000</td>
</tr>
</tbody>
</table>
### Table 49: Inter-Item Correlation Matrices - continued

<table>
<thead>
<tr>
<th>Joint Rewards</th>
<th>JR2</th>
<th>JR3</th>
<th>JR4</th>
</tr>
</thead>
<tbody>
<tr>
<td>JR2</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JR3</td>
<td>0.773</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>JR4</td>
<td>0.690</td>
<td>0.700</td>
<td>1.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compatible Goals</th>
<th>GOALS1</th>
<th>GOALS2</th>
<th>GOALS4</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOALS1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOALS2</td>
<td>0.897</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>GOALS4</td>
<td>0.748</td>
<td>0.773</td>
<td>1.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MSIF</th>
<th>MSIF1</th>
<th>MSIF2</th>
<th>MSIF3</th>
<th>MSIF4</th>
<th>MSIF5</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSIF1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSIF2</td>
<td>0.753</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSIF3</td>
<td>0.66</td>
<td>0.732</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSIF4</td>
<td>0.648</td>
<td>0.681</td>
<td>0.834</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>MSIF5</td>
<td>0.681</td>
<td>0.745</td>
<td>0.766</td>
<td>0.786</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Technological Turbulence</th>
<th>ENVTECH1</th>
<th>ENVTECH2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVTECH1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ENVTECH2</td>
<td>0.713</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Competitive Environment</th>
<th>ENVCOMP1</th>
<th>ENVCOMP2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVCOMP1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ENVCOMP2</td>
<td>0.674</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Market Performance</th>
<th>MPERF1</th>
<th>MPERF2</th>
<th>MPERF3</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPERF1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPERF2</td>
<td>0.76</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>MPERF3</td>
<td>0.691</td>
<td>0.666</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Performance</th>
<th>CPERF1</th>
<th>CPERF2</th>
<th>CPERF3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPERF1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPERF2</td>
<td>0.621</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CPERF3</td>
<td>0.721</td>
<td>0.702</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Performance</th>
<th>FPERF1</th>
<th>FPERF2</th>
<th>FPERF3</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPERF1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPERF2</td>
<td>0.789</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>FPERF3</td>
<td>0.791</td>
<td>0.864</td>
<td>1</td>
</tr>
</tbody>
</table>

Alpha reliability assessment has been criticised by scholars to be lacking the rigour required to establish scale reliability (e.g., Gerbing and Anderson 1988). An explanation for this statement can be found in the fact that alpha coefficient assumes perfect correlation of scales or lack of measurement error (Bollen 1998).
Consequently, coefficient alpha underestimates reliability and additional reliability assessment is suggested using CFA (Ping Jr 2004). Hence, as suggested in the literature, assessment of construct, i.e. composite reliability (CR\(^6\)) was assessed using the CFA output (Fornell, and Larcker 1981a). In assessing composite reliability, internal consistency of scales is investigated. As can be seen in Table 44, composite reliability for each construct exceeded Bagozzi and Yi’s (1988) recommended cut-off point of > 0.60. This provides additional evidence of acceptable construct reliability.

5.4 Descriptive analysis of the individual scales

5.4.1 Resource Dependence Asymmetry scale

In the case of the Resource Dependence Asymmetry scale, the results are slightly positively skewed (skewness - 0.729 and kurtosis - 0.659), with mean of 3.82 and standard deviation of 2.492. The KS (Kolmogorov–Smirnov) test returned a non-significant result and as previously, the decision was made to use the scale for formal model testing.

Figure 8: Resource Dependence Asymmetry - histogram

---

\(^6\) CR is calculated using the Lisrel output. More specifically, using completely standardised solution values and calculating the following formula: \(\rho_c = \frac{\sum\lambda^2}{\left(\sum\lambda^2 + \sum\Theta\right)}\), where \(\rho_c\) is composite reliability, \(\lambda\) – indicator loadings, \(\Theta\) – indicator error variances and \(\Sigma\) – summation over the indicators of the latent variable (Diamantopoulos and Siguaw 2000).
5.4.2 Trust

In the case of the Trust scale, the results are slightly positively skewed (skewness - 1.013 and kurtosis - 0.960), with a mean of 5.26 and standard deviation of 1.086. The KS test returned a non-significant result and was therefore used for formal model testing.

Figure 9: Trust - histogram

![Trust Histogram](image)

5.4.3 Joint Rewards

In Figure 7 a histogram for the final scale of joint rewards is presented. Skewness and kurtosis values for Joint rewards scale were 0.492 and 0.798, respectively. According to the results, distribution was slightly positively skewed, and the mean value was slightly lower than natural value of 3.5 (the construct was measured on a Likert scale 1-7) with a standard deviation of 1.67. The KS test came with non-significant results which was taken as proof of the scale’s normal distribution and therefore was used in formal model testing.
5.4.4 Compatible Goals

In the case of the Compatible Goals scale, the results are slightly negatively skewed (skewness - 0.542 and kurtosis - 0.152), with mean of 4.74 and standard deviation of 1.35. The KS test returned non-significant and was therefore used for formal model testing.
5.4.5 Marketing and Sales Interface Flexibility (MSIF)

In the case of the MSIF scale, results are slightly negatively skewed (skewness -1.00 and kurtosis - 0.867). The KS test returned a significant result (0.280) with mean of 4.09 and standard deviation of 1.518. However, since distribution appeared normal, with values of skewness and kurtosis falling within acceptable range (Skewness and kurtosis [peakedness of distribution] for each parameter should be within +/- 2 and +/- 3 respectively), scale was taken as appropriate for use in formal model testing.

Figure 12: M&S Interface flexibility - histogram

5.4.6 Market Performance

In the case of the Market Performance scale, results are slightly negatively skewed (skewness - 0.510 and kurtosis - 0.248), with a mean of 4.83 and a standard deviation of 1.322. The KS test returned a non-significant and was therefore used for formal model testing.
5.4.7 Customer Performance

In the case of Customer performance, the results are slightly negatively skewed (skewness - 0.287 and kurtosis - 0.248), with mean of 4.82 and standard deviation of 1.042 as well with non-significant results for KS. This scale was, therefore, used further in formal model testing.
5.4.8 Financial Performance

In the case of the Financial Performance scale, results are slightly negatively skewed (skewness - 0.271 and kurtosis - 0.098), with a mean of 4.58 and a standard deviation of 1.13. The KS test returned a non-significant result and the scale was therefore used for formal model testing.

Figure 15: Financial Performance - histogram

5.4.9 Competitive Environment

The results related to the Competitor Environment scale show slight negative skewness of the data (skewness - 0.240 and kurtosis - 0.485). The mean of the scale is 4.19 and standard deviation, 1.34. The KS test returned a non-significant solution indicating that the scale can be used for further testing.
5.4.10 Technological Turbulence

In the case of Technological turbulence scale, results are slightly positively skewed (skewness - 0.136 and kurtosis - 0.711), with mean of 3.79 and standard deviation of 1.39. The KS test returned non-significant as was the case with previous scale and was therefore, used for formal model testing.
5.5 Chapter summary

In this chapter, the construction and purification processes for measures used in the study are described. More specifically, unidimensionality, reliability and validity of measures were assessed using both EFA and CFA analysis. No problems with the unidimensionality of the measure were identified and the same conclusion was drawn regarding the reliability and validity of measures. The chapter concludes with the frequency distributions of the final scales. In these, major issues were detected. Consequently, measures were deemed ready for the next step in the analysis, model testing. This is the subject of Chapter 6 that follows.
Chapter 6: Model testing

6.1 Introduction

The previous chapter discussed the measurement model in detail. Following the two-step approach recommended by Anderson and Gerbing (1988), this chapter continues with applying and discussing the second step of the analysis; i.e., estimation of the structural model. Although both measurement and structural models could be estimated simultaneously (Kelloway 1998), this process may introduce some ambiguities in cases where poor model fit is present. In such circumstances the researcher would not be able to judge whether poor fit is the result of incorrect measurement or the structural model (Anderson and Gerbing 1988). Consequently, this study continues with suggested two-step approach to model estimation. This chapter begins with discussion on advantages of structural equation modelling technique, followed by discussion on its underlying statistical assumptions. The chapter then continues with testing the structural model and discussion of hypothesised relationships in the model.

6.2 Structural equation modelling assumptions

The model specified in Chapter 3 hypothesised a web of relationships between the various variables of interest. It is suggested here that traditional multivariate techniques fail short in giving the researcher an opportunity to examine these relationships simultaneously (Hair et al. 2006). Hence, following recommendations from the literature, this study relies on structural equation modelling (SEM) techniques as means of comprehensive assessment of this particular theoretical model (Anderson and Gerbing 1988). In contrast to more traditional multivariate techniques such as ANOVA, linear regression, logistic regression, Poisson regression, and so on, that examine direct relationships between sets of variables, the SEM approach allows for testing relationships within the context of the entire nomological network, allowing for examining multiple independent variables on multiple dependent (outcome) variables simultaneously (Hoyle 1995), as is the case here. The hypothesised model incorporates many independent variables as well as
several dependent variables, a mediating variable and the hypothesised moderating effects. In addition, contrary to other techniques mentioned above, SEM allows for incorporating measurement error and reliability and hence the ability to obtain parameter estimates close to their population levels (Hoyle 1995).

Before commencing with analysis it is necessary to check for a number of statistical assumptions that underpin the SEM technique. If these assumptions are satisfied then the researcher can draw valid conclusions from the analysis (e.g., Ping 1995; Hair et al. 2006; Tabachnick and Fidell 2007). These assumptions include: multivariate normality, linearity of relationship, continuous data and independence of observations (Sharma 1995; Hair et al. 2006). The first step in assessing multivariate normality is checking for univariate normality. This is because a lack of univariate normality implies a lack of multivariate normality (Hair et al. 2006). However, the existence of univariate normality does not prove multivariate normality of the data. In the previous chapter, the existence of univariate normality of data was concluded and will not be repeated here. Hence, the first condition of multivariate normality is satisfied. To further assess multivariate normality, two proposed tests were performed: linearity and homoscedasticity (Kline 2011). In this instance bivariate scatterplots were inspected (Appendix 2). Close inspection of bivariate scatterplots between a selected number of variables showed no serious violation of linearity and homoscedasticity rules. However, the $R^2$ for the quadratic line between MSIF and performance outcomes slightly exceeds that of the linear relationship which might imply a curvilinear relationship between these variables. It is worth mentioning that Chou and Bentler (1995) assert that EM approaches are relatively robust with regards to modest departures from distributional normality. Linearity of data is another assumption in the SEM technique. In this study all but one relationship are hypothesised as linear (Chapter 3). As explained in Chapter 3 the curvilinear relationship between MSIF and performance outcomes was based on previous findings and theoretical reasoning. Next, the continuity of the data was provided by measuring variables on a Likert scale. Although not considered continuous, the proof of continuity has generally been based on the theoretical assumption that all Likert scales have a continuous variable underlying it (Jöreskog and Sörbom 1996). Finally, independence of observations was assured through acquiring a single response.
from each company presented in the final data sample, as well as with assuring the level of random sampling of respondents.

6.2.1 Some further assumptions discussed: Model specification and identification, outliers, multicollinearity and power

Specification of the measurement model, a critical step in developing SEM model, was discussed in the previous chapter. The next step is specification of the structural model through the assignment of relationships between constructs of interest based on the proposed theoretical model (Kelloway 1998; Hair et al. 2006). Each hypothesis in Chapter 3 represents a relationship that needs to be specified, bearing in mind that the relationships making up the model have previously been grounded in theory and in previous research (Bollen and Long 1993). The path diagram below (due to overall model complexity showing only the main effect model) incorporates both the measurement and structural parts of SEM in one overall model, since the estimation of the SEM model requires that measurement specifications are included as well (Hair et al. 2006). For presentation purposes, the path diagram of main effects presented below represents causal relationships between variables in the main effect model (for more details see the next section), including existing and non-existing causal relationships (represented by the lack of arrow connecting the variables) between variables in the model (Kelloway 1998). This step is essential as omission of critical variables results in specification error which would imply that the model is not a true characterisation of the population and variables in the study (Diamantopoulos and Siguaw 2000). Another assumption evident from the path diagram is the absence of paths between the measurement errors within constructs and between constructs implying non-correlation of measurement errors in the model. This in addition to the absence of arrows between error terms of the endogenous variables and exogenous variables, implying a lack of correlation between residual influences and independent variables (Diamantopoulos and Siguaw 2000).
Figure 18: Path diagram for the main effect model

*RDA – Resource Dependence Asymmetry
*JR – Joint Rewards
*CA – Compatible Goals
*CP – Customer Performance
*MP – Market Performance
*FP – Financial Performance

Hypothesised paths
Non-hypothesised paths
6.3 Model identification

In identifying the model the researcher is concerned with sufficiency of information for obtaining a unique solution for parameters to be estimated in the model (Diamantopoulos and Siguaw 2000). In terms of model identification, three situations are possible: 1) an under-identified model, 2) a just-identified model and 3) an over-identified model. The most desirable option is for the model to be over-identified as it implies that more than one estimate of each parameter can be obtained, thus providing the possibility to use these estimates to test the model. In instances where significant difference between estimates exists, evidence of ‘falseness’ of the model is provided. A just-identified model does not allow for these comparisons as in this case only one set of parameters is available to exactly reproduce the observed covariance matrix providing no basis for evaluation (Kelloway 1998). Finally, the under-identified model is the least desirable due to its inability to produce a unique solution, since the number of unknown parameters exceeds the number of equations specified in the model.

The main concern in model identification is the causal flow proposed in the model (Diamantopoulos and Siguaw 2000), where one-way causal flows (as is the case in the present model) also called a recursive model, is one condition for over-identification. Another option for achieving over-identification of the structural model is restrictions of certain correlations between constructs to zero (Kelloway 1998) as is depicted in Figure 18. Together with the former condition (one-way causal flow) an example of these restrictions may be illustrated by the non-existence of a two-way relationship between MSIF and Joint Rewards. Hence, in the case of the present model the reverse relationship flowing from MSIF to Joint Rewards is restricted to zero. Finally, over-identification is also achieved with the minimum of three indicators per latent variable and sometimes two if sample size is greater than 100 (Anderson and Gerbing 1984). Most latent variables in this study contain three or more indicators. The exception is Technological Turbulence and Competitive Environment with two indicators, which presents no threat to identification of the model considering the sample size of 229 cases.
6.3.1 Outliers

Outliers are defined as “unique combination of characteristics identifiable as distinctly different from the other observations” (Hair et al. 2006, p. 97). Outliers may have an effect on results from SEM and some authors recommend outliers be excluded from data (West et al. 1995). This approach, however, may have impact on study outcomes and some authors advise caution in deleting outliers as they may be a valid piece of data that must be viewed within the context of the analysis and evaluated properly according to the type of information they provide (Hair et al. 2006). Outliers may be a source of procedural error (e.g., data entry error, coding mistake), errors in answering questions or extraordinary observations reflecting the unique profile of the respondent. Procedural error threat was kept to a minimum in this study as data were thoroughly checked for any mistakes in coding or data entry. Furthermore, use of rating scale ranging from 1 to 7 throughout the observations in the structural model implies that no observations could fall outside of this pre-defined range.

6.3.2 Multicollinearity

If significant dependence or correlation between independent variable exists in the regression model, the research is facing a problem of multicollinearity (Kleinbaum et al. 2013). This is an important issue considering that it may create instability in the study and an inability to distinguish between the effects each independent variable might have on the dependent variable (Tabachnick and Fidell 2007). To test for multicollinearity in this study, initially, Pearson’s two-tailed correlation matrix was examined. A high correlation between any two pairs of constructs \((r \geq 0.80\) according to Grewal et al. (2004) and \(r \geq 0.90\) according to Sharma (1995)) implies that multicollinearity is an issue (Grewal et al. 2004). Grewal et al. (2004) assert that conclusions regarding multicollinearity based on Pearson correlations should be considered while taking AVE values of constructs into account. More specifically, AVEs of each correlated construct should be larger than their squared correlations, i.e. test of discriminant validity (Fornell and Larcker 1981a). If the condition of discriminant validity is satisfied, then the existence of multicollinearity is at suspect
(Fornell and Larcker 1981a). First, in examining correlations among constructs, no correlations above 0.80 were detected. The highest score is observed between Competitive Environment and Technological Turbulence ($r = 0.569$). In addition, the AVE for each construct, including environmental constructs, exceeds their respective squared correlations, again implying that multicollinearity is not an issue in this study.

For moderator variables and the quadratic MSIF term, a recommendation by Little et al. (2006) was followed and all three variables including variables involved in multiplicative terms were orthogonalised\(^7\) so to make them mathematically independent/uncorrelated and to minimise any potential threat of multicollinearity resulting from introduction of such multiplicative terms in the model. Only orthogonalised variables were used in subsequent analysis.

### 6.3.3 Power considerations

One final issue in model evaluation that needs to be addressed is statistical power associated with model testing (Diamantopoulos and Siguaw 2000). Power of statistical model refers to the likelihood of rejecting an incorrect model introducing so called Type II error (Satorra 1993; Diamantopoulos and Siguaw 2000). Whereas in most statistical analysis it is desirable to have high power so to increase confidence when interpreting results, in SEM an increase in power can represent a potential threat (Satorra 1993). A very important consideration in structural model is the estimation of the sample size as it is closely associated with the power of the test (Kaplan 1995). Considering that SEM requires larger sample sizes compared to other multivariate approaches (Hair et al. 2006), it is necessary to establish the appropriate sample size for the given model. One recommended sample size that provides a sound basis for estimation is 200 cases (Hair et al. 2006). In instances of high power, there is a danger of the method becoming too sensitive where almost any difference is detected (resulting in poor goodness-of-fit measures and over-rejection of acceptable models) where sample size exceeds 400 cases. However, sample size should be taken into consideration together with the number of parameters, variable loadings and error terms to be estimated. That is, it should be

\(^7\) ‘Orthogonalisation’ - a process of finding the residual of the interaction term (Rodgers et al. 1984).
considered in light of the complexity of the model itself. Following the suggested 5:1 ratio of sample size to parameters the number of parameters to be estimated in this study would require a sample size of 325 cases (Tabachnick and Fidell 2007). Considering that several variables were used in calculating interaction terms per Ping (2004) and their respective averaged summed score was computed (Little et al. 2006) (discussed in more detail later in this chapter) the corrected number of parameters to be estimated equals 45. This, in turn, would require a sample size of 220. As the sample size for this study is 229 cases it was deemed appropriate to estimate structural model in a single model.

6.4 Analysis of the hypothesised structural relationships

After assuring all SEM assumptions have been met and discussed, the next step is analysis of the hypothesised structural relationships. In order to perform the analysis the Lisrel 8.71 statistical package with sample covariance matrix as input matrix was used (Jöreskog and Sörbom 2004). As discussed in Chapter 5, maximum likelihood estimation model (ML) was employed. Examination of the structural model was based on the previously hypothesised relationships between latent variables (Figure 18). The purpose of analysis is assessment of the existence of support of data to proposed conceptual model. Within this section, the following segments will be covered: 1) directions of relationships and whether they actually reflect the hypothesised directions; 2) the strength of hypothesised links; and 3) the amount of variance in the endogenous variables explained by the respective proposed determinants. The answer to the first question will be implied by the signs of relationship parameters, where the strength of relationships will be assessed by their respective t-values. Considering that all relationships in the model are hypothesised as one-directional, the cut-off points used for t-values in this study are 1.645 and 2.325 for significance levels of 0.05 and 0.01, respectively. Squared multiple correlations (R²) for structural equations were used as indicators of the amount of variance explained in endogenous variables (Diamantopoulos and Siguaw 2000).

Formal hypothesis testing was carried out in three steps. To begin with, the hypotheses relating to main effect model, as shown in the Figure 18, were tested.
Following this was the test and comparison of the constrained moderated model with the unconstrained moderated model. Moderating effects were analysed firstly by following the multiplicative interaction effect procedure recommended by Ping (1995) and secondly following the moderator effect analysis steps of the study of Cadogan et al. (2009).

The structural path model depicted in the Figure 19 can be represented by following path (or structural) equations:

\[
\begin{align*}
\eta_1 &= \gamma_{11}\xi_1 + \gamma_{12}\xi_2 + \gamma_{13}\xi_3 + \gamma_{14}\xi_4 + \zeta_1 \\
\eta_2 &= \beta_{21}\eta_1 + \zeta_2 \\
\eta_3 &= \beta_{31}\eta_1 + \zeta_3 \\
\eta_4 &= \beta_{41}\eta_1 + \beta_{42}\eta_2 + \beta_{43}\eta_3 + \zeta_4
\end{align*}
\]

All exogenous variables (i.e., Resource Dependence Asymmetry, Trust, Joint rewards and Compatible Goals) are represented by \(\xi\). All endogenous variables (i.e., those affected by other constructs in the model such as MSIF\(^2\), Customer, Market and Financial Performance) are represented by \(\eta\). Structural coefficients between endogenous and exogenous constructs are represented by \(\gamma\) and those between endogenous constructs by \(\beta\). Errors in equations are depicted by the letter \(\zeta\). In Figure 18 the inter-correlation between exogenous variables is represented by \(\Phi\) and corresponding subscripts. For example \(\Phi_{12}\) indicates inter-correlations between \(\xi_1\) and \(\xi_2\) that is, Joint rewards and Trust.

### 6.4.1 Main effect model

The structural relationships for the main effect model were formally analysed in a structural model presented in Figure 19. All hypothesised relationships are presented in Table 50, including the non-hypothesised control variable: performance relationships.
Table 50: Hypothesised relationships

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural Paths</th>
<th>Relationships</th>
<th>Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>$\beta_{21}$</td>
<td>MSIF $\rightarrow$ Customer Performance</td>
<td>(\beta)</td>
</tr>
<tr>
<td>H2</td>
<td>$\beta_{31}$</td>
<td>MSIF $\rightarrow$ Market Performance</td>
<td>(\beta)</td>
</tr>
<tr>
<td>H3</td>
<td>$\beta_{41}$</td>
<td>MSIF $\rightarrow$ Financial Performance</td>
<td>(\beta)</td>
</tr>
<tr>
<td>H6</td>
<td>$\gamma_{11}$</td>
<td>Resource Dependence Asymmetry $\rightarrow$ MSIF</td>
<td>(-)</td>
</tr>
<tr>
<td>H7</td>
<td>$\gamma_{12}$</td>
<td>Trust $\rightarrow$ MSIF</td>
<td>(+)</td>
</tr>
<tr>
<td>H8</td>
<td>$\gamma_{13}$</td>
<td>Joint Rewards $\rightarrow$ MSIF</td>
<td>(+)</td>
</tr>
<tr>
<td>H9</td>
<td>$\gamma_{14}$</td>
<td>Compatible Goals $\rightarrow$ MSIF</td>
<td>(+)</td>
</tr>
</tbody>
</table>

Control paths:
- Customer Performance $\rightarrow$ Financial Performance: NA
- Market Performance $\rightarrow$ Financial Performance: NA
- Turnover $\rightarrow$ Customer Performance: NA
- Turnover $\rightarrow$ Market Performance: NA
- Turnover $\rightarrow$ Financial Performance: NA

Figure 19: Main effect model paths

All indicants on the right hand side of the model (i.e., antecedents) were measured using total disaggregation where the original items were used as indicators of each construct (Baumgartner and Homburg 1996), with the exception of Resource Dependence Asymmetry. Resource Dependence Asymmetry presented a difference in scores respondents provided for the dependence of Marketing on sales resources and on dependence of Sales on marketing resources. The average scores were then
calculated based on extraction of the scores provided for Marketing and for Sales for all three items measuring resource dependence.

An error variance was also calculated for the control variable – Turnover, as it was measured by a single item measure. The calculation of error variances allows for taking into consideration measurement error even at the level of single indicators. The calculation was based on the formula (e.g., Bagozzi and Heatherton 1994; Baumgartner and Homburg 1996) - \([(1-\alpha) \times \delta^2]\) where \(\alpha\) is the score of alpha coefficient and \(\delta\), the variance of the indicator. As per the recommendation of Jöreskog and Sörbom (1993) and previous practice in the literature, the alpha coefficient for single indicant measures (e.g., Turnover) was assumed at the level of 0.7. In instances where \(\alpha\) values could be calculated (e.g., MSIF, Competitive Environment and Technological Turbulence) error variances were based on original values for \(\alpha\). Standard deviations were calculated using SPSS for all constructs. Having calculated error variances using such a procedure, the variance in single indicators originating from sources other than the actual underlying concept was effectively constrained. Table 51 below summarises the values.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Coefficient alpha [(\alpha)]</th>
<th>Standard deviation [(\delta)]</th>
<th>Error variances ([(1-\alpha) \times \delta^2])</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSIF</td>
<td>0.931</td>
<td>1.52</td>
<td>0.16</td>
</tr>
<tr>
<td>Resource Dependence Asymmetry</td>
<td>0.7</td>
<td>2.49</td>
<td>1.86</td>
</tr>
<tr>
<td>Competitive Environment</td>
<td>0.803</td>
<td>1.34</td>
<td>0.35</td>
</tr>
<tr>
<td>Technological Turbulence</td>
<td>0.832</td>
<td>1.35</td>
<td>0.31</td>
</tr>
<tr>
<td>Turnover</td>
<td>0.7</td>
<td>2.50</td>
<td>1.88</td>
</tr>
</tbody>
</table>

In addition, as per recommendation in the literature, and for the purposes of decreasing model complexity (Ping 1995) further composite scores pertaining to constructs applied in the quadratic (i.e., MSIF) and multiplicative terms (Competitive Environment and Technological Turbulence) were created. The interaction terms were created using Ping’s (1995) multiplicative interactive approach and were thus kept in their aggregate form in further analysis. In order to avoid the risk of multicollinearity connected to interactive terms leading to structural coefficient biases (Little et al. 2006) all interaction terms were orthogonalised (see previously). Firstly, H1-3 imply a non-linear (curvilinear) relationship between MSIF and performance.
outcomes (Figure 19). Curvilinearity occurs when the functional relationship between dependent (i.e., performance outcomes) and independent variable(s) (MSIF) is negatively accelerated (concave) or positively accelerated (convex) (Ganzach 1997). In order to perform the analytical procedure, the quadratic term was created for MSIF. The term was created by calculating the square of MSIF in SPSS. Secondly, based on H4a-4c and H5a-5c (Figure 20) that argue that the shape of the form of quadratic relationship between MSIF² and performance outcomes changes under Competitor Environment and Technological Turbulence, a product term was created by multiplying MSIF² with these environmental constructs.

Error variance for interaction terms, were calculated on the following basis: (variable1 Loading estimate)² *variable2 Error variance) + (variable2 Loading estimate)² *variable1 Error variance) + (variable1 Error variance + variable2 Error variance). In the case of MSIFxENVCOMP it would be: (Loading estimate MSIF)² ENVCOMP Error variance) + (Loading estimate ENVCOMP)² MSIF Error variance) + (MSIF Error variance+ ENVCOMP Error variance). Error values for the interaction terms are presented in Table 52.

Table 52: Loading estimates, error variances and interaction term error variances

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Loading estimate variable 1</th>
<th>Loading estimate variable 2</th>
<th>Error variance variable1</th>
<th>Error variance variable2</th>
<th>Interaction term error variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSIFxENVCOMP</td>
<td>0.965</td>
<td>0.904</td>
<td>0.16</td>
<td>0.183</td>
<td>0.24</td>
</tr>
<tr>
<td>MSIFxENVTECH</td>
<td>0.965</td>
<td>0.911</td>
<td>0.16</td>
<td>0.171</td>
<td>0.23</td>
</tr>
<tr>
<td>MSIF²</td>
<td>0.965</td>
<td>0.965</td>
<td>0.16</td>
<td>0.16</td>
<td>0.13</td>
</tr>
<tr>
<td>MSIF²xENVCOMP</td>
<td>0.93</td>
<td>0.964</td>
<td>0.13</td>
<td>0.183</td>
<td>0.29</td>
</tr>
<tr>
<td>MSIF²xENVTECH</td>
<td>0.93</td>
<td>0.963</td>
<td>0.13</td>
<td>0.171</td>
<td>0.29</td>
</tr>
</tbody>
</table>

Following this, paths between each single indicator construct and its respective dimension were fixed to ‘1’. In instances where constructs have more than one dimension, the link with the indicator that was considered to best reflect the construct was chosen to be ‘fixed’ to ‘1’ (Diamantopoulos and Siguaw 2000).
6.4.2 Main effect model results

Considering the signs of parameters, the results of the right hand side of structural model indicate that all signs of associations between constructs are in accordance to previously hypothesised relationships. The results for structural model assessment are presented in Table 53 below.

Table 53: Structural model assessment

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Parameters</th>
<th>Unstd. Coefficient</th>
<th>Std. Coefficient</th>
<th>T-value¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>MSF² Customer Performance</td>
<td>0.03</td>
<td>0.06</td>
<td>0.9</td>
</tr>
<tr>
<td>H2</td>
<td>MSF² Market Performance</td>
<td>-0.05</td>
<td>-0.12</td>
<td>-1.71</td>
</tr>
<tr>
<td>H3</td>
<td>MSF² Financial Performance</td>
<td>0.04</td>
<td>0.09</td>
<td>1.43</td>
</tr>
<tr>
<td>H6</td>
<td>Resource Dependence Asymmetry MSF</td>
<td>-0.11</td>
<td>-0.25</td>
<td>-2.16</td>
</tr>
<tr>
<td>H7</td>
<td>Trust MSF</td>
<td>0.31</td>
<td>0.28</td>
<td>2.28</td>
</tr>
<tr>
<td>H8</td>
<td>Joint Rewards MSF</td>
<td>0.25</td>
<td>0.45</td>
<td>3.27</td>
</tr>
<tr>
<td>H9</td>
<td>Compatible Goals MSF</td>
<td>0.16</td>
<td>0.24</td>
<td>1.96</td>
</tr>
<tr>
<td>Controls</td>
<td>Parameters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover Customer Performance</td>
<td>-0.02</td>
<td>-0.04</td>
<td>-0.48</td>
<td></td>
</tr>
<tr>
<td>Turnover Market Performance</td>
<td>0.05</td>
<td>0.11</td>
<td>1.26</td>
<td></td>
</tr>
<tr>
<td>Turnover Financial Performance</td>
<td>0.00</td>
<td>-0.01</td>
<td>-0.13</td>
<td></td>
</tr>
<tr>
<td>MSF Customer Performance</td>
<td>0.29</td>
<td>0.27</td>
<td>3.32</td>
<td></td>
</tr>
<tr>
<td>MSF Market Performance</td>
<td>0.23</td>
<td>0.20</td>
<td>2.48</td>
<td></td>
</tr>
<tr>
<td>MSF Financial Performance</td>
<td>0.06</td>
<td>0.05</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>Customer Performance Financial Performance</td>
<td>-0.06</td>
<td>-0.06</td>
<td>-0.93</td>
<td></td>
</tr>
<tr>
<td>Market Performance Financial Performance</td>
<td>0.53</td>
<td>0.55</td>
<td>7.45</td>
<td></td>
</tr>
</tbody>
</table>

Modification indices:

<table>
<thead>
<tr>
<th>χ²</th>
<th>df</th>
<th>χ²/df</th>
<th>p-val</th>
<th>RMSEA</th>
<th>GFI</th>
<th>CFI</th>
<th>NNFI</th>
<th>St.RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>294.251</td>
<td>226</td>
<td>1.3</td>
<td>0.002</td>
<td>0.037</td>
<td>0.9</td>
<td>0.983</td>
<td>0.98</td>
<td>0.046</td>
</tr>
</tbody>
</table>

¹ critical t-values are 1.645 and 2.325 for p <0.05 and p <0.01 respectively – one-tailed t-test values due to one-directional hypothesised relationships

The results indicate that MSIF² is significantly and negatively related to Market Performance (t-value = -1.71; p < 0.05) leading to acceptance of H1. The acceptance of H1 leads to the conclusion that MSIF has a non-linear relationship with Market Performance, and the negative sign of parameter implies that both low and high levels of MSIF are associated with inferior Market Performance, whereas moderate levels of MSIF are associated with superior Market Performance. This suggests that market performance requires more than just a higher level of MSIF. It actually implies that investing in MSIF represents an opportunity cost and might be drawing on resources that could be used more wisely elsewhere. No support was found for either H2 or H3 indicating that the relationship between MSIF and
Customer and Financial Performance is not non-linear. In fact, the results of the lower level controls indicate a strong linear relationship between MSIF and Customer Performance. On the other hand, the impact on Financial Performance is achieved indirectly through Market Performance with a very strong positive relationship. Indeed, despite the non-significant relationship between Customer and Financial Performance, a total of 20% of Financial Performance change is explained by the model.

In terms of the strength of relationships, the strongest determinant of MSIF is Joint Marketing and Sales rewards structure, with a positive relationship that implies that the more the rewards of M&S are joined together the higher the MSIF will be. This relationship has a path coefficient of 0.25 a t-value of -3.27. Therefore, by increasing the ‘jointness’ of rewards between M&S; that is, by making M&S enjoy rewards from cooperating with each other, managers would be able to increase interface flexibility levels between the two. As far as Resource Dependence Asymmetry is concerned, the results imply a negative relationship with MSIF (coefficient of -0.11, t-value of 2.16). This indicates that differences in the level of resource dependence between M&S departments will have a negative effect on their interface flexibility regardless of the direction of imbalance in dependence. This represents an important indication for managers wishing to improve the ability of M&S to flexibly manage their resources by balancing dependence on resources between the two departments. Moving on to Trust and Compatible Goals, hypothesis 7 and 9 also received support in the main effect model (coefficient 0.31; t-value of 1.859 and 0.16; t-value of 1.934 respectively). By achieving more compatibility in marketing and sales goals managers can push for more interface flexibility between two departments. Also, trust seems to play an important role in increasing interface flexibility. The more they are convinced of each other’s trustworthiness within the relationship, the more positive an effect it will have on interface flexibility between the two.

Finally, the structural model accounts for the additional effect of turnover as an indicator of firm size, which has been previously proven to have an effect on development of successful relationship strategy (Perrien and Ricard 1995). Although Turnover was not included as a main effect, some literature (e.g., Yuan et al. 2010) comments made on the model from academics suggesting that inclusion of turnover
as a control variable. The reason behind this is that it was suggested that Turnover may potentially change the influence of main effects. Hence, it was included as a part of the model and added to test in the proposed model (Doney and Cannon 1997). Control variables are defined as components that are included in analysis with the purpose of finding out whether there are additional explanations for phenomena under investigation, additional to those represented by variables reflecting main effects (Spector et al. 2000; Becker 2005). If Turnover proves to significantly affect dependent variables it will have to be considered for inclusion in the main effect model. The value of t-tests indicate that none of the relationships with control variables exert any biasing effect strong enough to alter any of constructs representing the main effect. Having confirmed such a scenario, the risk of increased Type I and Type II errors is excluded (Becker 2005). Considering the only slight differences in results of the model including and excluding the control variable, the control variable can be ruled out as an additional or potential explanation for the main effect model (Becker 2005).

6.4.3 Assessment of the moderating relationships

In this section, for purposes of decreasing model complexity (Ping 1995), further composite scores of items pertaining to certain constructs were created by averaging items to form composites to be used in assessment of the structural model. These constructs were Competitive Environment and Technological Turbulence for further application in multiplicative terms as per recommendations in the literature. Both of these constructs were used for creating interaction terms using Ping’s (1995) multiplicative interactive approach and were thus kept in their aggregate form in further analysis. In order to avoid the risk of multicollinearity connected to interactive terms leading to structural coefficient biases (Little et al. 2006) all interaction terms were orthogonalised (see previously).
Figure 20: Moderating Effects of Competitive Environment and Technological Turbulence on MSIF\(^2\): Performance relationships
In order to ensure model parsimony (Aiken and West 1991) and in line with steps undertaken in previous literature (Cadogan et al. 2009), all lower level interactions were also created and included in the model as control variables (Figure 20). According to Ganzach (1997) inclusion of non-hypothesised interaction effects reduces probability of Type I and Type II errors and hence all interaction terms should be included even if not suggested by theory. The full list of all interaction terms is created can be found in Table 52.

Hence, the analysis strategy undertaken was as follows:

\[
\text{Performance outcomes (i.e., Market, Customer and Financial)} = \gamma_1 MSIF + \gamma_4 MSIF^2 + \gamma_7 MSIF^2 \times ENVCOMP + \gamma_{10} MSIF^2 \times ENVTECH + \gamma_{13} ENVCOMP + \gamma_{16} MSIF \times ENVCOMP + \delta_1 \\
+ \gamma_{19} ENVTECH + \gamma_{22} MSIF \times ENVTECH + \delta_1 + \text{Controls}
\]

where \( \gamma_i \) represents estimates of slopes and \( \delta_1 \) residual variance (Aiken and West 1991).

In order to test the model of quadratic and interaction terms, two steps were undertaken. First, the constrained model was tested where only main effects were estimated freely, and interaction terms were fixed to zero. In the second run, the unconstrained model was tested where all parameters were freely estimated. The main interest at this point was to evaluate the reduction in chi-square from the constrained model to the unconstrained model. If the reduction is significant it can be concluded that the unconstrained model fits the data better than the constrained models, thus implying that the unconstrained model should be further used to assess the hypotheses (Cadogan et al. 2009). Table 54 below shows the change in chi-square for the constrained and unconstrained models.

**Table 54: Chi-square change in constrained vs. unconstrained model**

<table>
<thead>
<tr>
<th></th>
<th>( \chi^2 )</th>
<th>df</th>
<th>( \chi^2/df )</th>
<th>p-val</th>
<th>RMSEA</th>
<th>GFI</th>
<th>CFI</th>
<th>NNFI</th>
<th>St.RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully constrained</td>
<td>447.00</td>
<td>334</td>
<td>1.34</td>
<td>0.00</td>
<td>0.039</td>
<td>0.88</td>
<td>0.975</td>
<td>0.968</td>
<td>0.06</td>
</tr>
<tr>
<td>Unconstrained</td>
<td>415.23</td>
<td>316</td>
<td>1.31</td>
<td>0.00</td>
<td>0.037</td>
<td>0.89</td>
<td>0.977</td>
<td>0.968</td>
<td>0.05</td>
</tr>
</tbody>
</table>
The significant reduction in chi-square statistics (at the level of \( p=0.022^8 \)) and improvement in the standardised RMR value for the unconstrained model in comparison with the constrained model indicates that the unconstrained model fits the data better. In addition, the unconstrained model returns a satisfactory fit statistic and is further used for assessing the hypotheses. As far as fit statistics are concerned, all values are above or extremely close to threshold values of > 0.9 indicating a good model fit. Furthermore, the value of standardised RMR falls within recommended threshold of ≤ 0.05 (Diamantopoulos and Siguaw 2000).

As far as the results are concerned, \( \text{MSIF}^2 \times \text{Technological Turbulence} \) is negatively and significantly (\( t\)-value: -1.92; \( p < 0.05 \)) related to Market Performance implying that magnitude of curvilinear relationship between \( \text{MSIF}^2 \) and Market Performance becomes greater as technological turbulence in the market increases. Figure 22 represents this relationship diagrammatically. What diagram in Figure 22 implies is that with low levels of Technological Turbulence, the positive relationship between MSIF and Market Performance decreases in magnitude as MSIF levels increase. This will happen until so the called 'sweet spot' (Mantrala et al. 2007) is reached, signifying an optimal level of MSIF. Once the optimal level of MSIF is reached market performance is maximised and the relationship between MSIF and Market Performance is zero. MSIF levels higher than those of the 'sweet spot' are connected with a decrease in Market Performance. This relationship will become stronger as levels of MSIF increase. In another instance, where levels of technological turbulence are high, this relationship between MSIF and Market Performance becomes steeper and more prominent. Therefore, under low levels of Technological Turbulence a more rapid rise in Market Performance will occur with an increase in MSIF and under high level of Technological Turbulence, a company’s market performance will experience a more rapid decline as levels of MSIF continue to increase. As far as Competitive Environment is concerned, it has no effect on the form of the relationship between MSIF and Market Performance.

As far as the relationship with Customer and Financial Performance is concerned, the non-significant curvilinear and moderating relationships prohibit from concluding

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8 Calculations based on the stats tool package provided by Gaskin (2012)
that the degree of MSIF: Customer (and Financial) Performance relationship changes its form regardless of the degree of Technological Turbulence or competitor environment. It seems that, so far as Customer Performance is concerned, customers enjoy high levels of MSIF at any point and that there is no reason why customers would find a company’s MSIF negative in any circumstance. In respect of Financial Performance, a note should be made here regarding lower level interactions and non-hypothesised paths. Even though a curvilinear relationship between MSIF and Financial Performance is absent from the model, as Table 55 indicates, there is an interesting relationship between linear MSIF and Financial Performance in two environmental context.

Table 55: Curvilinear and moderating model statistics

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Parameters</th>
<th>Unstd. Coefficient</th>
<th>Std. Coefficient</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>MSIF² → Customer Performance</td>
<td>0.03</td>
<td>0.07</td>
<td>0.98</td>
</tr>
<tr>
<td>H2</td>
<td>MSIF² → Market Performance</td>
<td>-0.07</td>
<td>-0.12</td>
<td>-1.67</td>
</tr>
<tr>
<td>H3</td>
<td>MSIF² → Financial Performance</td>
<td>0.04</td>
<td>0.09</td>
<td>1.37</td>
</tr>
<tr>
<td>H4a</td>
<td>MSIF² x Competitive Environment → Customer Performance</td>
<td>0.02</td>
<td>0.05</td>
<td>0.51</td>
</tr>
<tr>
<td>H4b</td>
<td>MSIF² x Competitive Environment → Market Performance</td>
<td>0.04</td>
<td>0.08</td>
<td>0.81</td>
</tr>
<tr>
<td>H4c</td>
<td>MSIF² x Competitive Environment → Financial Performance</td>
<td>0.02</td>
<td>0.07</td>
<td>0.81</td>
</tr>
<tr>
<td>H5a</td>
<td>MSIF² x Technological Turbulence → Customer Performance</td>
<td>-0.03</td>
<td>-0.11</td>
<td>-1.13</td>
</tr>
<tr>
<td>H5b</td>
<td>MSIF² x Technological Turbulence → Market Performance</td>
<td>-0.08</td>
<td>-0.18</td>
<td>-1.92</td>
</tr>
<tr>
<td>H5c</td>
<td>MSIF² x Technological Turbulence → Financial Performance</td>
<td>0.00</td>
<td>-0.01</td>
<td>-0.17</td>
</tr>
<tr>
<td>H6</td>
<td>Resource Dependence Asymmetry → MSIF</td>
<td>-0.16</td>
<td>-0.23</td>
<td>-2.98</td>
</tr>
<tr>
<td>H7</td>
<td>Trust → MSIF</td>
<td>0.26</td>
<td>0.26</td>
<td>1.76</td>
</tr>
<tr>
<td>H8</td>
<td>Joint Rewards → MSIF</td>
<td>0.23</td>
<td>0.14</td>
<td>2.85</td>
</tr>
<tr>
<td>H9</td>
<td>Compatible Goals → MSIF</td>
<td>0.17</td>
<td>0.16</td>
<td>1.92</td>
</tr>
</tbody>
</table>

Controls Parameters

- Customer Performance → Financial Performance | -0.04 | -0.04 | -0.59
- Market Performance → Financial Performance | 0.40  | 0.54  | 7.57
- MSIF → Customer Performance | 0.09  | 0.14  | 1.93
- MSIF → Market Performance | 0.13  | 0.14  | 2.01
- MSIF → Financial Performance | 0.04  | 0.06  | 0.86
- Competitive Environment → Customer Performance | -0.22 | -0.26 | -2.18
- Competitive Environment → Market Performance | -0.09 | -0.07 | -0.71
- Competitive Environment → Financial Performance | -0.05 | -0.05 | -1.57
- MSIF x Competitive Environment → Customer Performance | -0.05 | -0.08 | -0.81
- MSIF x Competitive Environment → Market Performance | 0.05  | 0.07  | 0.67
- MSIF x Competitive Environment → Financial Performance | 0.14  | 0.26  | 3.14
- Technological Turbulence → Customer Performance | 0.13  | 0.15  | 1.18
- Technological Turbulence → Market Performance | 0.16  | 0.13  | 1.06
- Technological Turbulence → Financial Performance | 0.04  | 0.04  | 0.41
It seems that MSIF does, in fact, impact Financial Performance in certain circumstances. In instances of high Competitive Environment and high Technological Turbulence there is a direct impact of MSIF (through moderators) on Financial Performance as opposed to the previously established impact through Market Performance as a mediator. The signs of parameters make for interesting observations. Regarding Competitive Environment, the model implies that the higher the Competitive Environment, the more beneficial the impact of MSIF on Financial Performance will be. This is quite easy to understand as the company with higher abilities of flexible resource management between their M&S departments will benefit more financially in instances where fierce competition is faced. This would allow companies with greater MSIF to harness this advantage and take over the competition. The interesting part is the negative sign of the MSIF x Technological Turbulence parameter. One explanation may be that in instances of high Technological Turbulence, money would be better spent (and returned) if more is invested elsewhere, namely into the actual innovation (R&D) rather than in M&S. This would allow the company to follow the changes in technology in the market and stay on the top of the game.

The structural equations below serve the purpose of further assessing model output. Each equation gives several pieces of information. Four equations are included; i.e., equation 1 contains hypothesised antecedents to MSIF, followed by equations 2, 3 and 4 summarising the impacts of antecedents to the three performance outcomes.

Equation 1:

\[ \text{Flex} = 0.233 \times \text{Jr} + 0.258 \times \text{Trust} + 0.164 \times \text{Goals} - 0.159 \times \text{DepDiff}, \text{ Errorvar.} = 1.425, R^2 = 0.340 \]

Considering equation number 1, the relationship between MSIF and its antecedents is presented. Focusing on the first bit of information, this equation is implying is the impact of joint rewards on MSIF. The first number (0.233) is equivalent to the above reported coefficient, which indicates a relationship between joint rewards and MSIF. Beneath the coefficient is the standard error associated with this coefficient. This
indicates how accurately the coefficient has been estimated, which in this case amounts to 0.0825. Smaller values indicate better and more precise estimations. Finally, the third value, just below the standard error is the already reported t-value (2.855) indicating the significance of the coefficient above and is calculated by dividing the coefficient with its standard error (Diamantopoulos and Siguaw 2000). Going further to the right, the numbers in front of Trust, (Compatible) Goals and DepDiff (Resource Dependence Asymmetry) variables may be interpreted in the same manner. The equation also provides two more pieces of information, one is information associated with error variances and second is information on R². Firstly, error variance values contain three numbers. As in the example of Joint Rewards, the first number indicates the value of the coefficient connected to error variances, the difference being that error variances represent actual residual terms in the equation; that is, the variance in focal constructs not associated with any of the other equation constructs. Following the same manner of interpretation as for Joint Rewards, error variance in this case has a coefficient of 1.425 and a standard error of 0.155. In this case, the error term is significant with a t-value of 9.207⁹ at the 0.1% level. The significance of t-value in this instance implies that residual variance in MSIF is estimated accurately by the structural model (Diamantopoulos and Siguaw 2000).

**Equation 2:**

\[
\text{MPERF} = 0.133^{*}\text{MSIF} - 0.0875^{*}\text{EnvComp} + 0.161^{*}\text{EnvTech} + 0.0542^{*}\text{MSIFxEnvcomp} - 0.0252^{*}\text{MSIFxEnvTech} - 0.0677^{*}\text{MSIF}^2 + 0.0372^{*}\text{MSIF}^2x\text{EnvComp} - 0.0729^{*}\text{MSIF}^2x\text{EnvTech} + 0.0685^{*}\text{Turnover},
\]

Errorvar. = 1.732, R² = 0.0729

**Equation 3:**

\[
\text{CPERF} = 0.0904^{*}\text{MSIF} - 0.224^{*}\text{EnvComp} + 0.129^{*}\text{EnvTech} - 0.0466^{*}\text{MSIFxEnvcomp} + 0.066^{*}\text{MSIFxEnvTech} + 0.0278^{*}\text{MSIF}^2 + 0.0165^{*}\text{MSIF}^2x\text{EnvComp} - 0.0156^{*}\text{MSIF}^2x\text{EnvTech} - 0.0209^{*}\text{Turnover},
\]

Errorvar. = 0.859, R² = 0.086

⁹In this instance the significant t-values are as follows: 1.96 at 5% level, 2.576 at 1% level and 3.291 at 0.1% level. These values correspond to the significance levels of two-tailed tests as the directionality of error terms is not implied by the model.
Equation 4:

\[ F_{\text{PERF}} = 0.0341 \times MSIF + 0.402 \times MPERF - 0.0377 \times CPERF - 0.0476 \times \text{EnvComp} + 0.0404 \times \text{EnvTech} \]
\[ + 0.141 \times MSIF \times \text{EnvComp} - 0.128 \times MSIF \times \text{EnvTech} + 0.0354 \times MSIF^2 + 0.0238 \times MSIF^2 \times \text{EnvComp} \]
\[ - 0.0274 \times MSIF^2 \times \text{EnvTech} - 0.00548 \times \text{Turnover}, \text{Errorvar.} = 0.664, R^2 = 0.366 \]

where EnvComp represents Competitive Environment; EnvTech – Technological Turbulence; MPERF – Market Performance; CPERF – Customer Performance and FPERF – Financial Performance

Further inspection of equations 2, 3 and 4 show no issues with error variance (i.e., no negative error variance values) in any of the equations. The existence of negative error variances would imply an issue with the data as it is impossible for non-measured variables to contribute a negative amount of residual error to latent variable (Diamantopoulos and Siguaw 2000).

The final remarks regarding the equations consider R² values at the end of each of the equations. The value of R² indicates how much of variance in constructs (MSIF, CPERF, MPERF and FPERF) is accounted for by the structural model. What the equations imply is that more than 1/3 (34%) of MSIF is explained by the present model, whereas only 7.29% and 8.6% of Customer and Market Performance are explained by the model. Considering that prior literature has investigated and identified many other antecedents to Customer and Market Performance, (e.g., market based resources Hooley et al. (2005) such a small effect is not a surprise. A researcher should also ensure that these percentages of improvement are not neglected by managers, especially bearing in mind that any contribution in Market Performance that can be controlled by managers is welcomed. This is particularly important in view of the high impact of Market Performance on Financial Performance outcomes. Finally, the model was able to explain an excellent 36.6% of variance in Financial Performance. This is certainly a very important implication for managers.
6.4.4 Graphical representations of the quadratic and moderating relationships

To further explore inflexion points at which competitor and technological turbulence interactive effects become more positive or negative, the slopes of Market Performance on MSIF² were computed for any value of Technological Turbulence. To aid the interpretation of the findings presented in the previous section a diagram representing the curvilinear MSIF: Market Performance relationship (Figure 21) and curvilinear moderated relationship are presented below (Figure 22).

Firstly, the equation below represents the regression equation involving the curvilinear relationship between MSIF and Market Performance:

\[
Y (\text{Market Performance}) = \alpha + \beta_0 \text{MSIF} + \beta_1 \text{MSIF}^2 + \epsilon
\]

In this case \( \beta_0 = 0.14 \)
\( \beta_1 = -0.12 \)

**Figure 21: Graphical representation of the MSIF²: Market Performance relationship**

![Graphical representation of the MSIF²: Market Performance relationship](image)

Next, the equation below represents the regression equation involving the moderating impact of Technological Turbulence on the MSIF²: Market Performance relationship:

\[
Y (\text{Market Performance}) = \alpha + \beta_3 \text{MSIF} + \beta_4 \text{MSIF}^2 + \beta_2 \text{ENVTECH} + \beta_3 (\text{MSIF} \times \text{ENVTECH}) + \epsilon^{10}
\]

Where \( \alpha \) is constant; \( \beta_0 \) – unstandardized regression coefficient for MSCF; \( \beta_1 \) – unstandardised regression coefficient for MSIF²; \( \beta_2 \) – unstandardised regression coefficient for ENVTECH; \( \beta_3 \) – unstandardised regression coefficient for MSIFxENVTECH; \( \beta_4 \) – unstandardised regression coefficient for MSIF²xENVTECH and \( \epsilon \) random error.
In this case $\beta_0 = 0.14$
$\beta_1 = -0.12$
$\beta_2 = 0.16$
$\beta_3 = -0.05$

Figure 22: Graphical representation of the MSIF$^2$: Market Performance relationship under low and high Technological Turbulence

6.5 Chapter summary

In this chapter the model testing procedure was described in detail. The model testing led to several hypotheses being supported as well as rejection of certain hypotheses. In the first instance, the main effect model was tested after which tests of curvilinear and moderating relationships followed. The results showed that all the hypothesised antecedents to MSIF have an impact on MSIF. Therefore, all hypotheses pertaining to the left hand side of the model were accepted. So far as the right-hand side of the model is concerned, the results are somewhat mixed. The existence of a significant relationship between MSIF$^2$ and Market Performance led to rejection of previously established linear relationship. In respect of Customer Performance, the model implies a linear relationship with MSIF. Only one of the two environmental variables show an impact and hence, hypothesis support; i.e., Technological Turbulence. Competitive Environment had no effect on the relationship between MSIF and Customer or Market performance. Further inspection of lower level controls reveals an interesting finding. MSIF indeed impacts Financial
Performance through the moderating effects of both Competitive Environment and Technological Turbulence. This finding further supports the importance of MSIF for a company's performance.
Chapter 7: Discussion and Conclusions

In this, final chapter, the major findings of the research are summarised, implications for theory and practice are drawn, and reflections on the study’s key limitations are presented. The chapter concludes with proposed avenues for future research.

7.1 Discussions and theoretical Implications

A synchronised relationship between M&S is essential for harmonising their two complementary perspectives - Marketing’s strategic product perspective and Sales customer perspective. Both are necessary for balancing the needs of increasingly demanding customers with the company’s own objectives. However, despite the evidence, their relationship has constantly been reported as troubled, lacking in collaboration and generally out of balance. This is worrying considering that the extant empirical research indicates positive effects of M&S collaboration on business performance (Guenzi and Troilo 2007; Homburg and Jensen 2007; Le Meunier-FitzHugh and Piercy 2007a). Companies with aligned M&S departments are able to outperform their competitors, to excel in customer satisfaction and to experience 47% higher revenues than those lacking such alignment (Aberdeen Group 2010).

Recently, exploratory studies investigating the relationship indicated the ability and/or need of the two to adapt and to modify their plans; i.e., to be flexible as a critical determinant of successful responding to changing market conditions and customer requirements. However, a systematic analysis on what constitutes flexibility at the M&S interface is still lacking. The aim of this research was to address this gap and to provide insights on flexibility between these two strongly interlinked but often reported non-cooperative departments.

The present study of M&S interface flexibility in a business-to-business context makes several important contributions to theory. Most importantly, this is the first comprehensive and systematic research on flexibility in inter-departmental relationships. This research reveals, for the first time, what constitutes flexibility at the relational level of M&S, an area that has been cited crucial for success but which has not received in-depth analysis in the literature. Therefore, the first contribution of
this study can be divided in two sub-contributions: 1) the systematic approach and analysis of flexibility at the level of inter-departmental interfaces and 2) the focus on flexibility at the M&S interface.

7.1.1 Contribution to research on flexibility and M&S

By focusing on the M&S relationship, this study adds to very few studies investigating flexibility at the relational business level. In addition, this is the first study to investigate flexibility at the intra-organisational relational level. Extant research in flexibility in the intra-organisational context focuses on assessing team member’s (or employee) ability to perform different job roles (e.g., McComb et al. 2007) and assessing the level of achieved cross-functional collaboration (Cadogan et al. 2012), rather than examining intra-organisational flexibility per se.

Existing research in the area of flexibility in a business relationship context does not take into account explicitly the complementary contributions of all actors involved in the exchange process. This study fills this gap by recognising the importance of the role both M&S have in the flexible management of their resources via their coordinative processes and activities. The findings of the study reveal that M&S interface flexibility is a valuable asset and that if possessed by the two departments has a significant effect on business performance.

7.1.1.1 The definition of MSIF as a major contribution to theory

Organisations are often viewed as internalised structures for resource allocation (Williamson 1975) in which no function owns all of the necessary resources to complete their functional tasks and to make their contribution to the achievement of organisational goals (Ruekert and Walker 1987a). Such situations lead to inter-functional dependencies and the corresponding need for resource exchange between organisational functions. This was a starting point in defining MSIF. That is, resource interdependence as a central feature of the M&S relationship, and the consequent exchange of their tangible and intangible resources (e.g., Ruekert and Walker 1987a). Having in mind the focus on the exchange relationship between
interdependent M&S, the natural choice of the theory for underpinning the study was social exchange theory (SET). According to the SET view, exchange relations are, in fact, dynamic processes, where parties make continuous adaptations to each other’s needs for the sake of maintaining the attractiveness of their relationship (Newcomb et al. 1965). Specific attention here is paid to mutual adaptations of the resources at the disposal of M&S required to deal with changing business conditions. Rooted in SET’s expectations of reciprocity and mutual attractiveness (Blau 1964), adaptations in resources made by Marketing will be reciprocated by adaptations made by Sales and vice-versa (e.g., Gouldner 1960; Chen et al. 2009). Based on SET and research exploring business-to-business relational flexibility, MSIF is perceived as a form of cooperative M&S behaviour in which in order to capture market opportunities and to counter threats both continuously adapt to each other through resource modification (Newcomb et al. 1965). Based on the reciprocated adaptations expectations and the object of such adaptations (i.e., resources and their exchange), MSIF is defined as the “redefinition, reconfiguration, realignment and redeployment of resources between marketing and sales departments”. The qualitative research results confirmed the relevance of flexibility at the M&S interface and the validity and the appropriateness of the above definition. The interview findings revealed that MSIF involved M&S restructuring, realigning and redeploying time/people, knowledge/expertise and budgetary resources between each other in order to manage market exigencies and to deal with existing/potential performance issues.

Having accomplished the task of exploring and defining MSIF, this study offers a first, important contribution.

7.1.1.2 MSIF: Organisational performance link

Another contribution of this study is the development of a reliable and valid measure of MSIF that can be used in the testing of the model specified in Chapter 3 and then used subsequently by both researchers and practitioners. The findings of the empirical testing of the model in Chapter 6 inform theoretical knowledge on the non-linear and linear relationship between MSIF and organisational performance. Although flexibility is seen as a positive characteristic of the M&S relationship from the
perspective of creating loyal and satisfied customers, it is not always beneficial in terms of increasing market share and sales volume (consistent with H2). This is an important finding indicating that flexibility might entail a cost and that there might be a trade-off between flexibility and other strategic orientations practised by M&S (e.g., market orientation, innovativeness). Future research is now able to systematically investigate and delineate the required combination and trade-offs between differing strategic orientations by applying the MSIF measures developed in this study.

On the other hand, contrary to the hypothesised curvilinear relationship between MSIF and Customer and Financial performance, the hypotheses were not supported (inconsistent with H1 and H3, respectively). The results of the analysis of H1 suggest that customers will not experience too much M&S flexibility as an issue. Rather, the positive results of the controlled linear relationship between MSIF and Customer Performance indicate that investments in MSIF will lead to increase in Customer Performance. Customers will perceive the efforts of M&S as a signal of the company’s goodwill and repay in increased satisfaction and loyalty. MSIF will ensure that the voice of the customer is heard by both, as the differing world-views of the two are incorporated in the process of generating novel ideas and the joint efforts secured in the ideas implementation (Griffin and Hauser 1993; Diamantopoulos and Cadogan 1996; Cadogan et al. 2012). Creation of a satisfied base of customers will ensure the company’s products fall within the customers’ consideration set, it provides firms with the opportunity to lock-in satisfied customers and therefore to higher customer retention rate (Theoharakis and Hooley 2003). Marketing resources are better invested in keeping existing customers rather than attracting new ones as the acquisition costs for new customers’ acquirement is usually higher (Fornell and Wernerfelt 1987; 1988). Furthermore, investments in MSIF will ensure that customer needs are constantly re-evaluated and responses created to changes in customer needs, all likely leading to higher levels of customer satisfaction and subsequently loyalty (Capron and Hulland 1999; Sharma and Patterson 1999).

With regards to H3 (the curvilinear effect of MSIF on financial performance), the non-significant relationship may indicate the absence of a direct relationship between MSIF and company’s profit performance; rather, these indicators of financial performance are affected through a company’s market performance.
It is important to assert that the MSIF measures are transferrable across a variety of intra-organisational relationships and are not restricted to deployment in respect of the M&S relationship. Future studies may adjust the MSIF measure and apply it in, for example, studying flexibility in the Marketing and R&D relationship. As all organisational departments are dependent on each other for resources (to a smaller or greater extent) (Ruekert and Walker, 1987a) which are the central theme of interface flexibility measure, the application of MSIF in a different relationship context seems quite appropriate.

7.1.1.3 External environment as a moderator

The third theoretical contribution relates to the identification of external environment conditions that moderate the relationship between MSIF and performance outcomes. Although the external environment has been posited as an important condition to consider in investigating M&S interface (e.g., Rouziès et al. 2005), surprisingly, the impact of the external environment has never been formally hypothesised in the M&S literature. Coupled with the acknowledged importance of the external environment for flexibility research, this study investigates what effect the Competitive Environment and Technological Turbulence might have on the MSIF: performance link. Hypotheses 4 (a, b, c) and 5 (a, b, c) argue that the link between MSIF² and organisational performance are moderated by the level of Competitive Environment and Technological Turbulence the company faces. The results indicate support for one of these hypotheses, i.e. moderating role of Technological Turbulence on the MSIF²: Market Performance relationship. Although only one relationship was found significant, the result demonstrates that the external environment should not be neglected as a moderator and the future research could contribute further to our understanding of what might affect the success of M&S flexible resource management. In that sense, other conditions might be taken into consideration, such as, for example, customer demand or the regulatory environment.
7.1.1.4 Social constructed drivers of MSIF

This research provides a strong theoretical and empirical support for the role of social exchange theory in explaining flexibility between M&S departments. The current theoretical knowledge on how the social context in which M&S operate influences their flexibility in decision making and operations is therefore enriched. Socially constructed levers of MSIF are able to facilitate flexibility in the M&S inter-functional relationship. The results of this study are in line with the idea conveyed in the inter-organisational research literature that trust between parties involved in the relationship, i.e. M&S departments, and symmetry of their resource dependencies will positively influence flexibility between them. As hypothesised in the model, trust between M&S departments does provide positive value for MSIF, whereas, asymmetrical resource dependencies worked against MSIF. These results also support prior research which suggested that trust between partners in a business alliance and symmetrical resource dependencies positively influence flexibility in that relationship (Wang and Wei 2007).

Moreover, the results make a theoretical contribution to the knowledge by exploring the rules and norms that positively affect M&S’s flexible resource exchange, thus proving that incentive structures, in the form of joint rewards and the established compatible goals, have an effect on MSIF. Once M&S feel that engaging in MSIF will be worth their while, they will be more willing to act upon it. Compatible goals and joint rewards are shown to play a role as guidelines for the exchange, creating grounds for the development of “give and take” behaviours (Jap and Anderson 2003), and for bringing about a willingness to work together and to encourage resource sharing (Lawrence et al. 1967; Souder 1986; Clark 1991).

The investigation of aspects of the relational context as potential antecedents to MSIF extends our knowledge on flexibility in cross-functional relationships, showing how they can serve as means to foster stronger MSIF or, equally, hamper the development of MSIF.
7.2 Managerial Implications

The findings of this study indicate that companies need to work hard to instil and nourish flexibility between the two functions – to develop a relationship that embraces high levels of interface flexibility (MSIF). Insights into the importance of MSIF for the successful realisation of organisational performance also offer important managerial implications. First and foremost, the study provides an answer to the following questions:

1. *Does MSIF have an effect on performance and under what conditions?*

MSIF, i.e. the ability of M&S to redeploy, reallocate and reconfigure the resources possessed by the two functions, is proven important for customer and market performance. This is important as market performance is further proven to have a significant impact on financial performance (ROI). The main implication for managers is that the end game is no longer about aligning the two. Rather, the shift is towards viewing marketing and sales alignment as a dynamic process where both are willing and capable of responding to changing market conditions and customer requirements with the resources at their disposal. In order to deal with and/or to exploit existing and emerging opportunities and challenges presented by the trading environment, they are required to exhibit flexibility in the form of realignment and redeployment of their resources. Where an environmental challenge might be a threat to some organisations it is most certainly an opportunity for the flexible ones. Research reveals that successful companies are those whose capabilities are up to this challenge; effectively, those that are able to flexibly leverage their marketing and sales resources. A marketing director in the energy industry gave an example describing a situation where a short-term task force with representatives from both functions was put together to fix brand problems (i.e., under-achievements versus plan, and falling market share). The reciprocal flexibility worked to “pull things around” and to regain lost market share. A key account manager in a FMCG company also gave an insight into their marketing-sales interface flexibility by explaining their successful response to an anticipated competitor product launch. In this instance marketing resources were reallocated to work outside of normal product development and launch lead times to work with sales to launch a new product to...
counter the competitor launch: “…Marketing was concentrating on this product, Sales shifted all their efforts into selling this product and it was a big success….we managed to pull together as an organisation and the results were astonishing. So we all pulled together because we knew how important it was. So we had no other priorities except for that”.

In addition, the results also caution for the potential adverse effects of MSIF on market performance. It is very important for managers to be able to understand the trade-off between MSIF and an increase in sales volume and market share. At lower levels, M&S will achieve a lot in terms of sales volume and market share and will enhance success by exhibiting further flexibility. However, managers need to manage their flexibility in a way to maintain the levels of flexibility at a certain optimal ‘sweet spot’ and be cautious that marketing and sales do not cross the line, after which the MSIF is practised too often, it ultimately hurts market performance. In addition, companies operating at the lower levels and ‘sweet spot’ levels of MSIF will harness the positive effects of increased technological turbulence, such that as market experiences more turbulent technological changes, a unit increase in MSIF will result in a proportionally greater increase in market performance (Cadogan et al. 2009). More specifically, those firms whose M&S departments exhibit sub-optimal levels of flexibility will experience higher market performance gains in highly turbulent technological environments by further fostering MSIF. Therefore, it is crucial for managers to understand the exact position of MSIF on the slope; i.e., whether MSIF levels are at the upslope or the downslope in order to properly manage the relationship as the effects of further investments in MSIF and movement closer to ‘sweet spot’ on the slope can have dramatic effects on market performance, especially under conditions of high technological turbulence.

In addition to exploring the effects of MSIF on organisational performance, the study also provides a range of factors that can be used as guidelines to managers on how to foster such flexibility. The study identifies the factors that have the ability to increase MSIF (i.e., Trust, Joint Rewards and Compatible Goals) and those that can affect a decrease in levels of MSIF (i.e., Resource Dependence Differences). These results, in sum, provide an answer to the second question of the study and are covered in the next section.
2. What makes MSIF possible?

Resource Dependence Asymmetry

Resource dependence asymmetry between M&S was found to have detrimental consequences for MSIF. Thus, when there is an imbalance in the extent to which each function considers itself dependent on the other for resources, support and outputs, the company will experience a corresponding decrease in MSIF. The sales department’s dependence on marketing’s resources may be on the basis of new products, promotional material, consumer insights, technical assistance or information regarding product strategy. Correspondingly, the marketing department could be dependent on Sales for the time and expertise required for product launches, their input/expertise regarding customer needs, market intelligence and their assistance with developing promotional material. Achieving a balance between these dependencies proved extremely important for a company to develop beneficial levels of flexibility at the interface of the two functions.

Trust

The second discovery taps into the notion of trust shared between marketing and sales departments. The results indicate that building trust between the two has positive consequences for flexibility at their interface. In other words, if they are sincere in interfacing with each other, if they believe the information they provide to each other is reliable, if they fulfil the promises they make to each other and if they trust each other’s ability to carry out their work appropriately, the company will experience an increase in MSIF.

Joint Rewards

M&S joint rewards will have a positive and significant effect on the increase in MSIF. That is, if (1) M&S share equally in the rewards from a well implemented market strategy, (2) if they are both rewarded for the efforts they make to work together closely, (3) if collaboration between the two is a part of their M&S performance targets, (4) if M&S managers’ performance indicators are based on their joint performance, and (5) if a portion of M&S remuneration is based on their cross-functional collaboration, then the coordination flexibility between the two will,
correspondingly, increase. By inference, if the financial rewards of M&S personnel are based entirely and solely on their individual departmental targets, this will result in a decrease in Marketing’ and Sales’ ability to flexibly manage the resources at their disposal. It will hinder these two departments in their attempt to change the way their combined resources are allocated between them, preventing both functions from making use of these resources even if this is in the company’s best interests.

Compatible Goals

Compatibility of M&S goals is another factor important for achieving flexibility between the two functions. Goal compatibility can be accomplished if the objectives pursued by the marketing department are compatible with those of the sales department, and vice-versa. Only when their goals are synchronised and closely aligned will MSIF increase.

7.3 Research limitations and future research directions

As a first empirical study on flexibility at the level of the inter-departmental relationship, it does come with certain limitations which, at the same time, may provide avenues for future investigations. These are:

7.3.1. Alternative measurement and application of MSIF

The MSIF measure developed in this thesis provides an initial basis for future research into the effects of flexible resource management on organisational performance in other intra-functional contexts, such as the Marketing-R&D, Marketing-Finance and Sales-R&D interfaces. Therefore, future research may reveal whether the results of this study are generalisable to other interfaces that M&S have within a company. In addition, by applying a network analysis approach (Iacobucci 1996) flexibility between a variety of functional units could also be examined simultaneously.

However, a word of caution is required at this point as different approaches to measurement of MSIF are also another potential area for future investigation. The
multidisciplinary review of the literature presented in Chapter 2 revealed a variety of approaches to flexibility, and several approaches to relationship flexibility. Some of these approaches view flexibility as a multidimensional construct. For example, Sanchez (1995) differentiates between ‘resource flexibility’ - the flexibility inherent in product-creating resources – and ‘coordination flexibility’ - the flexibility in coordinating the use of such resources. Due to the specific focus on the relationship between M&S, this study did not take into consideration the flexibility inherent in M&S resources and how such (in)flexibility may affect the flexible exchange of such resources. It might be that MSIF is incapacitated by the rigidity of the M&S resources. On the other hand, the literature on resource constraints, for example, indicates how firms operating with lower resource levels than required for their operational activities are likely to be more successful in managing such resources and are able to bootstrap limited resources to achieve their goals (George 2005). Therefore, another fruitful research avenue may be the inclusion of the additional dimension of interface flexibility, i.e., M&S resource flexibility and testing for its connection to MSIF as develop in this thesis. In this case, resource based theory of the firm (e.g., Westhead et al. 2001) might serve as an additional theoretical background for exploring whether MSIF and organisational performance are contingent upon the flexibility of available resources and capabilities.

A distinction between responsive and proactive flexibility (e.g., Evans 1991) is beyond the scope of this thesis, but future research may differentiate between the two and test for potential differences in levels of MSIF exercised in these two instances. As stated by Gerwin (1993), flexibility serves dual purposes. Firstly, it is an adaptive response to environmental uncertainties and second, it can also be conceived as a proactive creation of uncertainties that are difficult for competitors to handle.

Furthermore, an alternative unit of analysis in researching MSIF could also reveal some important differences. For example, choosing specific stages of the strategy making process (e.g., planning versus implementation) as the unit of analysis could provide more detailed understanding at which phase of strategy making MSIF is required more and is more beneficial, as well as whether different types of resources are managed flexibly depending on the phase of strategy making process.
Closely connected to the future considerations of the alternative unit of analysis is another limitation of this study which refers to the explicit focus on these organisations with distinct M&S departments. This does not take into consideration a variety of M&S configurations in place in organisations (Homburg et al. 2008). Homburg et al. (2008)’s taxonomy of configurations of M&S reveals that in some configurations Marketing possess only a limited role, whereas in others the Marketing department has ultimate power, all of which can set up a different arena for flexibility to emerge and develop. Future research can, therefore, investigate the level of occurrence and the impact of flexibility on performance outcomes in each and every one of the five proposed M&S configurations proposed in this research.

7.3.2 Alternative methodological approaches to investigating MSIF

Certain limitations of this thesis fall within the area of methodology. First, information on the relationships and concepts in the model were collected via a cross-sectional research design. This essentially implies that inferences regarding relationships (which develop, and are enacted over time) were drawn at one point in time. While recent research shown the comparability of cross-sectional and longitudinal studies (Rindfleisch et al. 2008), this holds true under conditions of relatively large relationships between the constructs. For example, the curvilinear relationship between MSIF and market performance was relatively small and longitudinal study might help to fully understand the nature of this relationship and others in the model. A potential fruitful research opportunity is the longitudinal incidence study in which the researcher would be able to track the entire process of MSIF from identifying the opportunity to realisation, for example, and consequently discuss these events with key respondents from both M&S departments. The MSIF process might be composed of a series of ongoing activities that could be assessed and judged independently. Hence, such an approach might provide a more holistic understanding on the dynamics of MSIF.

Second, data for this research was obtained from M&S respondents whose knowledge was assessed to ensure that they are in a good position to report business performance and to evaluate independent variables. This type of business
performance measure has successfully been used in other studies and prior research proved these data acceptable (Churchill et al. 1985). Nevertheless, a self-reporting bias represents a potential threat to the study. However, no evidence of significant common method bias was found for this study. Regardless, the use of multiple informants and objective data collection could further increase the reliability and validity of respondents’ reports (e.g., Rindfleisch et al. 2008).

Third, the study’s sample is drawn from one geographical and cultural context. This limits the scope and generalisability of the research. A cross-national dataset(s) outside of UK is required to determine whether the relationships studied are omnipresent or are culturally or socioeconomically dependent.

7.3.3 Consideration of other antecedents and causal relationship directions

This study is no different from other social science studies with their limitations in terms of identifying additional variables that could (or should) have been included in the research. Given the rich body of research in the area of business relationships which combines perspectives from strategy, organisational psychology, employee behaviours to name a few, the list of potential variables is quite long. In addition, those that were already included could also have been investigated from alternative angles and in some circumstances, in more depth.

To start with, the following sections further build on the existing variables in this study.

This study draws on social exchange theory as the basis for explicating the dynamic exchange process between M&S and with interdependence and trust as the underlying basis for all exchange transactions (Emerson 1962; Skinner et al. 1992). With regards to M&S interdependence, this study focuses solely on the level of the dependence asymmetry, investigating how dependence (dis)balance affects their flexible behaviour. Even though the study results provide important implication for practitioners who wish to foster and maintain flexibility, they do not provide answers to the question of how dependence levels of different magnitudes affect such flexibility. Magnitude is defined as the total dependence in the exchange, the sum of interdependencies of the parties involved in the exchange relationship (Gundlach
and Cadotte 1994). Low magnitude interdependencies might not require much effort from the exchange parties, nor might they require high resource investments in the relationship (Anderson and Weitz 1989). As the magnitude of interdependence increases so does the sharing of resources and decision making between exchanges parties. Therefore, highly dependent M&S are expected to jointly pursue coordinative activities ( Zaheer and Venkatraman 1995; Lusch and Brown 1996) and to sacrifice their self-interest in favour of adaptive problem solving (Gundlach and Cadotte 1994; Rusbult et al. 1991). Hence, future research may address this issue and provide further guidelines for practitioners wishing to foster MSIF in their organisations.

Second, apart from interdependence, trust between M&S departments is another mechanism shown to foster MISF. However, within the organisational literature, trust is seen as both an antecedent and as an outcome of the successful collective action. Where this research sees trust as the facilitator of MSIF, it can also be argued that flexible behaviour leads to greater trust between the two. This is because MSIF is a form of cooperative behaviour and cooperation is found to positively influence trust, as successful project completion leads to greater trust between the workgroups (Anderson and Narus 1990). Therefore, future research may examine whether and how MSIF affects trust development between M&S. In addition, as the actual causal ordering is argued to depend on the position within the relationship “cycle” (Gundlach and Murphy 1993) and as social exchange relationships are seen as consisting of a series of interdependent transactions (Molm 2003), future research may also usefully investigate how stages in the relationship ‘cycle’ moderate the trust-MSIF relationship.

Scholars have also argued for the negative consequences of excessive trust between exchange parties (e.g., Souder 1988; Ayers et al. 1997). Reaching complete harmony might end up hurting M&S performance, as important information may be overlooked and M&S may avoid confronting each other and constructively challenging each other’s ideas, assumptions and solutions (Massey and Dawes 2007b; Rodríguez et al. 2007). Such a situation leads to missed opportunities as both (differing) perspectives are necessary in creating solutions with the highest
market potential. Future research may, therefore, investigate whether there is such a thing as too much trust between M&S and whether this affects MSIF.

Apart from interdependence and trust, researchers applying social exchange theory have also examined how variables such as relational commitment affect exchange relationships. For example, research shows that commitment predicts a wide variety of workplace outcomes (Mathieu and Zajac 1990). Committed employees believe that the exchange relationship they have with the exchange partner is highly important and are, therefore, more likely to exhibit creativeness or innovativeness, thus keeping an organisation competitive (Katz and Kahn 1978; Morgan and Hunt 1994). Relational embeddedness is another relational mechanism that has the ability to capture the dynamics of M&S behaviour and the department’s interaction (Lavie et al. 2012). Relational embeddedness relates to the level of social attachment and interpersonal ties in business relationships. Relational embeddedness fosters interaction amongst parties engaged in coordinated tasks (Heide and Miner 1992; McEvily and Marcus 2005). Hence it could be argued that relational embeddedness would guide M&S towards higher interface flexibility through sharing and developing knowledge and through increased realisation of value creation opportunities (Dhanaraj et al. 2004).

7.3.4 Consideration of additional moderators

In the flexibility literature there is a clear consensus with regards to the importance of the role environmental dynamism plays (e.g., Sanchez 1995; Grewal and Tansuhaj 2001; Anand and Ward 2004; Fredericks 2005). Underpinned by contingency theory, competitive intensity and technological turbulence are hypothesised and subsequently tested as important moderators to the MSIF: performance relationship. Accordingly, six hypotheses were put forward out of which only one was confirmed (H9a). Considering that the literature on strategic flexibility puts an emphasis on the contingency view, indicating that the required flexible responses depend on the level of environmental context (e.g., McKee et al. 1989; Kessler and Chakrabarti 1996; Garg et al. 2003), other environmental variables, both external and internal, may play an important role in shaping the MSIF: performance relationship. For one, Duncan
(1972) differentiates between market dynamism and complexity. Market related dynamism reflects the frequency of major market related changes (Duncan 1972). Under market dynamism the following changes are considered: changes in customer needs, technology and competitor activities (the latter two have already been addressed in this study). Environmental complexity, on the other hand, is defined as the number of external factors a company should consider when making a decision (Duncan 1972). The number of competitors with high differences among them is one example of environmental complexity (Klein et al. 1990). In addition, identifying internal contingencies that play a role in MSIF’s ability to predict performance would enrich our understanding on the concept. Project complexity is, for example, shown to positively moderate the relationship between team flexibility and effectiveness (McComb et al. 2007). Also, the innovation literature shows how positive managerial attitude towards change facilitates an internal climate that encourages innovation (Kohli and Jaworski 1990) and increases a firm’s willingness to innovate. Such a managerial attitude may also be beneficial for encouraging M&S to exhibit flexibility in leveraging their resources. Consistent with Young et al. (2003), this study proposes the relevance of managerial perceptions and decision-making frames and approaches in obstructing or encouraging flexibility.

Other internal factors that future research might consider are the level of formalisation of M&S processes and activities as well as the centralisation in decision making within the company. Formalisation in the marketing literature is defined as the way in which M&S interactions are structured by formal guidelines (Homburg et al. 2008). Ruekert and Walker (1987a) highlight the dangers of too much formalisation, where highly specified roles and procedures can limit the ability of a firm to deal effectively with a changing external environment. Centralisation refers to the extent to which decision-making power is concentrated at the top levels of the organisation (Caruana et al. 1998). According to Ambos and Schlegelmilch (2007) such concentrated decision making presents a constraint to reciprocity in exchange relations between actors on the same hierarchical level. Additionally, when operating in dynamic, uncertain environments, centralisation will hamper the organisation's ability to identify new market opportunities, to reallocate resources, to gain management commitment and to implement timely solutions (Caruana et al.
1998). Therefore, future research can take into consideration the following categories of variables and investigate how they moderate the MSIF: performance link: a) external environment (changes in customer needs, environmental complexity); b) internal environment (strategic positioning, formalisation/centralisation of M&S activities, senior management support to MSIF). Further assessment of internal and external environmental factors would help determine the varying effects of these different factors on the MSIF: performance link.

7.4 Concluding remarks

In summary, this study makes a contribution to both theory and practice and adds to both the M&S and flexibility literatures by developing and providing insights into inter-functional relational flexibility as a basis for improving business performance. The empirical evidence provides support for the MSIF: performance causal link. Specifically, M&S flexibility has been shown to have a linear positive effect with Customer Performance (i.e., customer satisfaction and loyalty) and an inverted U relationship with sales growth and market share. In addition, drawn from the main theoretical underpinning of the study - social exchange theory - several variables have been shown to have a positive influence on MSIF: Trust between M&S departments, their Joint Rewards and Compatible Goals, and one variable with a negative influence; i.e., M&S Resource Dependence Asymmetry. It was also found that MSIF's impact on market share will be contingent upon the Technological Turbulence under which firms operate. Thus, this study has found evidence in support of the use of social exchange and contingency theories as theoretical underpinnings of research examining inter-functional relational flexibility.

This study acknowledges its (inevitable) limitations in terms of variables taken into consideration and in executing the study. Hence, even though a number of hypothesised relationships were confirmed, this study should be regarded as a preliminary study on inter-functional relational flexibility. It is incumbent on future research to address the above-mentioned study limitations, to replicate the research model in different relational settings, and to provide a more complete understanding.
of the causes and effects of MSIF by examining the new ideas and concepts suggested in this chapter.

Overall, this doctoral thesis has shown that the M&S interface is not only about the alignment of the two, but also about viewing their alignment as a dynamic process where both are willing and capable of responding to changing market conditions and to changing customer requirements with the same or fewer joint resources at their disposal. Guided by this idea, it is hoped that this study will indeed stimulate further work in this highly important area of M&S relationship.
Appendices

Appendix 1: Data collection procedure

Appendix 1.1: Cover letter – Pilot study

[Respondent's Name]
[Company Name]
[Date]

Dear [Respondent's Name],

Research Project: The Marketing and Sales Interface in UK Firms

Thank you very much for agreeing to participate in my research on marketing and sales relationships in UK firms. We are acutely aware that this request represents a significant demand on your time, but your participation could really make a difference between the success and the failure of this project and of my PhD as well.

As I mentioned earlier, this is an important nationwide study with the purpose of investigating how, in the face of a turbulent trading environment, Marketing and Sales can best capitalise on their relationship in order to achieve optimal success in the market (e.g. sales, market share, profits). Let me stress that there are no right or wrong answers, it is your opinions that are very important to us.

In return for your valuable input I would be pleased to offer you a managerial summary of the key findings. If you would like to receive a copy, please include your email address on the last page of the questionnaire in the space provided.

Please be assured that any information you provide will be treated in absolute confidence; at no time will the company or any participating individual be identified in the results. The data to be published from this survey will appear only in aggregate form; no individual responses will at any time be made available to anyone other than my PhD supervisors (see below) and myself. In addition, to ensure personal anonymity of the questionnaires, when returned they will not bear the name of the individual respondent.

Once you have completed the questionnaire, I should be grateful if you could return it in the enclosed prepaid, pre-addressed envelope. As a good response rate is so critical to the study’s success and absolutely essential for the completion of my PhD, I will be sending reminders to non-respondents. Guidance for completion are included in the questionnaire before each set of questions, but please do not hesitate to contact me if you have any difficulties in completing the questionnaire. Once again, thank you very much for agreeing to help.

Yours sincerely,

Miss Milena Micevski  
PhD Candidate  
Tel. 01509 228804  
m.micevski@lboro.ac.uk

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Dr John W. Cadogan  
Professor of Marketing  
Tel: 01509 228846  
j.w.cadogan@lboro.ac.uk
Appendix 1.2: Follow-up letter – Pilot study

[Respondent's Name]
[Company Name]
[Date]

Dear [Respondent's Name],

Research Project: The Marketing and Sales Interface in UK Firms

Further to my letter dated [DATE], please find enclosed the Loughborough University Business School questionnaire titled “The Marketing & Sales Interface in UK Companies”. As explained in my earlier correspondence, this questionnaire is the basis for a study on how, in the face of a turbulent trading environment, Marketing and Sales can best capitalise on their relationship in order to achieve optimal success in the market (e.g. sales, market share, profits). Let me stress that there are no right or wrong answers; it is your opinions that are very important to us.

I would be most grateful if you could help with my project by completing the questionnaire and returning it in the enclosed prepaid, pre-addressed envelope. I am very aware that this request represents a significant demand on your time, but your participation could really make a difference between the success and the failure of the project and of my PhD as well. In a bid to encourage you to respond to my plea and in recognition of your generosity, I will send you, at your request, a managerial summary of the study’s key findings.

Furthermore, please let me assure you that the information collected will be treated in the strictest confidence; at no time will a company or any participating individual be identified in the results. The data to be published from this survey will appear only in an aggregate form. No individual responses will at any time be made available to anyone other than my supervisors and me. Please be advised also that the results of this survey will be used for academic purposes only and are completely independent of any commercial entity. In addition, to ensure personal anonymity, questionnaires, when returned will not bear the name of the individual respondent.

Guidance notes for completion are included in the questionnaire before each set of questions, but please do not hesitate to contact me if you have any difficulties in completing the questionnaire. Once again, thank you very much for agreeing to help.

Yours sincerely,

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For more information on the project, please visit: www.lboro.ac.uk/sbe/msinterface
Appendix 1.3: Cover letter – Main survey

[Respondent's Name]  
[Company Name]  
[Date]

Dear [Respondent's Name],

Research Project: The Marketing and Sales Interface in UK Firms

Thank you very much for agreeing to participate in my research on marketing and sales relationships in UK firms. We are acutely aware that this request represents a significant demand on your time, but your participation could really make a difference between the success and the failure of this project and of my PhD as well.

As I mentioned earlier, this is an important nationwide study with the purpose of investigating how, in the face of a turbulent trading environment, Marketing and Sales can best capitalise on their relationship in order to achieve optimal success in the market (e.g. sales, market share, profits). Let me stress that there are no right or wrong answers, it is your opinions that are very important to us.

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For more information on the project, please visit: www.lboro.ac.uk/sbe/msinterface
Appendix 1.4: Follow-up letter – Main survey

[Respondent's Name]
[Company Name]
[Date]

Dear [Respondent's Name],

Research Project: The Marketing and Sales Interface in UK Firms

Further to my letter dated [DATE], please find enclosed the Loughborough University Business School questionnaire titled “The Marketing & Sales Interface in UK Companies”. As explained in my earlier correspondence, this questionnaire is the basis for a study on how, in the face of a turbulent trading environment, Marketing and Sales can best capitalise on their relationship in order to achieve optimal success in the market (e.g. sales, market share, profits). Let me stress that there are no right or wrong answers; it is your opinions that are very important to us.

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Furthermore, please let me assure you that the information collected will be treated in the strictest confidence; at no time will a company or any participating individual be identified in the results. The data to be published from this survey will appear only in an aggregate form. No individual responses will at any time be made available to anyone other than my supervisors and me. Please be advised also that the results of this survey will be used for academic purposes only and are completely independent of any commercial entity. In addition, to ensure personal anonymity, questionnaires, when returned will not bear the name of the individual respondent.

Guidance notes for completion are included in the questionnaire before each set of questions, but please do not hesitate to contact me if you have any difficulties in completing the questionnaire. Once again, thank you very much for agreeing to help.

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Appendix 1.5: Reminder card

I hope that you have received my questionnaire on “The Marketing & Sales Interface in UK Companies” a little bit more than a week ago. If you have already returned the questionnaire to me, I apologise for contacting you again and thank you for your time and effort.

If you have not yet had a chance to complete the questionnaire, I would like to take this opportunity to emphasize that I am still very keen to obtain your response, since your participation could really make a difference between the success and the failure of this project and of my PhD as well.

Let me remind you and re-assure you that all replies are kept in strict confidence according to the University data protection guidelines. If you did not receive a copy of the questionnaire, or have any questions regarding the study, please do not hesitate to contact me. I look forward to your response.

Kind regards,

Milena Micevski
Doctoral Candidate in Marketing
Loughborough University Business School. Ashby Road, Loughborough. Leics, LE11 3TU.
Fax: 01509 223961. Email: m.micevski@lboro.ac.uk
Appendix 1.6: Questionnaire

The Marketing & Sales Interface in UK Companies

RESEARCH PROJECT TEAM
www.lboro.ac.uk/sbe/msinterface

Miss Milena Micevski
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By answering the following questions you are providing invaluable insights that are critical for the accuracy and success of this research project.

Your participation is key to the success of the project. Even if you are not sure what the answer to a question is, please try to answer all questions. An approximate indication that reflects your opinion is more valuable to us than an incomplete questionnaire. But, if you strongly prefer to leave certain questions unanswered, we would still appreciate you returning your incomplete questionnaire to us.

We want to stress that there are no right or wrong answers to our questions. It is your own opinions that are important to us.

Any information you provide will be treated in ABSOLUTE CONFIDENCE; at no time will a company or any participating individual be identified in the results.

Once completed, please return this questionnaire in the enclosed pre-paid, pre-addressed envelope provided.

THANK YOU!
GUIDELINES FOR COMPLETING THE QUESTIONNAIRE

- This questionnaire should be answered by Sales or Marketing managers who have a good overview of the Sales-Marketing relationship within the company (e.g., sales director/manager, marketing director/manager, product manager, key account manager, business development manager). If you feel you are not the right person to respond to the questionnaire, we would be grateful if you could pass it to the colleague(s) you consider might be more appropriate to answer the questions.
- The purpose of this study is to collect information on the interface between marketing and sales departments. To stress again, all of your answers will remain confidential.
- The questions will ask you to either circle the appropriate number OR insert the appropriate number in the box provided.
- For clarity, the beginning of each new question will be marked by □
- At some points in the questionnaire you might feel that we are asking you similar questions. This is due to methodological issues and we would kindly ask you to fill them in even if they seem repetitive.

THANK YOU VERY MUCH FOR YOUR HELP

SECTION ONE

In answering the questions please refer to the scales provided and INSERT THE NUMBER in the box that best reflects your opinion.

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a very small extent</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Senior management in this company...

Commit resources to facilitate joint planning between marketing and sales

Encourage marketing and sales cross-functional teamwork

Ensure that the activities of marketing and sales are well coordinated

Ensure that marketing and sales goals are closely aligned

Push for stronger links between marketing and sales

Promote improved communication between marketing and sales

Provide opportunities for marketing and sales to know and understand each other

Provide enough opportunities for marketing and sales to socialise together

How much do the following statements describe your company....

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a very small extent</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

- There can be little action taken in this company until a boss approves a decision
- A person who wants to make his or her own decisions would be quickly discouraged
- Even small matters have to be referred to someone higher up for a final answer
- Any decision made has to have the boss’s approval
- A person will have to ask his/her boss before he/she does almost anything

Using the same scale, please insert the numbers that best describe the situation in your company.

Marketing and sales rely on clearly defined marketing and sales coordination processes (e.g. formal meetings, reports)

The processes for coordinating marketing and sales are verbally clarified to all staff

The company has invested a lot of time in developing guidelines for marketing-sales coordination

Marketing and sales stick to agreed guidelines when cooperating with each other (e.g. regular monthly meetings)

Processes for coordinating marketing and sales are documented in written form
We would like to ask you to give separate responses for BOTH sales and marketing departments in your company. Using the scales below, PLEASE CIRCLE THE NUMBERS that you consider best describe the situation in your company.

### The marketing department

1. Performs activities that are considered to be critical by top management
2. Is considered by management to be important
3. Tends to dominate in decision making
4. Is generally regarded as being influential
5. Receives resources that are crucial for achieving company performance

### The sales department...

---

#### Thinking about the information your company gathers, how much do the following scenarios hold true?

<table>
<thead>
<tr>
<th>Scenario</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too much information concerning our competitors is discarded before it reaches decision makers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Important information about our customers is often &quot;lost in the system&quot;</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Information about our competitors’ activities often reaches relevant personnel too late to be of any use</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Important information concerning market trends (regulation, technology) is often discarded as it makes its way along the communication chain</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

#### In this company we...

<table>
<thead>
<tr>
<th>Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generate a lot of information concerning trends in our markets (e.g., economic, regulatory, technological)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Constantly monitor our level of commitment to meeting customer needs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Are slow to detect fundamental shifts in our business environment (e.g., regulation, technology, economic)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Periodically review the likely effect of changes in our business environment (e.g., regulation, technology)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Generate a lot of information in order to understand the forces which influence our customers’ needs and preferences</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

#### How much do you agree/disagree with the following...

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our business strategies are driven by our beliefs about how we can create greater value for our customers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Our strategy for competitive advantage is based on our understanding of our customers’ needs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Our business objectives are driven primarily by customer satisfaction</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>We give close attention to after-sales service for our customers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

---

We understand that you work in either marketing or sales and may not have experience working in both departments. However, we would like you to give separate responses for BOTH sales and marketing departments in your company. Please answer the questions about people from the other department based on what you know about them and how you see them behave in their roles. We are interested in your perceptions here. There are no right or wrong answers. It is your opinions that are important to us.

Using the scales below, PLEASE INSERT NUMBERS IN THE BOXES LEFT AND RIGHT that you consider best describe the situation in your company.

### Marketing people

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify themselves with their department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Would consider it a personal insult when someone criticises their department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Think of their department’s successes as their own successes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Would feel embarrassed if anyone external to the department were to criticise their department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>When talking about their department, usually say “we” rather than “they”</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Are very interested in what others think about their department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Would consider it a personal compliment if someone were to praise their department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

### Sales people...

---

284
Please evaluate your company’s market behaviour on the basis of the following scenarios. **PLEASE CIRCLE THE ANSWER!**

**Relative to our key market competitors, the products/services we offer in our market(s) are:**

<table>
<thead>
<tr>
<th>Inventive</th>
<th>Less than competition</th>
<th>About the same</th>
<th>More than competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Novel</th>
<th>Less than competition</th>
<th>About the same</th>
<th>More than competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Creative</th>
<th>Less than competition</th>
<th>About the same</th>
<th>More than competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**In our company, we...**

Act opportunistically to shape the market environment in which we operate

Consistently try to position ourselves to meet emerging market demands

**Regarding our competitors...**

We typically adopt an “out-of-the-competitor” posture in our markets

We take hostile steps to achieve market-competitive goals

Our actions towards our competitors can be termed “aggressive”

**Marketing and Sales personnel in our company...**

Act independently to carry their ideas through to completion

Are self-directed in pursuit of market opportunities

Have the approval of management to conduct independent activities to develop new market opportunities

**Regarding our company...**

In our company top managers, in general, tend to invest in high-risk projects

This company shows a great deal of tolerance for high-risk projects

Our market strategy is characterised by a strong tendency to take risks

Taking a chance is part of our business strategy

**When it comes to our products/services:**

Our company has produced more new products/services for our markets than our key market competitors during the past five years

On average, each year we introduce more new products/services in our markets than our key market competitors

Industry experts would say that we are more prolific than our key market competitors when it comes to introducing new products/services in our markets

**Giving separate responses for BOTH marketing and sales departments in your company, what are your perceptions on...**

<table>
<thead>
<tr>
<th>Very low</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

**Marketing’s** | **Sales’...**

<table>
<thead>
<tr>
<th>Ability to work in a team</th>
<th>Communication skills</th>
<th>Negotiation skills</th>
<th>Persuasiveness and assertiveness</th>
<th>Conflict tolerance</th>
<th>Empathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

**Again, please give separate responses for BOTH marketing and sales departments in your company. Please rate:**

<table>
<thead>
<tr>
<th>Systematic/ analytical</th>
<th>Pragmatic/ intuitive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing has an approach that is:</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Sales has an approach that is:</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long-term</th>
<th>Short-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

| Marketing has a planning horizon that is: | 1 2 3 4 5 6 7 |
| Sales has a planning horizon that is: | 1 2 3 4 5 6 7 |
Next, please circle the numbers left and right that reflects how marketing and sales focus their planning efforts.

<table>
<thead>
<tr>
<th>Products</th>
<th>Customers</th>
<th>Products</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>Aligns volume and revenue plans primarily by:</td>
<td>1 2 3 4 5 6 7</td>
<td>Aligns performance evaluations primarily by:</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>Aligns strategy definition primarily by:</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Giving separate responses for BOTH marketing and sales departments in your company, please assess:

<table>
<thead>
<tr>
<th>Marketing’s knowledge</th>
<th>Sales’ knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all knowledgeable</td>
<td>Very knowledgeable</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>Knowledge about products</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>Knowledge about internal processes</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>Knowledge about customers</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>Knowledge about competitors</td>
</tr>
</tbody>
</table>

Again, we understand that you work in either marketing or sales. However, again we would ask you to give separate responses for BOTH departments. Your responses regarding people from the other department should be based on what you know about them and how you see them behave in their roles. Using the scales below PLEASE CIRCLE NUMBERS IN THE BOXES ON THE LEFT AND RIGHT that best reflect how much you disagree/agree with the following statements about sales and marketing:

<table>
<thead>
<tr>
<th>Marketing people...</th>
<th>Sales people...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Slightly disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Slightly disagree</td>
<td>Neutral</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

SECTION TWO

The marketing and sales departments contain many resources (e.g. people’s time, manpower, financial resources, informational resources, knowledge, expertise). PLEASE INSERT THE NUMBER that best reflects the extent to which you agree/disagree with the following statements, giving special consideration to the potential flow of resources that might happen from Marketing to Sales AND from Sales to Marketing:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Slightly disagree</th>
<th>Neutral</th>
<th>Slightly agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

Our marketing and sales functions are capable of redeploying resources possessed by one of them so they can be used in some way by the other function.

If our marketing or sales functional areas are in need of resources, then either one of the functions can tap into and use the resources possessed by the other functional area.

The resources at the disposal of the marketing and sales function are a collective pool of capabilities and assets whose relative deployment varies depending on the strategic or operational needs of the company.

The marketing and sales functions in our company can change the way their combined resources are allocated between them, allowing both functions to make use of these resources should this be necessary.

Both the marketing and sales functions can pull in resources that are being used by the other functional area if this is in the broader business interests.

NOTE: SOME OF THE QUESTIONS WITHIN THE FOLLOWING SECTION MAY SEEM REPEITIVE. THIS IS PURELY DUE TO METHODOLOGICAL REASONS! THANK YOU FOR YOUR UNDERSTANDING!
By circling the appropriate number, please assess the marketing department’s performance over the past year.

<table>
<thead>
<tr>
<th>Far exceeded expectations</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Extremely poor</td>
<td>Outstanding</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

If you were to take into consideration resources at the disposal of the marketing unit in your company (e.g. marketing people’s time, the information they hold, their expertise), in your opinion, how would you rate the following situations?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a very small extent</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Our marketing department...

- If underachieving versus plan, is capable of changing the way it deploys its resources within the marketing department in order to put things back on track.
- Is able to shift resources from one marketing activity to another if needed.
- Has at its disposal resources and capabilities that are a flexible pool of assets that, if found necessary, can be used in alternative ways within the marketing department.
- Is capable of redeploying its own resources if essential for fulfilling their strategic and/or operational requirements.

In order to accomplish its goals and responsibilities, how much does the marketing department require the following from sales:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a very small extent</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Sales resources? (e.g. sales personnel time/expertise that marketing may require for launching new products)

Sales support? (e.g. sales advice regarding customer needs, assistance with developing promotional material)

Sales outputs? (e.g. achieving sales targets, relationships with trade customers, securing distribution for new products)

The sales function might benefit from some of the marketing function’s resources (e.g. their expertise, the information they hold, time or people related resources). In this section, the focus is on the flow of resources from the marketing department to the sales department.

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a very small extent</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Our marketing department...

- Possesses the capability to change the way it organises marketing resources such that, should those resources be required by the sales department, they could be redeployed to sales.
- Has at its disposal resources that can easily be accessed by the sales function if this is in the broader business interest.
- Is able to reallocate some of their resources to support sales in instances where the sales department is in need of resources.
- Has the ability to change the way it uses the resources it possesses such that, should those resources be required by the sales department, the sales department could have access to them.
- Is capable of redeploying their resources across functional boundaries to the sales department if this were considered beneficial to the company.
- Depending on the firm’s strategic and operational requirements, marketing is able to shift their resources outside of their functional boundary to the sales function if needed.

Please consider the marketing department’s contribution to the company’s overall sales, profits, achievement of goals and other performance outcomes over the past 3 years. (PLEASE CIRCLE THE NUMBER FOR EACH RATING BELOW)

On average, the marketing department’s contribution to performance on those fronts over the past 3 years has been:

<table>
<thead>
<tr>
<th>Extremely weak</th>
<th>Very weak</th>
<th>Weak</th>
<th>Neither weak nor strong</th>
<th>Strong</th>
<th>Very strong</th>
<th>Extremely strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

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In order to accomplish its goals and responsibilities, how much does the sales department require the following from marketing:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a very small extent</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Marketing resources?** (e.g. promotional material or information regarding product strategy)

**Marketing support?** (e.g. technical assistance regarding products)

**Marketing outputs?** (e.g. new products, promotional material)

If you were to take into consideration resources at the disposal of the sales unit in your company (e.g. sales people’s time, the information they hold, their expertise), in your opinion, how much do the following situations hold true in your company?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a very small extent</th>
<th>To a small extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Our sales department:**
- If underachieving versus plan, is capable of changing the way it deploys its resources within the sales department in order to put things back on track.
- Is able to shift resources from one sales activity to another if needed.
- Is capable of redeploying its own resources if essential for fulfilling their strategic and/or operational requirements.
- Has at its disposal resources that are a flexible pool of assets that, if found necessary, can be used in alternative ways within the sales department.

The marketing function might benefit from some of the sales function’s resources (e.g. their expertise, the information they hold, time or people related resources or their budget). In this section, the focus is the flow of resources from the sales department to marketing department.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Slightly disagree</th>
<th>Neutral</th>
<th>Slightly agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Our sales department:**
- Has the ability to change the way it uses the resources it possess such that, should those resources be required by the marketing department, marketing could have access to them.
- Is capable of redeploying their resources across operational boundaries to the marketing department should this be considered beneficial to the company.
- Possess the capability to change the way they organise sales resources such that, should those resources be required by the marketing department, the marketing department could benefit from using them.
- Is able to reallocate some of their resources in order to support the marketing function in instances where marketing is in need of resources.
- Has at its disposal resources that can easily be accessed by marketing should it be considered to be in the broader business interest.
- Depending on the firm’s strategic and operational requirements, if needed, sales is able to shift its resources outside of its functional boundary to the marketing function.

SECTION 3

If you were to think about the environment in which you company operates, how would you rate the following?

**PLEASE CIRCLE THE ANSWERS**

**How quickly do the following factors in your environment change?**

<table>
<thead>
<tr>
<th>Competitors’ products and models</th>
<th>Very slowly</th>
<th>Very quickly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers’ preferences for products (and product features)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The manufacturing technology in the industry</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Competitors’ selling strategies</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>The new product technology in the industry</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Competitors’ promotion/advertising strategies</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

**Regarding the regulatory environment in which your company operates...**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Our regulatory environment is very challenging</td>
<td></td>
</tr>
<tr>
<td>Our regulatory environment is constantly changing</td>
<td></td>
</tr>
</tbody>
</table>
If you were to think about the environment within your firm, please rate how frequently the following internal aspects change in your company:

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Frequently</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work processes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Superiors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Evaluation criteria for marketing and sales employees</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Organisational structure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Business strategy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

SECTION FOUR
This section contains questions regarding your company’s performance. We are interested in your opinion regarding the questions that follow. Any information you provide will be treated in absolute confidence.

Please rate your...

<table>
<thead>
<tr>
<th>Area</th>
<th>Very satisfied</th>
<th>Neither satisfied or dissatisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with the company’s sales volume during the past 3 years</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Satisfaction with the company’s market share during the past 3 years</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Would you say your:

| Company’s average annual sales growth during the past 3 years compared to the industry average | 1   | 2   | 3   | 4   | 5   | 6   | 7 |

By circling the appropriate number, please assess the sales department’s performance over the past year.

<table>
<thead>
<tr>
<th>Well below expectations</th>
<th>Far exceeded expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Totally failed to achieve their targets

<table>
<thead>
<tr>
<th>Extremely poor</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

PLEASE CIRCLE THE NUMBERS that best reflect your opinions regarding the following questions:

How satisfied are you with the...

<table>
<thead>
<tr>
<th>Level of customer loyalty compared to competitors?</th>
<th>Very satisfied</th>
<th>Very dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels of customer satisfaction compared to last year</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Levels of customer loyalty compared to last year</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Please rate the following...

<table>
<thead>
<tr>
<th>Overall profit levels achieved last year compared to competitors</th>
<th>Far less than we expected</th>
<th>Much higher than we expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on investment last year compared to competitors</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Overall profit margins last year compared to competitors</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

SECTION FIVE
The section that follows contains questions regarding your working environment. We are interested in your responses and opinions concerning BOTH marketing and sales. Again, there is no right or wrong answer; your opinion is very important to us.

As a result of dynamic external and internal pressures (e.g. competition, opportunities and threats in the environment, company changes), sales and marketing personnel may sometimes feel unclear and uncertain about what is actually expected of them in their job roles.

Would you say that this scenario refers more to the marketing or sales department in your company?

<table>
<thead>
<tr>
<th>Refers more to marketing</th>
<th>The same</th>
<th>Refers more to sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

In your view to what extent would...

<table>
<thead>
<tr>
<th>Marketing people know exactly what is expected of them in their job role?</th>
<th>Not at all</th>
<th>To an extreme extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sales people know exactly what is expected of them in their job role?</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
We understand that you work in either marketing or sales department; however, please give separate responses for BOTH marketing and sales departments in your company. In respect of your answers regarding people from the other department, please base your answers on what you know about them and how you see them behave in their roles. Again, there are no right or wrong answers. It is your opinion that is very important to us. Please rate how untrue/true the following statements are.

**PLEASE CIRCLE THE APPROPRIATE NUMBERS**

<table>
<thead>
<tr>
<th></th>
<th>Marketing people</th>
<th>Sales people</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completely untrue</td>
<td>Completely true</td>
</tr>
<tr>
<td>Have clear, planned goals and objectives for their jobs</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Know that they have divided their time properly</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Know what their job responsibilities are</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Feel certain about how much authority they have on the job</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Have very clear explanations of what has to be done on the job</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Know exactly what is expected of them</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

Sometimes due to external or internal pressures and job dynamics, sales and marketing personnel may receive a wide variety of tasks. However, they may feel that these tasks are overwhelming because they just don’t have enough resources and capabilities to complete all of the tasks within a given time limit.

Would you say that this scenario refers more to the marketing or sales department in your company?

| Refers more to marketing | 1 2 3 4 5 6 7 | The same | 1 2 3 4 5 6 7 | Refers more to sales | 1 2 3 4 5 6 7 |

When a situation described above occurs, to what extent do...

| Marketing people feel that they are able to finish all their tasks in a given time frame? | 1 2 3 4 5 6 7 | Not at all | 1 2 3 4 5 6 7 | To an extreme extent | 1 2 3 4 5 6 7 |
| Sales people feel that they are able to finish all their tasks in a given time frame? | 1 2 3 4 5 6 7 | Not at all | 1 2 3 4 5 6 7 | To an extreme extent | 1 2 3 4 5 6 7 |

As in the previous section, we are asking you here to give separate responses for BOTH marketing and sales departments in your company. Again, in respect of your answers regarding people from the other department, please base your answers on what you know about them and how you see them behave in their roles. To what extent do the following describe your company? **PLEASE CIRCLE THE APPROPRIATE NUMBERS**

<table>
<thead>
<tr>
<th></th>
<th>Marketing people</th>
<th>Sales people</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Completely describe at all</td>
<td>Completely describe at an extreme extent</td>
</tr>
<tr>
<td>Are given enough time to do what is expected of them in their job</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Have too much work for one person to do</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Have too high performance standards for their job</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Have too much work to do everything well</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Are asked to do an amount of work that is far</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Never seem to have enough time to get everything done</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

Please consider the sales department’s contribution to the company’s overall sales, profits, achievement of goals and other performance outcomes over the past 3 years. **(PLEASE CIRCLE THE NUMBER FOR EACH RATING BELOW)**

On average, the Sales department’s contribution to performance on these fronts over the past 3 years has been:

<table>
<thead>
<tr>
<th></th>
<th>Extremely poor</th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither poor nor strong</th>
<th>Strong</th>
<th>Very strong</th>
<th>Extremely strong</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td></td>
<td>Extremely minor</td>
<td>Very minor</td>
<td>Minor</td>
<td>Neither minor nor significant</td>
<td>Quite significant</td>
<td>Significant</td>
<td>Extremely significant</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td></td>
<td>Extremely low</td>
<td>Very low</td>
<td>Low</td>
<td>Neither low nor high</td>
<td>High</td>
<td>Very high</td>
<td>Extremely high</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

YOU ARE ALMOST DONE! THANK YOU VERY MUCH FOR YOUR PARTICIPATION!
YOUR INSIGHTS ARE INVALUABLE TO US.

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Personnel in sales and marketing may sometimes feel they are receiving incompatible requests from the people they work with (e.g. customers, managers, colleagues from their own department or the other department). As a result they may feel they are being torn in multiple directions.

Would you say that this scenario refers more to the marketing or sales department in your company?

<table>
<thead>
<tr>
<th>Refers more to marketing</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>The same</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Refers more to sales</th>
</tr>
</thead>
</table>

To what extent would you say...

<table>
<thead>
<tr>
<th>Marketing people feel as if they are being pulled in multiple directions?</th>
<th>Not at all</th>
<th>To some extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Sales people feel as if they are being pulled in multiple directions?</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

We would, again, like to ask you to give separate responses for BOTH marketing and sales departments. How much do you disagree/agree with the following statements? In respect of your answers regarding people from the other department, please base your answers on what you know about them and how you see them behave in their roles. PLEASE INSERT THE APPROPRIATE NUMBERS

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Slightly disagree</th>
<th>Neutral</th>
<th>Slightly agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

...Marketing people

- Receive incompatible requests from the people they work with (e.g. each other, managers, customers)
- Receive assignments without having the manpower to complete them
- Have to ‘bend a rule’ or policy in order to carry out an assignment
- Have to do things that, in their opinion, should be done differently
- Work on unnecessary things
- Do things that are accepted by one person and not by others (e.g. managers, colleagues, customers)
- Receive an assignment without adequate resources and materials to execute it

Sales people...

FINAL SECTION

This final section is about your company. All the information you provide will be kept in strict confidence; at no time will the company or any participating individual be identified in the results.

What is your job title?

What is your main functional responsibility? (Please tick the box)

What is the hierarchical level of your role? (Please tick the box)

What is the length of your experience in working in (Please insert the appropriate number)

Please circle the option that refers to your company

What is the composition of the board of directors in your company? (Please circle the appropriate answer)

How long have you been with the company?

And how long within the current role?

Which industry does your firm operate in?

How many full-time staff are employed by your company in the UK?

Of these, how many work in the Sales or Marketing department?

What year was your company founded?
Approximately what percentage of your firm's sales is generated by: (TOTAL 100%)

<table>
<thead>
<tr>
<th>Physical goods</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services</td>
<td>%</td>
</tr>
<tr>
<td>Business-to-business goods</td>
<td>%</td>
</tr>
<tr>
<td>Consumer goods</td>
<td>%</td>
</tr>
</tbody>
</table>

Approximately, what was your average **ANNUAL** turnover last year? Amounts are in **million £**

- [ ] 10-20
- [ ] 21-50
- [ ] 51-75
- [ ] 76-125
- [ ] 126-250
- [ ] 251-500
- [ ] 501-1000
- [ ] >1000

On average, what was the annual return on sales (operating profit before tax) of your company over the last 3 years?

- [ ] negative
- [ ] 0% to <2%
- [ ] 2% to <4%
- [ ] 4% to <6%
- [ ] 6% to <8%
- [ ] 8% to <10%
- [ ] ≥ 10%

Regarding the answers you have provided...

<table>
<thead>
<tr>
<th>strongly disagree</th>
<th>1 2 3 4 5 6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a good overview of marketing and sales in our company</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I am competent to answer the above questions</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I have a good overview of the company's situation (e.g. performance, strategy, environment)</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>My job role qualifies me to answer questions about the sales and marketing interface in my company</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

Regarding yourself, how much do the following statements reflect you as a person? True *% False *%

<table>
<thead>
<tr>
<th>1 2 3 4 5 6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have never deliberately said something that hurt someone's feelings</td>
</tr>
<tr>
<td>I am always willing to admit when I make a mistake</td>
</tr>
<tr>
<td>I like to gossip at times</td>
</tr>
<tr>
<td>There have been occasions when I took advantage of someone</td>
</tr>
<tr>
<td>At times, I have really insisted on having things my own way</td>
</tr>
<tr>
<td>I sometimes try to get even rather than forgive and forget</td>
</tr>
</tbody>
</table>

**THIS CONCLUDES THE QUESTIONNAIRE!**

Thank you very much for your time and valuable contribution to the study.

To receive a copy of the final managerial report from the study, please enclose your business card along with the questionnaire in the **FREEPOST** envelope, OR enter your email address below*:

__________________________

(please use BLOCK CAPITALS)

*Alternatively, please feel free to email us your request for a report.

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Survey wave: P / M 1 / 2
Survey code: ____________
Questionnaire received: ___ / ___ / 20__
Appendix 2: Scatterplots for a Selected Number of Variables

Figure 22: Linearity assumption (MSIF and Trust)

Figure 23: Linearity & non-linearity assumption (MSIF and Market performance)
Figure 24: Linearity & non-linearity assumption (MSIF and Customer performance)

Figure 25: Linearity & non-linearity assumption (MSIF and Financial performance)
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