Cranfield University

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# Market Orientation, Customer Selectivity And Firm Performance

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# ABSTRACT

Market orientation is a well-known construct in the marketing literature. One reason for the extensive research on market orientation is that it is seen as the operationalization of the marketing concept itself.

Extant literature provides evidence supporting the link between market orientation and firm performance. However, most of the evidence which links market orientation with firm performance comes from studies carried out in the goods context. The few studies that have been done in the services context show either a weak link with firm performance or no link at all. Further, the studies that have been carried out in the services context have generally been limited to a single industry.

In this thesis, I explore the reasons as to why market orientation might be more strongly associated with firm performance in the goods context than in the services context. I suggest that one reason could be that services are by their very nature non-standardized, and that market orientation is aimed at satisfying all the customers. Therefore, market orientation may not be the dominant driver of firm performance in the services context, where it becomes very difficult to satisfy every single customer. In the goods context, however, market orientation will be a dominant driver of firm performance.

I also suggest another construct, namely customer selectivity, as a driver of firm performance in the services context. Customer selectivity, it is argued, is anchored in the customer relationship management (CRM) literature. Since services are by their nature heterogeneous, i.e. non-standardized, firms which are customer selective will do well in the services context.

However, one cannot exclude the possibility that, while market orientation might not be a good driver of firm performance in the services context, it might be an antecedent of

customer selectivity. Therefore I develop an alternative model in which market orientation is conceptualized as a cultural orientation, and thus acts as antecedent to customer selectivity, which then leads to firm performance.

To test the hypotheses which are developed in the study, I use a pre-existing scale for market orientation, and operationalize customer selectivity using existing items. All the hypotheses are tested on a multi-industry dataset. The first set of hypotheses, relating to the first model, is tested using regression analysis. The second set, relating to the alternative model, is tested using structural equation modelling.

The results are, broadly speaking, consistent with the hypotheses. It is seen that market orientation is a direct driver of firm performance in the goods context, while customer selectivity is a direct driver of firm performance in the services context. Similarly, it is also seen that market orientation is an antecedent to customer selectivity. This is consistent with the results obtained in the first model. However, it is also seen that in both models, while the first dimension of market orientation (customer orientation) is associated with firm performance according to the hypotheses derived in the thesis, the second dimension of market orientation (interfunctional coordination) is not associated with firm performance.

The study clarifies and delimits the role of market orientation as a direct driver of firm performance in all contexts, and suggests it leads to firm performance primarily in the goods context. Similarly, customer selectivity leads to firm performance primarily in the services context. However, the study also suggests that market orientation is an antecedent to customer selectivity in both contexts. In other worlds, market orientation plays a role in both the goods and services context, but differentially. Managerially, market orientation and customer selectivity are proposed as a pair of strategies that marketers can help their CEOs choose between or possibly combine depending on the goods-service mix that the firm offers.

# ACKNOWLEDGEMENTS

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# 1 Introduction

## 1.1 Overview

The principal research questions I ask and attempt to answer in my doctoral dissertation are: (a) Is market orientation a driver of firm performance in the services context as well as in the goods context[1]? (b) If market orientation is a driver of firm performance in the goods context only, could customer selectivity, a concept anchored in customer relationship management (CRM), be an alternative driver of firm performance in the services context? (c) If market orientation is a driver of firm performance in the goods context and if customer selectivity is a driver of firm performance in the services context, could market orientation be an antecedent to customer selectivity itself?

In this chapter, I summarize the research gaps I identified in the literatures on market orientation and CRM, as well as on market orientation's link with firm performance. I describe the research questions in some detail, and explain the logic undergirding the theoretical part of my research. I then outline my research methodology, briefly summarize some of the important results, and discuss the theoretical, empirical and managerial contributions of my research. I also list dissemination of my research. I believe that my research is theoretically fertile and managerially relevant (Brown 2005, MacInnis 2005, in Brown, Webster Jr., Steenkamp et al. 2005). All of these are covered in more detail in the subsequent chapters. This chapter thus attempts to provide a roadmap to the reader in order to more efficiently navigate the dissertation.

[1] I will define the phrases "goods context" and "service context" later.

## 1.2 Three Research Gaps and Corresponding Research Questions

My literature review of market orientation and customer relationship management (CRM) literature suggests that a research gap exists regarding the impact of these two drivers on firm performance in the goods versus services context. At a more abstract level, I believe that it is important to begin developing a theoretical framework which could establish a link between the hitherto independent market orientation and CRM streams of marketing. Finally, I believe there is a need to further explore the marketing concept that has underpinned the marketing paradigm in business management for a long time.

I put the above-mentioned research gaps into three categories. These turn into research questions for my dissertation, which I explore in subsequent chapters. These three research gaps and research questions which I discuss in sections 1.2.1, 1.2.2 and 1.2.3 below are developed theoretically in chapter 2 and 3, and tested empirically in chapters 4 and 5. Chapter 6 summarizes the key results, discusses my theoretical, empirical and managerial contributions, lists important limitations of my research and suggests avenues of further research.

### 1.2.1 Exploring the link between market orientation and firm performance

The first research gap I identified was in the area of market orientation and firm performance literature. Market orientation is a well-researched construct in marketing literature (for a review paper on market orientation and firm performance, see Kirca, Jayachandran and Bearden 2005; for other references, see Chapter 2). One reason for this interest in market orientation was the lineage of the construct. Market orientation, it was argued, not only stemmed from but also was the embodiment of the marketing concept (e.g. Kohli and Jaworski 1990). Another reason for the growth of interest was the increasing evidence that market orientation leads to firm performance (Kirca, Jayachandran and Bearden 2005).

At the same time, preliminary single-industry survey evidence suggests a weak, insignificant or even negative association between market orientation and firm performance in the services context (Bhuian 1997; Han, Kim and Srivastava 1998; Hong and Davies 1997; Sargeant and Mohamad 1999). This was, at the very least, intriguing: should we not expect, as Gray and Hooley (2002) point out, the association between market orientation and firm performance to be stronger in the services context, given the dependence of service firms on person-to-person interactions and relationships? At a minimum, the contrary evidence calls for a multi-industry survey-based study of firms in the services context.

More important than the above-mentioned empirical gap is the theoretical question: Should market orientation directly, i.e. without an intervening variable, lead to firm performance in the services context? Judging from the marketing literature on market orientation as discussed in the next chapter, it seems likely that marketing scholars have tended to assume that it should. Since this question has not been explicitly explored, one can only offer a tentative explanation of why this implicit assumption has been made in the marketing literature. The construct of market orientation stems from the marketing concept. The marketing concept has been held sacrosanct in marketing literature since 1950s, when it was first formulated and developed. It is possible that, for many decades subsequently, during which period marketing was seen as synonymous with the marketing of goods, many marketing scholars did not feel the need to question the efficacy of market orientation in the services context.

The sway of the marketing of goods template within the marketing paradigm was almost overwhelming during the period 1950s-1970s (for a review paper making this point, see Fisk, Brown and Bitner 1993). And yet services marketing managed to find its way into mainstream academic research, especially from the 1970s onwards. However, services marketing was pre-occupied initially by the need to establish itself as a separate area of marketing. Then, from the 1980s onwards, services marketing became absorbed with the much-researched area of service quality. The link between market orientation and firm performance was rarely questioned in the services context: it was assumed, as mentioned above, that the marketing concept, and thus market orientation, should directly lead to firm performance in all contexts. Thus Gray and Hooley's (2002) logic is thought provoking: market orientation should lead to even higher firm performance in the services context given the dependence of service firms on person-to-person interactions and relationships.

I begin my proposed logic by noting that as traditionally defined, both market orientation and the marketing concept on which it is based do not include the concept of customer selectivity; instead both implicitly seek to satisfy *all* customers. I then argue that market orientation should thus work best for the firm when its revenue derives mostly from the sale of goods rather than the sale of services (in other words, market orientation works best in the goods context but not in the services context). In the services context, i.e. when the firm[2] derives more of its revenue from the sale of services than the sale of goods, it is likely that the level of customization required to satisfy customers would be higher than in the goods context. Attempting to satisfy all the customers in the services context will incur an ever-increasing expenditure and at some point firm profitability will be significantly reduced, and then reversed. Market orientation, thus, may not be an effective driver of firm performance in the services context.

I operationalize the goods and services contexts in which a firm operates by measuring the proportion of revenue accruing from the sale of goods versus services to a firm. That is, I do not arbitrarily assign a firm into a goods or services context. This results

[2] By firm I mean a strategic business unit (SBU), in accordance with extant literature.

in some advantages for my research. It counters the criticism levelled by many critics that in today's world the line drawn between goods and services is not clear (Anderson, Fornell and Rust 1997). Empirically, it allows a relatively more extensive testing of the hypotheses by changing the threshold beyond which a firm is deemed to be placed in a goods or a services context, and then retesting the hypotheses.[3]

### 1.2.2 Exploring the link between customer selectivity and firm performance

The second research gap I identified is linked to the one described above. If market orientation is not the driver of firm performance in the services context, i.e. in a context where a firm derives most of its revenues from the sale of services, could customer selectivity be construed as an alternative driver of firm performance in such a case? I define customer selectivity as a firm's development of insight into its customer database, to understand differential customer value, so that it can make judicious allocation of resources to customers with differential actual and potential contribution margins, with a view to maximizing customer and firm profitability. And if customer selectivity is a potential driver of firm performance in such a context, as is argued shortly, is customer selectivity also a driver of firm performance in the goods context, i.e. in a context where the firm derives most of its revenues from the sale of goods? Thus, in my dissertation, I go beyond testing the relationship between customer selectivity and firm performance in an overall context, and relate customer selectivity to firm performance both in the services and goods contexts.

Why should customer selectivity be a driver of firm performance in the services context? The logic of this claim can be seen as the flip side of the logic that was mentioned above in the context of linking market orientation to firm performance.

[3] This will be clarified in the empirical section (Chapter 5). In simple words, we can test a hypothesis based on an arbitrary rule that firms which derive more than 50% of their revenue from the sale of services can be put in a service context. Then, this threshold can be changed to say 55% or 60%.

Earlier, it was claimed that market orientation might not work well when it is difficult and expensive to satisfy heterogeneous customer demand. It is now proposed that when the firm derives more of its revenue from the sale of services than the sale of goods, it is likely that the level of customization required to satisfy customers is higher than when it derives its revenue primarily from goods. Hence it becomes important for the firm to be more selective about customers regarding their profitability in such a scenario, rather than satisfying all of them. Thus, whereas market orientation, which aims to satisfy all, might not be the ideal driver of firm performance in the services context, customer selectivity should be a good driver of firm performance in the same context.

Therefore I propose that in the services context it is more likely that it will be expensive to serve all the customers to their satisfaction, and that satisfying customers through standardized offerings is, in general, more difficult. In such a scenario, firms would be well advised to be customer selective, i.e. allocate resources judiciously to their customers based on the marginal revenue the customers bring to the firm.

### 1.2.3 Exploring a competing model of market orientation as an antecedent of customer selectivity

In sections 1.2.1 and 1.2.2 above, the model undergirding my theoretical arguments suggests that both market orientation and customer selectivity are potential drivers of firm performance, but the link with firm performance depends on the goods versus services context, i.e. whether the firm derives more of its revenues from the sale of goods or services. However, it is possible to argue that market orientation may not be an alternative and parallel driver to customer selectivity but an antecedent to it. In other words, market orientation can be conceptualized as a firm’s cultural orientation that in turn drives customer selectivity. This would imply that market orientation does lead to firm performance but through the mediation of customer selectivity.

The nature of "orientation" in market orientation, despite much theoretical research, is still subject to considerable debate. In particular, it has been argued that the orientation of a firm is a cultural construct (Narver and Slater 1990). Thus, market orientation could be conceptualized as a cultural construct that drives customer selectivity practices of firms. Cultural antecedents to CRM constructs have been infrequently modelled in CRM literature (Jayachandran, Sharma, Kaufman et al. 2005; Ramani and Kumar 2008). Jayachandran, Sharma, Kaufman et al. (2005: 179) conceptualize and operationalize a construct labelled "customer relationship orientation". They anchor this construct (CRO) in the firm's overall culture, and claim it "guides the organization's attitude toward both CRM and the implementation of the necessary processes." Ramani and Kumar (2008) conceptualize and operationalize an interaction orientation. But in their model interaction orientation directly leads to relational and profit performance.

Whereas CRM literature has generally avoided discussion of organisational culture, organizational behaviour literature offers many studies, even paradigms, on organisational culture. In fact, there exists significant paradigmatic pluralism, verging on paradigmatic conflict. Thus contrary to the relative dearth of pre-existing research as indicated in the above two sections, I was motivated to explore the organizational culture literature in detail, and to conceptualize, delimit, and operationalize organizational culture with a view to setting up a workable and testable model. Confronted by a multiplicity of paradigms (e.g. in Meyerson and Martin 1987; Sanday 1979; Smircich 1983) I attempt to simplify the issue to advantage by proposing two "meta-paradigms" of culture – the constructivist and the empiricist - that subsume nearly all the major paradigms, and then selecting one of the two to further my research question.

## 1.3 Research Aim and Questions

The research aim of my PhD dissertation is to enhance our understanding of the impact of market orientation and customer selectivity on firm performance. This is further translated into specific research questions, which are listed as below.

1) Is market orientation a driver of firm performance when the firm derives more of its revenue from the sale of goods than the sale of services?

2) Is market orientation a driver of firm performance when the firm derives more of its revenue from the sale of services than the sale of goods?

3) Is customer selectivity a driver of firm performance when the firm derives more of its revenue from the sale of services than the sale of goods?

4) Is customer selectivity a driver of firm performance when the firm derives more of its revenue from the sale of goods than the sale of services?

5) Is market orientation an antecedent to customer selectivity?

## 1.4 Research Model

To address the research gaps and answer the research questions, I develop the following research models. Both the models (below) and the methodology (see Chapter 4 on methodology) are simple (Rust 2006) as I attempt to keep the focus on conceptual thinking (Staelin 2005, Webster 2005, in Brown, Webster Jr., Steenkamp et al. 2005) and relevance (Brown 2005 Sheth and Sisodia 2005, in Brown, Webster Jr., Steenkamp et al. 2005).

## Model I

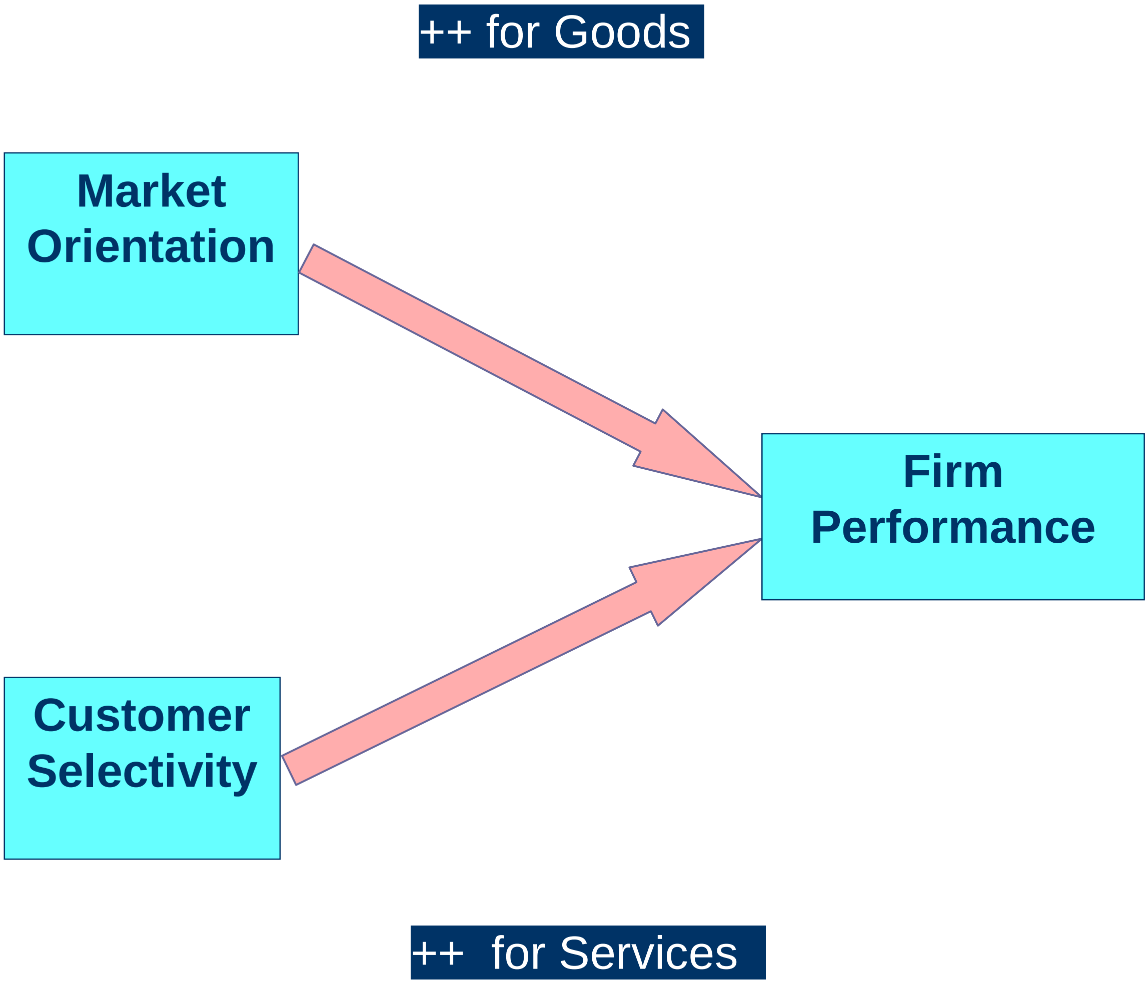


**Figure 1-1 Model I**

## Model II


**Figure 1-2 Model II**

## 1.5 Research Methodology

I test the hypotheses on a multi-industry secondary dataset.[4] The dataset consists of 211 firms in three European countries and across four industries: financial services, hospitality, online retailing and power utilities. The industries serve a large number of customers, intensively use various channels, and are marked by repeated interaction between firms and customers. The questionnaire was sent to 1015 companies; 211 usable responses were obtained. In more than 75% of cases, senior executives such as

[4] A paper entitled "The Customer Relationship Management Process: Its Measurement and Impact on Performance", based on the same dataset, was published in Journal of Marketing Research (2004) by Reinartz, Krafft and Hoyer. The focus of that paper was conceptualizing and operationalizing a formative 39-item scale for CRM, and linking it with firm performance. My thesis's primary focus is very different: I contrast customer selectivity, a reflective scale based on one dimension among many of CRM – and one which was not identified by Reinartz, Krafft and Hoyer (2004) - with market orientation. In examining the impact of these drivers on firm performance, I also distinguish goods from service contexts both conceptually and empirically. As a result, the theoretical and managerial implications of my dissertation are very different for those of Reinartz, Krafft and Hoyer (2004)

marketing or sales executives answered the questionnaires. After the first-wave dataset was collected, a second set of primary data from a different set of respondents was collected (95 valid responses were obtained). Analysis showed that Sample 1 and Sample 2 respondents did not vary on several descriptive variables (Reinartz, Krafft and Hoyer 2004).

## 1.6 Results

The results are presented at length in Chapter 5, and discussed again in the last chapter. I provide a very brief summary of some of the results here. In line with my hypotheses, I find that:

- Overall, that is without dividing the dataset into firms that derive more of their revenues from the sale of goods or services, customer selectivity is positively associated with firm performance, but market orientation is not.

- When only firms that derive more of their revenue from the sale of services than goods are included, customer selectivity remains positively associated with firm performance, while market orientation has no impact.

- However, when only firms that derive more of their revenue from the sale of goods are selected, market orientation is positively associated with firm performance, but customer selectivity is not.

- Market orientation is positively associated with customer selectivity (i.e. market orientation is an antecedent of customer selectivity), and customer selectivity is positively associated with firm performance, when the model (market orientation drives customer selectivity, and the latter drives firm performance) is estimated at the same time on the entire dataset.

The above results remain valid across a range of sensitivity analyses, including changing the construct items, changing the controls and changing the threshold value above which a firm is placed in a goods or a service context.

## 1.7 Contributions

### 1.7.1 Theoretical contributions

Firstly, I re-examine the marketing concept and its link with the CRM literature. Boulding, Staelin, Ehret et al. (2005) claim that CRM can be “traced back to the marketing concept” and “to the market orientation literature”. Others have assumed that CRM capability is equivalent to market orientation itself (Srinivasan and Moorman 2005). I explore the relationship between market orientation and CRM further. My results shed light on the link between the marketing concept and market orientation on the one hand, and CRM (as embodied by customer selectivity) on the other.

Formulated in the 1950s and discussed extensively till the 1990s, the marketing concept was and remains a revolutionary idea in the field of business management; it contributed in legitimizing the marketing field and in differentiating marketing from the “selling” orientation and strategy, of which Ford’s Model T had become the exemplar (Kirca, Jayachandran and Bearden 2005). Consequently, when market orientation scales were introduced in 1990, the emphasis on satisfying customers, with the attendant corollary that rewards would logically follow the implementation of market orientation, became well entrenched. It was thus not surprising that both the marketing concept and market orientation did not incorporate the emerging literature and developments in customer relationship management (CRM). Incidentally, the CRM field flourished only post-1990, in part due to widespread availability of inexpensive large data storage and analysis tools and skills.

In no way in my thesis do I argue against the validity or the utility of the marketing concept. My theoretical arguments and empirical analyses show that market orientation, and by implication the marketing concept, remains a key driver of firm profits. At the same time, the literature review in Chapter 2 also reveals that the marketing concept did not even have a unified agreed formulation, even though academics broadly understood what it meant, and even though now it might appear that it had an agreed formulation in the past. Further, my study attempts to highlight the need to integrate the developments in CRM into the marketing concept itself.

How is this integration to be done? Clearly, this is a challenge that cannot be met within the confines of the present study. However, one line of research is suggested. Essentially, CRM is about exchange and relationships (Reinartz, Krafft and Hoyer 2004) and marketing theorists agree that marketing is also essentially about exchange and relationships (Bagozzi 1974, 1975). In particular, Bagozzi (1974) discusses the concept of balance and quid pro quo in marketing, a concept that draws on the work on exchange by Blau (1964). This line of thinking is offered as a first step in allowing CRM to be theoretically anchored in marketing.

Secondly, my study has implications for a fast growing area within the marketing field: services marketing. Briefly, services marketing scholars began to ask in the 1960s as to whether goods and services were different. It was only in the 1980s that marketers came round to accepting that services differed from goods at least in four respects: intangibility, heterogeneity, inseparability and perishability (Fisk, Brown and Bitner, 1993). Recently, however, the debate has come full circle, as several services marketing scholars have claimed that the above four differences are a myth. Lovelock and Gummesson (2004) concluded, "The underlying premises of [the paradigm of services possessing unique characteristics] no longer bear up under examination." Vargo and Lusch (2004) noted, "We advocate that the strategy of differentiating services from goods should be abandoned."

In addition to these theoretical implications regarding the link between the marketing concept and market orientation on the one hand, and firm performance on the other, in the context of services and goods, the following additional implications may also be considered. In my empirical analyses, interfunctional coordination, a part of the market orientation construct, seems to have had no impact on firm performance. As per my review of the marketing concept, customer orientation relates to the marketing concept more closely than interfunctional coordination. I leave the link between interfunctional coordination for further study. Also, I have conceptualized and operationalized the concept of customer selectivity. Factor analysis led me to re-conceptualize the construct as bi-dimensional. I leave it for further study how many dimensions there are in the construct.

### 1.7.2 Empirical contributions

Empirically, I show support for the above hypotheses, based on a dataset which relates to multiple industries. All the results I obtain, with the exception of linking interfunctional coordination with firm performance, are significant at $p < 0.05$. Since my hypotheses are directional in nature, I could have used one-tailed significance tests, which would have doubled the level of significance achieved. However, to remain on the conservative side, I use two-tailed tests. I also use the standard control (sales, as a measure of company size – see O'Sullivan and Abela 2007) as well as industry sector (Reinartz, Krafft and Hoyer 2004) to control for the industry effect. And I subject my analyses to a sensitivity check, which I report in Chapter 5. This gives me some grounds to claim that it is likely that the results I obtain might be generalizable, although further studies are in order to validate my conclusions.

Secondly, as mentioned at the beginning of the chapter, previous studies had not found a strong link between market orientation and firm performance in the services context. My study is the largest multi-industry test of this relationship. I did not find any direct link between market orientation and firm performance, not only when only firms that derived more of their revenue from the sale of services were considered, but also when all the firms in the four service sectors were considered together. In this way, my results validate what Kirca, Jayachandran and Bearden (2005) indicated on the basis of single industry studies.

### 1.7.3 Managerial Contributions

It is generally assumed, within practitioner marketing literature, that market orientation is applicable across all contexts. Managers are thus encouraged to inculcate, adopt and internalize market orientation: As Kohli and Jaworski (1990) found, managers believe that rewards will follow if they follow this approach. My results indicate that market orientation is indeed positively associated with firm performance but only when more of the revenue is derived from the sale of goods. When more of the revenue is derived from the sale of services, customer selectivity seems to be a better driver of firm performance.

It is emphasized that the above conclusion needs to be interpreted in the context of the limitations of my study, which are discussed below, and in more detail in Chapter 6. If the results of my study are validated by further studies, managers are advised not to deploy market orientation as a direct marketing strategic tool in all the contexts. Equally, customer selectivity, derived from and anchored in CRM, should not be deployed across all contexts and industries. Based on the results obtained, customer selectivity will be a primary driver of firm performance when a firm derives more of the revenue from the sale of services. In fact, one reason why CRM systems have underperformed (Reinartz, Krafft and Hoyer 2004) might be the lack of discrimination in applying marketing strategy as mentioned above.

## 1.8 Limitations

Firstly, the customer selectivity scale is developed as a reflective scale, as will be explained later, primarily because of the nature of conceptualization of customer selectivity. While I originally envisioned a uni-dimensional scale, data analysis suggested that customer selectivity was a bi-dimensional scale. The results of my study are consistent with my final conceptualization, which is a bi-dimensional scale. However, further research is needed on both the conceptualization and operationalization of the construct of customer selectivity.

Secondly, I used a perceptual measure of a firm's economic performance, in line with extant literature. This implies the possibility of the presence of common-method bias. I attempt to limit the bias by designing the hypotheses carefully. I also run the required test. However, I welcome further research that attempts to replicate my hypotheses with non-perceptual outcome measures.

## 1.9 Dissemination

### 1.9.1 Academic Publications

- A draft paper based on my doctoral research was submitted to the Journal of Marketing, with Professor Hugh Wilson as a co-author.

- I am in the process of writing a second paper "Are services really different from goods? An empirical investigation", co-authoring with Professor Hugh Wilson, targeted at the Journal of Service Research. The paper is largely based on the empirical work of my dissertation and on the service versus goods distinction that I bring out in the last chapter of this dissertation.

### 1.9.2 Conferences, Seminars and Colloquiums

The research was sent to or presented at the following conferences, seminars and colloquiums:

- "Market Orientation and Customer Selectivity in Repeated Interaction Context", Doctoral Colloquium, Cranfield University School of Management (January 2008). The colloquium was attended by, amongst others, Professor Simon Knox of the School of Management.

- "Market Orientation, Customer Selectivity and Organizational Performance" Marketing Science Conference, Singapore, June 2007 (Paper accepted)

- "Market Orientation, Customer Selectivity and Organizational Performance" London Business School Transatlantic Doctoral Conference, London, United Kingdom, May 2007 (Presentation)

- "Market Orientation, Customer Selectivity and Organizational Performance" Marketing Research Seminar, INSEAD, February 2007

I also made a presentation at the Cranfield University School of Management Doctoral Colloquium on "Are services different from goods? An empirical examination" in July 2008.

## 1.10 Thesis Structure

The thesis is divided into six chapters. Chapter 2 explores the marketing concept, market orientation and CRM/customer selectivity, and sets up the propositions relating these two constructs with firm performance. Chapter 3 explores an alternative model, which stipulates market orientation as an antecedent of customer selectivity, which in turns leads to firm performance. Chapter 4 lays out the research methodology, discusses my epistemological and ontological positions, operationalizes the exogenous constructs and specifies the research models. Chapter 5 presents my empirical analysis. It also presents a sensitivity analysis of the results. Chapter 6 draws conclusions, discusses theoretical, empirical and managerial implications of the research, lists the major limitations of the study, and makes suggestions for further research.

# 2 Market Orientation and Customer Selectivity

## 2.1 Overview

Increasingly, emerging evidence in marketing literature shows that market orientation might not be positively associated with firm performance in the services context, even though the association might exist in the goods context. This chapter reviews the literature on market orientation, and the marketing concept from which market orientation has originated (Kohli and Jaworski 1990). It is argued that both the construct of market orientation and the marketing concept aim at satisfying *all* customers, rather than discriminating among them on the basis of their profitability. It is posited that customer selectivity is a more appropriate driver of firm performance than market orientation in a context where interactions between the firm and its customers are repeated. It is shown that customer selectivity is firmly anchored in the customer management relationship (CRM) literature. However, customer selectivity might not be a good driver of firm performance in the goods context. This chapter sets up specific propositions that are tested on a multi-industry dataset in Chapters 4 and 5. The next chapter sets up propositions based on an alternative model, which are also tested in Chapters 4 and 5.

One contribution of this chapter is the argument that market orientation and customer selectivity are useful strategies a firm's manager can choose from to increase profits, depending on the particular revenue context the firm is operating in. That both market orientation and customer relationship management should not be indiscriminately deployed could explain why, for example, billions of dollars might have been ill spent on inducting expensive CRM systems over the last decade (Reinartz, Krafft and Hoyer 2004). The argument is that CRM systems could have been deployed without matching the expense with the need for a CRM system.

## 2.2 The Marketing Concept

To argue that market orientation and customer selectivity are theoretically separate constructs I return to the marketing concept itself, because market orientation is nothing but the implementation of former (Kohli and Jaworski 1990; Han, Kim and Srivastava 1998; Noble, Sinha and Kumar 2002; Kirca, Jayachandran and Bearden 2005). Once I have traced the history of the marketing concept I move onto market orientation. This will also set the stage for arguing later that customer selectivity does not spring from the marketing concept.

Marketing papers explicating the marketing concept suggest that a business should aim to satisfy customers, and their needs should be at the heart of the business (Keith 1960; Kotler and Levy 1969; McNamara 1972). Drucker (1954), one of the earliest proponents of this view, declared that creating satisfied customers was the only valid definition of business purpose. Similarly, Keith (1960) claimed the consumer, not the company, to be "in the middle", and predicted that soon every activity of the corporation – from finance to sales to production – would be aimed at satisfying the needs and desires of the consumer. A decade later, Kotler and Levy (1969) reiterated the above by noting that the marketing concept held that the problem of all business firms, in an age of abundance, was to develop customer loyalties and satisfaction, and the key to this problem was to focus on the customer's needs. Much later, Webster (1988) concluded that all expressions of the marketing concept emphasized the interests of the customer as the firm's top priority, and that the product was a variable to be tailored and modified in response to changing customer needs, and not a given.

The satisfaction of customers' needs was a major - though not the only - element included in definitions of the marketing concept during the period from the 1950s to 1970s. Extant literature refers to the integration and coordination of all marketing functions, or to the important role of marketing in communicating market needs to all major corporate departments (Felton 1959), and to coordination across corporate functions (Bell and Emory 1971, Felton 1959, McNamara 1972). However, a detailed look at the extant literature related to the marketing concept allows us to make two observations: One, there was no discussion at all of customer selectivity. Two, the issue of profit making was problematic.

I shall first tackle the problematic issue of the relationship of profit making with the marketing concept - whether profits are an integral part of the concept, or a reward for implementing the concept. In one of the earliest formulations, the objective of the marketing concept was believed to be long-range corporate profits (Felton 1959). Bell and Emory (1971) argued that profit must be viewed as the residual that resulted from efficiently supplying consumer satisfactions in the marketplace. Webster (1988) concluded that financial goals were seen as results and rewards, not the fundamental purpose of the business. The purpose was customer satisfaction, and the reward was profit. And in one of the most significant findings, Kohli and Jaworski (1990) reported that their interviewees - 62 individuals, of whom 33 held marketing and 14 senior management positions - without exception viewed profitability as a *consequence* of market orientation rather than a part of it. It may be noted that Kohli and Jaworski (1990) specifically used the term market orientation to mean the implementation of the marketing concept.[5]

A few researchers, however, stressed the importance of profits in the marketing literature, though mostly to rescue marketing from the pernicious influences of the "sales mentality". Thus, Bell and Emory (1971) included what they called a "profit direction" in the definition of the marketing concept: they believed the marketing concept was intended to make money for the company by focusing attention on profit

[5] "In keeping with tradition (e.g. McCarthy and Perreault 1984, p.36, cited in Kohli and Jaworski 1990) I use the term "market orientation" to mean the implementation of the marketing concept. Hence, a market-oriented organization is one whose actions are consistent with the marketing concept." (Kohli and Jaworski 1990, p. 1)

*rather* than upon sales volume. Houston (1986) believed the marketing concept stated that an entity achieved its own exchange determined goals most efficiently through a thorough understanding of the costs associated with satisfying the needs of potential exchange partners, and then designing, producing and offering products in light of this understanding.

The above-mentioned tension between including in and excluding from the definition of the marketing concept the role of profits is best reflected in Narver and Slater (1990). They state, “We take a *compromise* position and hold that profitability, *though* conceptually closely related to market orientation, is appropriately perceived as an *objective* of a business” (p 22, italics mine). They attempted to include “profit emphasis” in the market orientation construct but abandoned it. Since then, hardly any study, to my knowledge, has incorporated profit emphasis as a dimension of the market orientation construct.

## 2.3 Market Orientation

Market orientation has been well researched in marketing, largely because it has been extensively argued to embody the marketing concept, as seen above. In this section, drawing on this extensive marketing orientation literature, I suggest three claims: One, there does not exist a consensus on the definition and operationalization of the construct of “orientation” (The construct of orientation will be reviewed in Chapter 3). Two, though researchers heavily rely on two widely cited scales, namely Jaworski and Kohli (1993) and Narver and Slater (1990), there is neither an agreed uni-dimensional scale of market orientation nor a second-order factor scale that has emerged out of them. Three, and most important for my research, market orientation has included neither profits nor customer selectivity in any operationalization since 1990, at least to my knowledge. I now take up the above claims in some detail.

Some controversy exists regarding the exact nature of an "orientation" and literature review suggests that three broad views have emerged over this issue. One group of scholars entrenched in the anthropological-cultural tradition views orientation as a quintessentially cultural construct (Deshpande and Webster Jr. 1989; Deshpande, Farley and Webster Jr. 1993; Narver and Slater 1990; Pettigrew 1970; Smircich 1983). The second group views orientation as a collation of activities carried out in a firm to achieve certain goals (Jaworski and Kohli 1993; Kohli and Jaworski 1990); while the third views orientations as strategic directions implemented by a firm to create the proper behaviours for the continuous superior performance of the business (Gatignon and Xuereb 1997). Importantly, Deshpande and Farley (1998) empirically examined three major market orientation scales and found that "all appear interchangeable, and that substantive conclusions reached with each apply generally to the others." They factor analyzed all the scale items and developed a more parsimonious, 10-item scale.

Thus, two highly-cited papers in the marketing literature, both published in 1990, differ somewhat on what they mean by market orientation despite attempting the same thing - conceptualizing and operationalizing market orientation, and linking it with firm performance (Kohli and Jaworski 1990; Narver and Slater 1990). Kohli and Jaworski (1990) define market orientation as a collation of some specific activities. Narver and Slater (1990), on the other hand, refer to market orientation as the organization culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers. Interestingly, the references cited by each paper support the other paper's conceptualization: Those at the end of Kohli and Jaworski (1990) include seminal papers on organizational culture (Pettigrew 1979; Smircich 1983); whereas those in Narver and Slater (1990) include only one mention on organizational culture, and that too published in a marketing journal (Deshpande and Webster Jr. 1989).

There are also some operationalization issues regarding market orientation, in addition to the conceptual confusion. Jaworski and Kohli (1993) measure coefficient alpha at the sub-construct level (generation, dissemination, response) but in table 3 of their paper, they examine the consequences of market orientation and operationalize the construct by averaging the *entire* 32-item scale, whose alpha is not mentioned. Similarly, Narver and Slater (1990) gather five somewhat conceptually different constructs under one head, discard two out of five because of low alphas, and use an average score of all the remaining items put together. Whether the customer and competitor orientations that are included in the market orientation scale by Narver and Slater (1990) are conceptually similar or even represent one construct, is not clear. At least one marketing paper has explicitly questioned whether a competitor orientation could be conceptually similar to customer orientation, and even suggested that the two are almost antithetical (Deshpande, Farley and Webster Jr. 1993). I will adhere to the observation by Deshpande, Farley and Webster Jr. (1993) and exclude competitor orientation from market orientation.

The two scales mentioned above are widely used; however, they are not the only ones that exist. To take an example of scale plurality, Kohli, Jaworski and Kumar (1993) ran 25 separate models, selected the 25$^{th}$ model, which performed marginally better, and which consisted of one factor for intelligence generation, one factor for dissemination and responsiveness, one factor for M sample, one factor for N sample and one general factor[6]. Researchers, over the years, have used both scales (Jaworski and Kohli 1993, Narver and Slater 1990) in different ways (Kirca, Jayachandran and Bearden 2005). No paper, to my knowledge, has used the model selected and suggested as the most efficient one by Kohli, Jaworski and Kumar (1993).

I will justify and clarify my interpretation of Kohli and Jaworski's (1990) and Jaworski and Kohli's (1993) "collation of activities" as contained within the concept of

6 Page 472; Note: M stands for sample of marketing managers, N for non-marketing managers

organizational culture in the next chapter. Many of the major theoreticians of organizational culture (e.g. Hatch 1993, Hofstede 1998, Schein 1985) view practices as part of the organizational culture concept. Also in the next chapter, I will examine the conception of "strategic orientation" that has been used in extant marketing literature (Gatignon and Xuereb 1997).

The above review of market orientation scales highlights some difficulties when market orientation is used as a construct in an empirical study. To begin with, some conceptual and operational problems remain despite the apparent popularity of these two scales and their wide usage. These problems include not only the difficulty of exact scale replication, - these scales can be as long as the 32-itemed Jaworski and Kohli (1993) one - but also the operational problem of whether or not the different parts of these scales load onto a second-order factor.

More importantly, no market orientation scale has to date included the profit dimension; this despite the fact that marketing concept theorists have discussed it and market orientation scholars have operationalized it in more than one way. Nor has any market orientation scale included the concept of customer selectivity, which was, in any case, not part of the marketing literature in the 1950s to 1970s. This is not surprising, as it was only in the 1990s that data on customers became widely available, the cost of acquiring such datasets came within the reach of the average company, and the skills to analyze such datasets became widespread as a result of increasingly user-friendly software.

Nothing illustrates the above point better than the example of market orientation in Kohli and Jaworski (1990). The authors relate the anecdote of a business doing a $100 million worth of sales and yet, when a customer that bought a mere $10,000 worth of services complained, the president of the company took action, and word spread inside the organization that they were a customer-oriented company.[7] In a customer selective company, this is unlikely to happen. In fact, near the end of the same paper, the authors note with some discomfort that to meet a customer's needs, one industrial products company customized small batches of products, which *resulted* in poor financial performance. This, again, is unlikely to happen in a customer selective company. So long as customers of a firm are more or less homogeneous in their needs and so long as products are open to standardization, market orientation should be a reasonable driver of organizational performance. This may not happen when the products are customized and when the interactions are repeated. In short, market orientation may not be an appropriate driver of firm performance in all business contexts.

### 2.3.1 Market Orientation and Firm Performance

Marketing orientation did not include within itself a profit emphasis; however, it itself was supposed to lead to profits. Since 1990, a large number of studies have attempted to show precisely this linkage (for a meta-analysis see Kirca, Jayachandran and Bearden 2005). Kirca, Jayachandran and Bearden (2005) found that the association between market orientation and firm performance was not only much weaker for service firms but also in some cases insignificant or even negative.

The service industries in the papers mentioned in the bibliography of Kirca, Jayachandran and Bearden (2005) include hotels (Agarwal, Erramilli and Chekitan 2003; Au and Tse 1995; Sandvik and Sandvik 2003; Sargeant and Mohamad 1999), banks (Bhuian 1997; Han, Kim and Srivastava 1998), and tourism (Greenley and Matcham 1986). Based on this meta-analysis, one can tentatively conclude that the association between market orientation and organizational performance in large parts

[7] In accordance with marketing literature I use the terms "market oriented" and "customer oriented" synonymously (See Deshpande, Farley and Webster Jr. (1993) Footnote 1 p 63

of the service sector is weak, or may even be insignificant. However, to date, no cross-industry study has confirmed the above findings. One of the objectives of this dissertation is to test this conclusion on a relatively large multi-industry dataset.

## 2.4 Customer Selectivity

If market orientation is not an appropriate driver of firm performance in the services context, could customer selectivity be an alternative driver of firm performance in the same context? And if so, would customer selectivity also lead to firm performance in the goods context? My answer is yes to the first question and no to the second. But first, I show that customer selectivity is an important ingredient of customer relationship management (CRM).

The field of CRM is large and diverse, and CRM has been conceptualized and operationalized in more than one way (Boulding, Staelin, Ehret et al. 2005; Reinartz, Krafft and Hoyer 2004). I define customer selectivity as a firm's development of insight into its customer database, to understand differential customer value, so that it can make judicious allocation of resources to customers with differential actual and potential contribution margins, with a view to maximize customer and firm profitability. I argue that customer selectivity is a driver of firm performance in the services context, i.e. when the firm derives more of its revenue from the sale of services than from the sale of goods. But first, I demonstrate that customer selectivity is an integral part of CRM literature, in which it is deeply rooted.

### 2.4.1 Customer Relationship Management and Customer Selectivity

There have been claims that the field of CRM has matured over the last decade (Boulding, Staelin, Ehret et al. 2005). CRM has been conceptualized and operationalized (Reinartz, Krafft and Hoyer 2004) and some evidence, albeit limited and mostly in academic research, as opposed to practitioners' views, has accumulated linking CRM with firm performance (Boulding, Staelin, Ehret et al. 2005). Researchers have shown the effect of moderators (Reinartz, Krafft and Hoyer 2004; Jayachandran, Sharma, Kaufman et al. 2004; Srinivasan and Moorman 2005) and mediators (Plouffe, Williams and Leigh 2004; Zablah, Bellenger and Johnston 2004). While the above studies have looked at CRM from a firm's perspective, others have developed sophisticated statistical models to examine individual profitability (Reinartz and Kumar 2000). In short, CRM is now a thriving area in the marketing discipline.

Even though the CRM field is thriving, there is still controversy regarding the definition of CRM. Parvatiyar and Sheth (2001) state that the term CRM reflects a variety of themes, ranging from an emphasis on database marketing, to seeking customer retention, to more strategic views, to customer selectivity. Yim, Anderson and Swaminathan (2004) note that the definitions of CRM include a technology-focused database management approach, and broader perspectives that see CRM as an overall mix of marketing strategy, organizational structure and processes, and technology. Zablah, Bellenger and Johnston's (2004) review includes conceptualizations of CRM as a process, strategy, capability, or as a technological tool. And Plouffe, Williams and Leigh (2004) remark that CRM definitions range from the far too accurately focused to the far too vague.

Two definitions, though, are more prominent in the CRM literature. Reinartz, Krafft and Hoyer (2004) define the CRM process at the customer-facing level as a systematic process to manage customer relationship initiation, maintenance, and termination across all customer contact points to maximize the value of the relationship portfolio. Payne and Frow (2005) define CRM as "a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments."

Keeping the above definitions in mind, it can be gainfully asked: What is it that CRM is assumed to accomplish, in light of extant literature? Extant literature suggests that the first objective of CRM is to provide vital information to the firm at every point in the interface with the customer. This establishes a learning relationship with a customer by not ignoring any information that may help the firm in satisfying the customer, therefore making the customer more dependent on the firm (Parvatiyar and Sheth 2001). In turn, this strengthening of the bond between the customer and firm will make it more difficult for the customer to switch to another firm (Peppers, Rogers and Dorf 1999).

But obtaining customer information at every point of the interface between the firm and the customer will not be very useful if the second, and principal, objective of CRM is not met: customer selectivity. Customer selectivity is based on the idea that not all customers are created equal: they have differential costs and willingness to pay, and therefore should be treated differently, so that customer profitability can be maximized. Extant CRM literature supports this. Sheth and Sisodia (1995) note that the essence of CRM programs is customer selectivity. Parvatiyar and Sheth (2001) define CRM as a strategy of acquiring, retaining and partnering with selective customers. Zeithaml, Rust and Lemon (2001) observe that firms have discovered that they need not serve all customers equally well. Vandermerwe (2004) believes the ultimate goal of CRM is to achieve deep customer relationships with a firm’s most profitable customers, while Yim, Anderson and Swaminathan (2004) incorporate focusing on key customers as the first dimension of CRM. Payne and Frow (2005), as seen above, arrive at a definition which focuses on relationships with key customers.

Customer selectivity also drives stochastic modelling in marketing. One of the early influential papers was by Schmittlein, Morrison and Colombo (1987), which used a Pareto/NBD model to identify active customers; a managerially relevant problem since most customers do not inform the firm when they leave. Reinartz and Kumar (2000) used this model in a non-contractual scenario and showed that long-life customers were not necessarily profitable customers.

Recently, Mittal, Sarkees and Murshed (2008) have discussed strategies for managing unprofitable customers. Their research suggests that “customer divestment, whereby a company stops providing a product or service to an existing customer” is fast becoming a viable strategic option for many firms. Of the 32 companies in multiple industries - including IT, health care, finance and professional services - that they interviewed, some 85% of the executives said they had already undertaken divestment. The reasons for divestment included profitability, capacity constraints, consequence of evolving strategies, and interestingly, increasing employee productivity and morale. As one executive informed the authors, “The client was working [the employees] too hard, and mutiny was upon us.” But the authors wisely put termination of customer relationship only as the last step of the divestment process management.

### 2.4.2 Customer Selectivity and Segmentation

Is customer selectivity nothing but marketing to a segment of one? Even though both share a common basis - a selective focus on customers - I argue that the marketing strategy of deploying customer selectivity is *somewhat* distinct from the marketing strategy of segmentation, and the targeting of specific segments which is often regarded as the next step after a segmentation scheme is conceived and designed. It is important to understand these differences if one is to fully grasp the import of customer selectivity; unfortunately, extant CRM and segmentation literatures are generally silent on this issue. This distinction is apparent in at least three ways.

First, segmentation is mostly implemented on self-selection basis by customers themselves, even though the defining criteria and boundaries of the segments are determined, and the advertising and communication are implemented by the firm. A typical example of self-selection by customers in a firm-sponsored segmentation scheme is seating in the aircraft, where customers pay for different levels of seat comfort and service differentially. Customer selectivity on the other hand is actively deployed and managed by the firm, and in most cases, is *invisible* to the customer. This has important implications for marketing. At a minimum, it may lead to resentment by customers (Xia, Monroe and Cox 2004). In fact, in deploying customer selectivity, the firm not only knows who its customers are, but also knows how much they cost, and how much revenue they bring in. In many ways, I develop the framework introduced by Rangan, Moriarty and Swartz (1992) where they matched high and low prices with high and low cost to serve (CTS) customers.

Second, the anchoring of customer selectivity within CRM implies an ongoing relationship between the firm and its customers. The firm attempts to obtain relevant information on the customer through external databases and its own transactions, interactions and experiences with the customer. This allows the firm to continuously learn about the customer and re-allocate its resources. This is in general not possible with 'mere' segmentation. A good example is Harrah's: The gambling company not only knows which machines a customer has played in the last few hours, it also knows and can predict his gambling behaviour if he is provided with a certain level of loan, credit or grant. This feedback loop, along with customer selectivity, constitutes the essence of a customer selectivity-based CRM system.

Third, when segmentation is applied, it has limits that are reached much earlier than when customer selectivity is deployed. Gottfredson and Aspinall (2005) show how, beyond a certain point in product customization, even a small addition - such as tinted glass in car production - adds tremendously to production costs. Conversely, customer selectivity aims to customize service increasingly for customers with higher contribution margins. Building on Gottfredson and Aspinall (2005), it is suggested that there are limits to the segmentation of customers with a view to offering them a standardized product (i.e. goods), such as the width of the segment that can be profitably served. Beyond a certain point, as the width is reduced, the cost of segmenting customers becomes prohibitive. Thus, generally speaking, market orientation will be a driver of firm performance only in such (standardized product) cases. In line with Gottfredson and Aspinall (2005), a firm is likely to start losing money if it simultaneously deployed market orientation and customized products beyond a certain threshold.

### 2.4.3 Customer Selectivity and the Goods versus Service Debate

Why should customer selectivity lead to organizational performance in the service context, i.e. when the firm derives more of its revenue from the sale of services than the sale of goods? Earlier, I discussed the judicious allocation of resources to customers based on their relative profitability to the firm. Customer profitability depends, in part, on the revenue a customer brings; and in the services context, on the cost to serve an individual customer. This cost to serve a customer can vary sharply in some industries compared to others. But before I explore the concept of cost to serve (CTS), it is useful to draw on an old, but periodically revisited, debate in marketing: Are services different from goods? This debate will help us understand how CTS is linked with customer selectivity.

Briefly, the discipline of services marketing was to a large extent legitimized by the question asked - from the 1960s onwards: whether services marketing was different from goods marketing (Fisk, Brown and Bitner 1993). It was generally agreed that services were different from goods, endowed with unique characteristics, which required marketing techniques different from the marketing of goods. In particular, the delineation of services characteristics was agreed upon and four features – intangibility, inseparability, heterogeneity and perishability – came to be accepted by most marketing scholars (Fisk, Brown and Bitner 1993).

Wyckham, Fitzroy and Mandry (1975) challenged the above consensus by arguing that the four features were neither generalizable to all services nor unique to services. However, it is only recently that the criticism of the four-feature logic of services has been fully developed (Lovelock and Gummesson 2004, Vargo and Lusch 2004b). Vargo and Lusch (2004b) concluded, “We advocate that the strategy of differentiating services from goods should be abandoned …” This echoes what some leading service-marketing scholars noted in a content analysis exercise (Grove, Fisk and John 2003).

I believe that the examples quoted in Lovelock and Gummesson (2004) and Vargo and Lusch (2004b) are both interesting and useful. However, these are mostly boundary-case examples. On the whole, many services exhibit the four characteristics mentioned in the literature to varying extents: most services are intangible, inseparable, heterogeneous, and perishable. Many are produced at the time they are consumed. Conversely, only some goods are perishable. And, services are perishable in a step function as it were, whereas products are perishable in an exponential curve. In short, services and goods are different, generally speaking, based on the four characteristics mentioned above.

I agree with Lovelock and Gummesson’s (2004) contention that “Other less frequently cited characteristics were largely overlooked, most notably the *absence of ownership* in service purchases.” Judd (1964) first introduced the absence of ownership as a criterion of distinction between services and products by when he defined marketed services as “A market transaction by an enterprise or entrepreneur where the object of the market transaction is other than the transfer of ownership (and title, if any) of a tangible commodity.” Judd’s (1964) two page article presciently created service typologies by building on his definition: rented goods services, based on the right to possess and use a product; owned goods services, based on the custom creation, repair or improvement of a product; and non-goods services, based on an experience.

Judd (1964) believed his definition was defective because it was a definition by exclusion. I believe that his definition provides an insightful starting point in understanding what is it about services that makes them different from products. As an example, consider a firm facing two choices: selling a car to a customer for $20,000 or leasing a car to him for 20 years for $30,000, where the net present value of the average cost of maintenance incurred by the firm over 20 years, when the car is leased to an average customer, is $10,000. What difference does the mere *non-ownership* of the vehicle by the customer make for the firm?

To begin with, all the maintenance work done by a car-owner is now transferred to the firm. Car-owners maintain also their own cars differently, some taking more care than others. More importantly, once the ownership stays with the firm, consumer behavior can change. Some customers may take even less care of the vehicle than before, believing that the firm would or should be responsible for any wear and tear. The point of this very simple example is that the non-transfer of ownership of a commodity creates its own logic of service costs, which necessitates an assessment by the firm of the cost to serve a customer (CTS). The firm can very well make the contract more complex, for example by inserting a clause according to which the contract could be re-examined every few years depending on the CTS of a particular customer to the firm. In short, the CTS across the customers in long-term car-leasing industry could be significantly variable.

The above example was simple and industry-specific. I will discuss some empirical examples below. Here I note that the logic described above is also consistent with more complex scenarios and recent trends in business development. Consider customer solutions. Tuli, Kohli and Bharadwaj (2007), in researching customer solutions, mention customer adaptiveness, political counselling and operational counselling as the three key customer variables. Customer adaptiveness refers to the extent to which a customer is willing to modify its routines and processes to accommodate a supplier's products. It is posited that some customers will be more adaptive than others. Similarly, some customers will be more willing, or able, or both, to offer political and operational counselling than others. Over repeated interactions, the costs to serve across these customers will become highly variable. Ignoring these CTS may explain the "poor profits earned to date by solution suppliers" (Tuli, Kohli and Bharadwaj 2007, p 13).

Cost to serve, however, is not an exogenous variable but an endogenous one, in part depending on the customer's willingness to pay and in part driving it. This is entirely consistent with Anderson, Fornell and Rust's (1997) logic discussed above. I agree with Vargo and Lusch (2004b) that "service managers should capitalize on the flexibility of service provision". Shostack (1987) offers a useful framework to position services on the standardization-customization axis. While some services can be and are being standardized, Anderson, Fornell and Rust (1997) and Rust and Chung's (2006) logic of the relationship among standardization, customization, customer satisfaction and productivity still stands. According to their logic, it is no longer a question of whether goods or services are more customizable; the question that needs to be answered is how to balance "the trade-off between increasing customer satisfaction through customization and increasing firm's productivity through standardization" (Rust and Chung 2006).

It is in the above context that I fully agree with, and build on Rust and Chung's (2006) assertion that "Service delivery and interactive customization are best seen as entirely different from product design." It is true that many services are being modularized, not customized (Lovelock and Gummesson 2004) and that "There may be opportunities for product differentiation through mass customization" (Lovelock and Gummesson 2004). But I also concur with Gottfredson and Aspinall (2005) that customization of goods, beyond a certain point, leads to an exponential growth in costs. In the service context, however, the cost to serve across customers can vary greatly in many cases where customers do not want modularization, and are willing to pay for highly differentiated services that take into account their individual needs.

Importantly, I do not contend that the above is true for all services in all contexts; I simply argue that this is truer for services than for goods. And to deal with the important but vexing problem of most products containing both goods and services, I set my hypotheses in terms of revenues derived from the sale of goods versus services. Finally, I believe that as developed economies move in the direction of servitization (Vargo and Lusch 2004a) and provision of customer solutions (Tuli, Kohli and Bharadwaj 2007), the cost to serve-based logic will become even more prominent.

### 2.4.4 Cost to Serve (CTS) in a repeated interaction (service) context

Understanding the nature of cost to serve (CTS) helps explain, to some extent, the weakness or absence of an association between market orientation and organizational performance when a firm derives more of its revenue from the sale of services. It also helps in arguing that in the same context, customer selectivity is a better and more effective driver of firm performance.

Calculation of cost to serve by companies is still not frequent. A recent survey concluded that only about one-third of respondent firms could calculate customer cost to serve on a frequent basis.[8] I reached a similar conclusion, based on some preliminary interviews with MBA participants, with managerial experience, at a leading school – it is not possible to obtain survey-based empirical data at this stage on cost to serve.

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[8] CSC's 2004 Customer Intelligence Diagnostic Survey, conducted in collaboration with Jacquelyn Thomas (Northwestern University). Also, my detailed interviews of MBA participants at INSEAD led me to believe that managers needed to be explained the concept of CTS before they could provide some data.

A few things can be noted here: To begin with, CTS is not equivalent to marketing cost. In fact, the very term “marketing cost” is not well defined in both academic and practical marketing. Foster and Gupta (1994) conducted a rare survey of a hundred marketing executives. The four categories most frequently mentioned under marketing costs were sales force management (including salaries, travel and entertainment); advertising; sales promotions (including point of sale promotions, samples, coupons, and price discounts); and catalogues and brochures. The marketing managers interviewed typically did not view distribution, general and administration costs as falling within their domain. The authors also quoted Schiff et al. (1991) as reporting that while over 90 percent of their respondents viewed advertising, sales promotion, and catalogues/samples as MCs, much smaller percentages applied to physical distribution (27 percent), credit and collection (14 percent), and packaging (13 percent).

CTS, on the other hand, as the label shows, includes all the costs incurred to serve the individual customer, such as order taking, order processing, order fulfilment, collecting and banking payment, credit checking, technical support, returns handling and complaint handling. Customer-order fulfilment includes product storage, picking, packaging and distribution (Murphy 2005). This would also include the cost of processing the financial aspects of the transaction: collecting and banking payment. Post-sales customer service might also include technical support, returns and complaint handling (Murphy 2005). These costs for bank customers would include fees charged by other banks for using their ATMs, fees charged for cheque processing, telephone calls with service operators, branch visits, costs of investigating fraudulent charges and other disputes (Vaysman 2006). CTS does not include acquisition costs, in general, such as advertising. Similarly, marketing costs may not include some of the items mentioned above.

CTS varies across customers, and the variability depends not only on the industry but also on the firm itself, insofar as it chooses a particular customer base. Different banks may serve different segments of customers and may have different cost allocations according to their marketing and business strategies. Also, each customer's CTS, theoretically speaking, may be different, not only per transaction but also per product offered, and over his lifetime. In fashion consulting, it is possible that a client, even though he pays considerably more for one shirt ordered, is much more costly to serve due to the nature of the work, than another client who pays much less per shirt but whose order results in a higher overall contribution margin.[9] Thus the contribution margin per customer will differ across customers, as can be seen in the diagram below; the x-axis being the customers a firm and on the y-axis, the contribution margin per customer, which is revenue less CTS.

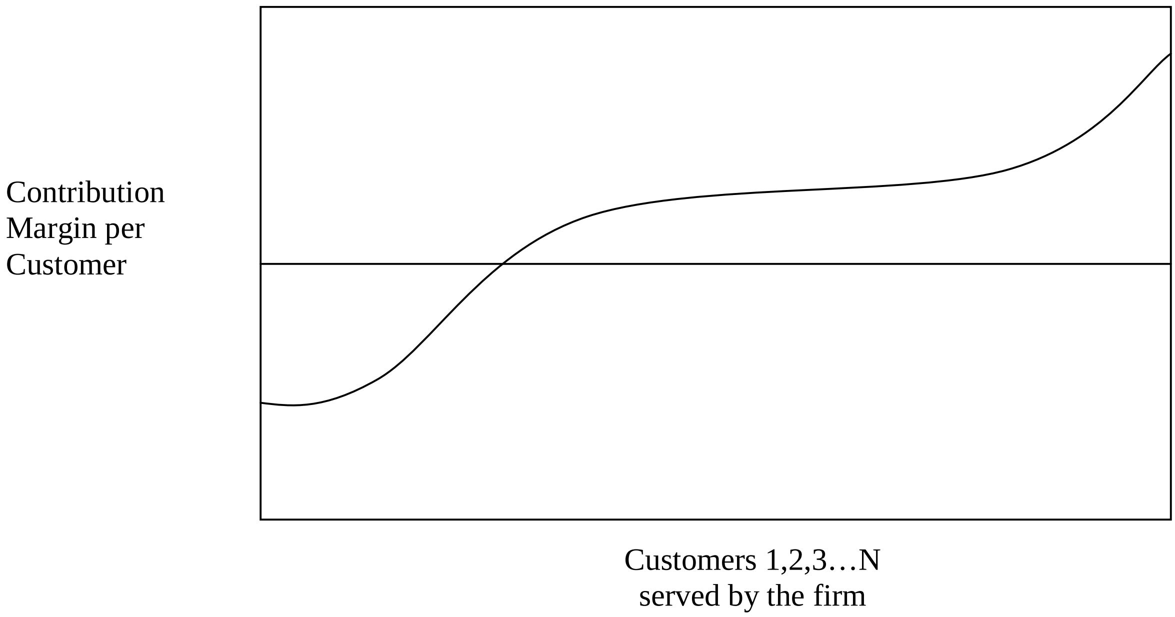


**Figure 2-1 Cost to Serve**

[9] An ex-manager, who had worked as a fashion and apparel consultant, explained how Marc Jacobs of Louis Vuitton was costing her a fortune to serve, despite paying her high rates per shirt ordered, while Wal-Mart was bringing in large margins because it was very inexpensive to serve. However, it is entirely possible that the firm the participant was working for deliberately supplied the shirts to Marc Jacobs, even at a negative contribution margin, because of Marc Jacob's personal brand equity.

### 2.4.5 Is CTS high and variable in the service sector?

It was mentioned above that customer selectivity is based on the analysis of customer profitability by a firm. Customer profitability is directly linked to cost to serve (CTS): it was stated that if the revenue accrued to a firm derived mainly from the sale of services, by implication the customization required by customers would be high, and thus CTS would probably be higher and variable across customers. Given that CTS data is very difficult to obtain, the question may be asked: Is there qualitative evidence to support this?

Anecdotal evidence suggests that in many service industries the CTS are quite high and variable across customers. According to an INSEAD case "Infinity Bank" the service costs for some 8 million current account holders amounted to between £650 and £716 million between 1999 and 2003. The servicing cost varied from £2 to £312 and the standard deviation was 59 with a mean of 82. Servicing costs were defined as the easy-to-identify costs associated with customers, i.e. the costs of activities that are not passed on to customers, such as fees charged by other banks for using their ATMs, fees charged for cheque processing, telephone calls with service operators, and branch visits.[10]

Cost to serve for utilities is even harder to measure. In one of the few studies to have been published in this sector, a model found that there was about £6 per customer difference between the best and worst of the six leading UK power suppliers in terms of cost-to-serve. Across a customer base of 5 million, it meant a difference of £30 million in the bottom line. And this only included four categories: metering, billing, payment and the contact centre. The model also estimated that if Powergen reduces the

[10] Infinity Bank (A), Retail Braches and Customer Profitability; Igor Vaysman, INSEAD 2006

number of customers who pay by cheque by 10 percentage points it would deliver a £1.8 million saving.[11]

In my preliminary interviews with MBA participants with prior management experience, I found that even though the managers could not put numbers on the costs, they believed that in fashion consulting, IT consulting and investment banking the CTS was both high and variable across customers. In contrast, the profits were so high relative to CTS for the selling of heavy machinery that it did not matter to the firm to be customer selective. In chewing gum, paints and other FMCGs, the CTS from the retailer's angle was very low and not variable when the product was sold to customers, but sometimes it was quite high and variable when the producer passed the product on to distributors and dealers. In retail banking, managers believed that most of the CTS were not relevant, in that these would not be eliminated if one particular customer were not served.

### 2.4.6 Customer selectivity and contemporary business

The concept of customer selectivity is best illustrated by the business strategy of the gambling company Harrah's.[12] Harrah's knows its customers well. In particular, Harrah's knows about the behaviour of its customers on all of its machines, and even outside the gambling area. It then rewards its customers in accordance with the last updated behaviour, offering selective bonus points for different machines, credits, cash, complimentary trips and meals, hotel room upgrades, free hotel weekends, welcome gifts, tickets to sporting and entertainment events and even being met at the airport. The key thing in Harrah's model is a precise matching of CTS with current and

[11] Datamonitor, March 2005; www.datamonitor.com

[12] Information on Harrah's is culled from popular media, including the following: "Harrah's Continues Winning Streak with CRM", Gartner's Report of 4 November 2004; "Harrah's Hits the Jackpot with CRM", www.stores.org; "Cashing in on Customer Loyalty", www.destinationcrm.com

potential revenues, and its COO Gary Loveman has been quoted as saying that Harrah's has a 90 percent hit ratio in turning customers who are presently worth $500 into customers who are worth $5000, and that Harrah's invests in the customer based on his ultimate value, not necessarily what is initially observed.

Consider Dell. Dell's profitability has recently come under pressure and according to popular media, part of the reason lies in the new segment of less IT-savvy consumers that Dell has approached. Thus, all other things being equal, and only for illustrative purposes: earlier, Dell's CTS was low and market orientation would have been an appropriate driver of performance. Now that some users would need Dell's online and offline help much more than others, CTS will have increased substantially and customer selectivity will possibly be an appropriate driver in this case.

Also consider the cost structure of McDonald's. Although service costs (salaries of the employees at the counter) are a big item in the cost line, there is hardly any variation in CTS across customers. In any case the CTS per customer is quite small. Consequently, market orientation, and not customer selectivity, should play a significant role in predicting performance. Selling Coca Cola cans at a large retail store is similar to McDonald's, but selling coke concentrate to bottlers may involve high and variable CTS across the latter's lifetime. Consequently, it matters which part of the supply chain we are looking at, and this is an additional insight of the above analysis.

### 2.4.7 Customer Selectivity and Revenue Variation

An important clarification is due here, regarding variation in customer revenues of a firm. As will be recalled, the curve in the above diagram under CTS is a contribution margin curve, not a CTS curve. Contribution margin is defined generally as revenues less direct costs, and in this thesis is defined as revenues less CTS. It is implicitly assumed until now that customer revenues do not matter, only CTS do. This implicit assumption was meant only to focus clearly on the CTS in the context of market orientation. Now this assumption can be relaxed. Two limiting cases are now discussed.

The business case of differential revenue providing, but a constant CTS incurring, customer base (e.g. some economy class travellers making a large number of trips per year) is relevant but trivial. It is relevant because customer selectivity, to be discussed below, is easily deployable and should be deployed because the lifetime value (LTV) of such customers is much higher than others. The case is trivial because since CTS is (assumed to be) constant per customer per travel, all the CRM system is supposed to do is to identify the customer by name. Once this is done, some benefits can be provided to ensure his loyalty. Or, alternatively, the benefits are announced earlier and customers develop “loyalty” as a result. Interestingly, in general CTS go up once the loyalty card system kicks in, because the airline is now incurring additional cost (e.g. of bonus miles addition to the customer account).

However, since CTS does not vary significantly across customers of a particular class, the airline (or for that matter any firm) will find it easier to standardize the product for a sufficiently large segment of customers, and thus will be able to make use of market orientation. Of course, it is possible that different customers travelling in the same class may incur differential costs to the airlines (cancelling their reservations frequently, requiring additional efforts regarding itinerary etc.) We are however concerned with the more complex, and more interesting, subject of CTS variation, and will therefore exclude the abovementioned case, barring significant CTS variance.

The other limiting case is when a constant customer contribution margin is obtained, despite differing CTS and revenues. To illustrate, the hundred customers of the hypothetical firm mentioned incur CTS of 1,2..100 dollars respectively but bring in a revenue of 6,7…105 dollars respectively. As can be seen, the contribution margin is constant. A superficial view of this case will suggest its exclusion from the purview of this paper because it seems trivial. However, a few things may be noted. To begin with, as opposed to the airline's case above (where it can be safely assumed that CTS is constant for a particular customer segment), CTS must here be calculated for all customers. Unless we know the CTS of all customers we cannot know about their contribution margins.

To illustrate, customer 1 incurs a CTS of 1 dollar and customer 100 incurs a CTS of 100 dollars. Thus even in this limiting and rather rare case, knowledge of CTS is a must. Even more importantly, the nature of CTS being very complex, it is not only possible but likely that with the passage of time either the amount or the nature of CTS of a customer will change. Thus CTS for customer 1 may change from 1 dollar to 10 dollars. Or the structure of CTS for some customers may change in that some costs to serve may be relevant or sunk at a certain level of hierarchy. The point being made here is that even a near constant contribution margin does not imply a diminishing need to deploy a customer selectivity-based CRM system. Unless we know the structure of the CTS itself - a major component of the contribution margin, we cannot be sure of the picture we obtain at the level of contribution margin.

### 2.4.8 Customer selectivity and firm performance

A customer selective firm will earn higher profits in a context where it derives more of its revenues from the sale of services rather than goods.[13] For this, it is assumed that there is repeated interaction between customers and the firm. It is of course possible that in many business scenarios, the CTS is high and variable across customer and yet it is a one-off transaction (customers searching for an apartment, buying a car, looking for a marriage partner through a non-internet company). In such cases, it is possible to

[13] Note that I am assuming away customer resentment against customer selectivity. This is, however, a topic of growing importance. For an excellent review of this issue, see Xia, Monroe and Cox (2004).

estimate profitability, to some extent, based on available demographic data or even personal experience of different kinds of customers (i.e. customer segments), instead of knowing customers at an individual level.

However, in a repeated interaction context, the firm is able to collect information on every contact point and across multiple products on the customer. It can thus offer a much better product to the individual customer. Also, it can rationalize its CTS according to the actual and potential customer contribution margin. This also allows the firm to examine its relationships with the customers who are on the negative side of the contribution margin curve (see diagram of contribution curve), especially those who are bringing in a negative amount of contribution margin. Thus a positive main effect of customer selectivity on firm performance in the above context is predicted.

## 2.5 Model

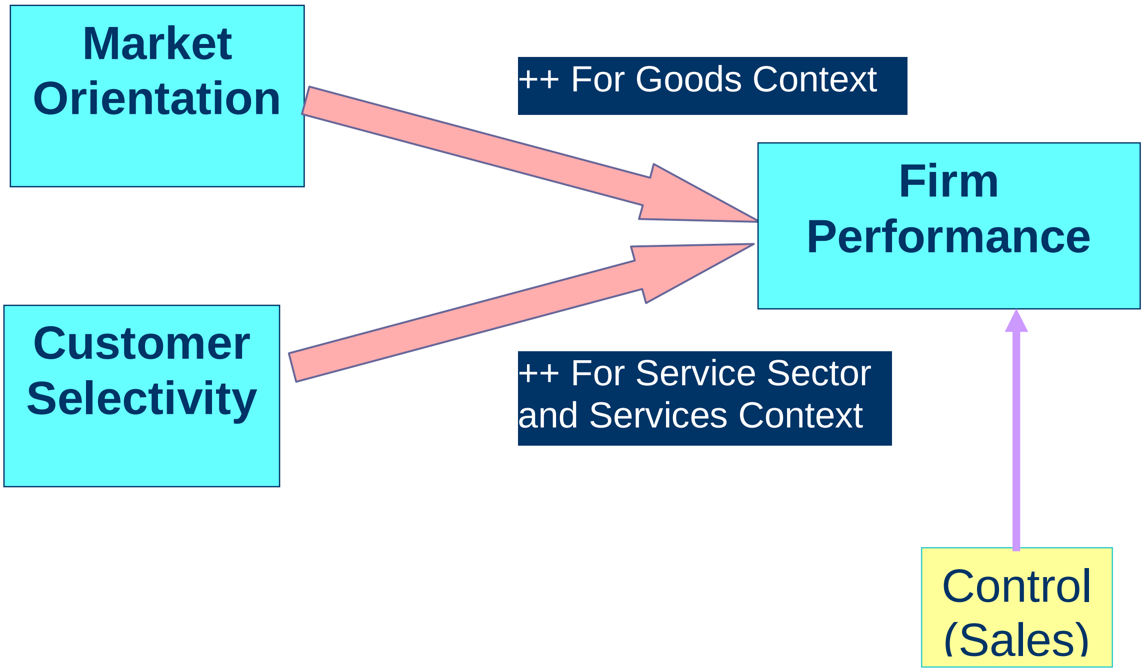


**Figure 2-2 Model I**

## 2.6 Propositions

I summarise the above discussion in the following propositions.

First, it is argued that the service sector consists of industry categories which offer, by definition, a large proportion of services. Customer satisfaction is dependent on customization in this sector (Anderson, Fornell and Rust 1997), but as customization is expensive, due to the high and variable cost to serve that it can involve with services in particular (Tuli, Kohli and Bharadwaj 2007), it can have a negative impact on costs and hence on profits (Rust and Chung 2006). Hence firms cannot afford to satisfy all customers, but rather need to understand the value of different customers and treat customers differentially accordingly (Zeithaml, Rust and Lemon 2001) – that is, be customer selective (Sheth and Sisodia 1995). Hence, it would seem plausible that customer selectivity will be associated with performance for firms in the service sector.

$P_1$: Firm performance is positively associated with customer selectivity for firms in the service sector

However, the above proposition and the arguments in the literature on which it is based assume, implicitly or explicitly, that service sector firms offer services. While services presumably predominate in the services sector by definition, and hence the proposition might be expected to hold on average, we have also seen that firms may offer a mixture of goods and services (Tuli, Kohli and Bharadwaj 2007). Within any sector, the proportion of revenue earned by firms from the sale of goods versus the sale of services may differ. Assuming that the service sector can be divided into firms which derive the majority of their revenue from services versus a presumably smaller set of firms which derive the majority of their revenue from the sale of goods, it can be argued that firm performance should be positively associated with customer selectivity for the former (i.e. firms which derive the majority of their revenue from the sale of services). This leads to the second proposition.

$P_2$ The association between customer selectivity and firm performance is positive for firms that derive a larger proportion of their revenues from the sale of service components of their products (i.e. the services context firms).

The obverse is true for market orientation:

$P_3$ The association between market orientation and firm performance is positive for firms that derive a larger proportion of their revenues from the sale of goods components of their products.

**Note: These propositions will be re-stated as hypotheses in Chapter 4, at the level of dimensions of each construct.**

# 3 Alternative Model: Market Orientation as Antecedent to Customer Selectivity

## 3.1 Overview

In Chapter 2, the construct of market orientation and the concept of customer selectivity were reviewed and discussed in detail. The term “orientation” in the phrase “market orientation” was also discussed to some extent. An examination of marketing literature showed that there is not much consensus on the definition of orientation, as was mentioned. It was suggested that a plurality of views exist on the very nature of what an orientation is. For further empirical analysis, Narver and Slater’s (1990) scale was chosen, as well as some elements from Jaworski and Kohli’s (1993) scale.

More importantly, it was argued that since it is difficult (expensive) for firms to supply both customization and standardization, and customer satisfaction is more dependent on customization in the service sector (Anderson, Fornell and Rust 1997), it would be logical to conclude that customer selectivity will be associated more strongly with performance for firms in the services context, i.e. when they derive a higher proportion of the revenue from the sale of services than goods. The obverse, it was argued, was true for market orientation. Thus, in Chapter 2, a theoretical model was presented that posited market orientation and customer selectivity as parallel drivers of firm performance, albeit in different contexts.

However, this above model is not the only possible model of linking marketing orientation and customer selectivity to firm performance. It could be claimed that market orientation is a form of organizational culture, and as such, it can be an *antecedent* to a firm's CRM processes and activities in general, and to customer selectivity in particular. If this is a valid model of how CRM processes and activities are themselves driven, i.e., driven by marketing orientation, then a further question arises: Can there be more than one antecedent orientation to CRM and to customer selectivity? This chapter attempts to answer these questions by proposing an alternate model to the one proposed earlier.

I begin with examining what culture is. Since a plethora of definitions and definitional surveys of culture are available, I will only select a few prevalent ones. In particular, I will focus more on Schein's (1985) work, which presents a widely accepted framework in organizational literature (Hatch 1993; Winklhofer, Pressey and Tzokas 2006). I will then discuss the prevalent paradigms in cultural research, focusing on some of the more cited papers in the literature.

However, since the debate about whether or not culture is "measurable" is still not settled, I will propose two *meta-paradigms* of culture studies in organizational literature and establish my position in one of these two meta-paradigms, since "these different conceptions give rise to different research questions and interests" (Smircich 1983). In essence, I will argue that the ethnographic paradigmatic view of culture that has prevailed in organizational cultural studies has been somewhat inappropriately applied to the study of organizations. More specifically, I will show that this view does not prevent empirical, survey-based measurement of the cultural dimensions of organizations.

I then review the sparse literature linking CRM with culture, and develop a conceptual model of how culture can be related to customer selectivity. I suggest that culture can be conceptualized as values and practices based on a world view of how a firm's managers believe they should interact with outside reality. It can then be operationalized as dimensions of management orientations, which lead to the implementation of CRM activities, which in turn lead to firm performance. Since my dissertation is about customer selectivity and not about CRM, I will focus on customer selectivity in this chapter, even though what I suggest can be generally applied to CRM.

In other words, the alternative model I propose in this chapter has two parts, or stages. The first part assumes that cultural antecedents lead to customer selectivity; the second part assumes that customer selectivity leads to firm performance. The second part of the model, i.e. customer selectivity leading to organizational performance, has been conceptually proposed earlier in chapter 2. The model proposed here keeps the customer selectivity – firm performance relationship intact to emphasize that inclusion of firm performance in a model is highly desirable, although it focuses on the cultural antecedents of CRM (i.e. customer selectivity in this dissertation). The model in no way denies other possible antecedents of CRM - such as imitation by one firm of what other firms are implementing in a particular industry - but does not include them.

In particular, I argue that strategic orientation - which has been used in a few studies (e.g. see Gatignon and Xuereb 1997) - is a convenient construct that is both anchored in organizational culture literature and also flexible enough to fit the environments of organizations, as opposed to national or even supra-national cultures. I will draw on organizational culture literature to argue that contrary to the paradigmatic, anthropological view of a unique culture, multiple strategic orientations - some even contrary to each other - can exist within an organization.

## 3.2 What is Culture?

Many researchers on organizational culture have acknowledged the lack of consensus on what culture means. Smircich (1983) noted that the culture concept had been borrowed from anthropology, “where there is no consensus on its meaning”. Allaire and Firsirotu (1984) were worried lest the concept of organizational culture turned into “a superficial fad…a catch-all construct.” Referring to Kroeber and Kluckhorn‘s (1952) oft-quoted identification of 164 definitions of culture, Allaire and Firsirotu (1984) observed that the word culture was presumed as “a stenographic cue for ‘values, norms, beliefs, customs’ or any other such string of convenient identifiers chosen among the vast assortment of definitions available in a random pick of texts from cultural anthropology.” Barley (1983) agreed with Allaire and Firsirotu (1984) that it was in fashion to treat organizational culture as a “grab bag of norms, beliefs, values and customs”.

In fact, Pettigrew (1979) in his oft-cited paper had argued that culture was not even a unitary concept, but was a “source of a family of concepts”. After agreeing that culture was “shared and stable beliefs and values”, Gordon and DiTomaso (1992) insightfully questioned what constituted sharing, as it was not all “self-evident”. They also noted that the literature was “even more ambiguous about the content of the beliefs or values thought to produce a strong organizational culture”. In other words, both components of “shared values” were unclear.

In a paper on organizational culture, Hofstede, Neuijen, Ohayv et al. (1990) agreed that there was no “consensus” about the definition of culture. Jermier, Slocum, Fry et al. (1991) placed the question of how best to define organizational culture at the top of their list of “unanswered questions.” Nomologically, even though Schwartz and Davis (1981) claimed that whatever culture was, it was not climate, Denison’s (1996) literature review showed that how scholars treated culture and climate tended to overlap, exacerbating the confusion surrounding the domain of culture. Sackmann (1992), not surprisingly, ascribed the difficulty in operationalizing culture to “the existing conceptual diversity.”

Despite the controversy surrounding the definition of culture, and the lack of consensus regarding an appropriate paradigm for research on organizational culture, resolution is necessary in order to progress in conceptualizing culture as an antecedent to customer selectivity. In fact, the definitional issue is less important than the paradigmatic pluralism and even paradigmatic conflict. However, I argue that once we review the major paradigms and categorize them into two major meta-paradigms, the problem of defining and operationalizing culture will become amenable.

Thus for the purposes of this chapter, I consider Schein's (1985, 1996a) culture model an appropriate first step. Culture manifests at three levels – deep tacit assumptions, espoused values and day-to-day behaviour - that can be clearly differentiated in this model. Also, as Hatch (1993) noted, Schein's work has been especially influential as his model is one of the few conceptual models ever offered.[14] To illustrate the model, Hatch (1993) uses the example of a firm's management holding the tacit assumption that humans are lazy. This can result in values - such as organization members should have less autonomy. These values can then lead to artefacts, such as timepieces and attendance charts, which embody those values. Most research attempting to measure culture have focused on values (Chatman 1989).

Schein's (1985) above model is consistent with a range of other definitions, which have been offered over the years and which may not contain all the elements that Schein (1985) proposed. Hofstede, Neuijen, Ohayv et al.'s (1990) culture model does not include assumptions but focuses on values and practices. Chatman's (1991) model focuses more on values, which she regards as "a fundamental element in most definitions of organizational culture." In a later work, Chatman (1994) admits that "organizations vary in terms of the level at which their values are most widely shared" but conceptualizes culture in terms of values. Chatman, Polzer, Barsade et al. (1998) however define organizational culture as "the observable norms and values that

[14] There are very few attempts to conceptualize culture beyond defining it. Hatch (1993) has ingeniously extended Schein's work. Sackmann (1992) is an exception but her four-layered model (dictionary, directory, recipe and axiomatic knowledge-based framework) has not been explored in the literature, possibly due to its less-than-convincing empirical substantiation.

characterize an organization, influences which aspects of its operations and its members become salient and how members perceive and interact with one another, approach decisions and solve problems."

Instead of offering a new definition of culture here, I stick to Schein's (1985) model of culture as shared assumptions, values and artefacts, and Hofstede, Neuijen, Ohayv et al.'s (1990) clear focus on both values and practices. More importantly, I propose to examine the paradigms of culture that have been used in understanding and researching the concept of organizational culture in order to explore its nature. I then attempt to show that all these diverse paradigms can be classified into two major meta-paradigms to advantage. The first metaparadigm assumes that culture is by definition unique and not amenable to measurement by statistical techniques, such as the survey method. The second metaparadigm assumes cultures can be examined to advantage by thinking in terms of specific dimensions or orientations, rather than holistically, and allows culture to be measured by statistical techniques. This also allows cross-organizational comparisons, and more importantly, culture can be linked with performance variables.

I also argue that it is desirable, and indeed possible, for the two seemingly irreconcilable paradigms to be re-examined and a consensual agreement of sorts reached. We can then benefit from the insights of the former and the practical advantages of the latter.

## 3.3 Paradigms of Organizational Culture

The study of organizational culture in top-tiered journals, especially in the Administrative Science Quarterly, over the past few decades has been marked by paradigm wars (Smircich 1983). As has been argued, the paradigm issue goes to the root of epistemological debates on culture, and both defines the kind of research questions we can pose and constrains the way we can answer these. However, there is no consensus on how many paradigms there are in organizational culture literature, what the nature of these paradigms are, and whether there is a way to integrate these paradigms (or whether, by definition, there can be no further integration).

While the debate has increased awareness of the complexity surrounding the culture concept - and therefore sharpening research focus - this has simultaneously forced researchers to define their position on the paradigmatic chart of culture study. Given the expansion in the number of paradigms used, the task of benefiting from research based on different paradigms might become increasingly difficult, if not impossible.

I will briefly review some of the major paradigms proposed since 1970s, when the field of organizational culture developed, and then outline my own view that summarises these paradigms into two meta-paradigms, before choosing and explicating my own position. This will allow me to categorize a large majority of extant research, thereby introducing much-needed simplicity in the paradigmatic map of culture. I will also suggest that both these meta-paradigms, although fundamentally different on how they view culture, collectively advance our knowledge of the concept of culture. I will further sub-divide the second meta-paradigm to distinguish the way culture has been measured within organizations.

### 3.3.1 Review of Extant Paradigms Literature

Sanday (1979) is one of the first researchers to propose a classification of organizational culture paradigms, even though her classification is limited to ethnography. For her there are three “styles” in the body of ethnographic literature: holistic, semiotic and behaviouristic. The holistic style consists of both configurationalists, such as Benedict and Mead, and the functionalists, such as Malinowski and Radcliffe-Brown. All four treat culture as a whole, but whereas the former two focus more on a culture's tendency toward consistency and coherence, thus attaining a certain configuration, the latter emphasize the role a culture plays in either fulfilling some biological needs or in maintaining the social structure of a society. The semiotic style's core in the search for the native's point of people with one another "is clearly an imaginative act". Lastly, the behaviouristic approach is aimed at uncovering correlational patterns in observed behaviour.

Whereas Sanday (1979) focuses only on the ethnographic tradition, Smircich's (1983) oft-quoted paper charting five "current research themes" or "programs of research" also covers non-ethnographic domains, albeit fleetingly. Two of these themes treat culture as a variable and the remaining three, as a root metaphor. When culture is treated as an external variable, a researcher can focus on comparative management across countries, where culture is "almost synonymous with country". When culture is treated as an internal variable, organizations can be treated as "culture-producing phenomena". Here, culture is seen as the glue holding an organization together. This line of research implies that organization culture may be seen as a lever that can be used to direct the course of an organization.

Allaire and Firsirotu (1984) find that the critical distinction among theorists lies in whether they view culture as meshed into the social system or whether they conceive of it as a separate ideational system. The first view conceives culture as a sociocultural system whereby cultures evolve as a response to the demands of societies. The synchronic school studies culture at a particular point in time and space whereas the diachronic school examines the processes involved in the development of cultures across time. The second view (i.e. culture as separate ideational system) postulates a distinct cultural realm exhibited in cognitive structures, processes or products.

Culture as a root metaphor implies that culture is something an organization *is,* rather that something that it *has.* The cognitive view sees culture as a unique system for perceiving and organizing material phenomena, behaviour and emotions, a system generated by means of a finite number of rules or even an unconscious logic. Anthropologists are then tasked to determine what the rules are. The symbolic view sees cultures as systems of shared symbols and meanings, and this necessitates the interpretation and deciphering of organizations. The psychodynamic perspective emphasizes the unconscious human mind.

Finally, Meyerson and Martin (1987) present another view of cultural paradigms. Interestingly, they choose the larger paradigm of culture as a metaphor (discussed above) and present their three paradigms within this larger (meta-) paradigm. The first paradigm,, integration, focuses on culture as social or normative glue and emphasizes consistency, consensus, exclusion of ambiguity, and the leader's value system. Researchers who endorse this paradigm often restrict their conception of culture to the espoused values of top management.

The second paradigm, differentiation, focuses more on inconsistencies, lack of consensus, and non-leader-centred sources of cultural content. It can easily incorporate the idea of sub-cultures. In an insightful remark the authors note, "the usefulness of a cultural approach is severely constrained if organizational culture is defined as only that which is unique to a given organizational context" (Meyerson and Martin 1987). The third paradigm is a culture in which nothing is shared, except an awareness of ambiguity.

### 3.3.2 Two Meta-Paradigms

The brief description above of some well-known papers on paradigms in organizational culture shows that there is little consensus on the usage of the word "paradigm". As Sanday (1979) remarks, it is unclear whether there is one or more paradigms guiding ethnographic practice in anthropology. If a paradigm implies a model for collecting data and a theory for interpreting results, there are many paradigms in ethnography. If it means "normal science", the ethnographic paradigm has not changed with respect to basic intent. Smircich (1983) argued that researchers make different "basic assumptions" about both "organization" and "culture".[15] This was seen very clearly not only in Smircich's (1983) own study but also, for example, in Meyerson and Martin (1987). Their classification of paradigms rests basically on what researchers assume remains of the level of ambiguity once the concept of culture is introduced (as exemplified by the metaphors used by the authors noted above).

Are the above-mentioned paradigms compatible? To begin with, I discussed only four papers. However, these papers have been cited heavily and cover a large part of the diverse paradigms in culture. Also, some of the paradigms discussed above match or at least overlap. Meyerson and Martin's (1987) discussion of the three paradigms takes off by assuming culture is a root metaphor; an assumption that forms the basis of three paradigms found in Smircich (1983). Sanday's (1979) semiotic style overlaps with the cognitive and symbolic paradigms in Smircich (1983). These will probably constitute what Allaire and Firsirotu (1984) call an ideational system. However, in many cases there is no direct matching and little overlap. Meyerson and Martin's (1987) three paradigms do not, at least neatly, match with any of the paradigm discussed above. It is not even clear why the first two paradigms in Smircich (1983) are separate paradigms, because it should not really matter whether culture is treated as an independent or dependent variable (perhaps it should be both).

I propose a simpler and more efficient categorization of the organizational culture literature. Based on a literature review of organizational culture, I suggest that many, if not most, of the papers published on organizational culture since Pettigrew (1979) can be categorized to advantage according to these positions and that researchers take

[15] Also see Gregory (1993) who means, by paradigm, "conceptual orientation or perspective from which research questions, methods, and styles of explanation flow."

either of the following two positions on the concept of culture: constructivist (essentially, culture cannot be empirically measured) and empiricist (essentially, culture can be empirically measured). In turn, these positions derive from a much deeper conceptual and epistemological view of culture, which somewhat parallels the well-known debate about post positivism and post-modernism.[16] Also, it will be seen that the first meta-paradigm of organizational research (constructivist) stems from the field of anthropology, which had already evolved a strong paradigm by early 20th century (in the "normal science" sense of the word, as explicated by Sanday 1979). I suggest that this confounding of organizational research with anthropological research has not only undermined the former but also blocked new avenues of research, which could have had much use for managers.

### 3.3.3 The Constructivist Meta-Paradigm

A key defining feature of the constructivist meta-paradigm is the firm belief of researchers that it is futile, if not actually counter-productive, to attempt to measure culture with questionnaire-based surveys. One of the more well-known, and somewhat stronger, statements came from Schein (1996) when he argued that researchers' failure to take culture seriously enough stemmed "from our methods of enquiry, which put a greater premium on abstractions that can be measured than on careful ethnographic or clinical observation of organizational phenomena". He concluded his argument by famously lamenting the use of the survey method: "Particularly in relation to culture, when I see my colleagues *inventing* (italics mine) questionnaires to 'measure' culture, I feel that they are simply not seeing what is there, and this is particularly dangerous when one is dealing with a social force that is invisible yet very powerful."

[16] These terms have been used with different meanings. I use them in the sense Guba and Lincoln (in Denzin and Lincoln 1994) have used. See chapter 4 on Research Methodology.

The above argument is not limited to Schein (1996), and is implicitly or explicitly made by almost all constructivist researchers. Denison and Mishra (1995) noted that there was “healthy scepticism about whether culture could ever be ‘measured’ in a way that allows one organization to be compared with another.” Indeed they quoted several authors of the constructivist meta-paradigm who argued that culture should not be studied as a “variable” with “outcomes” (Denison and Mishra 1995). Even authors who believe culture can be measured, as we will see below in the second meta-paradigm, may start their research by the research question: “Can organizational cultures be ‘measured’ quantitatively?” (Hofstede, Neuijen, Ohayv et al. 1990).

Where does this anti-positivist stand in organizational cultural research originate from? I contend that without answering this question, it is difficult to conduct research on organizational culture in the (post-) positivist framework. This is because the anti-positivist stance is widely disseminated in studies on organizational culture and has possibly hampered the measurement of culture. Also, the proponents of this stance, eminent researchers in the field, have posed fair questions, which need to be answered. Once we identify the source of this stand, we will be better positioned to see its relevance to the kind of phenomena organizational culture research has to contend with.

Two inter-related strands that emerged over the course of the 20th century helped crystallize the view that culture is unique, coterminous with the organization boundary, non-measurable through surveys and should, in a way, only be interpreted rather than linked to organizational performance measures. The first strand originated from the anthropological model of conducting research, from which many organizational researchers heavily borrowed in the late 1970s and all through the 1980s, when organizational cultural research was being established as a proper area of academic scrutiny.

In particular, the image of “Franz Boas stepping off the boat in an Eskimo village with his suitcase in hand, preparing for a long stay in residence” (Wallace 1972) developed into a full-fledged paradigm for carrying out ethnographic research. Well-developed and widely accepted criteria of conducting cultural research were set and followed. Some of these criteria were: researchers should have ample experience of other cultures, should stay in the community for a long period of time, and should be trained in qualitative methods, especially participant observation (Sanday 1979).

The above participant observation-based ethnographic method was developed as a result of certain assumptions about the cultures that were being studied. As Wilkins and Ouchi (1983) explain, “What ethnographers have in mind is a ‘well-defined community’ that has existed for some period of time and has employed some relatively stable enculturation mechanisms.” Because the community may share a rather complex and idiosyncratic understanding of the world, it would need patient and careful learning of this understanding by well-trained researchers over a period of time. Gregory (1983) also notes that the notion of culture is often associated with exotic, distant peoples and places and with myths, rites, foreign languages and practices.

Closely linked to the idea of an exotic culture is that of a unique one. As Denison (1996) has noted, many culture researchers believe all cultures are unique, and attempts at generalization are “inherently futile”. In fact, if the culture is not exotic, it may not be unique. One cannot thus generalize the relationship between the individual and the organizational environment beyond the situations in which they arise. No wonder Sanday (1979) compared the ethnographer to a linguist who has studied and recorded a foreign language so that others can learn the rules for producing intelligible speech in that language.

In the 1970s and especially in the 1980s, most organizational culture research virtually adopted the above-described anthropological method intact. As Allaire and Firsirotu

(1984) surmise, the discourse on organizations is laced with, amongst others, "sociomorphic" analogies that see organizations as little societies, should allow one to accept the logical conclusion that "the individuality of organizations may be expressed in their differing cultures." If a further restrictive assumption - namely that the culture of an organization is coterminous with the boundary of the organization itself - is added, then it becomes easy to understand why the constructivist meta-paradigm became so prevalent in organizational culture research. Not only was an organizational culture treated as unique but it was also argued that to generate superior financial performance, the culture of a firm should be rare and imperfectly imitable (Barney 1986).

The second strand comes from the impact of post-modernism on research in social sciences. To take an example, Denison (1996) believes post-modernists "often are harshly critical of attempts to systematize, define, and impose rational comparative logics on the social and organizational world … Following this logic, knowledge must then be situated in time and place and hence relativized." Although this statement does not adequately summarize post-modernism, it is clear that the constructivist meta-paradigm studies of organizational culture encompasses the logic mentioned therein: the two strands are mutually consistent and are in fact mutually supportive.

It is neither possible nor beneficial to list all the studies within this paradigm but some are mentioned to illustrate the argument. John Van Maanen's work on police illustrates this paradigm (e.g., 1973, 1975). In fact, in one of the clearest statements on the post-modernistic logic as well as on the ethnographic methodology, Van Maanen (1979) noted that the results of ethnographic study were mediated several times over, by the fieldworker's own standards of relevance, by the historically situated questions put to the people, by an informant's self-reflection and by data production methods. If ethnographers believed that with more time in the field certain crucial facts would be revealed, then, Van Maanen (1979) claimed, "this is an illusion".[17]

Barley's (1983) study of a funeral home is perhaps a classic illustration of the first meta-paradigm. Applying tools from literary theory to the study of an organization rich with symbols Barley (1983) lays out the framework of semiotics in post-modernist language: "The questions to which semiotics provides a possible answer are not what does a culture do, how did it come to be, or who shares it, but rather of what is composed, how are its parts structured, and how does it work?" And he argues that semiotics captures both the redundant themes that characterize insiders' interpretations of this work-world, and the mundane, critical aspects of a culture.

The epistemological assumptions of the constructivist meta-paradigm make it impossible to either conduct comparisons across organizational cultures, or link organizational cultures with organizational effectiveness. If cultures are unique, if knowledge must be relativized, if semiotics captures the redundant themes, and so on, surely there must be very little room for comparisons to be made across cultures. If a culture cannot be measured, there can be little possibility of comparison. Similarly, linking culture with effectiveness would be an equally foolhardy venture.

### 3.3.4 The Empiricist Paradigm

Despite the strong influence of ethnography-based anthropology on the organization cultural research tradition, a parallel meta-paradigm emerged, maturing in the 1990s.[18]

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[17] This statement by Van Maanen is hard to interpret: Is he saying that all ethnographic work is illusory (but only ethnographic work, and thus by implication, survey-based research has more chances of being "real"?) Or does he imply survey-based research is even more illusory?

[18] Of course it had roots in previous research, most notably in climate research, as Denison (1996) so admirably documents. And to some extent, it had roots in the 19th century social scientific effort to compare cultures, without researching them by living inside these cultures for long periods, a tradition against which modern ethnography rebelled.

It claimed that culture not only was measurable (Sackmann 1992) but insisted that it should be measured. It also compared a large number of organizations along various "dimensions" of culture (Chatman 1991; Chatman and Jehn 1994; Hofstede 1998). And, importantly, it linked these dimensions with organizational effectiveness (Calori and Sarnin 1991; Gordon and DiTomaso 1992; Pothukuchi, Damanpour, Choi et al. 2002). It also showed that instead of a unique culture, multiple cultures, or sub-cultures, existed within one organization (Jermier, Slocum, Fry et al. 1991; Hofstede 1998). In some ways, the positivist research paradigm made a comeback, but this time to co-exist with the post-modernist tradition.

The empiricist paradigm, at least implicitly, is based on the view that organizational cultures are not unique. This does not imply that some organizations have identical cultures, as will be clarified below. In essence it claims that cultures can be broken down into "dimensions" which can be compared across organizations. But the assumption that lies underneath this view is not in harmony with the view that the culture of an organization is coterminous with its boundary. Gregory (1983) pointed out that a researcher could choose between the two views: culture is either coterminous or non-coterminous with the focal organization's boundaries, depending on the theoretical or empirical grounds for a particular study. I would argue that this choice raises a much deeper issue and reflects the choice of a meta-paradigm.

The argument that cultures in organizations are non-coterminous seems plausible and is a logical corollary of an organisation culture being non-unique. To equate an organization, with an influx and outflux of its members, who are deeply entrenched in their own national cultures, and who identify themselves with multiple referent self-identification groups (based on gender, ethnicity, race, work identity and so on), with an Eskimo-like culture, which had evolved over centuries and was reasonably self-contained, seems both implausible and logically weak. The Boasian model mentioned above (Wallace 1972) seems highly inappropriate to the organizational context. It is thus no surprise that Wilkins and Ouchi (1983) argue that clans (which are synonymous with cultures) emerge only when certain conditions are met: the organization has a long history and stable membership, there is absence of institutional alternatives, and there is interaction among members.

Along with non-uniqueness and non-coterminousness of organizational culture the third defining feature of the empiricist meta-paradigm is featurization. Featurization is the rating of organizational cultures on dimensions. Poole (1985, quoted in Denison 1996) notes when discussing contexts: "These types can be rated on dimensions – for example, a democratic climate is high in supportiveness, low in structure, and emphasizes rewards rather than punishments – but cannot be reduced to dimensions, because they are wholes." This comment by Poole clarifies an essential difference in the conceptualization of culture by researchers. Constructivist meta-paradigm researchers would argue that it is precisely the featurization of culture that inflicts the deepest harm on the concept of culture because featurization in the end reduces a complex culture to a few statistically-arrived dimensions and misses out on the redundant themes, as pointed out by Barley (1983) as mentioned above.

The above concern, for example, was important for Denison and Mishra (1995) when they found four major cultural dimensions, features, or traits, across 764 organizations. They however conceded, "To argue that the four traits in fact *are* [italics original] culture would be inappropriate. Instead, the four traits are summary characteristics of an organization's culture and the processes by which culture may have an impact on effectiveness."

One of the most well known examples of featurization of national (and not organizational) culture is Hofstede (1980), which showed four dimensions of national "value differences" (power distance, uncertainty avoidance, individualism and masculinity). Later work by Hofstede and others, relating to organizations, revealed three factors (need for security, work centrality, and need for authority) when 57 value items across 20 organizational units were reduced. As for practices, six factors were identified: process-oriented vs. results-oriented, employee-oriented vs. job-oriented, parochial vs. professional, open system vs. close system, loose control vs. tight control, and normative vs. pragmatic (Hofstede, Neuijen, Ohayv et al.1990). The analysis showed that at the organizational level, perceptions of practices were more important than perceptions of values.

Conscious of the objections by constructivist meta-paradigm researchers, Hofstede, Neuijen, Ohayv et al. (1990) did not deny that organizational cultures were gestalts. But they pointed out that the above approach allowed comparisons across organizations, measurement of culture over time, and revealed if there was one single culture or many subcultures present in an organization. In an insightful concluding paragraph, they noted that any position on these six dimensions was neutral and its adoption was a function of strategic choice. As an example, they pointed out that customer orientation might not be a good choice in all kinds of industrial contexts.

Other studies also “featurized” culture by selecting dimensions. O’Reilly, Chatman and Caldwell (1991) found seven dimensions of organizational culture: innovative, stable, respecting of people, outcome oriented, detail oriented, team oriented, and aggressive. Chatman (1991) measured the organization cultural profile (OCP), which was an index of an organization’s values (9 categories formed out of 54 items). This was matched with recruit profiles and the person-organization fit was linked to other organizational variables. Chatman, Polzer, Barsade et al. (1998) manipulated the culture of an organization by emphasizing individual vs. collective effort in an experiment. Calori and Sarnin (1991) used cluster analysis to reduce a large number of organizational values to 12 dimensions. Gordon and DiTomaso (1992) refer to eight factors, which earlier analyses had found from 61 items, labelled as clarity of strategy, systemic decision-making, integration, innovation, accountability, action orientation, fairness of rewards and promotion from within.

Since featurization is perhaps one of the key defining characteristics of the empiricist meta-paradigm, and also one which attracts the most criticism from proponents of the constructivist meta-paradigm, it is pertinent to ask if the notion of featurization of culture is conceptually problematic, and if so, to what extent. At the outset, researchers from both paradigms will agree that one problem with the featurization of culture is that there exists no consensus on either the number or the type of features that a culture possesses. Hofstede's (1980) four factors (later extended to five), discussed above, have attracted considerable interest. But the criticism levelled against Hofstede's approach has also been extensive, as documented by Hofstede himself (Hofstede 1990). There seems to be no theory, which dictates why there should be four such factors. And empirically, as seen in some of the examples discussed above, researchers have found a large number of dimensions which featurized culture, and only some of these overlap with Hofstede's (1990).

It should be kept in mind that the term culture had already acquired 164 definitions in 1952 (quoted in Deshpande and Webster 1989). If its definition as assumptions, values and artefacts (Schein 1985) is accepted as the most prevalent, these three terms could generate any number of "features" which can then be operationalized. No wonder, Allaire and Firsirotu (1984) term culture a "motley, protean notion". For this reason alone, the effort to conceptualize culture as a uni-dimensional construct should be abandoned. Further, features should be selected in accordance with the theoretical reasons for which the study is examining culture. At the same time Chatman and Jehn (1994)'s remark is insightful: "Replicability does not imply that all organizations will be characterized by the same magnitude of a culture dimension." In other words, it is perfectly permissible to use a dimension such as innovativeness, even though many organizations will not be innovative at all.

That featurization helps advance the cause of research on culture is borne out by the fourth characteristic of the empiricist meta-paradigm: the link between the features or dimensions of organizational culture and organizational performance. Gordon and DiTomaso (1992) found that a culture's strength is predictive of short-term performance. Pothukuchi, Damanpour, Choi et al. (2002) concluded that organizational culture, rather than national culture, affected the performance of international joint ventures. Calori and Sarnin (1991) showed that some cultural attributes were correlated with firms' relative growth performance, while the link with profitability was weak. Chatman (1991) found that the person-organizational culture fit was related to satisfaction after one year in the company, and to the intention to leave.

### 3.3.5 Clarifications

A few clarifications are in order regarding the discussion on meta-paradigms. To begin with, the first question that comes to mind is the link between these two meta-paradigms and the various paradigms discussed above. These meta-paradigms are not composed of separate, neatly categorized paradigms; however, many paradigms in the literature should fit in with either of the two. But more importantly, most studies in organizational literature will fall into either of the two *meta*-paradigms. Thus, out of Smircich's (1983) five paradigms, the first two belong to the empiricist meta-paradigm and the last two to the constructivist meta-paradigm. The middle one can belong to either, depending on the particular study. Similarly, Sanday's (1979) second style (semiotic) is again clearly contained within the constructivist meta-paradigm. Her first style (holistic configuration) is also largely contained within the constructivist meta-paradigm, but it may be recalled that some of the anthropologists she has discussed conducted some cross-cultural (or cross-community) comparisons.

On the other hand, Allaire and Firsirotu's (1984) paradigms crosscut with my meta-paradigms. This is because their defining criterion is whether a paradigm is sociocultural or only separately cultural in nature. This is a useful distinction, but beneficial only when employed in anthropological research. In organizational cultural research, this distinction hardly matters as the complexities of organizations are not equivalent to societies, despite the sociomorphic analogies (Allaire and Firsirotu 1984). Similarly, Meyerson and Martin's (1987) first paradigm is mostly, but not wholly, contained within the constructivist meta-paradigm, and their second paradigm within the empiricist meta-paradigm. But a more correct categorization will emerge on the basis of actual studies that have been conducted on culture. I suggest that the two meta-paradigms described above are more efficient in categorizing much of the extant literature, simpler to understand and as will be seen, more useful in conducting further research. However, I do not make a claim that the two meta-paradigms identified in this chapter are exhaustive.

Secondly, while the two meta-paradigms partially overlap the familiar qualitative-quantitative division, there is no one-to-one correspondence. To begin with, the qualitative-quantitative divide itself is open to question. It is perhaps a misleading conception that qualitative work is not quantitative. Van Maanen's (1975) study of police socialization has made considerable use of statistics. Barley's (1986) research on technology and structuration makes some of its most vital points with the help of statistics, including linear and quadratic trends in the proportion of operational decisions involving radiologists. More importantly, some qualitative studies have denied some of the major claims of the constructivist meta-paradigm and supported those of the empiricist meta-paradigm. In an interesting paper, Martin, Feldman, Hatch et al. (1983) argue that a culture's claim to uniqueness (a claim in line with the constructivist meta-paradigm, according to my categorization, that is generally not acceptable to empiricist meta-paradigm researchers) is, paradoxically, expressed through cultural manifestations, such as stories, that are in fact not unique.

It is important to recall that the constructivist meta-paradigm was shaped not by post-modernism, which was not even present in early 20$^{th}$ century, but by the ethnographic tradition which developed as a result of the Boasian paradigm mentioned above. It was reinforced, much later, by post-modernist thought, which seemed to fit in very well with the implications of the Boasian paradigm. But equating the constructivist meta-paradigm with post-modernism will miss out on the rich ethnographic tradition of research scholarship. Furthermore, it limits us from comprehending the inappropriateness of applying the Boasian paradigm to organizations, as a result of the erroneous deployment of the sociomorphic analogy of "organization as society."

### 3.3.6 Measurement of Culture

Within the empiricist meta-paradigm, controversy exists on how to measure culture. Once again, for analytical clarity, I subdivide the empiricist meta-paradigm into two categories: The firm-cultural empiricist and the managerial-cultural empiricist paradigm. Both share all the characteristics of the second meta-paradigm that were mentioned above, but differ in an important way as described below. Both are prevalent in extant literature, but due to reasons associated with ease and practicality of survey research, the managerial-cultural empiricist meta-paradigm (which will be later referred to as "strategic orientation") is gaining ground. In turn, it is suggested below that it is improbable that the firm-cultural meta-paradigm would become a measurement mode for researchers, particularly those who wish to link organizational culture with performance across a large number of organizations.

**The firm-cultural empiricist Meta-paradigm** sticks to the definition(s) of culture, such as in Schein (1985), in a literal way by insisting that culture is a phenomenon that exists within communities and is based on shared assumptions, values and artefacts among a set of people who form a particular community. Consequently, culture should be measured at the individual level, not at the organizational level. In other words, we must know something about the “sharedness” of a culture across a community as it actually exists, before we link culture as a variable to other variables including performance. In a way, this view incorporates and answers Arensberg’s (1978; quoted in Gregory 1983) comment that culture was not “merely planned and commanded” but partially “spontaneous, responsive [and] self-realized…”

One of the researchers working in the above meta-paradigm is Chatman (e.g. 1991, 1994). Chatman (1991) and Chatman and Jehn (1994) measured consensus among members of an organization about organizational values in two ways: co-efficient alpha and average inter-rater correlation. The second measure represents how similarly any two raters view their firm. Gordon and DiTomaso (1992) computed standard deviations across individuals within companies, and measured culture strength by taking the inverse of standard deviations. This is consistent with Saffold (1988; quoted in Gordon and DiTomaso 1992)’s recommendation that one can measure culture strength by dispersion. Denison (1990; quoted in Gordon and DiTomaso 1992) measured variances across groups within companies.

Although theoretically sound, the firm-cultural meta-paradigm has not been widely replicated. One reason is suggested: it would require an immense, almost certainly financially prohibitive, effort to collect data across hundreds of organizations, and within each organization, across a large number of respondents. It is probably for this reason that **the managerial-cultural empiricist meta-paradigm** has been adopted, and followed, much more widely. Further, it has had a large impact on the marketing literature, particularly through the orientation construct, as was seen in the previous chapter. The rest of the chapter will explicate the approach contained in the managerial-cultural empiricist meta-paradigm.

The managerial-cultural empiricist meta-paradigm assumes that while societal, national, regional and communal cultures can originate from any number of sources, organizational culture is more often than not a product of the ideologies, views, strategies and practices of the leaders and management of a particular organization. This assumption is present in a large body of extant literature, and not only within the empiricist meta-paradigm but also in the constructivist meta-paradigm. Pettigrew's (1979) well-cited paper on organizational cultures, an archetypical example of the first meta-paradigm, was centred on the visions of the headmasters of a British school; visions that set the culture of the school. More generally, Allaire and Firsirotu (1984) comment that in many instances "the study of culture actually means the study of individual actors" some of whom may be "dominant actors casting upon organizations their values, needs and preferences.

Interestingly, Denison (1996) notes that within culture literature, authors have taken positions in favour of or against managerial ideology. However, climate researchers appear to be less critical of managerial ideology, and tend to "accept the organizational contexts created by management as a given." This remark is insightful, because climate research, according to Denison (1996) is characterized by operationalization, measurement and comparison of cultures and cultural dimensions, thus it is reasonable to imagine that such researchers would focus more on managerial ideology.

Gregory (1983), while discussing cultural integration, noted that it had been evaluated by the degree of compliance or non-compliance with the normative view managers had of the organization, to the extent that the dominant culture was defined as the explicit management philosophy. Managers were said to create organizational cultures and train employees in them. Baker (1980) was quoted in Gregory (1983) as saying that some successful companies had especially distinctive cultures that they actively cultivated and managed. The same emphasis on top management as creators of culture is present in the very few papers on culture in marketing literature. Thus Deshpande and Webster (1989) noted, "most literature on organizational culture treats it as a top-down phenomenon with a critical role being played by the CEO in both establishing cultural norms an overseeing their diffusion in the firm.” The authors suggested that it might be more productive to study the culture at the SBU or divisional or even departmental levels based on their preliminary research.

Extant literature also casts doubt on whether the empiricist managerial-cultural meta-paradigm’s focus on management ideology and values is well placed. Meyerson and Martin’s (1987) categorization of paradigms, discussed above, suggested the first paradigm was marked by consistency, organization-wide consensus among members and denial of ambiguity. While these characteristics do not represent the managerial-cultural empiricist meta-paradigm, the authors’ claim that researchers who endorse this paradigm “usually restrict their conception of culture to relatively superficial manifestations, such as the espoused values of top management” implies a veiled criticism of the emphasis on management’s values. Smircich (1983) obliquely notes “Those of a sceptical nature may also question the extent to which the term corporate culture refers to anything more than an ideology cultivated by management for the purpose of control and legitimation of activity.”

These concerns are valid and the managerial-cultural empiricist meta-paradigm does not meet all of them. However, this does not imply that it cannot be used to conduct useful research. On the contrary, strong theoretical and practical reasons suggest and reinforce its usage. Thus, Hofstede, Neuijen, Ohayv et al. (1990), in a well-cited study, noted that US management literature rarely distinguished between the values of the founders and leaders, and the values of the bulk of the organization’s members. They concluded, “The values of founders and key leaders undoubtedly shape organizational cultures but the way these cultures affect ordinary members is through shared practices. Founders’ and leaders’ values become members’ practices.”

## 3.4 The Construct of Strategic Orientation

Although the construct of "orientation" was discussed at some length in the previous chapter, it is time to take it up in the context of organizational culture. The concept and construct of orientation provides us with a useful way to resolve some of the problems that the above discussion of culture brought up. The construct of orientation, it is argued, fits in well with the managerial-cultural empiricist meta-paradigm that was explicated above. Consequently, it becomes possible to measure the "culture" of an organization within the management values' stream, without necessarily measuring the actual sharedness implied by the concept of organizational culture. Finally, this discussion provides a vital link between the treatment of organizational culture in organizational behaviour literature and its treatment in the marketing literature.

There has been some confusion in marketing literature, as was seen in the previous chapter, as to whether market orientation is an aspect of culture or a set of activities, behaviours and processes. Originally, Kohli and Jaworski (1990) took the latter view, while Narver and Slater (1990) adopted the former view, and ever since, the two respective scales that were developed have dominated orientation literature in marketing research. However, it should be clear from the above discussion of culture that both assumptions and values on the one hand, and artefacts and practices on the other, comfortably and non-controversially lie within the definitional umbrella of culture. Conceptually, Schein (1985) and Hatch (1993) clearly include both values and artefacts/practices as part of culture. Empirically, Hofstede, Neuijen, Ohayv et al. (1990) measured both as part of culture.

An examination of extant marketing literature reveals that after more than a decade of research on the market orientation construct, since the construct was conceptualized and operationalized in 1990, both conceptualizations of the construct, namely cultural and behavioural, are widely used. In fact, Jaworski and Kohli (1996; quoted in Hurley and Hult 1998) studied the differences in the cultural and behavioural definitions of market orientation and concluded that both had merit. Hurley and Hult (1998) believe that both perspectives "are valuable" and Deshpande and Farley (1998) found both scales "interchangeable", as mentioned previously. Interestingly, Hurley and Hult (1998) also argue that market orientation can manifest "at various levels in an organization (i.e., the firm's strategy, processes, structure, behaviours, and culture). Drawing on the culture literature, we go further to suggest that the deepest manifestations of market and learning orientations are at the cultural level…"

One related construct is that of **strategic orientation**. Hitt, Dacin, Tyler et al. (1997) used the concept and construct of strategic orientation as reflections of the beliefs and mental models of senior executives. Strategic orientation is also related to culture and market orientation. Noble, Sinha and Kumar (2002) note, "The concepts of market orientation, strategic orientation, and culture are closely intertwined" but also conclude, "Any differences among 'culture', 'strategic orientation' and 'market orientation' have not been well established, in part because of different definitions and treatments of the constructs in the literature." They define a competitive culture approach to strategic orientation, in which competitive culture is primarily influenced by long-term management perspectives on the keys to competitive advantage and success in the firm's environment. They also claim that orientation can be categorized and compared across organizations and that strategic orientation is a subdimension of the culture construct. It can be seen that both Hitt, Dacin, Tyler et al.'s (1997) and Noble, Sinha and Kumar's (2002) approaches fit in well with the managerial-cultural empiricist paradigm.

It is instructive to compare the concept of strategic orientation in Noble, Sinha and Kumar (2002) with the one in Gatignon and Xuereb (1997). Gatignon and Xuereb (1997) base their version of strategic orientation on the concept of marketing orientation as explicated in Narver and Slater (1990). According to them, strategic orientation reflects the strategic directions implemented by a firm to create the proper behaviours for the continuous superior performance of the business. They count customer, competitive and technological orientations as three such strategic directions. Noble, Sinha and Kumar (2002) contrast their view of strategic orientation with the one in Gatignon and Xuereb (1997) and observe that the latter view suggests "a more malleable and less culture-like view of strategic orientations than we take in this research."

It can be seen from the above discussion that both Gatignon and Xuereb (1997) and Noble, Sinha and Kumar (2002) remain within the parameters of the empiricist meta-paradigm of organizational culture: the culture of an organization is not unique, is measurable along some dimensions, and thus comparable across organizations; and can be linked, through its dimensions, to firm performance. At the same time, many papers it is suggested that many papers find it somewhat difficult to reconcile the managerial-cultural empiricist meta-paradigm, with the firm-cultural empiricist meta-paradigm, which is perhaps closer to the classical definition of culture, as in Schein (1985).

This may explain why Kohli and Jaworski (1990) did not use the word "culture" in their paper, (but Narver and Slater 1990 did); why Noble, Sinha and Kumar (2002) believe that Gatignon and Xuereb's (1997) view of strategic orientation is a little more malleable than theirs and what Noble, Sinha and Kumar (2002) mean by a "less culture-like view". In short, despite the various differences in operationalizing strategic orientation, and the differences even in conceptualizing it, the construct of strategic orientation comes closest to representing the managerial-cultural empiricist meta-paradigm. And irrespective of its various definitions, strategic orientation, while anchored within the organizational culture stream, is more *malleable* than the paradigmatic culture derived from anthropology. Finally, the word "strategic" imparts to the firm the managerial influence and top-management-led impetus that organizational cultures certainly possess, but that are made more explicit by the term "strategic".

Before I proceed to link strategic orientation with customer selectivity, by modelling it as an antecedent, it is useful to clarify a few issues. First, just as it was seen above that the definition of culture consists of assumptions, values and artefacts/practices; similarly the term strategic orientation includes both values and practices. Incidentally, Hatch's (1993) model of culture clearly provides for forward and backward causal links among these components. In other words, while it is intuitive to understand that assumptions lead to values which lead to artefacts/practices, the model explains how values can lead to assumptions in a backward causal relationship.

It is also useful to note that the items used in the two paradigmatic scales of market orientation (Kohli and Jaworski 1990 and Narver and Slater 1990) largely, but not wholly, reflect activities and practices. Further, as was mentioned in the previous chapter, Deshpande and Farley (1998) asked 82 marketing executives from 27 companies to complete a questionnaire based on these two scales and another scale on market orientation by Deshpande, Farley and Webster (1993) and concluded that all three scales "appear interchangeable, and that substantive conclusions reached with each apply generally to the others" (quoted in Farrell 2002). They even factor analyzed the three scales to develop a parsimonious 10-item scale.

## 3.5 Organizational Culture and CRM/Customer Selectivity

Given the extensive literature that now exists on customer relationship management it is indeed surprising that not much attention has focused on the antecedents of CRM, especially the link between organizational culture and CRM. This is surprising for many reasons. First, CRM implementation is an expensive proposition, and yet it is increasingly a necessary one in many industries. It is also a complex one, particularly given the large number of activities that can be grouped under the CRM umbrella. Consequently, at the very least it should be academically interesting and managerially relevant to ask the question: Where does CRM implementation come from?

In particular, is it linked to a particular kind of organizational culture? Even more specifically - since we have discussed in some detail the concept of organizational culture, and how organizational culture can be represented - can the strategic orientation of a firm (encompassed by the managerial-cultural empiricist meta-paradigm) be linked to CRM? And since we have seen in the previous chapter that extant CRM literature considers customer selectivity the essence of CRM, the question reduces to whether a firm's strategic orientation can be linked to its implementation of customer selectivity.

Second, given the possibility that more than one orientation exists within a firm, and that a particular orientation leads to customer selectivity rather than another orientation, it should be of considerable managerial interest to locate and identify the particular orientation that is antecedent to customer selectivity implementation. Given that organizational culture as viewed in the managerial-cultural empiricist paradigm, particularly through the construct of strategic orientation, is malleable - as opposed to culture as viewed in the constructivist paradigm (in the paradigmatic sense) - it is reasonable to hypothesize that more investment in the building up of the "right" orientation should lead to better/higher implementation of customer selectivity.

And third, the absence of the linkage mentioned above is surprising: from the organizational culture perspective, it would be very useful to link the concept of organizational culture with firm performance through CRM activities (in my case, customer selectivity). In other words, it is possible that one reason research on organizational culture has not yielded the results it was expected to is because the concept of organizational culture has been directly linked to firm performance. Linking organizational culture to customer selectivity, which is then linked to firm performance, provides a plausible model with a clear explanatory mechanism.[19]

### 3.5.1 Marketing orientation as Antecedent to customer selectivity

Extensive search yielded one clear reference to cultural antecedents of CRM. Even here, the link with organizational culture was implied and brief, not explicit and detailed. The link is made by Boulding, Staelin, Ehret et al. (2005) when they claim, “The evolution of CRM can be traced back to the market orientation literature.” Boulding, Staelin, Ehret et al. (2005) also refer to fulfilment of needs instead of focus on selling products for firms to stay in existence as one of the original big ideas in marketing, and note that this was “a key component of CRM.” The link between CRM and market orientation may appear logical because both claim to satisfy customer needs.

In Chapter 2, market orientation and customer selectivity were examined as alternate drivers of firm profits in differing contexts. It was argued that market orientation, which was nothing but the operationalization of the marketing concept, was aimed at fulfilling all customer needs. The idea of incorporating customer costs, and thus customer profits, was tentatively discussed when the marketing concept was being framed, but dropped eventually (Narver and Slater 1990). All such discussion was permanently shelved when the marketing concept was operationalized through market orientation.

The question whether market orientation, instead of being a rival driver of customer selectivity, can be visualized and modelled, as an antecedent of customer selectivity

[19] In marketing literature though, a few examples of this model exist, such as Han, Kim and Srivastava (1998) who hypothesize that innovation mediates the link between market orientation and organizational performance.

was not posed in the previous chapter. The reason for this, as was explained earlier, lies in a different conceptual framework needed to handle this relationship. The framework was developed in this chapter by examining the concept of culture and by explication the concept of strategic orientation. This sets the basis for arguing the possibility that market orientation, if not a rival strategic activity to customer selectivity, can act as its antecedent.

Boulding, Staelin, Ehret et al. (2005), in an opening paper for the special section on CRM in Journal of Marketing (October 2005), make the case for linking marketing orientation with customer relationship management (CRM). Their argument is that "One of the original big ideas in marketing is that for firms to stay in existence, they should not focus on selling products but rather on fulfilling needs". They do not explicitly label this "original" big idea, but based on the literature review in the previous chapter, we can see that the idea is nothing but the marketing concept.

Boulding, Staelin, Ehret et al. (2005) argue that a drill manufacturer is in the business of providing a customer a hole, and a railroad company is in the business of providing transportation. They see this as a "key component" of CRM because the focus here is on creating value for the customer (and in the process, for the firm as well). It was seen in Chapter 2 that the marketing concept was essentially based on the same idea. They refer to Levitt (1969) as having introduced the concept of the augmented product, emphasizing that "consumers are interested in the total buying experience, not just the core product". They argue that "CRM relies on this concept because it tries to find the specific elements of the exchange process that produce value to the customer." Boulding, Staelin, Ehret et al. (2005) go on to claim that "the evolution of CRM can be traced back to the market orientation literature".

Further link between market orientation and CRM in Boulding, Staelin, Ehret et al. (2005) is provided by their argument that concepts such as market orientation and market focus were developed “that emphasized the establishment of good information processes and capabilities within the firm to understand the needs and wants of customers, thus making firms more efficient and effective in *managing customer relationships*” (italics mine). In fact they conjecture that based on their discussion, it could be argued that “CRM is the relabeling of a mixture of different marketing ideas in the extant marketing literature”. They argue, however, that CRM goes beyond extant literature. In other words, the implication is that CRM originated from market orientation, but is not equivalent to it.

The link between market orientation and CRM is also made in few other papers. Srinivasan and Moorman (2005) note that the measures of a firm’s CRM capability are “theoretically founded in the firm’s market orientation”. They stress that “this foundation reinforces the importance of market orientation to a firm’s CRM capability.” However, they note that the two concepts are not equivalent, and that “a firm’s capability extends beyond its market orientation.” Yim, Anderson and Swaminathan (2004) argue that the essence of CRM thinking originates in part from customer orientation (they do not explain how customer orientation is different from market orientation). Tuominen, Rajala and Moller (2004) model market orientation as driving customer intimacy, which they believe is part of CRM. In Javalgi, Martin and Young’s (2006) framework, market orientation leads to CRM.

Based on the above literature review of culture, at the end of which I argue in favour of looking at market orientation as a strategic orientation, based on Boulding, Staelin, Ehret et al.’s (2005) linking market orientation with CRM, and based on my anchoring customer selectivity within CRM as per Chapter 2, I propose the following model. According to this model, market orientation is a cultural antecedent to customer selectivity, which in turn drives firm performance.

## 3.6 Model


**Figure 3-1 Model II**

## 3.7 Proposition

$P_4$: Market Orientation is positively associated with customer selectivity

**Note: The above proposition, as well those in the previous chapter, will be re-stated as hypotheses in Chapter 4, at the level of dimensions of each construct.**

## 3.8 Conclusion

This chapter presented a literature review on the concept of organizational culture. It also suggested a convenient, efficient and useful distinction between two meta-paradigms. The first meta-paradigm, the constructivist, argued that organizational culture is unique. It can neither be measured, nor compared across organizations, nor can it be linked with performance measures. It can only be interpreted. It was seen that this paradigmatic view of culture was derived from anthropology, and reinforced by developments in post-modernist thought. The other meta-paradigm, i.e. the empiricist one, argued the opposite of this. From the perspective of measurement, the second meta-paradigm was divided into two sub-meta-paradigms and the latter of the two was seen as leading to the concept of strategic orientation. This led me to set up a rival model to the one presented in the previous chapter.

# 4 Research Methodology

## 4.1 Overview

The previous two chapters set up the hypotheses that establish the links between market orientation, customer selectivity and performance on the other. Chapter 2 set up a model which argued that market orientation and customer selectivity were marketing tools which could be chosen, depending on the context, to drive firm performance. Chapter 3 set up a model which argued that market orientation could be viewed as an antecedent to customer selectivity, which in turn drives firm performance. This chapter discusses the research methodology appropriate for testing these hypotheses. It sets out my ontological and epistemological positions, my research strategy and design, and describes the dataset I use. It then outlines my research method, and describes the operationalization of the constructs I used in my empirical analysis. Finally, it lays down the model estimation on which I base my research.

Right at the outset, I note that over the last few decades, a large number of papers and books have been published on the categorization of competing paradigms in the social sciences. This has inevitably led to multiple definitions of such widely used terms as positivism, post-positivism, constructionism, etc. It is not within the confines of this paper to discuss and evaluate in full detail the extant literature on competing paradigms in the social sciences. Therefore, I intend to stick to the excellent categorization by Guba and Lincoln (1994), in the Handbook of Qualitative Research by Denzin and Lincoln (1994), as well as to the well-known work by Popper (1968). I will also refer to other categorizations, such as Blaikie (1993, 2000).

Guba and Lincoln (1994) note that an answer to the methodological question of how an inquirer finds out whatever he or she believes can be known is “constrained” by the answers already given to the ontological and epistemological questions. I will therefore first enunciate my ontological and epistemological position, before discussing my methodology.

## 4.2 My Ontological and Epistemological Position

Research in the social sciences is marked by paradigmatic pluralism, and even by paradigm wars. What complicates enunciating one's position on the ontological and epistemological landscape is the multiplicity of definitions of each paradigm. Consequently, as mentioned above, I abide by Guba and Lincoln's (1994) four-fold categorization of paradigms: Positivism, post-positivism, critical theory, and constructionism. This categorization is simple, reasonably comprehensive, well cited and accompanied by two tables, which clearly underscore the differences among the paradigms and the positions of the four paradigms on selected practical issues. On the whole, I place myself within the post-positivism paradigm.

The ontological question relates to the form and nature of reality, and therefore, what can be known about it (Guba and Lincoln 1994). This can be compared to Blaikie (1993) who defines it as the assumptions that a particular approach makes about the nature of social reality. Similarly, the epistemological question pertains to the nature of the relationship between the knower and what can be known (Guba and Lincoln 1994). This can be compared to Blaikie (1993), who relates it to the claims or assumptions made about the ways in which it is possible to gain knowledge of this reality.

Ontology and epistemology constrain methodology (Guba and Lincoln 1994; Blaikie 1993). A useful distinction is made between methodology and methods of research by Blaikie (1993): Methodology is the analysis of how research should or does proceed and includes discussions of how theories are generated and tested - what kind of logic is employed, what kind of criteria need to be fulfilled, what theories look like and how particular theoretical perspectives can be linked with a specific research question. Methods of research are the actual techniques or procedures used to gather and analyze data related to some research question or hypothesis.

Guba and Lincoln's (1994) four paradigms of research can be summarized as follows. Positivism, ontologically, is based on "naïve realism" which assumes an apprehendable reality exists, driven by unchangeable natural laws and mechanisms. Research can help one reach the "true" state of affairs. It epistemologically postulates that the investigator and the investigated are independent of each other. In post-positivism, ontology is based on "critical realism", according to which reality can be comprehended but only imperfectly. Also, claims about reality must be submitted to the widest possible critical examination. Epistemologically, the complete separation between the investigator and the investigated is abandoned but objectivity remains an ideal. The findings should fit in with pre-existing knowledge and the critical community (editors, referees, peers) play a key role in its maintenance. Replicated findings are true, subject to the p-values of statistical probability, and are always open to being falsified if contrary evidence or findings are presented.

In critical theory, ontology is based on historical realism, which claims that all reality has been fashioned by political, cultural, economic, ethnic and gender factors, shaped into structures, which assume a kind of virtual reality. Epistemologically, the investigator and the investigator are not independent of each other. Constructionism, on the other hand, assumes realities are individual constructions; even though they are socially and experientially based, they remain local. These constructions are changeable. Epistemologically, the distinction between the investigator and investigated is weakest compared to the other three paradigms - it disappears.

Since I have positioned myself within the post-positivist paradigm of research I shall elaborate its position on selected practical issues, based on Table 6.2 in Guba and

Lincoln (1994). The paradigm's inquiry aim is the explanation of phenomena, so that eventually they can be predicted and controlled. The nature of knowledge is based on hypotheses that have been tested and found to be non-falsified (cf. Popper 1968) and that assume the shape of probable facts or laws (as opposed to hypotheses which have been verified as "true" and become "laws" in positivism); its goodness criteria are based on conventional benchmarks of rigor: internal and external validity, reliability and objectivity; the voice of the inquirer is that of the unbiased and objective scientist; and the training for beginners is in quantitative skills but also in some qualitative methods. I note here that Guba and Lincoln's (1994) views on positivism are similar to Blaikie (1993), and Guba and Lincoln's (1994) views on post-positivism overlap with those of Blaikie (1993) on critical rationalism.

Post-positivism is consistent with, if not directly derived from Popper (1968). Popper, in his Logic of Scientific Discovery (1968) notes that if the decision regarding a theory's predictions turns out to be positive, "then the theory has, *for the time being*, passed its test … But if the decision is negative or in other words, if the conclusions have been falsified, then their falsification also falsifies the theory from which they were logically deduced."

## 4.3 Research Strategy

My research strategy is determined by my ontological and epistemological positions and by the kind of research questions I am interested in. Why have I placed myself within post positivism? Part of the answer lies in a researcher's previous training, inclinations and experiences. But part of the answer lies in the kind of research questions he is interested in. As the previous chapters indicate, I want to test the hypotheses establishing the relationships between market orientation and customer selectivity on the one hand and firm performance on the other. This type of question assumes that I will be looking at sample data across multiple firms because I want to reach a conclusion that is generalizable to a larger number of firms. It is obvious that a deductive research strategy is appropriate to my research questions. However, I make this claim with important caveats, because I believe that despite the remarkable progress made in the philosophy of research in the social sciences, a lot of unnecessary confusion has been created which hampers further progress.

A large part of the above-mentioned confusion centres around the debates on inductive versus deductive research and qualitative versus quantitative research. While it is not possible for me to take a definite position on these issues, I want to clarify that if I resort to using the deductive research approach I am not, by any means, stating or implying that deduction is a better or a more useful and fruitful strategy than induction. Thus although my research strategy is consistent with Popper's (1968) falsificationist views, as noted above, I also agree with O'Hear's (1989, quoted in Blaikie 1993) implication that Popper's denunciation of induction is somewhat misplaced. O'Hear (1989) noted that, regarding Popper's claim that the best theory at any time is the one that has survived the severest tests, it is difficult to talk of severe tests without using some notion of inductive reasoning.

If the hypotheses I have set up in this research are not falsified, to argue that these are generalizable to all the firms (even under specified conditions) now and in the future should involve some feat of inductive logic. Equally important, a large part of insights in extant marketing literature, as in other literatures, has come from inductive/qualitative papers. (And many qualitative research papers involve a fair amount of quantitative work). It is inconceivable to me that these insights could only have come from deductive research.

Second, while claiming that both inductive and deductive logics and both qualitative and quantitative research are indispensable for furthering knowledge, I chose the deductive research strategy as my principal strategy because I did not need the "thick description” that Geertz (1973) mentioned (and which corresponds to the empiricist paradigm detailed in chapter 3) in my research. I therefore quote a remark by Giddens (1984; cited in Blaikie 1993), “Thick description may be necessary in some types of research, especially of the ethnographic kind, but it is not necessary where the activities have generalized characteristics familiar to those to whom the findings are made available [and where] actors are treated in large aggregates.”

## 4.4 Research Design

This research primarily aims at linking market orientation and customer selectivity with firm performance, and testing the hypotheses on a multi-industry dataset. One of the most widely accepted methods to deductively test hypotheses is to use survey research. Survey research methods are valuable when representativeness and generalization are central study objectives (Knoke, Marsden and Kalleberg, in Baum 2005)

### 4.4.1 Dataset

I used a secondary dataset[20], consisting of 211 usable responses from firms across four industries: financial services, hospitality, online retailing and power utilities. The industries have a large customer base and make intensive use of various channels. The questionnaire was sent to 1015 companies; 214 responses were obtained, resulting in

[20] For details of the dataset, see Reinartz, Krafft and Hoyer (2004). As noted earlier, a paper entitled “The Customer Relationship Management Process: Its Measurement and Impact on Performance”, based on the same dataset, was published in Journal of Marketing Research (2004) by Reinartz, Krafft and Hoyer. The focus of that paper was conceptualizing and operationalizing a formative 39-item scale for CRM, and linking it with firm performance. My thesis’s primary focus is very different: I contrast customer selectivity, a reflective scale based on one dimension among many of CRM – and one which was not identified by the Reinartz et al. (2004) paper - with market orientation. In examining the impact of these drivers on firm performance, I also distinguish goods from services contexts both conceptually and empirically. As a result, the theoretical and managerial implications of my thesis are very different from those of Reinartz, Krafft and Hoyer (2004).

an effective response rate of 21.1%. In more than 75% of cases, senior marketing or sales executives filled out the questionnaires.

After the first-wave dataset was collected, a second set of primary data from a different set of respondents was collected (95 valid responses were obtained). Analysis showed that Sample 1 and Sample 2 respondents did not vary on several descriptive variables. This reduces the possibility of common method bias (Reinartz, Krafft and Hoyer 2004).

### 4.4.2 Fit with my research requirements

1) The companies in the dataset are limited to consumer markets because business-to-business relationships are typically characterized by a strong dependence on salespeople as a principal means of communication between firms and clients and by smaller numbers of customers. This means that both market orientation and CRM related constructs have a chance to be linked to performance measures because the number of customers a firm serves on average is large.

2) The industries chosen for the survey are: financial services, hospitality, online retailing, and power utilities. These were selected on the basis of characteristics such as a huge customer base, exhaustive use of various channels, professionalism in CRM activities, and market emphasis to distinguish oneself from competition. Based on my own qualitative research, as well as my research on cost to serve, I concluded that the cost to serve is both high and variable across customers in these industries. Consequently, this dataset should provide me with high chances of testing my hypotheses.

3) My research design in the first model is aimed at reducing the presence of common method bias. This is also consistent with Podsakoff and Organ's (1986)

observation, "First, we strongly recommend the use of procedural or design remedies for dealing with the common method variance problem as opposed to the use of statistical remedies."

Having said that, this dataset is based on two "waves" of the same questionnaire, the second one sent to 211 companies that responded in the first round of data collection. In addition, the second set was collected as soon as possible after the first set was collected, to minimize any temporal biases. In Sample 2, 95 valid responses were obtained from a *different* set of respondents. Both datasets were compared on several descriptive variables, but no differences between the groups were found. This second wave collection imparts a rare robustness to the dataset, which adds significantly to the quality of the data. It is important to note that many respondents from Sample 1 did not appreciate the cross-validation procedure. This also addresses, at least to some extent, the concern that in single-informant studies, an informant may not necessarily possess a totally accurate or unbiased view of the entire organization.

4) Most importantly, I could find most of the items I needed to construct my scales from the dataset. For market orientation, I could find items both from Jaworski and Kohli's (1990) and Narver and Slater's (1990) scales. I also found items that corresponded reasonably to the concept of customer selectivity, as defined in this dissertation. As I discuss later, I had conceptualized a one-dimensional construct, but factor analysis suggested a bi-dimensional construct of customer selectivity. For control, I was able to find the important variable of sales, which is extensively used in marketing literature as a proxy of firm size. More importantly, I was able to find a one-item question asking the percentage of revenues derived from the sale of goods versus services.

5) As I mentioned above, I was interested in the widest possible generalization of my results. In deductive analysis, it is of the utmost importance that the dataset be as

large and as diverse as possible. This dataset was obtained from three countries, four industries, and 211 firms from a sample of more than a thousand firms. Questionnaires were prepared in different languages and translated and retranslated. As mentioned, a second wave was sent to a smaller sample. Consequently, even though my ontological and epistemological assumptions preclude a complete certainty with which the generalizability of my results can be claimed, it is hoped that the results of my study will be validated by other researchers.

## 4.5 Research Methods

As mentioned above, Blaikie (1993) distinguishes between research methodology and research methods. I have described my methodology above.

For the hypotheses set up in chapter 2 I use multivariate regression. I choose multivariate regression because it is one of the most widely used methods when the dependent variable is single and available in interval scale, when independent variables are more than one, and when there are no further endogenous variables. Further, the method is reasonably rigorous as it allows to incorporate controls. The results can be interpreted easily and can be compared to other studies.

For the hypotheses set up based on the rival model developed in chapter 3, I use structural equation modelling. This is because the antecedent and the dependent variables are mediated by a third variable, and structural equation modelling (SEM) can estimate the entire model, as it were, at one go.

## 4.6 Measures

### 4.6.1 Exogenous Variables

All items are rated on a seven-point Likert scale, anchored by 1 = “strongly disagree” and 7 = “strongly agree”. Cronbach alphas are given next to the scale. Factor loadings and item-to-total correlations are mentioned next to the items.

### 4.6.2 Market Orientation

***Reflective Scale***

The first question in developing a scale that a researcher is confronted with is the choice between a reflective and a formative scale. In a reflective scale, items (i.e. observed variables) composing a scale are perceived as reflective (effect) indicators of an underlying construct, i.e. the latent variable (Churchill 1979, Spector 1992). A formative scale is based on formative (cause, causal) indicators and “involves the creation of an index rather than a scale” (Diamantopoulos and Winklhofer 2001). Researchers tend to agree that the choice between a reflective and formative scale should be based on theoretical considerations: that is, the direction of causality between the construct and its indicators (Diamantopoulos and Winklhofer 2001; Fornell, Rhee and Yi 1991).

Reflective scales were discussed at length in Churchill (1979) and Spector (1992). Together, they suggested multiple-item scales (as single items were unreliable), factor analysis, calculation of Cronbach alpha for representing internal-consistency reliability and discriminant validity. Diamantopoulos and Winklhofer (2001) complain that much less guidance is available for developing formative scales, and emphasize content specification, indicator specification and external validity.

The literature on market orientation reveals that invariably all the papers that have used market orientation as a construct have operationalized it as a reflective scale (Jaworski and Kohli 1993; Kirca, Jayachandran and Bearden 2005; Narver and Slater 1990). This is primarily based on the nature of the construct: market orientation is perceived to be an underlying construct which is reflected by its indicators. In other words, it is not a formation, or an index, of these indicators.

In line with extant literature I use pre-existing scales for market orientation. For market orientation, two widely used scales exist in the literature (Jaworski and Kohli 1993, Narver and Slater 1990). I noted earlier Deshpande and Farley's (1998) conclusion that the market orientation scales "appear interchangeable, and that substantive conclusions reached with each apply generally to the others". Farrell (2002) found that the items of both scales could be used to construct a single, parsimonious scale. Also, the available dataset had a larger number of items available for the Narver and Slater (1990) scale than for Jaworski and Kohli (1993). I use Narver and Slater's (1990) market orientation construct (customer orientation and interfunctional coordination) for the analysis. However, in line with Deshpande and Farley (1998), and Farrell (2002), as discussed above, I also use items from Jaworski and Kohli (1993), which load onto the customer orientation dimension of Narver and Slater's (1990) construct. I do not include competitor orientation, in light of Deshpande, Farley and Webster's (1993) observation that "a competitor orientation can be almost antithetical to a customer orientation …".

It is to be noted that both the models and the hypothesis in chapters 2 and 3 depict both market orientation and customer selectivity as "unidimensional constructs" (both are shown within one box each). Since both are bi-directional (for customer selectivity, see the discussion later in the chapter), both models are reproduced and all the hypotheses restated at the end of the chapter to reflect the bi-dimensionality of the constructs.

***Exploratory Factor Analysis (Unidimensionality of Scale)***

All multivariate statistical analyses textbooks agree that one major difference between both types of factor analysis, i.e. exploratory factor analysis and confirmatory factor analysis lies in the following: in exploratory factor analysis, the researcher has little idea of which items will load onto which factors, whereas in confirmatory factor analysis the researcher is essentially trying to “confirm” his or her a priori proposed measurement model (e.g. Hair, Black, Babin et al. 2006). However, since the key requirement for scale unidimensionality is that no scale indicator should load onto more than one factor (Hair, Black, Babin et al. 2006; O’Leary-Kelly and Vokurka 1998), exploratory factor analysis is the most efficient and widespread method to check that the items that load onto a scale, do not load onto any other factor.

I conducted an exploratory factor analysis on all the items with a Likert scale that were present in the data set, in order to ensure the unidimensionality of the scales. The dataset existed in two separate parts. The first part of the dataset contains items related to firm and environmental factors (items starting with a “b” in Section 8.1, showing results of exploratory factor analysis, in the Appendix). The second part of the dataset includes items relating to CRM activities (items starting with a “c” in Section 8.1). There were 49 items in the first part of the dataset and 102 items in the CRM portion of the dataset that were based on Likert scale. Given the length of the questionnaire and its clear thematic division into two parts I conducted two sets of exploratory factor analyses on the dataset.

One question facing researchers conducting factor analysis is selection of the number of factors to be retained, both in the unrotated and rotated parts. Hair, Black, Babin et al. (2006, p 119) suggest multiple methods, of which the three most widely used are latent root criterion, percentage of variance criterion and Scree test criterion. I used all three methods.

According to the latent root criterion, “only the factors having latent roots or eigenvalues greater than 1 are considered significant”. However, the authors also warn that “if the number of variables is more than 50, it is not uncommon for too many factors to be extracted.” The second method is examination of the Scree plot. Hair, Black, Babin et al. (2006) suggest that “the point at which the curve first begins to straighten out is considered to indicate the maximum number of factors to extract.” The curve, below, showed a possible number of factors around 20. Finally, the principle of percentage of variance criterion suggests that “in the natural sciences, the factoring procedure should not be stopped until the extracted factors account for at least 95% of the variance…In the social sciences, it is not uncommon to consider a solution that accounts for 60 percent of the total variance.” In my case, the first 11 factors accounted for some 91% of the variation (see Table 4.1). Also, factor 10 has an eigenvalue of approximately 1.

**Table 4-1 Eigenvalues for Factor Analysis (Number of Factors)**

| Factor | Eigenvalue | Difference | Proportion | Cumulative |
|---|---|---|---|---|
| Factor1 | 7.34 | 3.14 | 0.25 | 0.2479 |
| Factor2 | 4.20 | 0.96 | 0.14 | 0.3897 |
| Factor3 | 3.25 | 0.82 | 0.11 | 0.4993 |
| Factor4 | 2.43 | 0.47 | 0.08 | 0.5812 |
| Factor5 | 1.95 | 0.27 | 0.07 | 0.6472 |
| Factor6 | 1.68 | 0.06 | 0.06 | 0.7040 |
| Factor7 | 1.62 | 0.17 | 0.05 | 0.7587 |
| Factor8 | 1.45 | 0.23 | 0.05 | 0.8076 |
| Factor9 | 1.22 | 0.14 | 0.04 | 0.8486 |
| Factor10 | 1.08 | 0.15 | 0.04 | 0.8851 |
| Factor11 | 0.93 | 0.13 | 0.03 | 0.9163 |
| Factor12 | 0.80 | 0.02 | 0.03 | 0.9433 |
| Factor13 | 0.78 | 0.16 | 0.03 | 0.9696 |
| Factor14 | 0.62 | 0.11 | 0.02 | 0.9906 |
| Factor15 | 0.52 | 0.05 | 0.02 | 1.0081 |
| Factor16 | 0.47 | 0.10 | 0.02 | 1.0239 |
| Factor17 | 0.37 | 0.03 | 0.01 | 1.0363 |
| Factor18 | 0.34 | 0.05 | 0.01 | 1.0477 |
| Factor19 | 0.29 | 0.04 | 0.01 | 1.0574 |
| Factor20 | 0.25 | 0.01 | 0.01 | 1.0657 |

Then I examined the Scree plot for the above data, which is placed below

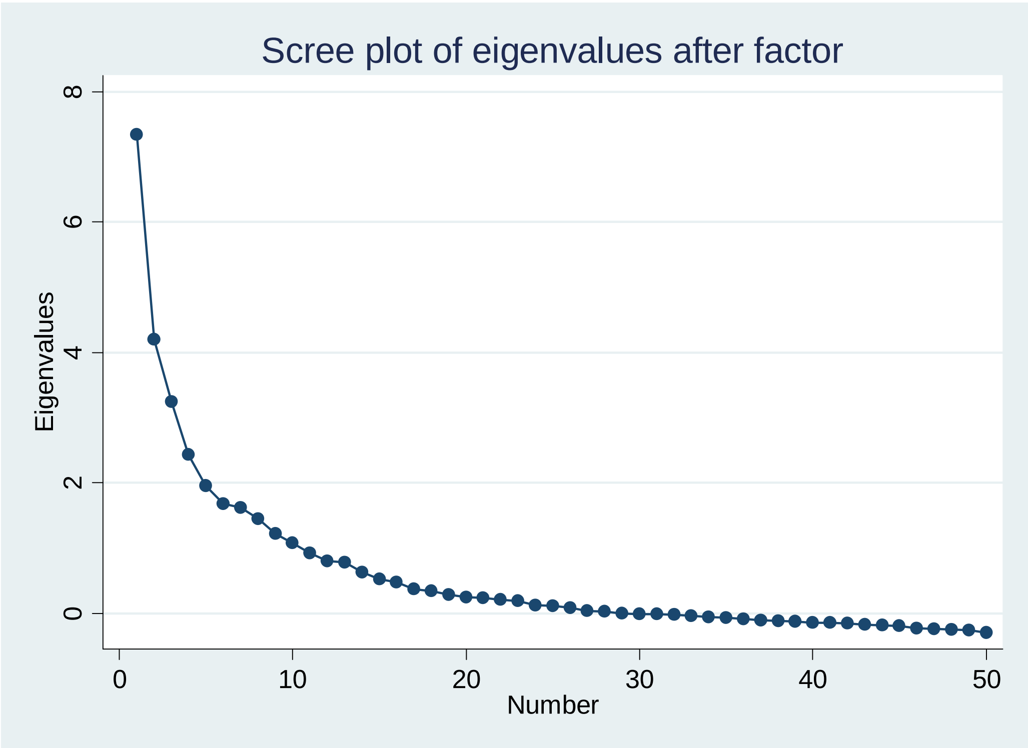


**Figure 4-1 Scree plot for Factor Analysis for non-CRM portion of dataset**

The Scree plot suggested between 15 and 20 factors. Hair, Black, Babin et al. (2006) suggest that "while too few factors may not reveal the correct structure of the data, too many factors will make interpretation more difficult." In line with the three criteria, and the need to balance between too many and too few factors, I selected 20 factors for the unrotated and 15 factors for the rotated phase for the first part of the dataset. The results of the exploratory factor analysis on the dataset (principal component analysis, varimax rotation) are shown in the Appendix in Section 8.1. For convenience, I have emboldened the items in the dataset I will use in my scales. Also, I indicate the specific item I use in the list of scale items in the section below on Description of Scales.

Exploratory factor analysis found that four previously used scale items heavily loaded onto one factor (Market Orientation - Customer Orientation, or MarOrienCO). Two belong to the Narver and Slater (1990) scale and the remaining two to Jaworski and Kohli (1993). As per Deshpande and Farley (1998) and Farrell (2002) I also use items from Jaworski and Kohli (1993) for my scale. The minimum factor loadings and item-to-total correlation were 0.8 [Ramani and Kumar (2008) use a cut-off value of 0.4 in line with extant literature], while Cronbach alpha was 0.91.

Exploratory data analysis also suggests that five items load onto Interfunctional coordination as a separate factor, with all items' factor loadings greater than 0.74 except for one item with a factor loading of 0.47. All item-to-total correlations are greater than 0.81, except one with a correlation of 0.74. Cronbach alpha for the scale is 0.86.

### 4.6.3 Customer Selectivity

***Reflective Scale***

Customer selectivity was defined earlier as a firm's development of insight into its customer database, to understand differential customer value, so that it can make judicious allocation of resources to customers with differential actual and potential contribution margins, with a view to maximize customer and firm profitability. As such, as a firm ability, customer selectivity is conceptualized as an underlying construct which is reflected by its indicators.

It is emphasized that the fact that customer selectivity might consist of processes and practices is not related to the distinction between reflective and formative constructs. Jaworski and Kohli's (1993) conceptualization of market orientation (collation of activities) is distinct from Narver and Slater's (1990) conceptualization of market orientation (organizational culture); but both operationalize the construct as a reflective scale. Most recently, Ramani and Kumar (2008) have conceptualized interaction orientation as capturing "the basic underlying belief and also the processes and practices …"; they operationalized interaction orientation as a reflective scale. Further, it is recalled from Chapter 3 that organizational culture, according to Schein (1981, 1996) is manifested at three levels – deep tacit assumptions, espoused values and day-to-day activities. Therefore, Jaworski and Kohli's (1993) conceptualization of market orientation, in terms of collation of activities, if seen through Schein's (1981) prism, can be conceptualized as an underlying construct.

My conceptualization and operationalization of customer selectivity is also consistent with Homburg, Droll, and Totzek (2008) who, noting the "scarcity of prior empirical research on customer prioritization", defined customer prioritization as the degree to which customers are treated differently with respect to marketing instruments according to their importance to the firm. They conceptualized customer prioritization "using reflective multi-item scales". They defined the construct as the prioritization of important customers in the use of marketing instruments (i.e., product, price, sales, processes, and communication) and measured each of the five dimensions with three items.

***Content Validity***

It was seen that Parvatiyar and Sheth (2001) argue that "it is not prudent for a company to allocate equal resources to all customers", Zeithaml, Rust and Lemon (2001) note that firms have discovered that they need not serve all customers equally well, and Vandermerwe (2004) believes the ultimate goal of CRM is to achieve deep customer relationships with a firm's most profitable customers.

Most importantly, Reinartz, Krafft and Hoyer (2004), who collected the dataset to conceptualize and operationalize a CRM construct, while conceptualizing CRM, emphasize that a key aspect of CRM is "the recognition that the distribution of relationship value to the firm is not homogeneous. This is a consequence of the increasing adoption of recent accounting practices, especially activity-based costing …This enables firms to investigate resource allocations that are made against the customer relationship profitability distribution."

The dataset, therefore, contains a number of items which were specifically designed, and tested on CRM experts, in order to incorporate customer selectivity. However, since Reinartz, Krafft and Hoyer (2004) wanted to conceptualize a formative construct of CRM, based on the initiation, maintenance and termination model of relationship, some of the customer selectivity-related items were used in different parts of the scale, and others were not used at all.

As a first step in scale development, I selected some 21 items from the questionnaire directly relating to customer selectivity, as defined both by Reinartz, Krafft and Hoyer (2004) and by myself in this dissertation. I conceptualized customer selectivity, at the beginning of my analysis, as a unidimensional reflective scale, largely because of my belief that managers are not in a position at the moment to calculate the cost to serve their customers. It thus makes sense to ask managers only at a non-granular level how "customer selective" their firm is. All 21 items, as can be seen in Section 8.2 of the Appendix, directly relate to the firm's development of insight into its customer database, to understand differential customer value.

This list of items was examined by two senior professors with CRM knowledge and expertise, and was reduced to 15 items. I then conducted exploratory factor analysis, the results of which are produced below.

***Exploratory Factor Analysis (Unidimensionality of Scale)***

I had 102 items in the second part of the dataset, and a criterion of a latent root or eigenvalue equal to 1, as discussed above, ended up with some 22 factors. I then used the Screeplot criterion (shown below). According to Hair et al. (2006)'s suggestion, the curve shows a possible number of factors from 20 to 30. Finally, according to the percentage of variance criterion, the first 20 factors (for the CRM section) accounted for some 79.48% of the variation (see Table 4.2).

**Table 4-2 Eigenvalues for Factor Analysis (Number of Factors)**

| Factor | Eigenvalue | Difference | Proportion | Cumulative |
|---|---|---|---|---|
| Factor1 | 23.64 | 17.78 | 0.28 | 0.28 |
| Factor2 | 5.86 | 1.57 | 0.07 | 0.35 |
| Factor3 | 4.29 | 0.71 | 0.05 | 0.40 |
| Factor4 | 3.58 | 0.20 | 0.04 | 0.44 |
| Factor5 | 3.39 | 0.27 | 0.04 | 0.48 |
| Factor6 | 3.12 | 0.60 | 0.04 | 0.52 |
| Factor7 | 2.51 | 0.10 | 0.03 | 0.55 |
| Factor8 | 2.41 | 0.19 | 0.03 | 0.58 |
| Factor9 | 2.22 | 0.26 | 0.03 | 0.60 |
| Factor10 | 1.96 | 0.16 | 0.02 | 0.63 |
| Factor11 | 1.80 | 0.11 | 0.02 | 0.65 |
| Factor12 | 1.69 | 0.02 | 0.02 | 0.67 |
| Factor13 | 1.67 | 0.10 | 0.02 | 0.69 |
| Factor14 | 1.56 | 0.13 | 0.02 | 0.71 |
| Factor15 | 1.43 | 0.10 | 0.02 | 0.72 |
| Factor16 | 1.34 | 0.09 | 0.02 | 0.74 |
| Factor17 | 1.25 | 0.03 | 0.01 | 0.75 |
| Factor18 | 1.22 | 0.08 | 0.01 | 0.77 |
| Factor19 | 1.14 | 0.04 | 0.01 | 0.78 |
| **Factor20** | **1.10** | **0.05** | **0.01** | **0.79** |

The Screeplot for the above is placed below

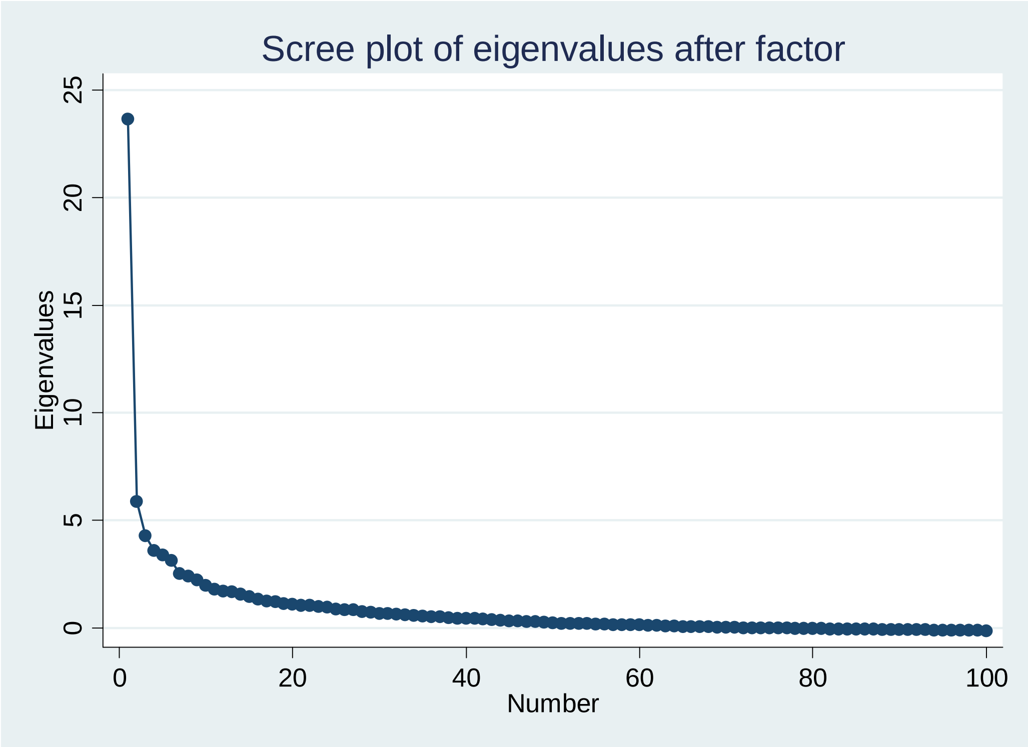


**Figure 4-2 Scree plot for Factor Analysis for CRM portion of dataset**

Scree Plot for 102 items in the CRM portion of the dataset

Hair, Black,Babin et al. (2006) suggest that while too few factors may not reveal the correct structure of the data, too many factors will make interpretation more difficult. In line with the three criteria, and the need to balance between too many and too few, I selected some 20 factors, both for the unrotated and the rotated phase. The results are shown in the Appendix in Section 8.1. For convenience, I have emboldened the items in the dataset I will use in my scales. Also, I indicate the specific item I use in the list of scale items in section on Description of Scales.

A detailed item by item examination of Section 8.1, reveals that all the items that are in bold, i.e. those that are finally selected, pertaining to the customer selectivity scale, do not load onto any other factor with a load value higher than the one with which it loads onto the scale.

***Customer Selectivity is a Bi-dimensional construct***

I had started the factor analysis on the premise that customer selectivity was a unidimensional construct. Exploratory factor analysis, however, revealed that it is a bi-directional construct, with five items loading onto the first factor, which I label customer selectivity potential, and three items loading onto the second factor, which I label customer selectivity actual. The findings, albeit with hindsight, seem based on logic: the construct is bi-dimensional, since targeting potentially valuable customers, and selecting more valuable ones from the existing set of customers may constitute two different sets of activities, and therefore performed by two distinct sets of people within a firm. Consequently, a firm may be stronger in one area of customer selectivity (say selectivity of potential customers) and weaker in the other (say selectivity of actual customers).

### 4.6.4 Confirmatory Factor Analysis

I ran a second factor analysis on all the items I had finally selected for the scales, requesting for four factors. Table 4.3 below shows that all the items load onto the four factors neatly.

**Table 4-3 CFA Results**

| Item | Factor1 | Factor2 | Factor3 | Factor4 | Uniqueness |
|---|---|---|---|---|---|
| b5 | 0.09 | 0.10 | 0.75 | 0.07 | 0.41 |
| b7 | 0.13 | -0.01 | 0.79 | 0.02 | 0.36 |
| b9 | 0.16 | 0.08 | 0.79 | 0.01 | 0.34 |
| b10 | 0.09 | 0.13 | 0.78 | 0.07 | 0.35 |
| b13 | 0.34 | 0.07 | 0.55 | 0.22 | 0.53 |
| b15 | 0.84 | 0.16 | 0.17 | 0.15 | 0.22 |
| b16 | 0.78 | 0.17 | 0.10 | 0.20 | 0.31 |
| b19 | 0.78 | 0.18 | 0.10 | 0.13 | 0.34 |
| b20 | 0.80 | 0.13 | 0.15 | 0.11 | 0.30 |
| c27 | 0.20 | 0.32 | 0.03 | 0.78 | 0.25 |
| c28 | 0.28 | 0.34 | 0.10 | 0.76 | 0.23 |
| c46 | 0.17 | 0.81 | 0.06 | 0.27 | 0.25 |
| c47 | 0.13 | 0.85 | 0.11 | 0.24 | 0.20 |
| c49 | 0.25 | 0.74 | 0.04 | 0.14 | 0.37 |
| c52 | 0.26 | 0.52 | 0.08 | 0.15 | 0.64 |
| c53 | 0.08 | 0.54 | 0.11 | 0.21 | 0.65 |
| c102 | 0.10 | 0.22 | 0.13 | 0.51 | 0.67 |

### 4.6.5 Endogenous Variable

Firm Performance is a formative, four-item multi-item measure, adapted from the work of Deshpande, Farley and Webster (1993) and Kohli and Jaworski (1990), and used as the dependent variable in Reinartz, Krafft and Hoyer (2004) with four indicators.

Relative to your competitors, how does your SBU perform concerning the following statements? (Likert Scale)

- Achieving overall performance
- Attaining market share
- Attaining growth
- Current profitability

### 4.6.6 Description of Scales

*Market Orientation (Customer Orientation)*

Cronbach Alpha (0.91)

- We measure customer satisfaction systematically and frequently (Han, Kim and Srivastava 1998, Im and Workman Jr. 2004, Narver and Slater 1990)
  [factor loading 0.87; item to total correlation 0.91] (b15)

- We have routine or regular measures of customer service (Deshpande, Farley and Webster 1993, Narver and Slater 1990)
  [factor loading 0.79; item to total correlation 0.88] (b16)

•We poll end users at least once a year to assess the quality of our products and services (Homburg and Pflesser 2000, Jaworski and Kohli 1993, Matsuno, Mentzer and Ozsomer 2002)

[factor loading 0.81; item to total correlation 0.89] (b19)

•Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis (Homburg and Pflesser 2000, Jaworski and Kohli 1993) (b20)

[factor loading 0.85; item to total correlation 0.88] (b20)

*Market Orientation (Inter-Functional Coordination)*

Cronbach alpha 0.86

•Our division's management style encourages a high level of participation (adapted from Narver and Slater 1990)

[factor loading 0.83; item to total correlation 0.81] (b5)

•Information is credibly and openly shared within our business unit (Han, Kim and Srivastava 1998; Narver and Slater 1990)

[factor loading 0.82; item to total correlation 0.84] (b7)

•People feel that their ideas and information are listened to by others in our business unit (Im and Workman 2004)

[factor loading 0.74; item to total correlation 0.83] (b10)

•There is a general feeling of trust and confidence between different groups within our division (Narver and Slater 1990)

[factor loading 0.75; item to total correlation 0.84] (b9)

•We freely communicate information about our successful and unsuccessful customer experiences across all business functions (Narver and Slater 1990, Im and Workman Jr. 2004)
[factor loading 0.47; item to total correlation 0.74] (b13)

*Customer Selectivity (Potential)*
Cronbach alpha 0.87

•We have a formal system for identifying potential customers (Reinartz et al. 2004)
[factor loading 0.74; item to total correlation 0.85] (c46)

•We have a formal system for identifying which of the potential customers are more valuable (Reinartz, Krafft and Hoyer 2004)
[factor loading 0.77; item to total correlation 0.88] (c47)

•We have a formal system in place that facilitates the continuous evaluation of prospects (Reinartz et al. 2004)
[factor loading 0.65; item to total correlation 0.84] c(49)

•We have a formal system in place that differentiates targeting of our communications based on the prospects value (Reinartz et a. 2004)
[factor loading 0.44; item to total correlation 0.71] (c52)

•We systematically present different offers to prospects based on their value (Reinartz et al. 2004)
[factor loading 0.46; item to total correlation 0.72] (c53)

*Customer Selectivity (Actual)*

Cronbach alpha 0.82

•We have a formal system for determining which of our current customers are of the highest value (Reinartz et al. 2004)

[factor loading 0.73; item to total correlation 0.91] (c27)

•We continuously track customer information in order to assess customer value (Reinartz et al. 2004)

[factor loading 0.75; item to total correlation 0.90] (c28)

•With regard to your SBU, to what extent does the following represent a strength or weakness for you? Understanding and determining the value of a customer (major weakness 1…major strength 7)

[factor loading 0.49; item to total correlation 0.74] (c102)

### 4.6.7 Goods versus Services Revenue Proportion

•Please indicate the percentage split of revenues that is attributable to products and services in your organization:

Products: ___________ %

Services: ___________ %

Total: 100%

### 4.6.8 Summary statistics of the Scales

Table 4.4 lists the summary statistics for the measurement scales.

**Table 4-4 Summary Statistics for the Measurement Scales**

| Variable | Number of Items | Frequency | Mean | SD | Minimum | Maximum |
|---|---|---|---|---|---|---|
| Firm Performance | 5 | 211 | 23.3 | 5.23 | 8 | 34 |
| Market Orientation CO | 4 | 211 | 4.27 | 1.83 | 1 | 7 |
| Market Orientation IFC | 5 | 210 | 5.5 | 1.01 | 1 | 7 |
| Customer Selectivity Potential | 5 | 214 | 3.67 | 1.49 | 1 | 7 |
| Customer Selectivity Actual | 3 | 212 | 4.55 | 1.61 | 1 | 7 |
| Industry Online Retailers | 1 | 64 | - | - | - | - |
| Industry Financial Services | 1 | 78 | - | - | - | - |
| Industry Power Utilities | 1 | 28 | - | - | - | - |
| Industry Hospitality | 1 | 41 | - | - | - | - |

Table 4.4 suggests that the four dimensions of the two constructs of market orientation and customer selectivity are reasonably distributed around their means (standard deviations vary from 1.01 to 1.83). Interestingly, while Market Orientation CO, Customer Selectivity Actual and especially Market Orientation IFC are scored highly, Customer Selectivity Potential has a mean of only 3.67. This is not surprising as customer selectivity potential must be the hardest construct to apply in a firm. This also suggests that in case Customer Selectivity Potential is linked to firm performance, the former could constitute as a strategic asset precisely because it is rarer.

Table 4.5 lists the correlations matrix for exogenous constructs.

**Table 4-5 Correlations among Exogenous Constructs**

| | MarOrienCO | MarOrienIFC | CusSelP | CusSelA |
|---|---|---|---|---|
| MarOrienCO | 1.00 | | | |
| MarOrienIFC | **0.35**** | 1.00 | | |
| | (0.00) | | | |
| CusSelP | **0.40**** | **0.24**** | 1.00 | |
| | (0.00) | (0.00) | | |
| CusSelA | **0.41**** | **0.26**** | **0.57**** | 1.00 |
| | (0.00) | (0.00) | (0.00) | |

** $p < 0.01$

The real interest lies in the correlations across constructs, rather than among the dimensions of the same construct. The across-construct correlations show that the two constructs are not highly correlated (the correlations vary from 0.24 to 0.41). This is positive news as the low correlations suggest the constructs are distinct from each other (discriminant validity), although I will formally check their discriminant validity below.

My next step was to examine the discriminant validity of the two constructs. Alpha coefficients for all measures are greater than 0.8, indicating that reliability is acceptable (Nunnally and Bernstein 1994). Also, the correlations between the two constructs range between 0.24 and 0.41, indicating that the constructs are dissimilar. However, I apply the test of discriminant validity from Fornell and Larker (1981), who argue that the average variance extracted (AVE) of any two constructs should be greater than their squared correlation (Gustafsson, Johnson and Roos 2005; O'Sullivan and Abela 2007). Table 4.6 shows that none of the squared correlations exceeds the AVE of the constructs.

### 4.6.9 Discriminant Validity

Having looked at a large number of papers in the Journal of Marketing which contain development of scales, one notes that discriminant validity is perhaps the foremost test of scale validities, especially when a new scale is developed. Discriminant validity means that the scales are distinct from each other. The fact that my scales showed low correlations indicated discriminant validity. However, the most conservative and widely used discriminant validity test is the one suggested by Fornell and Larcker (1981). The test involves calculating the average variance extracted of any two constructs and comparing it with the squared correlation between the same two constructs. I have only two major exogenous constructs, but in case of more than two, the same procedure is repeated two constructs at a time (Gustafsson, Johnson and Roos 2005; O'Sullivan and Abela 2007).

Table 4.6 shows the Fornell and Larcker test results:

**Table 4-6 Average Variance Extracted and Squared Correlations**

| | AVE | MarOrienCO | MarOrienIFC |
|---|---|---|---|
| MarOrienCO | 0.69 | | |
| MarOrienIFC | 0.54 | | |
| CusSelP | 0.39 | 0.16 | 0.06 |
| CusSelA | 0.44 | 0.17 | 0.07 |

Note: In the second column, AVE represents the average variance extracted of the constructs. In the third and fourth column, the numbers represent the squared correlations among the constructs.

## 4.7 Common-Method Variance

According to Podsakoff and Organ's (1986) oft-cited[21] paper, "the most severe problems relating to common method variance arise when measures of two or more variables in categories 3, 4, 5, and 6 are collected from the same respondents and the attempt is made to interpret any correlation(s) among them. This is the well-known problem of common-method variance". The categories the paper referred to were gathering personality data, obtaining descriptions of a respondent's past, scaling the psychological states of respondents, and soliciting respondents' perceptions of an external environmental variable. The paper explained the existence of the problem by noting that what most generally accounted for this was the urge by respondents to maintain a consistent line (consistency motif). Aggravating the consistency motif problem, the paper noted, was the fact that self-report measures of different variables were often found to contain items similar in content. Then there could be the social desirability problem.

It is perhaps surprising that researchers in both the social sciences and management science appear to have paid more attention to Podsakoff and Organ's (1986) suggestion to use Harmon's one-factor test (which I also use) than to their more forcefully put suggestion: "First, we strongly recommend the use of procedural or design remedies for dealing with the common method variance problem as opposed to the use of statistical remedies."

I note here a limitation of my research: the survey data I use in my thesis has been collected from the same respondent, and therefore the possibility that common method variance is present cannot be eliminated. The following steps were taken to reduce this possibility.

[21] Over 650 citations in Business Source Premier in February 2009

First, as per extant literature, I used Harman's one-factor test (Podsakoff and Organ 1986; Reinartz, Krafft and Hoyer 2004) on both the whole dataset and on the part of dataset which I used for my analysis. For the whole dataset, the principal component analysis (unrotated) revealed forty-four factors with eigenvalues greater than one, explaining 85% of the total variance. For the smaller dataset I found eighteen such factors explaining 80% of variance. In both cases, the first factor explained 18.6% and 15% of the variance respectively, which were much less than 50%, the threshold for presence of common-method bias (Podsakoff and Organ 1986). It may be recalled that Podsakoff and Organ (1986) noted that the basic assumption of this technique was that if a substantial amount of common method variance was present, either a single factor will emerge from the factor analysis or one general factor will account for the majority of the covariance in the independent and criterion variables.

Second, I checked the scale items for the exogenous and the endogenous variables in my dissertation for the presence of the same or similar items. The scales have been reproduced earlier in the chapter. I could not detect any item in the endogenous variable scale which was similar to the exogenous variables' scales.

Third, unlike previous studies on market orientation and CRM, which postulate a direct relationship between an independent construct and firm performance (e.g. Reinartz, Krafft and Hoyer 2004), my propositions in chapter 2 postulate both the presence and absence of positive relationships between two sets of independent variables on the one hand and a dependent variable on the other in a symmetrical way. It seems unlikely that the respondent in the survey would have biased his or her answers on the variables in such a way that a positive relationship were obtained between market orientation and firm performance when more of the revenue accrues from sale of goods (but not when customer selectivity is a driver of firm performance), and a positive relationship were obtained between customer selectivity and firm performance when more of the revenue is obtained from sale of services (but not when market orientation is a driver of firm performance). If common method variance were present, market orientation and customer selectivity should lead to firm performance across both goods and service contexts. In other words, while the possibility of the consistency motif on the part of the respondent cannot be ruled out, it would seem unlikely that the respondent would be able to discern the design of the study and exhibit the consistency motif selectively.

In the second, rival model, it may be noted that both market orientation and customer selectivity have two dimensions each. Once again, while the design of the model cannot eliminate common method variance, it can lessen its presence. If common method variance were present, either both dimensions of market orientation should be associated with both dimensions of customer selectivity, or there should be no association present among the two constructs.

## 4.8 Models

As has been noted earlier, both market orientation and customer selectivity have two dimensions each. Therefore, the detailed models and hypotheses, incorporating the two dimensions, are placed below.

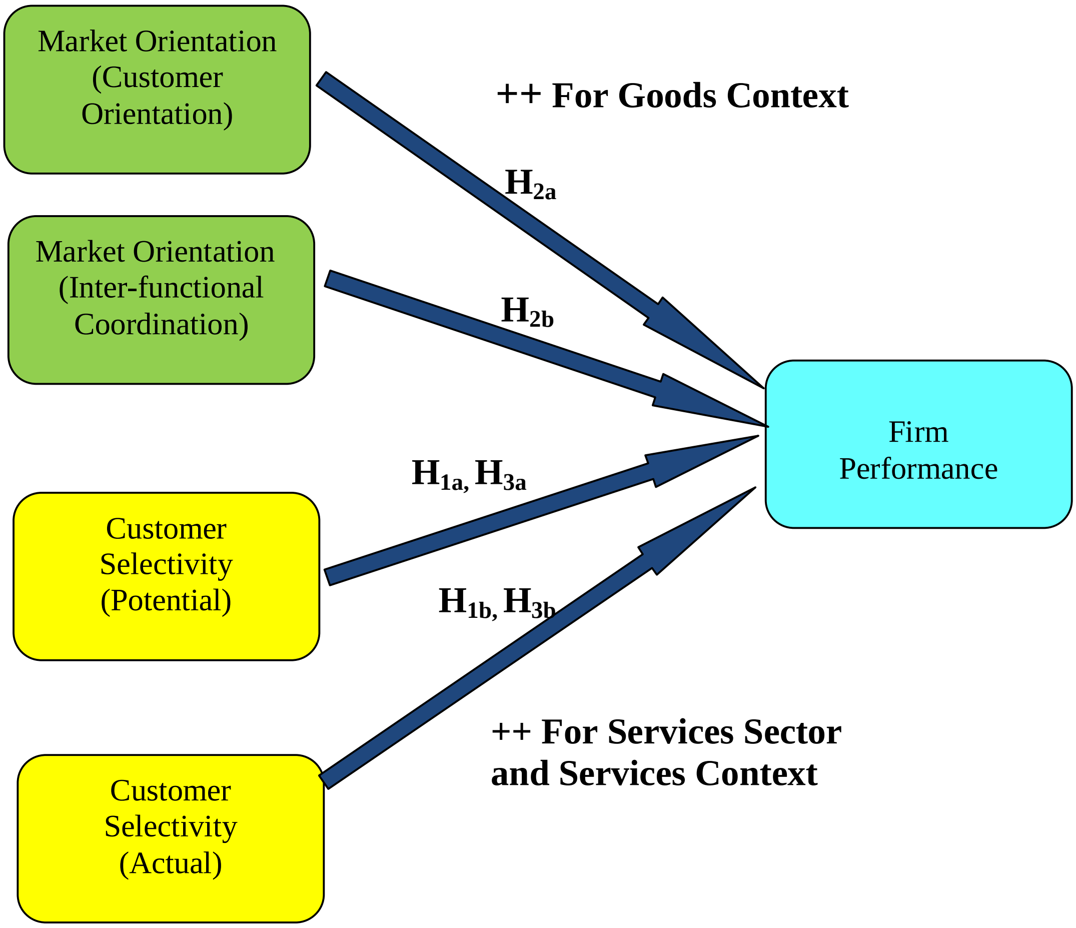


**Figure 4-3 Model I (at level of construct dimensions)**

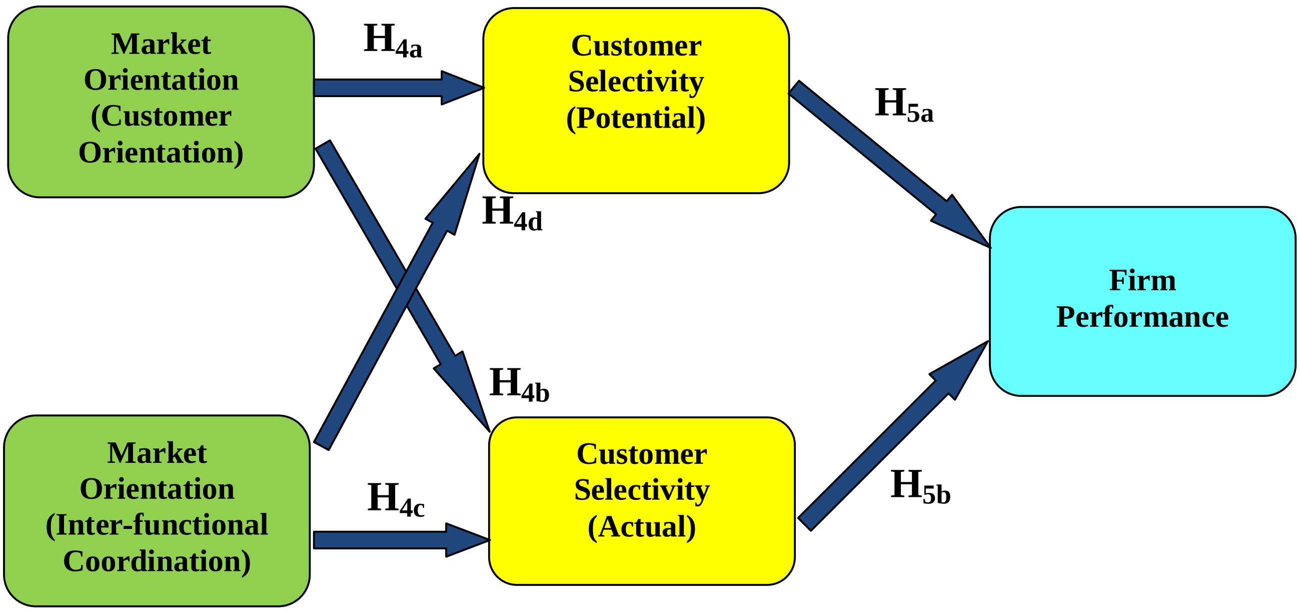


**Figure 4-4 Model II (at level of construct dimensions)**

## 4.9 Hypotheses

$H_{1a}$: Customer selectivity potential is positively associated with firm performance for all the firms in the service sector (from Proposition $P_1$)

$H_{1b}$: Customer selectivity actual is positively associated with firm performance for all the firms in the service sector (from Proposition $P_1$)

$H_{2a}$: The association between market orientation (customer orientation) and firm performance is positive for firms that derive a larger proportion of their revenues from the sale of goods components of their products

$H_{2b}$: The association between market orientation (inter-functional coordination) and firm performance is positive for firms that derive a larger proportion of their revenues from the sale of goods components of their products

$H_{3a}$: The association between customer selectivity potential and firm performance is positive for firms that derive a larger proportion of their revenues from the sale of services components of their products

$H_{3b}$: The association between customer selectivity actual and firm performance is positive for firms that derive a larger proportion of their revenues from the sale of services components of their products

$H_{4a}$: The association between market orientation (customer orientation) and customer selectivity potential is positive for all the firms across all the contexts

$H_{4b}$: The association between market orientation (customer orientation) and customer selectivity actual is positive for all the firms across all the contexts

$H_{4c}$: The association between market orientation (inter-functional coordination) and customer selectivity actual is positive for all the firms across all the contexts

$H_{4d}$: The association between market orientation (inter-functional coordination) and customer selectivity potential is positive for all the firms across all the contexts

$H_{5a}$: The association between customer selectivity potential and firm performance is positive for all the firms across all the contexts

$H_{5b}$: The association between customer selectivity actual and firm performance is positive for all the firms across all the contexts

**Note:** $H_{5a}$ and $H_{5b}$ are similar to $H_{1a}$ and $H_{1b}$ but are re-stated because the impact of customer selectivity on firm performance in regression analysis and in structural equation analysis might not be the same.

## 4.10 Model Estimation

The model specification for Model I in Figure 4.3 is given in Equation 4.10

$$\textbf{Firm Performance} = \beta_1\textbf{MarOrienCO} + \beta_2\textbf{MarOrienIFC} + \beta_3\textbf{CusSelP} + \beta_4\textbf{CusSelA} + \beta_5\textbf{Industry2} + \beta_6\textbf{Industry3} + \beta_7\textbf{Industry4} + \beta_8\textbf{Lnsales} + \varepsilon$$

(Equation 4.10)

| | | |
|---|---|---|
| MarOrienCO | = | Market Orientation (Customer Orientation) |
| MarOrienIFC | = | Market Orientation (Inter Functional Coordination) |
| CusSelP | = | Customer Selectivity (Potential) |
| CusSelA | = | Customer Selectivity (Actual) |
| Industry2 | = | online retail |
| Industry3 | = | financial |
| Industry4 | = | service |
| Industry1 (base) | = | power utilities |
| Lnsales | = | natural logarithm of yearly sales (revenue) of the firm |

# 5 Empirical Analysis

## 5.1 Overview

In Chapter 4, I not only discussed my ontological and epistemological positions, but also the research method for conducting an empirical analysis to test the propositions set up earlier in chapters 2 and 3, and set up as detailed hypotheses in chapter 4. I used regression analysis with the software STATA 9.0 to test the hypotheses related to model I and use structural equation modelling with the software LISREL 9.0 to test the hypotheses related to model II (the alternative model). Also, in chapter 4, I detailed the operationalization of my constructs, namely market orientation and customer selectivity. It was seen that both constructs have two dimensions each: market orientation has two dimensions based on extant marketing literature (customer orientation and inter-functional coordination); and customer selectivity was found to have two dimensions, instead of one, as a result of the factor analysis I conducted on the items, namely customer selectivity potential and customer selectivity actual.

I estimate Model I as follows. First, I estimate it on the entire dataset. Since all the data comes from service industries, it is argued that customer selectivity is positively associated with firm performance. Then I split the dataset into two blocks, based on a threshold of 50% regarding the revenue generated from sale of goods and services. Any firm which derives more than 50% of its revenue from the sale of goods is categorized into a “goods context” and any firm which derives more than 50% of its revenue from the sale of services is categorized into a “service context”. I re-estimate the model on both the “blocks” of the original dataset.

I also carry out sensitivity analysis of my results as follows. First, I vary the threshold level of the revenue derived from the sale of goods versus services, which defined the goods versus services contexts in the study. I change it to 55%, to 60%, and so on, till I reach 95%. An obvious limitation is that as the threshold increases, fewer and fewer firms remain in the block of dataset which is being tested on, eventually reaching a point where the whole model becomes insignificant (P>F reaches a value above $p = 0.05$). Since the number of firms deriving more of their revenue from the sale of services is higher than those deriving more of their revenue from the sale of goods (an obvious result for a dataset that is based on service industries only), it is expected that the "goods context" firms reach the point of insignificance earlier than the service context firms. It is somewhat surprising that the model remains significant even when the threshold reaches 99% for "service context" firms.

Second, I remove some relatively low-loading items from both dimensions of the customer selectivity scale. I re-estimate the model with newer versions of the construct and run the same iterations, even progressively increasing the thresholds of cut-off values that define the goods and service contexts, as explained in the previous paragraph. And finally, I add a further control, in addition to the size of the firm, as measured by the yearly sales. I develop a new construct, namely customer heterogeneity, based on how heterogeneous the customers are on, say, income, variety of products they consider, loyalty, needs, etc., report its alpha, and incorporate it into the original model. I re-estimate the model and report the results.

Across all the above estimations, I obtain results that support the hypotheses detailed in Chapter 4. In addition, the models as a whole are significant, and the R-squared and adjusted R-squared values are reasonably high, even when the number of firms in a certain block of dataset becomes low. I report the results in their entirety and discuss them briefly in this chapter, and in detail in the last chapter of the thesis

## 5.2 Error term

Textbooks on statistics and multivariate analysis generally suggest that in order to run a linear regression on a dataset, the error term in the model should be approximately normal in shape. I therefore plot the graph of the error term ε which is the last term in the model specification reproduced below. The distribution appears approximately normal.

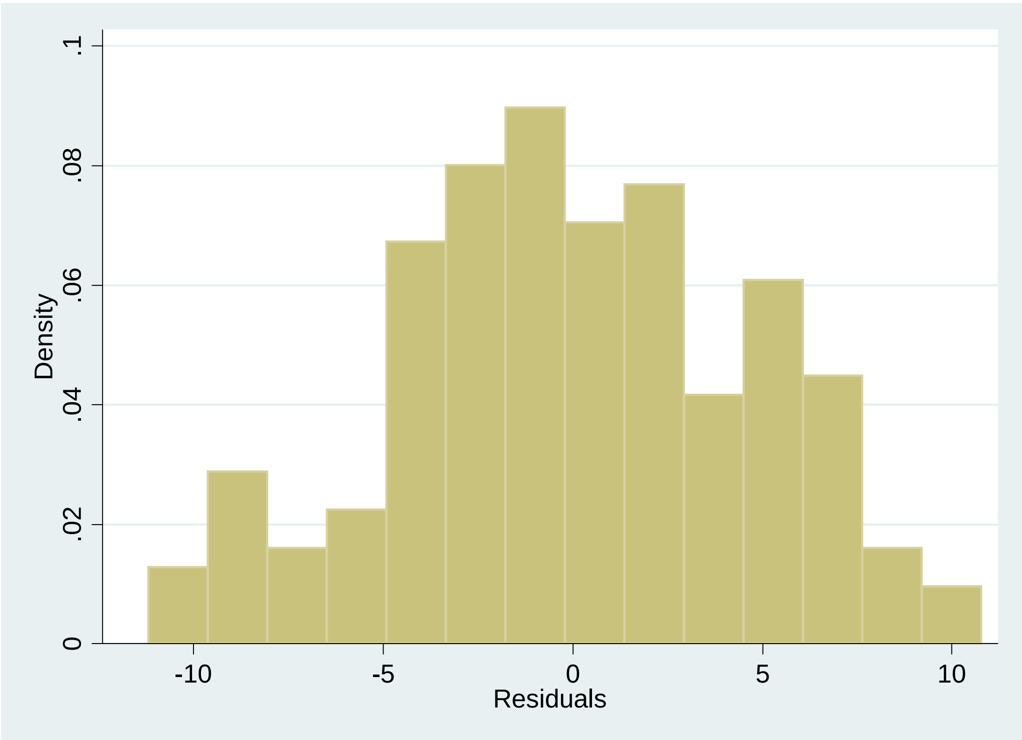


**Figure 5-1 Graph of the error term ε**

## 5.3 Results for Model I (Regression Analysis)

### 5.3.1 The entire dataset

The results of estimating the model in section 4.10 on the entire dataset of 211 firms are placed below:

**Table 5-1 Results for all the firms in the dataset**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.21 | 0.88 | 0.38 |
| MarOrienIFC | 0.28 | 0.79 | 0.43 |
| CusSelP | **0.84**** | 2.95 | 0.00 |
| CusSelA | 0.42 | 1.64 | 0.10 |
| Online Ret | 0.63 | -0.60 | 0.55 |
| Financial | 0.25 | 0.23 | 0.82 |
| Service | 0.82 | 0.64 | 0.52 |
| LnSales | 0.23 | -1.76 | 0.08 |
| Constant | 17.12 | 7.84 | 0.00 |

Number of observations = 199
P>F = 0.00
Adjusted R-squared = 15%
** p<=0.01

The model specification is significant (P>F = 0.00) and R-squared is 18.65%, while Adj R-squared is 15.22%. Interestingly, both MarOrienCO and MarOrienIFC are not significant. As noted earlier, I did not predict the effects of these constructs on firm performance when the dataset consisted of all the firms, but the lack of a positive relationship is consistent with extant literature, as was summarized in Chapter 2.

More importantly, out of the two customer selectivity dimensions, CusSelP is highly significant ($\beta_3 = 0.84$, $p < 0.01$). Even CusSelA is marginally significant ($\beta_4 = 0.42$, $p = 0.1$). Note that my hypotheses are one-directional and I am reporting results with two-tail significance levels to be on the conservative side. Both relationships carry the expected positive sign. Thus it seems that for the entire dataset - i.e. for the service industries, without taking into account the proportion of the revenue accruing from sale of goods and services - customer selectivity, and in particular customer selectivity regarding potential customers and prospects, is a driver of firm performance. This is consistent with $H_{1a.}$ However, it may be noted that customer selectivity actual is only marginally associated with firm performance.

### 5.3.2 For Firms Deriving More than Half of their Revenue from Goods

The results of estimating model I on a reduced dataset of firms that derive more than 50% of their revenue from sale of goods are placed below

**Table 5-2 Results for the goods context firms in the dataset**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | **0.74*** | 2.09 | 0.04 |
| MarOrienIFC | -0.04 | -0.09 | 0.93 |
| CusSelP | 0.80 | 1.61 | 0.11 |
| CusSelA | -0.04 | -0.08 | 0.94 |
| Online Retail | -0.35 | -0.30 | 0.77 |
| Financial | -0.66 | -0.53 | 0.60 |
| Service | -0.47 | -0.20 | 0.84 |
| LnSales | -0.40 | -2.20 | 0.03 |
| Constant | 20.32 | 6.78 | 0.00 |

Number of observations = 79
P>F = 0.01
Adjusted R-squared = 15%

The model specification is significant (P>F = 0.01); R-squared is 24%, and Adj R-squared is 15%. Importantly, MarOrienCO is significant ($p < 0.05$). Both dimensions of customer selectivity are not significant. This is consistent with $H_{2a}$ (but $H_{2b}$ is not supported).

### 5.3.3 For Firms Deriving More than Half of their Revenue from Services

**Table 5-3 Results for the service context firms in the dataset**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.10 | 0.33 | 0.74 |
| MarOrienIFC | 0.55 | 1.11 | 0.27 |
| CusSelP | **0.84*** | 2.37 | 0.02 |
| CusSelA | **0.61*** | 1.98 | 0.05 |
| Online Ret | 0.40 | 0.13 | 0.89 |
| Financial | 2.35 | 0.79 | 0.43 |
| Service | 2.06 | 0.68 | 0.50 |
| LnSales | -0.20 | -1.21 | 0.23 |
| Constant | 13.61 | 3.33 | 0.00 |

Number of observations = 132
P>F = 0.00
Adjusted R-squared = 17%

As can be seen above, MarOrienCO is not significant (for $\beta_1$, p = 0.74); but both dimensions of customer selectivity, i.e. CusSelP and CusSelA are significant (for $\beta_3$, p = 0.02; for $\beta_4$, p = 0.05). Thus, both $H_{3a}$ and $H_{3b}$ are supported.

## 5.4 Sensitivity Analysis

I carry out a sensitivity analysis of my results along three dimensions: changing the threshold that defines the goods and services context of a firm (i.e. the proportion of revenue derived from the sale of goods and services); modifying the scale of customer selectivity itself; and by including an additional control.

### 5.4.1 Proportion of Revenue Derived from Goods versus Services

In the above analysis, the threshold for selecting goods versus services context was the arbitrarily selected 50% level, beyond which, if the revenue came from the sale of services, the firm was categorized into the services context, and if the revenue came from the sale of goods, the firm was categorized into the goods context. It allowed for the placing of all firms that were deriving 55%, 70% or 100% of their revenues from the sale of services into the services context, even though they would have been deriving 45%, 30% and 0% respectively of their revenues from the sale of goods. It thus counters the plausible criticism of marketing scholars that goods and services are hardly present in a "pure" form – most products are mixtures of goods and services.

It may be asked whether the results would still hold if this threshold were varied so that the services context became more and more based on "pure services" and the goods context became increasingly based on "pure goods". I re-estimated the above model, changing the threshold to 55%, 60% and so on till it reached 100%. For the services context, the results were surprisingly consistent till the threshold reached 95%. Above 95% the model became insignificant due to attrition in the number of firms. For the goods context, the results were consistent till the threshold reached 60%. Beyond 60%, the model became insignificant because of attrition in the number of firms. It may be recalled that the dataset is based on service industries, and it is natural that the attrition in the goods-based companies is reached sooner as the threshold increases. I report some of the results below.

*Goods (60%)*[22]

**Table 5-4 Model Re-estimated for Goods Context firms (threshold = 60%)**

| Firm Perf | Coef | t | P |
|---|---|---|---|
| MarOrienCO | **0.67** | 1.78 | 0.08 |
| MarOrienIFC | -0.05 | -0.09 | 0.93 |
| CusSelP | 0.78 | 1.44 | 0.15 |
| CusSelA | -0.06 | -0.11 | 0.91 |
| OnlineRet | -0.01 | -0.01 | 0.99 |
| Financial | -0.59 | -0.45 | 0.65 |
| Service | -0.25 | -0.09 | 0.93 |
| LnSales | -0.42 | -2.16 | 0.04 |
| Constant | 20.86 | 6.59 | 0.00 |

Number of observations = 73
P>F = 0.03
Adjusted R-squared = 12%

I report results with two-tail significances, even though my hypotheses are directional; therefore, e.g. the actual significance of MarOrienCO in the above table is 0.04 and not 0.08.

[22]Note: Goods (60%) means that the dataset contains only those firms that derive more than 60% of their revenue from the sale of goods.

*Services (60%)*

**Table 5-5 Model Re-estimated for Service Context firms (threshold = 60%)**

| Firm Perf | Coef | t | P |
|---|---|---|---|
| MarOrienCO | 0.08 | 0.27 | 0.79 |
| MarOrienIFC | 0.55 | 1.08 | 0.28 |
| CusSelP | **0.79*** | 2.16 | 0.03 |
| CusSelA | **0.69*** | 2.14 | 0.04 |
| OnlineRet | 0.18 | 0.06 | 0.95 |
| Financial | 2.34 | 0.78 | 0.44 |
| Service | 2.02 | 0.65 | 0.52 |
| LnSales | -0.22 | -1.28 | 0.20 |
| Constant | 13.64 | 3.26 | 0.00 |

Number of observations = 126
P>F = 0.00
Adjusted R-squared = 17%

It can be seen that both dimensions of customer selectivity, potential and actual, are positively associated with firm performance (and market orientation is not). Interestingly, compared to Table 5.3, as the threshold for services increases from 50% to 60%, the coefficient size of CusSelA (as well as its significance level) increases, and becomes higher than CusSelP. This is not incidental – we will see this pattern repeated as the threshold keeps increasing.

*Services (95%)*

**Table 5-6 Model Re-estimated for Service Context firms (threshold = 95%)**

| Firm Perf | Coef. | T | P |
|---|---|---|---|
| MarOrienCO | 0.02 | 0.07 | 0.95 |
| MarOrienIFC | 0.57 | 0.94 | 0.35 |
| CusSelP | **0.78** | 1.71 | 0.09 |
| CusSelA | **0.83*** | 2.22 | 0.03 |
| OnlineRet | 1.00 | -0.25 | 0.80 |
| Financial | 0.38 | 0.10 | 0.92 |
| Service | 0.98 | -0.24 | 0.81 |
| LnSales | 0.28 | -1.31 | 0.19 |
| Constant | 15.65 | 2.85 | 0.01 |

Number of observations = 98
P>F = 0.007
Adjusted R-squared = 13%

The above results are consistent with the results reported in prior tables. Market orientation remains highly insignificant, whereas both dimensions of customer selectivity remain significant. The size of the coefficient, as well as its significance, for CusSelA, remains higher than CusSelP.

I report below the p values of both Customer Selectivity Potential and Customer Selectivity Actual, as the threshold of goods versus service contexts is increased.

**Table 5-7 P values for CusSelP and CusSelA for different thresholds**

| Percentage of Revenue from Services (>= ) | CusSelP P values | CusSelA P values | N |
|---|---|---|---|
| 50 | 0.019 | 0.05 | 132 |
| 55 | 0.019 | 0.057 | 127 |
| 60 | 0.033 | 0.035 | 126 |
| 65 | 0.054 | 0.041 | 119 |
| 70 | 0.074 | 0.038 | 118 |
| 75 | 0.073 | 0.041 | 115 |
| 80 | 0.072 | 0.042 | 114 |
| 85 | 0.032 | 0.037 | 107 |
| 90 | 0.057 | 0.022 | 106 |
| 95 | 0.091 | 0.029 | 98 |

### 5.4.2 Changing Scale Composition

For the second part of the robustness analysis, I drop two items from the Customer Selectivity Potential scale and one item from the Customer Selectivity Actual scale, based on the lowest values of factor loadings. I rename the new scales as CusSelP2 and CusSelA2 to distinguish these from the earlier scales. I re-estimate the model, based on the original threshold value of 50%. The results are reported below.

**Table 5-8 Model Re-estimated with Revised Customer Selectivity Scale**

| Firm Perf | Coef. | T | P |
|---|---|---|---|
| MarOrienCO | 0.87 | **2.42*** | 0.02 |
| MarOrienIFC | -0.04 | -0.09 | 0.93 |
| CusSelP2 | 0.34 | 0.87 | 0.39 |
| CusSelA2 | 0.08 | 0.21 | 0.84 |
| OnlineRet | -0.21 | -0.17 | 0.86 |
| Financial | -0.55 | -0.43 | 0.67 |
| Service | -1.00 | -0.42 | 0.68 |
| Lnsales | -0.38 | -2.04 | 0.05 |
| Constant | 20.87 | 7.24 | 0.00 |

No of observations = 79
P>F = 0.02
Adjusted R-squared = 13%

When compared to the analysis reported above with the original scale items, the results obtained are even better for the goods context (50%): The coefficient of MarOrienCO has increased somewhat to 0.87 and the p value is now 0.02 as opposed to 0.04. Both dimensions of customer selectivity remain insignificant.

For the services context, the results are reported below:

**Table 5-9 Model Re-estimated with Revised Customer Selectivity Scale**

| Econperf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.12 | 0.40 | 0.69 |
| MarOrienIFC | 0.64 | 1.31 | 0.19 |
| CusSelP2 | **0.70*** | 2.35 | 0.02 |
| CusSelA2 | **0.55*** | 2.12 | 0.04 |
| OnlineRet | 0.47 | 0.16 | 0.87 |
| Financial | 2.52 | 0.85 | 0.40 |
| Service | 2.35 | 0.77 | 0.44 |
| LnSales | -0.25 | -1.50 | 0.14 |
| Constant | 14.06 | 3.46 | 0.00 |

No of observations = 133
P> F = 0.0001
Adjusted R-squared = 18%

I re-estimated the above model for both the goods and service contexts at a threshold value of 60%, instead of 50%, with the new scale of customer selectivity: The results are placed below for the goods context.

**Table 5-10 Model Re-estimated with Revised Customer Selectivity Scale**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | **0.78*** | 2.06 | 0.04 |
| MarOrienIFC | -0.05 | -0.10 | 0.92 |
| CusSelP2 | 0.36 | 0.84 | 0.41 |
| CusSelA2 | 0.04 | 0.10 | 0.92 |
| OnlineRet | 0.23 | 0.18 | 0.86 |
| Financial | -0.48 | -0.37 | 0.71 |
| Service | -0.92 | -0.33 | 0.74 |
| LnSales | -0.40 | -1.99 | 0.05 |
| _Constant | 21.44 | 7.09 | 0.00 |

No of observations = 73
P>F = 0.05
Adjusted R-squared = 10%

With the revised scales, both dimensions of customer selectivity remain highly insignificant for the goods context at a threshold of 60%, while MarOrienCO is significant at p = 0.05.

The results of the services context are placed below.

**Table 5-11 Model Re-estimated with Revised Customer Selectivity Scale**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.10 | 0.33 | 0.74 |
| MarOrienIFC | 0.63 | 1.24 | 0.22 |
| CusSelP2 | **0.68*** | 2.18 | 0.03 |
| CusSelA2 | **0.59*** | 2.18 | 0.03 |
| OnlineRet | 0.27 | 0.09 | 0.93 |
| Financial | 2.50 | 0.83 | 0.41 |
| Service | 2.33 | 0.75 | 0.45 |
| LnSales | 0.26 | -1.53 | 0.13 |
| Constant | 14.22 | 3.41 | 0.00 |

No of observations = 127
P>F = 0.0001
Adjusted R-squared =18%

I re-estimated the model for a threshold of 90%. It may be recalled that the model with the original scale remained significant up to 95% in the services context but only up to 60% for the goods context. I report the results with the new scale below:

**Table 5-12 Model Re-estimated with Revised Customer Selectivity Scale**

| | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.70 | 1.53 | 0.13 |
| MarOrienIFC | -0.01 | -0.01 | 0.99 |
| CusSelP2 | 0.43 | 0.89 | 0.38 |
| CusSelA2 | 0.11 | 0.23 | 0.82 |
| OnlineRet | 0.88 | 0.49 | 0.63 |
| Financial | 0.42 | 0.27 | 0.79 |
| Service | 0.02 | 0.01 | 1.00 |
| LnSales | -0.70 | -2.56 | 0.02 |
| Constant | 22.71 | 5.67 | 0.00 |

No of observations = 46
$P > F = 0.09$
Adjusted R-squared = 14%

The model itself is not significant at $p = 0.05$ (but at $p = 0.10$) because of attrition in the number of firms; interestingly, with only 46 firms present at a threshold of 90% for the goods context, MarOrienCO is significantly associated with Firm Perf at $p = 0.13$ (or $p = 0.065$ at a one-tailed significance level). Both dimensions of the customer selectivity construct remain highly insignificant.

For the service context, the results are placed below.

**Table 5-13 Model Re-estimated with Revised Customer Selectivity Scale**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.01 | 0.04 | 0.97 |
| MarOrienIFC | 0.74 | 1.28 | 0.20 |
| CusSelP2 | **0.69*** | 1.95 | 0.05 |
| CusSelA2 | **0.71*** | 2.35 | 0.02 |
| OnlineRet | 0.72 | 0.22 | 0.82 |
| Financial | 2.67 | 0.85 | 0.40 |
| Service | 1.76 | 0.54 | 0.59 |
| Lnsdale | -0.28 | -1.41 | 0.16 |
| Constant | 13.61 | 3.01 | 0.00 |

No of firms = 107
P>F = .001
Adjusted R-squared = 16%

Once again, even at a threshold level of 90%, with only 107 firms left in the service context datablock, both dimensions of customer selectivity are significant at p = 0.05, whereas market orientation is not. The model is highly significant.

In short, the second dimension of the robustness check, which incorporates the first dimension (threshold variation of goods versus service revenue proportion), shows that the results I obtained earlier are remarkably resilient.

### 5.4.3 Adding Further Controls

*Customer Heterogeneity*

In estimating the above-specified model, I used the appropriate controls as per extant literature, which were the size of the firm (measured by sales, e.g. O'Sullivan and

Abela 2007) and the industry in which a firm was operating (e.g. Reinartz, Krafft and Hoyer 2004). Inclusion of controls is a complex issue and reviewers and critics are wont to suggest additional controls. One cannot control for all the possible factors. Also the existing datasets do not allow for testing of all the possible controls that could be suggested based on theory. However, I tested the above model with an additional control and found the results consistent with the earlier reported ones. Here I report the results when customer heterogeneity is included.

Customer heterogeneity refers to how similar or how different a firm's customers tend to be, along various dimensions of demographic and buying behavior. The need for the control emerges from the possibility that customer heterogeneity may affect customer selectivity differentially – i.e. the more heterogeneous the customers are the more customer selectivity may lead to firm performance, which may not be the case with market orientation. Extant literature does not strongly suggest this control but based on theoretical grounds I examined its impact.

The dataset contained the following items on customer heterogeneity:

*Regarding your individual customers, how similar or different do you think they tend to be on the following: In terms of …(Likert Scale of 1 to 7, anchored on Very Similar and Very Different)*

- *Their incomes, professions, social-class, education*
- *The variety of products (different brands, product features) they like to consider*
- *Their product price/quality preferences*
- *Their loyalty*
- *Their service needs*

The Cronbach alpha of the scales was 0.78 and all the items loaded onto one factor (factor loadings ranged from 0.55 to 0.74), which I termed customer heterogeneity. I estimated the above model with the additional control factor of customer heterogeneity for firms, which derived more than 50% of their revenue from sale of goods. The results are placed below:

**Table 5-14 Results for original model with customer heterogeneity added as a control, for goods context firms (threshold = 50%)**

| Firm Perf | Coef | t | P |
|---|---|---|---|
| MarOrienCO | **0.73*** | 1.98 | 0.05 |
| MarOrienIFC | -0.03 | -0.06 | 0.96 |
| CusSelP | 0.79 | 1.56 | 0.12 |
| CusSelA | -0.12 | -0.25 | 0.80 |
| Online Retail | -0.27 | -0.22 | 0.83 |
| Financial | -0.65 | -0.50 | 0.62 |
| Service | -0.28 | -0.12 | 0.91 |
| LnSales | -0.40 | -2.17 | 0.03 |
| Customerhet | 0.26 | 0.66 | 0.51 |
| Constant | 19.67 | 5.75 | 0.00 |

Number of observations = 77
P>F = 0.02
Adjusted R-squared = 14%

I estimated the above model for firms that derived more than 50% of their revenue from the sale of services:

**Table 5-15 Results for original model with customer heterogeneity added as a control, for service context firms (threshold = 50%)**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.03 | 0.10 | 0.92 |
| MarOrienIFC | 0.55 | 1.09 | 0.28 |
| CusSelP | **0.95**** | 2.57 | 0.01 |
| CusSelA | 0.52 | 1.61 | 0.11 |
| OnlineRet | 0.11 | 0.04 | 0.97 |
| Financial | 2.43 | 0.81 | 0.42 |
| Service | 2.19 | 0.71 | 0.48 |
| LnSales | -0.23 | -1.34 | 0.18 |
| Customerhet | -0.06 | -0.15 | 0.88 |
| Constant | 14.25 | 3.34 | 0.00 |

Number of observations = 129
P>F = 0.00
Adjusted R-squared = 17%

The overall results remain similar to the results obtained earlier with the inclusion of customer heterogeneity; for goods, market orientation (CO) is still significant; for services, customer selectivity potential is significant. The effect of customer selectivity actual is somewhat reduced. Although as previously mentioned I test for two-tailed significance, despite one-directional hypotheses, customer selectivity actual is still on the margins of significance.

I finally estimate the model with the new customer selectivity scale and with customer heterogeneity included. For the goods context, the results are placed below:

**Table 5-16 Results for revised customer selectivity scale with customer heterogeneity added as a control, for goods context firms (threshold = 50%)**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | **0.85*** | 2.29 | 0.03 |
| MarOrienIFC | -0.03 | -0.07 | 0.95 |
| CusSelP2 | 0.36 | 0.86 | 0.39 |
| CusSelA2 | 0.01 | 0.01 | 0.99 |
| OnlineRet | -0.13 | -0.10 | 0.92 |
| Financial | -0.53 | -0.41 | 0.68 |
| Service | -0.77 | -0.31 | 0.76 |
| Customerhet | 0.27 | 0.69 | 0.49 |
| LnSales | -0.38 | -2.01 | 0.05 |
| Cons | 20.05 | 5.94 | 0.00 |

No of observations = 77
P>F = 0.04
Adjusted R-squared = 11%

With the additional control of customer heterogeneity, MarOrienCO remains significant at p = 0.05, and both dimensions of customer selectivity remain insignificant.

For the service context firms the results are placed below:

**Table 5-17 Results for revised customer selectivity scale with customer heterogeneity added as a control, for service context firms (threshold = 50%)**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.05 | 0.18 | 0.86 |
| MarOrienIFC | 0.64 | 1.30 | 0.20 |
| CusSelP2 | **0.76*** | 2.44 | 0.02 |
| CusSelA2 | 0.49 | 1.84 | 0.07 |
| OnlineRet | 0.21 | 0.07 | 0.95 |
| Financial | 2.61 | 0.87 | 0.39 |
| Service | 2.50 | 0.82 | 0.42 |
| Customerhet | -0.06 | -0.16 | 0.87 |
| LnSales | -0.27 | -1.61 | 0.11 |
| Cons | 14.68 | 3.46 | 0.00 |

No of observations = 130
P>F = 0.000
Adjusted R-squared = 18%

### 5.4.4 Testing for significance of goods vs. services proportion

To check for the significance of the goods vs. services proportion I estimated a modified model, based on the model in Equation 4.10 above, but with the inclusion of a new variable, namely PropServ, which represents the proportion of services in the overall revenue of the firm (where PropServ can vary from 0 to 100), on the entire dataset.

The revised model is specified as below

$$\textbf{Firm Performance} = \beta_1\textbf{MarOrienCO} + \beta_2\textbf{MarOrienIFC} + \beta_3\textbf{CusSelP} + \beta_4\textbf{CusSelA} + \beta_5\textbf{Industry2} + \beta_6\textbf{Industry3} + \beta_7\textbf{Industry4} + \beta_8\textbf{PropServ} + \beta_9\textbf{Lnsales} + \varepsilon$$

(Equation 4.10)

The results are as below:

**Table 5-18 Testing for Goods and Services Proportion Significance**

| Firm Perf | Coef. | t | P |
|---|---|---|---|
| MarOrienCO | 0.09 | 0.38 | 0.71 |
| MarOrienIFC | 0.35 | 0.96 | 0.34 |
| CusSelP | 0.81 | 2.71 | 0.01 |
| CusSelA | 0.42 | 1.63 | 0.11 |
| PropServ | -0.01 | -0.59 | 0.56 |
| OnlineRet | -0.24 | -0.2 | 0.84 |
| Financial | 0.63 | 0.5 | 0.62 |
| Service | 1.84 | 1.22 | 0.22 |
| Lnsales | -0.18 | -1.34 | 0.18 |
| Constant | 17 | 7.73 | 0 |

No of observations = 193
P>F = 0.000
Adjusted R-squared = 14%

As can be seen, the impact of PropServ is insignificant. This is as expected. What the results show is that the proportion of revenue generated from services (or for that matter goods, because the goods case is simply the inverse of services) does not indicate the profitability of the firm. In other words, more service-based firms are, as a whole, not more profitable than more goods-based firms within this sample. It may be recalled that my thesis did not set up any hypothesis as to whether firms in any one context are more profitable than firms in the second context.

## 5.5 Results for Model II

For ease of reference I reproduce Model II below.

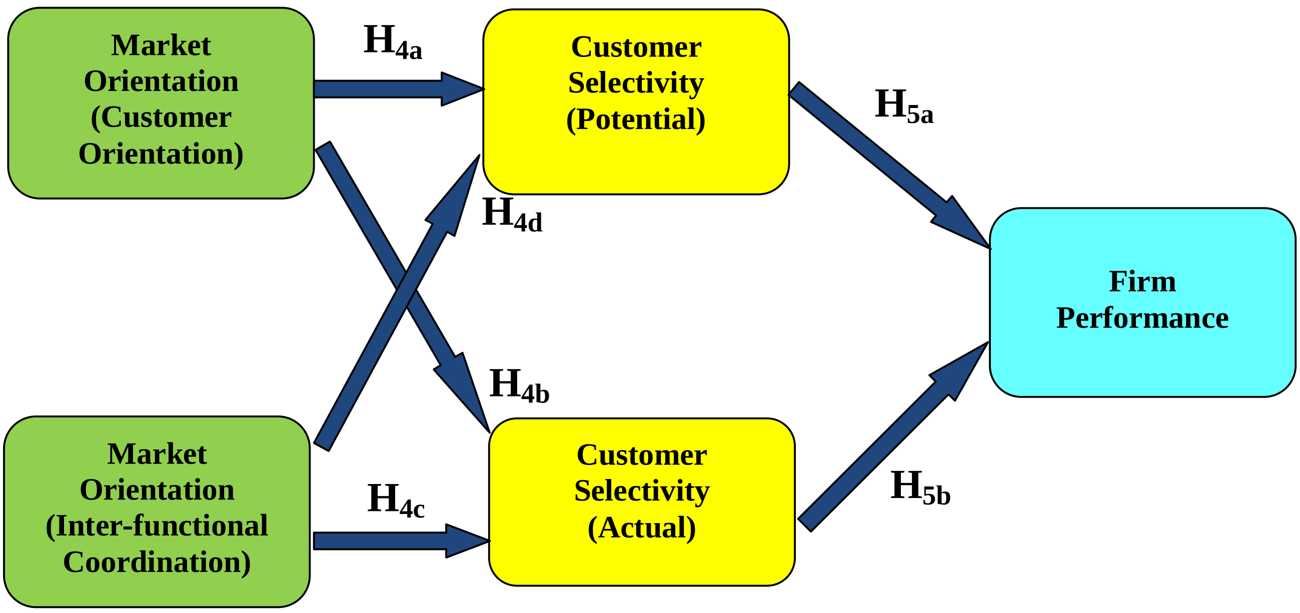


**Figure 5-2 Model II (at level of construct dimensions)**

I have shown scale development and scale tests in the previous chapter. Here, I report the results of estimating the entire model through structural equation modelling (SEM), using LISREL. But since LISREL provides several fit indices to evaluate an SEM (see Schumacker and Lomax 2004 on the problem of fit indices plurality), I discuss this issue first.

### 5.5.1 Fit Indices in SEM

Table 5.18 provides a brief description of some well-known fit indices, references relating to the fit indices, a description of the index, its critical value, and some marketing papers published over the last two decades which have used various fit indices. The fit indices are chosen based on a review of marketing papers (indicated in the table) but also based on the most commonly reported fit indices in SEM (McDonald and Ho 2002). I used this table to evaluate how good the fit of my model (Model II) was.

**Table 5-19 Fit Indices**

| Index | Reference | Description | Critical Value | Marketing Papers that have used these indices |
|---|---|---|---|---|
| Wheaton's Relative or Normed chi-square | Bollen (1989); Tabachnick and Fidell (2007); Wheaton, Muthen, Alwin et al. (1977) | Chi-square/degrees of freedom Its advantage lies in minimizing the impact of sample size on the Model Chi-Square | Wheaton, Muthen, Alwin et al. (1977) < 5; Bollen (1989) < 3 | Ramani and Kumar (2008) Chi square/df = 1.9<br><br>Jayachandran, Sharma, Kaufman et al. (2005) Chi square/df = 3.4<br><br>Matsuno, Mentzer and Ozsomer (2002) Chi square / df = 422/156 |
| Root Mean Square Error of Approximation (RMSEA) | Diamantopoulos and Siguaw (2000); Steiger (1990) | It has become one of the more cited fit indices because of its sensitivity to the number of estimated parameters. Thus, RMSEA favours parsimony as it rewards the model with the lesser number of parameters. | MacCullum, Browne and Sugawara (1996) < 0.10<br>Brown and Cudeck (1993) < 0.10 | Im and Workman (2004) RMSEA = 0.07 |
| Goodness-of-fit index (GFI) | Joreskog and Sorbom (1981); Tabachnick and Fidell (2007) | GFI calculates the proportion of variance that is accounted for by the estimated population covariance. It is somewhat analogous to R-squared. | Joresbog and Sorbom (1981) > 0.90 | Ramani and Kumar (2008) GFI = 0.81<br><br>Jayachandran, Sharma, Kaufman et al. (2005) GFI = 0.96 |

| | | | | |
|---|---|---|---|---|
| | | | | **Matsuno, Mentzer and Ozsomer (2002)**<br>**GFI = 0.89** |
| **Normed Fit index (NFI) and Non-Normed Fit index (NNFI)**<br>**[NNFI is also called Tucker-Lewis Index]** | **Bentler and Bonnet (1980); Tabachnick and Fidell (2007)** | **This index compares the chi-square values of the model to the chi-square of the null model. NNFI rectifies to some extent NFI's sensitivity to the sample size** | **Bentler and Bonnet (1990)**<br>**NFI > 0.90**<br>**Bentler and Hu (1999)**<br>**NNFI > 0.95** | **Ramani and Kumar (2008)**<br>**NNFI/TLI = 0.92**<br><br>**Jayachandran, Sharma, Kaufman et al. (2005)**<br>**NFI = 0.91**<br>**TLI = 0.97**<br><br>**Matsuno, Mentzer and Ozsomer (2002)**<br>**NFI = 0.85** |
| **Comparative Fit Index (CFI)** | **Bentler (1990)** | **CFI is a revised for m of NFI which takes into account sample size. These days, this index is included in all SEM programmes. It is popular because it is least affected by sample size (Fan, Thompson and Wang 1999)** | **Bentler (1990)**<br>**> 0.90**<br>**Hu and Bentler (1999)**<br>**> 0.95** | **Ramani and Kumar (2008)**<br>**CFI = 0.94**<br><br>**Matsuno, Mentzer and Ozsomer (2002)**<br>**CFI = 0.90** |
| **Incremental Fit Index (IFI)** | **Bollen (1989)** | **Same interpretation as NNFI/TLI; however this index if less variable than NNFI/TLI in smaller samples** | **Bollen (1989)**<br>**> 0.90** | **Ramani and Kumar (2008)**<br>**IFI = 0.94**<br><br>**Matsuno, Mentzer and Ozsomer (2002)**<br>**IFI = 0.90** |

### 5.5.2 Model Fit Results

I estimated the structural equation model (Rival Model) by LISREL using the maximum likelihood estimation method. The fit statistics indicate a reasonable model fit (chi square = 380.36, d.f. = 182, chi square/d.f. ratio = 2.08; NFI = 0.91; NNFI/TLI = 0.94; CFI = 0.95; GFI = 0.86).

### 5.5.3 Results of the Hypothesis Testing

**Table 5-20 Results of Hypothesis Testing**

| Construct | Direction | Construct | Standardized Estimate | t-Value | Hypothesis | Conclusion |
|---|---|---|---|---|---|---|
| CusSelP | | MarOrienCO | 0.36 | 4.59 | $H_{4a}$ | Supported |
| CusSelA | | MarOrienCO | 0.45 | 5.55 | $H_{4b}$ | Supported |
| CusSelA | | MarIFC | 0.09 | 1.25 | $H_{4c}$ | Not Supported |
| CusSelP | | MarIFC | 0.11 | 1.48 | $H_{4d}$ | Not Supported |
| Firm Perf | | CusSelP | 0.13 | 0.16 | $H_{5a}$ | Not Supported |
| Firm Perf | | CusSelA | 0.45 | 2.42 | $H_{5b}$ | Supported |

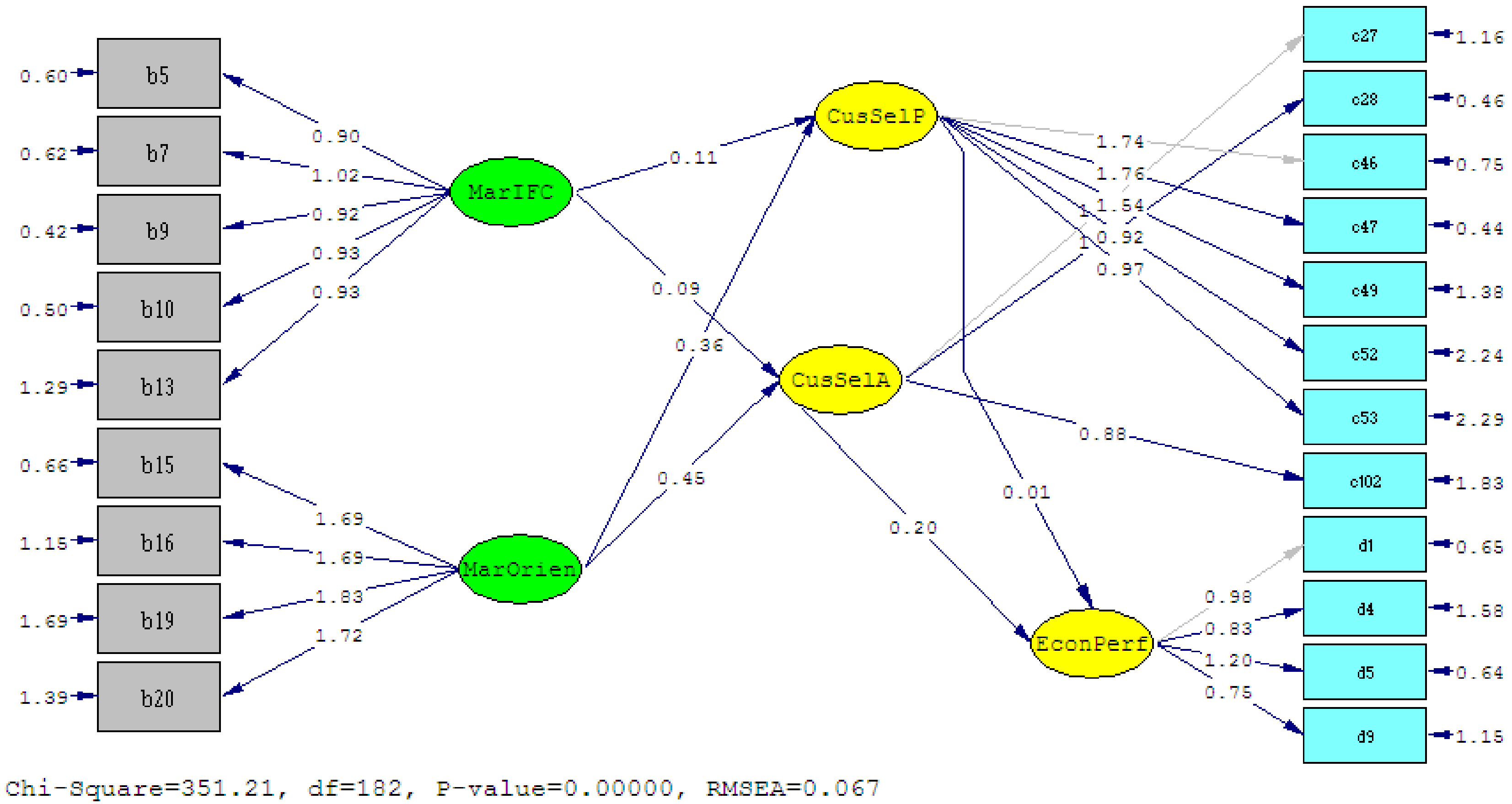


**Figure 5-3 Full Context**

## 5.6 Conclusions

Broadly speaking, it can be concluded that the above results are consistent with the hypotheses stated in chapter 4.

In particular, the following conclusions are highlighted.

1. Customer selectivity potential is positively associated with firm performance, when the model is estimated on all the firms across all the contexts. This is consistent with $H_{1a}$. However, customer selectivity actual is only marginally associated with firm performance.

2. Market orientation (CO) is positively associated with firm performance, when the model is estimated only for firms deriving more of their revenue from the sale of goods. This is consistent with $H_{2a}$.

3. Customer selectivity (both dimensions) is positively associated with firm performance, when the model is estimated only for firms deriving more of their revenue from the sale of services. This is consistent with $H_{3a}$ and $H_{3b}$.

The above results also obtain across: a) variation in threshold of proportion of revenue from sale of goods and services that determines the goods and service contexts for the firms; b) change of scale items in customer selectivity; c) addition of customer heterogeneity as a further control.

4. Market orientation (CO) is an antecedent of both dimensions of customer selectivity. This is consistent with $H_{4a}$ and $H_{4b.}$ But note that Market orientation (IFC)

is not an antecedent of any dimension of customer selectivity ($H_{4c}$ and $H_{4d}$ are not supported).

6. In the structural equation model, customer selectivity actual is positively associated with firm performance. This is consistent with $H_{5b}$. However, customer selectivity potential is not positively associated with firm performance ($H_{5a}$ is not supported).

# 6 Contributions

## 6.1 Overview

In this chapter I summarize the conclusions of my thesis, especially in the light of the research questions asked in Chapter 1. I then highlight the theoretical, empirical and managerial contributions of my thesis. All studies, especially those based on empirical analysis of data, have limitations and I indicate some important ones.

## 6.2 Conclusions

In Chapter 1, the following five research questions were asked:

### 6.2.1 Primary Research Questions

1) Is market orientation a driver of firm performance when the firm derives more of its revenue from the sale of goods than the sale of services?

2) Is market orientation a driver of firm performance when the firm derives more of its revenue from the sale of services than the sale of goods?

3) Is customer selectivity a driver of firm performance when the firm derives more of its revenue from the sale of services than the sale of goods?

4) Is customer selectivity a driver of firm performance when the firm derives more of its revenue from the sale of goods than the sale of services?

5) Is market orientation an antecedent to customer selectivity?

### 6.2.2 Conclusions in the light of chapters 2-5

*1) Is market orientation a driver of firm performance in the goods context, i.e. when the firm derives more of its revenue from the sale of goods than the sale of services?*

Chapters 2-5 showed, through theoretical exploration and statistical analyses, that in the goods context, i.e. where a firm derived more of its revenues from the sale of goods, market orientation (customer orientation) was a significant driver of firm performance. However, it was also seen that market orientation (inter-functional coordination) was not a driver of firm performance.

*2) Is market orientation a driver of firm performance in the services context, i.e. when the firm derives more of its revenue from the sale of services than the sale of goods?*

Chapters 2-5 showed, through theoretical exploration and statistical analyses, that market orientation (both dimensions) was not significantly associated with firm performance in the services context, i.e. where a firm derived more of its revenues from the sale of services. These results obtained in the case of the two exogenous constructs of market orientation and customer selectivity directly driving firm performance. However, as will be shortly discussed, market orientation leads to firm performance across all contexts through the mediation of customer selectivity.

*3) Is customer selectivity a driver of firm performance in the services context, i.e. when the firm derives more of its revenue from the sale of services than the sale of goods?*

Chapters 2-5 showed, as a result of theoretical exploration and statistical analyses, that in the services context, i.e. where a firm derived more of its revenues from the sale of services, both dimensions of customer selectivity, i.e. customer selectivity potential and customer selectivity actual, were significant drivers of firm performance. Originally I had conceptualized customer selectivity as a uni-dimensional scale but data analysis (i.e. factor analysis) suggested two factors.

*4) Is customer selectivity a driver of firm performance when the firm derives more of its revenue from the sale of goods than the sale of services?*

Chapters 2-5 showed, as a result of theoretical exploration and statistical analyses, that customer selectivity was not associated with firm performance in the goods context, i.e. where a firm derived more of its revenues from the sale of goods. As with question 2, this was not set up as a specific hypothesis, but the absence of a statistically significant positive relationship is consistent with the overall logic of this dissertation.

*5) Is market orientation an antecedent to customer selectivity?*

Chapters 3-5 showed that market orientation was an antecedent to customer selectivity when the structural equation model was estimated across the entire dataset. It is pointed out that the two models (regression and structural equation) might not provide us with consistent results because of the presence of a number of controls in the regression model etc., but the alternative model (Model II) suggests one possible explanation of the lack of association between market orientation and firm performance across the entire dataset: Market orientation leads to firm performance in such a case but through the mediation of customer selectivity.

## 6.3 Theoretical, Empirical and Managerial Contributions

### 6.3.1 Theoretical Contributions

My study has made three theoretical contributions: the re-examination of the marketing concept and its link with the CRM literature; some clarification of the difference between goods and services, that has been debated in the services marketing literature; and the clarification of the role of market orientation and customer selectivity in driving firm performance.

### 6.3.2 The Marketing Concept and its link with the CRM literature

One theoretical contribution of my study is the re-examination of the marketing concept and its link with CRM literature. I do not challenge the legitimacy and efficacy of the marketing concept; I attempt to place it in a more specific context, and link it with customer relationship management.

Formulated in the 1950s by a host of scholars, popularized by Drucker (1954), and discussed extensively till the 1980s, the marketing concept has been a truly revolutionary idea in the field of business management. It has provided the much-needed legitimacy to the field of marketing, allowing it to differentiate itself from the "selling" orientation and strategy, of which Ford's Model T had become a rather infamous exemplar. The overall emphasis and the principal guiding thread of the marketing concept has been to satisfy customers. Most marketing scholars agree that market orientation, when properly implemented, should and would lead to firm profitability. If it did not, something must be wrong with the implementation process. Kohli and Jaworski (1990) actually hypothesize that the reason why a firm suffered financial ruin because of its commitment to satisfy a high cost to serve customer must have been related to the implementation process of market orientation. The notion of customer selectivity is not addressed in their highly cited paper (Kohli and Jaworski 1990).

Consequently, when market orientation scales were developed from 1990 onwards, explicitly based on and implementing the marketing concept, the emphasis on satisfying customers, which implicitly, and at times explicitly, meant satisfying *all* customers, became well entrenched. Along with this emphasis, the attendant corollary that rewards would logically follow the implementation of market orientation across all contexts. It was thus not surprising that both the marketing concept and market orientation were not able to fully incorporate the emerging literature and developments in customer relationship management (CRM).

I have not argued against the validity or the utility of the marketing concept. In fact, I argue that the marketing concept is a direct driver for firm performance in the goods context. Also, I argue, as mentioned below, that the marketing concept is an antecedent to customer selectivity and thus an indirect driver of firm performance in all contexts.

### 6.3.3 The difference between Goods and Services

My study has made some contribution in a growing area of the marketing field: services marketing. I believe my study helps address an old question - Are services different from goods? It is noted that the importance of this question has been rekindled by its recent discussion by services marketing scholars (Fisk, Brown and Bitner 1993; Lovelock and Gummesson 2004, Vargo and Lusch 2004b).

Briefly, the question was first posed for the first time in the 1960s by some of the earliest services marketing researchers, as the marketing field till then essentially translated as the marketing of goods. It was only in the 1980s that marketers came round to accepting that services differed from goods in at least four respects:

intangibility, heterogeneity, inseparability and perishability (for a review paper, see Fisk, Brown and Bitner, 1993).

Recently, however, the debate has come full circle, by re-asking – Are services different from goods? The answer, this time, is the opposite of what service marketers argued earlier: several services marketing scholars have claimed that the above four differences are a myth. Lovelock and Gummesson (2004) concluded, “The underlying premises of [the paradigm of services possessing unique characteristics] no longer bear up under examination.” Vargo and Lusch (2004b) noted, “We advocate that the strategy of differentiating services from goods should be abandoned.” This echoes what other service-marketing scholars noted in a content analysis exercise (Grove, Fisk and John 2003).

My study can be seen as an indirect and somewhat limited test of the above-mentioned debate. Instead of defining what a good or a service is, or allocating a product into a pure good or a pure service, I envisioned a product as a spectrum anchored by pure good and pure services at each end but which could contain any mixture of the two. My theoretical model and the empirical support it has obtained suggest that the distinction between goods and services matters to some extent in terms of marketing strategy choice between market orientation and customer selectivity.

### 6.3.4 Empirical Contributions

My study provides empirical support for the argument that market orientation is a direct driver of organizational performance in the goods context, but not in the services context, and that customer selectivity is a direct driver of organizational performance in the services context but not in the goods context.

Second, in Tables 5.1 (overall data) and also in later tables (e.g. Table 5.3, when the threshold of revenue above which firms are chosen is 50%) it is seen that customer selectivity potential is a more significant driver of organizational performance than customer selectivity actual. One reason why this is so could be because customer selectivity potential is a rarer asset than customer selectivity actual (see the means in Table 4.1). However, it is also seen that as the threshold value - at which the revenue is split to select the goods and service context firms - is increased from 50% to 95%, the significance of customer selectivity actual rises steadily when compared to that of customer selectivity potential (see Table 5.7). It would appear, then, that the two dimensions of customer selectivity need to be studied further – at the very least, they behave in empirically different patterns.

### 6.3.5 Managerial Contributions

Until now, it has been generally accepted within practitioner marketing literature that market orientation is a universally applicable marketing strategy, irrespective of the context in which it is being applied. Managers are thus encouraged to inculcate, adopt and internalize market orientation: as Kohli and Jaworski (1990) found, managers believe that rewards will follow if they do this. My results indicate that market orientation is indeed positively associated with firm performance but only when more of the revenue is derived from the sale of goods. When more of the revenue is derived from the sale of services, customer selectivity seems to be a better driver of firm performance.

It is emphasized that the above conclusion needs to be interpreted in the context of the limitations of my study, which are discussed below. If the results of my study are validated by further studies, managers are advised not to deploy market orientation as a direct marketing strategic tool in all the contexts. Equally, customer selectivity, derived from and anchored in CRM, should not be deployed across all contexts and industries. Based on the results obtained, customer selectivity will be a driver of firm performance when a firm derives most of the revenue from the sale of services. Based on the arguments developed in this study, customer selectivity is best deployed in a context of high and variable cost to serve. In fact, one reason why CRM systems have underperformed (Reinartz, Krafft and Hoyer 2004) might be the lack of discrimination in applying marketing strategy mentioned above.

## 6.4 Limitations of my study

An important limitation of my study is the division of products into goods and services, based on the proportion of revenue earned by the firm. Although I tried to lessen the bias introduced as a result of measurement of such revenue by changing the threshold which categories the context – goods versus services – of a firm, I recognize that this measurement is not without problems, and at the very least a more granular level of measurement is needed. Also, more studies are needed before one can be more confident of the results obtained above.

Secondly, I used a perceptual measure of a firm's economic performance, in line with extant literature. Due to the nature of my hypotheses, the presence of common-method bias seems unlikely. However, I would welcome further research which replicates my hypotheses with non-perceptual outcome measures.

Third, all survey research is "snapshot" research. Ideally, panel data analysis, across multiple time points, is needed to corroborate the results obtained in my study. Panel data analysis is expensive, time consuming and in general less used in marketing, but without recourse to it, one cannot be sure of generalizing from the results obtained in a survey.

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# 8 Appendices

## 8.1 Factor Analysis

**Useful Notes to read the following tables**

- The dataset is divided into two parts – Firm and environmental variables, and CRM variables. Items related to the first part start with a “b”. Items related to the second part start with a “c”. Therefore, exploratory factor analyses are performed on the two parts separately.

- The first column of all the tables contains the items upon which the factor analysis is performed.

- All the items used in the scales appear in bold. This makes it easy to read across a particular line to verify if the item does not load onto another factor with a value higher than its loading on the scale.

| Item | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 |
|---|---|---|---|---|---|---|---|---|
| b4 | 0.59 | 0.14 | 0.08 | 0.06 | -0.04 | 0.19 | -0.01 | 0.10 |
| **b5** | **0.83** | 0.09 | 0.06 | -0.01 | -0.01 | -0.05 | 0.02 | -0.01 |
| b6 | 0.81 | 0.07 | 0.04 | -0.04 | -0.01 | 0.01 | -0.02 | -0.01 |
| **b7** | **0.82** | 0.12 | 0.07 | -0.01 | -0.05 | 0.09 | 0.05 | 0.07 |
| b8 | 0.53 | 0.15 | 0.02 | -0.10 | -0.06 | 0.14 | 0.02 | 0.03 |
| **b9** | **0.75** | 0.15 | 0.16 | 0.09 | 0.08 | 0.12 | -0.01 | -0.05 |
| **b10** | **0.74** | 0.09 | 0.03 | 0.12 | 0.08 | 0.05 | -0.08 | -0.06 |
| b11 | 0.10 | 0.13 | 0.26 | 0.07 | 0.07 | 0.63 | 0.00 | 0.05 |
| b12 | 0.24 | 0.46 | 0.10 | 0.19 | -0.09 | 0.49 | -0.06 | 0.02 |
| **b13** | **0.47** | 0.33 | 0.12 | 0.15 | -0.04 | 0.25 | -0.01 | 0.05 |
| b14 | 0.32 | 0.30 | 0.15 | 0.16 | 0.00 | 0.55 | -0.09 | 0.02 |
| **b15** | 0.14 | **0.87** | -0.05 | 0.15 | -0.02 | 0.13 | 0.00 | 0.05 |
| **b16** | 0.14 | **0.79** | -0.04 | 0.12 | -0.04 | 0.10 | 0.10 | 0.01 |
| b17 | 0.22 | 0.32 | 0.11 | 0.03 | -0.01 | 0.59 | 0.05 | -0.06 |
| b18 | 0.38 | 0.15 | 0.06 | 0.11 | -0.04 | 0.25 | 0.02 | 0.05 |
| **b19** | 0.09 | **0.81** | 0.01 | 0.10 | -0.03 | 0.06 | 0.01 | -0.06 |
| **b20** | 0.12 | **0.85** | 0.10 | 0.07 | 0.05 | 0.00 | 0.01 | 0.09 |
| b26 | 0.09 | 0.29 | -0.04 | 0.05 | 0.13 | -0.13 | 0.07 | 0.14 |
| b28 | 0.03 | 0.23 | -0.15 | 0.14 | 0.04 | 0.04 | 0.08 | 0.11 |
| b29 | -0.05 | 0.23 | -0.04 | 0.05 | 0.11 | -0.10 | 0.13 | 0.07 |
| b30 | -0.02 | 0.04 | -0.08 | 0.00 | 0.12 | 0.04 | 0.38 | 0.05 |
| b32 | 0.03 | 0.06 | 0.08 | 0.10 | -0.03 | 0.15 | 0.04 | 0.08 |
| b33 | 0.11 | 0.12 | 0.05 | -0.06 | -0.03 | 0.02 | -0.10 | -0.01 |
| b34 | 0.12 | 0.02 | 0.79 | 0.05 | -0.08 | 0.02 | -0.10 | -0.08 |
| b35 | 0.04 | -0.09 | 0.69 | 0.03 | -0.02 | 0.20 | 0.06 | -0.15 |
| b36 | 0.07 | 0.01 | 0.81 | -0.02 | -0.06 | 0.09 | -0.11 | 0.01 |
| b37 | 0.21 | 0.13 | 0.67 | 0.17 | 0.00 | 0.03 | -0.09 | 0.10 |
| b42 | 0.01 | 0.05 | -0.01 | 0.10 | 0.05 | 0.06 | 0.60 | 0.08 |
| b46 | 0.02 | -0.03 | 0.35 | 0.07 | -0.12 | 0.11 | -0.59 | 0.07 |
| b50 | -0.02 | 0.08 | -0.14 | 0.04 | -0.01 | -0.04 | 0.63 | 0.04 |
| b52 | 0.06 | 0.07 | 0.00 | 0.83 | -0.06 | 0.01 | 0.02 | 0.07 |
| b53 | -0.01 | 0.16 | 0.01 | 0.87 | -0.08 | 0.06 | -0.01 | 0.03 |
| b54 | 0.03 | 0.18 | 0.11 | 0.84 | -0.05 | 0.05 | 0.03 | 0.05 |
| b58 | 0.05 | -0.08 | 0.19 | 0.08 | -0.13 | -0.04 | 0.09 | 0.06 |
| b61 | -0.01 | 0.00 | 0.18 | 0.22 | -0.04 | 0.06 | -0.06 | 0.03 |
| b66 | -0.03 | -0.01 | 0.09 | -0.06 | 0.56 | -0.02 | -0.08 | 0.08 |
| b67 | 0.09 | 0.01 | 0.13 | 0.08 | 0.70 | -0.06 | 0.10 | -0.06 |
| b68 | 0.07 | -0.01 | -0.08 | -0.11 | 0.74 | -0.03 | -0.06 | -0.12 |
| b69 | -0.09 | -0.04 | -0.23 | -0.21 | 0.61 | 0.03 | 0.30 | 0.02 |
| b70 | -0.12 | -0.06 | -0.24 | -0.19 | 0.64 | 0.12 | -0.01 | -0.04 |
| b76 | -0.15 | -0.06 | 0.01 | -0.12 | 0.09 | 0.13 | 0.06 | -0.12 |
| b77 | -0.17 | 0.12 | -0.02 | 0.07 | -0.02 | 0.22 | 0.17 | -0.04 |
| b78 | -0.05 | 0.15 | 0.02 | 0.06 | 0.20 | 0.01 | 0.19 | 0.05 |
| b79 | 0.08 | -0.01 | -0.04 | -0.04 | -0.10 | 0.24 | -0.10 | -0.01 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| b82 | -0.04 | -0.08 | -0.09 | 0.04 | 0.06 | 0.05 | 0.04 | 0.19 |
| b84 | -0.02 | 0.03 | -0.01 | 0.10 | 0.01 | 0.00 | -0.11 | 0.84 |
| b85 | 0.05 | 0.06 | -0.07 | 0.04 | -0.13 | 0.02 | 0.14 | 0.81 |
| b86 | 0.12 | 0.18 | -0.17 | 0.07 | 0.05 | 0.04 | 0.42 | -0.15 |
| b87 | 0.01 | -0.02 | 0.04 | 0.09 | -0.15 | 0.06 | 0.00 | 0.02 |
| b88 | 0.06 | 0.08 | -0.02 | 0.10 | 0.01 | 0.01 | -0.14 | 0.10 |

| Item | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 |
|---|---|---|---|---|---|---|---|
| b4 | 0.06 | 0.03 | 0.04 | -0.02 | -0.09 | 0.01 | 0.04 |
| **b5** | 0.07 | 0.04 | 0.04 | -0.13 | 0.02 | -0.09 | -0.01 |
| b6 | 0.07 | 0.10 | 0.10 | 0.04 | -0.01 | -0.05 | -0.15 |
| **b7** | -0.03 | -0.11 | 0.03 | 0.00 | -0.04 | -0.01 | 0.01 |
| b8 | 0.06 | 0.17 | 0.10 | -0.01 | 0.05 | 0.21 | -0.08 |
| **b9** | -0.06 | -0.03 | -0.13 | -0.01 | 0.01 | 0.07 | 0.08 |
| **b10** | -0.03 | 0.02 | 0.02 | -0.04 | 0.04 | 0.07 | -0.02 |
| b11 | 0.00 | -0.01 | -0.02 | 0.04 | -0.03 | -0.05 | -0.03 |
| b12 | 0.11 | 0.01 | 0.08 | -0.05 | -0.07 | 0.09 | 0.02 |
| **b13** | 0.04 | 0.07 | -0.02 | 0.01 | -0.03 | -0.08 | 0.08 |
| b14 | 0.10 | 0.02 | 0.08 | 0.03 | 0.07 | -0.05 | -0.05 |
| b15 | -0.08 | -0.04 | 0.06 | 0.06 | 0.04 | 0.05 | 0.02 |
| b16 | -0.07 | 0.14 | 0.07 | 0.09 | 0.07 | -0.06 | -0.08 |
| b17 | -0.04 | 0.11 | 0.22 | -0.06 | -0.03 | 0.06 | -0.01 |
| b18 | 0.44 | -0.06 | -0.12 | -0.12 | 0.06 | 0.02 | 0.16 |
| b19 | 0.13 | 0.04 | 0.02 | -0.09 | 0.09 | 0.00 | -0.07 |
| b20 | 0.00 | -0.07 | -0.03 | -0.01 | 0.00 | 0.01 | 0.01 |
| b26 | -0.02 | -0.11 | 0.09 | 0.00 | 0.19 | 0.47 | 0.14 |
| b28 | -0.03 | -0.12 | 0.13 | 0.10 | 0.56 | -0.06 | -0.11 |
| b29 | -0.20 | -0.03 | 0.07 | 0.11 | 0.58 | 0.06 | -0.06 |
| b30 | -0.03 | -0.14 | 0.08 | -0.04 | 0.35 | 0.36 | -0.19 |
| b32 | 0.05 | -0.02 | 0.67 | 0.02 | 0.04 | 0.08 | 0.09 |
| b33 | 0.11 | 0.07 | 0.71 | 0.04 | 0.08 | -0.01 | 0.16 |
| b34 | 0.09 | 0.01 | -0.02 | 0.00 | -0.08 | 0.07 | 0.00 |
| b35 | 0.10 | 0.07 | -0.03 | -0.04 | -0.09 | -0.05 | -0.09 |
| b36 | 0.08 | -0.04 | 0.11 | 0.03 | 0.06 | -0.04 | 0.04 |
| b37 | 0.06 | 0.00 | 0.04 | 0.03 | -0.02 | -0.09 | 0.04 |
| b42 | 0.09 | -0.03 | 0.00 | 0.20 | 0.04 | 0.02 | -0.13 |
| b46 | -0.01 | -0.02 | 0.02 | -0.01 | 0.07 | -0.05 | -0.13 |
| b50 | 0.00 | -0.20 | -0.09 | 0.12 | 0.15 | 0.00 | 0.11 |
| b52 | 0.07 | 0.12 | -0.03 | 0.03 | 0.01 | -0.05 | -0.02 |
| b53 | 0.03 | 0.01 | 0.04 | 0.05 | 0.04 | 0.00 | 0.02 |
| b54 | 0.07 | -0.01 | 0.01 | -0.07 | 0.01 | 0.08 | 0.01 |
| b58 | 0.70 | 0.03 | 0.16 | -0.03 | -0.11 | -0.14 | -0.04 |
| b61 | 0.67 | 0.17 | 0.02 | 0.15 | -0.04 | 0.10 | -0.08 |
| b66 | -0.14 | -0.25 | -0.11 | 0.07 | 0.20 | 0.13 | 0.25 |
| b67 | 0.00 | 0.00 | 0.00 | 0.02 | 0.09 | 0.10 | -0.03 |
| b68 | 0.04 | -0.01 | -0.05 | 0.05 | -0.01 | -0.06 | -0.09 |
| b69 | -0.10 | 0.02 | 0.04 | 0.10 | 0.00 | 0.07 | 0.04 |
| b70 | -0.18 | -0.05 | 0.04 | -0.01 | -0.06 | 0.00 | -0.09 |
| b76 | 0.05 | -0.19 | -0.21 | 0.51 | 0.13 | 0.00 | 0.21 |
| b77 | 0.24 | -0.27 | 0.10 | 0.42 | 0.17 | 0.12 | 0.05 |
| b78 | 0.04 | 0.07 | 0.17 | 0.52 | 0.09 | 0.26 | -0.13 |
| b79 | 0.01 | 0.06 | -0.08 | -0.57 | 0.01 | 0.03 | 0.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b82 | -0.05 | 0.01 | 0.02 | 0.13 | -0.07 | 0.63 | -0.05 |
| b84 | 0.05 | -0.02 | -0.01 | -0.02 | 0.06 | 0.02 | 0.04 |
| b85 | 0.01 | 0.11 | 0.05 | 0.00 | 0.00 | 0.10 | -0.03 |
| b86 | -0.04 | -0.03 | 0.02 | -0.06 | 0.21 | 0.05 | 0.16 |
| b87 | 0.05 | 0.68 | 0.04 | -0.13 | 0.01 | 0.03 | 0.15 |
| b88 | 0.11 | 0.71 | 0.02 | 0.01 | -0.09 | -0.06 | 0.12 |

| Item | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 |
|---|---|---|---|---|---|---|---|---|
| c1 | 0.27 | 0.35 | 0.22 | -0.03 | 0.01 | 0.56 | 0.04 | 0.10 |
| c2 | 0.12 | 0.18 | 0.10 | 0.20 | 0.12 | 0.79 | 0.07 | -0.02 |
| c3 | 0.12 | 0.22 | 0.12 | 0.11 | 0.01 | 0.82 | 0.09 | 0.05 |
| c4 | 0.38 | 0.08 | 0.21 | 0.20 | 0.06 | 0.46 | 0.07 | 0.06 |
| c5 | 0.30 | 0.11 | 0.23 | 0.03 | -0.01 | 0.33 | 0.00 | 0.01 |
| b13 | 0.09 | 0.25 | 0.21 | 0.00 | -0.20 | -0.02 | -0.05 | 0.14 |
| c6 | 0.22 | 0.05 | 0.12 | 0.21 | 0.01 | 0.20 | -0.03 | -0.01 |
| c7 | 0.29 | 0.18 | 0.03 | 0.17 | -0.04 | 0.30 | 0.28 | 0.09 |
| c8 | 0.35 | 0.19 | 0.01 | 0.19 | 0.02 | 0.29 | 0.18 | 0.05 |
| c9 | -0.20 | -0.07 | -0.01 | 0.13 | 0.02 | 0.12 | 0.07 | 0.07 |
| c13 | 0.22 | 0.00 | 0.01 | 0.07 | 0.05 | 0.08 | 0.13 | 0.09 |
| c14 | 0.03 | 0.10 | 0.03 | 0.08 | 0.32 | -0.05 | 0.09 | 0.17 |
| c15 | 0.19 | 0.04 | 0.12 | 0.06 | 0.08 | 0.02 | 0.00 | 0.11 |
| c16 | 0.14 | -0.04 | 0.12 | 0.04 | 0.05 | 0.03 | 0.04 | 0.04 |
| c17 | 0.23 | 0.10 | 0.10 | 0.12 | 0.04 | 0.04 | 0.06 | 0.06 |
| c18 | 0.22 | 0.09 | -0.03 | 0.08 | 0.12 | 0.04 | 0.18 | 0.06 |
| c19 | -0.02 | 0.12 | 0.07 | 0.27 | 0.01 | 0.06 | 0.12 | -0.06 |
| c20 | 0.13 | 0.07 | 0.04 | 0.20 | 0.06 | 0.11 | 0.11 | 0.00 |
| c23 | 0.08 | -0.03 | 0.00 | 0.03 | 0.21 | 0.16 | 0.25 | 0.18 |
| c24 | -0.01 | -0.01 | 0.03 | 0.08 | 0.02 | 0.10 | 0.21 | -0.08 |
| c25 | 0.01 | 0.00 | 0.15 | 0.01 | 0.04 | 0.03 | 0.09 | 0.05 |
| c26 | -0.02 | -0.03 | 0.07 | -0.02 | 0.10 | 0.02 | -0.08 | 0.06 |
| **c27** | 0.30 | 0.03 | -0.02 | 0.06 | 0.04 | 0.00 | 0.20 | 0.00 |
| **c28** | 0.30 | 0.03 | 0.05 | 0.07 | 0.10 | 0.10 | 0.16 | -0.01 |
| c29 | 0.41 | 0.13 | -0.01 | 0.19 | 0.13 | 0.16 | 0.21 | 0.00 |
| c30 | 0.07 | 0.19 | 0.03 | 0.23 | -0.02 | 0.45 | 0.07 | 0.02 |
| c31 | 0.15 | 0.34 | 0.02 | 0.10 | 0.06 | 0.22 | -0.01 | 0.06 |
| c32 | 0.28 | 0.15 | 0.01 | 0.08 | 0.09 | 0.08 | 0.08 | 0.13 |
| c33 | 0.32 | 0.07 | -0.07 | 0.20 | 0.02 | 0.12 | 0.20 | 0.15 |
| c34 | 0.34 | 0.16 | 0.07 | 0.15 | 0.09 | 0.28 | 0.06 | 0.22 |
| c35 | 0.13 | 0.19 | -0.01 | -0.01 | 0.05 | 0.13 | 0.16 | 0.00 |
| c36 | -0.09 | 0.24 | -0.03 | 0.19 | -0.15 | 0.07 | 0.10 | -0.05 |
| c37 | 0.08 | 0.09 | 0.07 | -0.03 | 0.13 | 0.10 | 0.08 | 0.14 |
| c38 | 0.47 | 0.39 | 0.04 | 0.16 | -0.02 | 0.34 | 0.16 | 0.06 |
| c39 | 0.44 | 0.18 | 0.23 | 0.23 | -0.04 | 0.25 | 0.18 | 0.07 |
| c40 | 0.34 | -0.01 | 0.17 | 0.03 | 0.16 | 0.12 | 0.00 | -0.02 |
| c41 | 0.24 | 0.03 | 0.28 | 0.22 | -0.08 | 0.07 | 0.06 | 0.14 |
| c42 | 0.19 | 0.07 | 0.18 | 0.17 | 0.08 | 0.10 | -0.04 | -0.12 |
| c43 | 0.45 | 0.20 | 0.23 | 0.14 | 0.00 | 0.10 | 0.08 | 0.10 |
| **c46** | **0.74** | 0.03 | 0.03 | 0.07 | 0.17 | 0.10 | 0.17 | 0.08 |
| **c47** | **0.77** | 0.10 | 0.10 | 0.04 | 0.08 | 0.09 | 0.18 | 0.04 |
| c48 | 0.39 | 0.14 | 0.13 | 0.12 | 0.14 | 0.15 | 0.28 | 0.05 |
| **c49** | **0.65** | 0.14 | 0.04 | 0.17 | 0.28 | 0.13 | 0.22 | 0.19 |
| c50 | 0.17 | 0.03 | 0.02 | -0.06 | 0.18 | 0.15 | 0.04 | -0.05 |

| Item | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 |
|---|---|---|---|---|---|---|---|---|
| c51 | 0.22 | 0.14 | -0.06 | 0.22 | 0.08 | 0.15 | 0.16 | 0.16 |
| **c52** | **0.44** | **0.23** | 0.03 | 0.16 | 0.12 | 0.17 | 0.24 | 0.16 |
| **c53** | **0.46** | **0.21** | -0.03 | 0.19 | 0.01 | 0.22 | 0.15 | 0.06 |
| c54 | 0.41 | 0.21 | -0.02 | 0.22 | 0.15 | 0.19 | 0.21 | 0.12 |
| c55 | 0.32 | 0.25 | -0.08 | 0.06 | -0.04 | 0.14 | 0.11 | 0.01 |
| c56 | 0.38 | 0.29 | -0.01 | 0.18 | 0.08 | 0.09 | 0.16 | 0.24 |
| c59 | 0.25 | 0.11 | 0.00 | 0.15 | 0.32 | 0.11 | 0.46 | 0.24 |
| c60 | 0.19 | 0.13 | -0.04 | 0.13 | 0.07 | -0.01 | 0.68 | 0.17 |
| c61 | 0.07 | -0.04 | -0.06 | 0.16 | 0.21 | 0.32 | 0.39 | 0.18 |
| c62 | 0.21 | -0.04 | -0.02 | 0.04 | -0.03 | 0.05 | 0.76 | 0.03 |
| c63 | 0.33 | 0.09 | -0.01 | 0.18 | 0.06 | 0.21 | 0.36 | 0.18 |
| c64 | 0.20 | 0.00 | 0.01 | 0.05 | 0.04 | 0.09 | 0.75 | 0.02 |
| c65 | 0.08 | 0.04 | -0.02 | 0.05 | 0.01 | 0.40 | 0.54 | 0.12 |
| c69 | 0.12 | 0.15 | 0.10 | 0.75 | -0.01 | 0.13 | 0.11 | 0.02 |
| c70 | 0.22 | 0.06 | 0.03 | 0.73 | -0.04 | 0.15 | 0.14 | 0.11 |
| c71 | 0.18 | 0.03 | 0.10 | 0.53 | -0.04 | 0.20 | 0.15 | -0.01 |
| c72 | 0.03 | 0.06 | 0.02 | 0.06 | -0.08 | 0.02 | 0.00 | -0.06 |
| c73 | 0.27 | 0.08 | -0.04 | 0.35 | 0.07 | -0.01 | 0.05 | 0.07 |
| c74 | 0.27 | 0.03 | 0.09 | 0.30 | -0.04 | 0.14 | 0.05 | 0.23 |
| c75 | 0.06 | -0.03 | 0.04 | 0.17 | 0.11 | -0.05 | -0.10 | 0.62 |
| c76 | -0.01 | 0.08 | 0.10 | 0.14 | 0.05 | -0.03 | -0.04 | 0.76 |
| c77 | 0.11 | -0.01 | 0.05 | 0.09 | -0.05 | 0.03 | 0.18 | 0.76 |
| c78 | 0.16 | 0.01 | 0.09 | -0.01 | -0.01 | 0.10 | 0.19 | 0.76 |
| c79 | 0.08 | 0.06 | 0.04 | 0.46 | -0.09 | 0.08 | 0.03 | 0.22 |
| c80 | 0.21 | 0.14 | 0.03 | 0.19 | -0.10 | 0.21 | 0.15 | 0.36 |
| c81 | 0.33 | 0.10 | 0.00 | 0.16 | 0.10 | 0.07 | 0.14 | -0.06 |
| c82 | 0.16 | 0.00 | 0.08 | 0.14 | 0.10 | 0.04 | -0.08 | 0.16 |
| c83 | -0.15 | -0.02 | 0.10 | 0.23 | -0.04 | 0.24 | 0.07 | 0.11 |
| c84 | -0.04 | 0.03 | 0.12 | 0.17 | -0.04 | 0.10 | 0.18 | 0.10 |
| c85 | 0.09 | 0.73 | 0.13 | 0.14 | 0.08 | 0.17 | 0.13 | 0.05 |
| c86 | 0.03 | 0.74 | 0.18 | 0.10 | 0.00 | 0.26 | 0.06 | 0.02 |
| c87 | 0.11 | 0.65 | 0.17 | 0.21 | 0.10 | 0.00 | -0.02 | -0.12 |
| c88 | 0.07 | 0.75 | 0.22 | 0.07 | 0.30 | 0.11 | 0.04 | 0.04 |
| c89 | 0.13 | 0.81 | 0.17 | 0.03 | 0.15 | 0.13 | -0.08 | 0.05 |
| c90 | 0.09 | 0.72 | 0.15 | 0.13 | 0.28 | 0.07 | 0.04 | 0.11 |
| c91 | 0.11 | 0.25 | 0.07 | 0.01 | 0.31 | 0.03 | -0.03 | 0.00 |
| c92 | 0.14 | 0.43 | 0.17 | 0.18 | 0.41 | 0.10 | 0.05 | 0.02 |
| c93 | 0.24 | 0.23 | 0.09 | 0.13 | 0.61 | 0.06 | -0.10 | 0.04 |
| c94 | 0.07 | 0.27 | 0.18 | 0.08 | 0.70 | 0.04 | 0.10 | -0.04 |
| c95 | 0.16 | 0.41 | 0.20 | 0.10 | 0.43 | 0.03 | -0.06 | 0.06 |
| c96 | 0.23 | -0.04 | 0.00 | -0.03 | 0.19 | -0.18 | 0.00 | -0.04 |
| c97 | 0.01 | 0.16 | 0.29 | 0.06 | 0.16 | -0.05 | -0.10 | 0.43 |
| c98 | 0.04 | 0.28 | 0.17 | 0.66 | 0.30 | 0.08 | -0.03 | 0.23 |
| c99 | 0.06 | 0.27 | 0.13 | 0.65 | 0.26 | 0.14 | 0.02 | 0.10 |

| Item | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 |
|---|---|---|---|---|---|---|---|---|
| c100 | 0.01 | 0.16 | 0.12 | 0.06 | 0.25 | 0.09 | 0.07 | 0.59 |
| c101 | 0.22 | 0.23 | 0.08 | -0.03 | 0.23 | 0.05 | -0.10 | 0.07 |
| **c102** | 0.06 | 0.33 | 0.15 | 0.02 | 0.26 | -0.11 | 0.09 | -0.10 |
| c103 | 0.28 | 0.19 | 0.08 | 0.13 | 0.23 | -0.08 | 0.20 | -0.01 |
| c104 | 0.35 | 0.26 | 0.39 | 0.12 | 0.20 | 0.02 | -0.06 | -0.07 |
| c105 | 0.34 | 0.27 | 0.41 | 0.05 | 0.32 | 0.01 | -0.02 | -0.10 |
| c106 | 0.14 | 0.23 | 0.57 | 0.15 | 0.23 | 0.19 | 0.01 | 0.00 |
| c107 | 0.11 | 0.26 | 0.66 | 0.11 | 0.18 | 0.11 | -0.08 | 0.07 |
| c108 | -0.03 | 0.28 | 0.72 | 0.07 | 0.03 | 0.08 | -0.05 | 0.16 |
| c109 | 0.01 | 0.13 | 0.84 | 0.03 | 0.14 | 0.11 | 0.03 | 0.09 |
| c110 | 0.04 | 0.19 | 0.83 | 0.07 | 0.08 | 0.03 | 0.02 | 0.06 |
| c111 | 0.17 | 0.25 | 0.25 | 0.07 | 0.62 | 0.08 | -0.06 | 0.08 |
| c112 | 0.07 | 0.29 | 0.16 | -0.03 | 0.70 | -0.02 | 0.16 | 0.10 |
| c113 | 0.28 | 0.30 | 0.15 | 0.01 | 0.40 | 0.18 | 0.27 | 0.13 |

| Item | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 |
|---|---|---|---|---|---|---|---|---|
| c1 | 0.17 | 0.06 | 0.00 | 0.07 | -0.01 | 0.12 | 0.17 | 0.08 |
| c2 | -0.05 | -0.01 | 0.02 | 0.11 | 0.04 | -0.04 | 0.08 | 0.05 |
| c3 | 0.01 | 0.12 | 0.01 | 0.10 | -0.02 | 0.12 | 0.04 | 0.03 |
| c4 | -0.04 | -0.09 | 0.00 | 0.17 | 0.23 | 0.07 | 0.18 | -0.06 |
| c5 | 0.29 | 0.09 | 0.05 | 0.10 | -0.12 | -0.03 | 0.07 | -0.04 |
| b13 | 0.33 | 0.03 | -0.01 | 0.25 | -0.01 | -0.01 | 0.04 | -0.03 |
| c6 | -0.09 | 0.16 | 0.05 | 0.18 | 0.03 | 0.09 | 0.01 | -0.12 |
| c7 | 0.11 | 0.00 | 0.18 | 0.05 | 0.06 | 0.03 | 0.54 | -0.04 |
| c8 | 0.18 | 0.08 | 0.12 | 0.13 | 0.12 | 0.03 | 0.55 | -0.04 |
| c9 | -0.11 | -0.22 | -0.10 | 0.10 | 0.37 | 0.00 | -0.06 | -0.06 |
| c13 | 0.02 | -0.11 | 0.70 | 0.15 | 0.07 | 0.21 | -0.08 | -0.08 |
| c14 | 0.04 | 0.14 | 0.61 | 0.05 | 0.18 | 0.07 | 0.16 | 0.00 |
| c15 | 0.18 | 0.09 | 0.23 | 0.08 | 0.77 | 0.08 | 0.03 | 0.09 |
| c16 | 0.18 | 0.07 | 0.21 | 0.05 | 0.79 | 0.08 | 0.07 | 0.01 |
| c17 | 0.13 | 0.07 | 0.70 | 0.04 | 0.37 | 0.17 | 0.00 | 0.04 |
| c18 | 0.06 | 0.12 | 0.59 | 0.08 | 0.22 | 0.03 | 0.35 | 0.12 |
| c19 | 0.16 | -0.33 | 0.31 | 0.12 | 0.15 | 0.32 | 0.23 | 0.07 |
| c20 | 0.04 | -0.13 | 0.31 | 0.05 | 0.11 | 0.25 | 0.49 | 0.07 |
| c23 | -0.03 | 0.03 | 0.20 | 0.05 | -0.01 | 0.45 | 0.04 | -0.18 |
| c24 | 0.30 | -0.14 | 0.44 | 0.01 | 0.01 | 0.46 | 0.10 | 0.04 |
| c25 | 0.08 | -0.04 | 0.19 | 0.13 | 0.15 | 0.74 | 0.04 | -0.02 |
| c26 | 0.04 | 0.04 | 0.23 | 0.21 | 0.00 | 0.61 | 0.13 | 0.09 |
| **c27** | **0.73** | 0.09 | 0.08 | 0.13 | 0.25 | 0.04 | 0.01 | 0.07 |
| **c28** | **0.75** | 0.07 | 0.09 | 0.26 | 0.12 | 0.06 | 0.06 | 0.06 |
| c29 | 0.30 | 0.14 | 0.10 | 0.39 | 0.24 | 0.02 | 0.21 | -0.09 |
| c30 | 0.27 | 0.05 | 0.28 | 0.06 | 0.11 | -0.03 | -0.01 | -0.15 |
| c31 | 0.16 | -0.07 | 0.10 | 0.61 | 0.09 | -0.10 | -0.03 | -0.11 |
| c32 | 0.26 | 0.12 | 0.13 | 0.59 | 0.07 | 0.13 | 0.18 | 0.11 |
| c33 | 0.13 | -0.11 | 0.06 | 0.28 | 0.15 | 0.03 | 0.12 | 0.01 |
| c34 | 0.10 | -0.15 | 0.04 | 0.38 | 0.16 | -0.05 | 0.08 | -0.03 |
| c35 | 0.09 | 0.28 | 0.20 | 0.48 | 0.09 | 0.22 | 0.09 | -0.01 |
| c36 | -0.17 | 0.18 | 0.09 | 0.31 | 0.08 | 0.41 | -0.01 | 0.15 |
| c37 | 0.17 | 0.11 | 0.05 | 0.69 | 0.03 | 0.32 | -0.04 | 0.04 |
| c38 | 0.14 | -0.02 | 0.14 | 0.07 | -0.03 | 0.09 | 0.10 | -0.14 |
| c39 | 0.13 | 0.12 | 0.13 | -0.01 | 0.16 | 0.14 | 0.04 | 0.09 |
| c40 | 0.31 | -0.01 | 0.00 | 0.40 | 0.13 | 0.10 | -0.03 | -0.05 |
| c41 | 0.06 | 0.22 | 0.23 | 0.20 | 0.11 | -0.02 | 0.05 | -0.01 |
| c42 | 0.12 | 0.08 | 0.05 | 0.19 | 0.10 | 0.06 | -0.10 | 0.18 |
| c43 | 0.23 | 0.06 | 0.05 | 0.41 | 0.01 | 0.13 | 0.08 | 0.18 |
| **c46** | 0.24 | 0.06 | 0.14 | 0.10 | 0.09 | -0.07 | 0.09 | 0.09 |
| **c47** | 0.21 | 0.14 | 0.17 | 0.07 | 0.11 | -0.04 | 0.06 | 0.10 |

| Item | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 |
|---|---|---|---|---|---|---|---|---|
| c48 | -0.04 | 0.13 | 0.15 | 0.15 | 0.27 | -0.04 | 0.01 | -0.05 |
| **c49** | 0.09 | 0.02 | 0.16 | 0.19 | 0.11 | 0.02 | 0.13 | 0.03 |
| c50 | -0.17 | 0.54 | -0.08 | 0.14 | 0.02 | 0.06 | 0.04 | 0.04 |
| c51 | -0.12 | -0.02 | -0.32 | -0.02 | 0.23 | 0.05 | -0.09 | -0.15 |
| **c52** | 0.06 | 0.00 | -0.02 | 0.03 | 0.13 | 0.25 | 0.03 | -0.07 |
| **c53** | 0.06 | 0.19 | 0.05 | -0.03 | 0.17 | 0.34 | -0.18 | 0.13 |
| c54 | 0.14 | -0.07 | 0.05 | 0.11 | 0.15 | 0.09 | 0.08 | -0.02 |
| c55 | 0.05 | 0.22 | -0.04 | 0.03 | 0.06 | 0.46 | -0.16 | 0.05 |
| c56 | 0.06 | -0.06 | 0.04 | 0.07 | 0.20 | 0.13 | -0.10 | -0.08 |
| c59 | 0.14 | -0.06 | 0.08 | 0.08 | 0.03 | 0.01 | -0.09 | -0.14 |
| c60 | 0.06 | -0.03 | 0.13 | 0.05 | 0.06 | 0.10 | 0.11 | 0.00 |
| c61 | 0.18 | -0.05 | 0.15 | 0.07 | 0.01 | -0.02 | -0.20 | -0.20 |
| c62 | 0.27 | 0.11 | 0.10 | 0.00 | -0.08 | 0.03 | 0.03 | -0.01 |
| c63 | 0.10 | -0.03 | -0.02 | 0.23 | 0.21 | -0.04 | -0.08 | 0.10 |
| c64 | 0.05 | 0.05 | 0.06 | 0.09 | 0.06 | 0.09 | 0.20 | 0.01 |
| c65 | -0.02 | -0.02 | 0.04 | 0.02 | 0.16 | 0.04 | -0.12 | 0.00 |
| c69 | -0.04 | 0.14 | 0.11 | 0.07 | -0.04 | -0.06 | -0.04 | -0.03 |
| c70 | 0.01 | 0.07 | 0.18 | 0.11 | 0.04 | 0.02 | 0.03 | 0.12 |
| c71 | 0.13 | 0.10 | 0.19 | 0.24 | 0.16 | 0.03 | 0.05 | 0.15 |
| c72 | 0.21 | 0.58 | 0.11 | -0.02 | -0.04 | 0.08 | -0.21 | 0.25 |
| c73 | 0.20 | -0.04 | -0.09 | 0.06 | -0.12 | -0.12 | 0.12 | 0.03 |
| c74 | 0.05 | 0.22 | 0.03 | 0.00 | 0.23 | 0.14 | -0.22 | 0.44 |
| c75 | -0.05 | 0.00 | 0.05 | 0.00 | 0.18 | 0.03 | -0.03 | 0.03 |
| c76 | 0.05 | 0.03 | -0.01 | 0.07 | 0.04 | 0.11 | 0.07 | -0.02 |
| c77 | -0.10 | 0.02 | 0.06 | 0.07 | 0.07 | -0.11 | -0.05 | -0.05 |
| c78 | -0.03 | 0.11 | 0.21 | 0.08 | 0.00 | -0.04 | -0.06 | 0.05 |
| c79 | 0.02 | -0.22 | 0.21 | 0.06 | -0.02 | -0.08 | -0.28 | -0.06 |
| c80 | 0.17 | -0.12 | 0.17 | -0.06 | -0.03 | -0.07 | -0.01 | -0.12 |
| c81 | 0.23 | 0.47 | 0.07 | 0.10 | 0.36 | -0.16 | 0.13 | 0.03 |
| c82 | 0.08 | 0.64 | 0.11 | 0.00 | 0.11 | -0.11 | 0.04 | -0.15 |
| c83 | 0.12 | 0.63 | 0.18 | 0.16 | 0.15 | 0.01 | -0.01 | 0.13 |
| c84 | 0.13 | 0.55 | -0.06 | 0.09 | 0.04 | 0.11 | -0.03 | 0.20 |
| c85 | 0.11 | 0.12 | -0.08 | -0.06 | 0.08 | -0.13 | 0.06 | 0.06 |
| c86 | 0.02 | 0.09 | 0.08 | -0.01 | -0.03 | 0.07 | -0.02 | 0.08 |
| c87 | -0.11 | 0.04 | -0.01 | 0.25 | 0.04 | 0.08 | -0.03 | 0.26 |
| c88 | 0.10 | -0.07 | 0.04 | 0.14 | -0.05 | 0.04 | 0.10 | -0.07 |
| c89 | 0.00 | -0.07 | 0.09 | 0.05 | -0.01 | 0.05 | 0.07 | -0.02 |
| c90 | 0.04 | -0.05 | 0.05 | 0.19 | 0.01 | -0.02 | -0.04 | 0.02 |
| c91 | 0.04 | -0.04 | 0.14 | 0.14 | 0.00 | -0.07 | -0.07 | 0.00 |
| c92 | 0.12 | 0.10 | -0.05 | 0.07 | 0.12 | 0.02 | 0.10 | 0.02 |
| c93 | 0.01 | 0.13 | 0.07 | 0.08 | 0.13 | 0.13 | 0.02 | 0.27 |
| c94 | -0.01 | 0.00 | 0.06 | 0.04 | 0.08 | -0.01 | -0.01 | -0.03 |
| c95 | 0.09 | 0.13 | -0.01 | 0.09 | 0.18 | 0.03 | 0.10 | 0.47 |
| c96 | 0.03 | 0.64 | -0.19 | -0.01 | -0.01 | 0.06 | 0.10 | -0.06 |

| Item | Factor 9 | Factor 10 | Factor 11 | Factor 12 | Factor 13 | Factor 14 | Factor 15 | Factor 16 |
|---|---|---|---|---|---|---|---|---|
| c97 | 0.10 | 0.03 | -0.17 | 0.05 | 0.01 | 0.20 | 0.17 | 0.17 |
| c98 | 0.18 | 0.06 | 0.00 | -0.03 | 0.07 | 0.09 | 0.22 | 0.00 |
| c99 | 0.07 | 0.09 | -0.14 | -0.12 | 0.17 | 0.16 | 0.17 | -0.06 |
| c100 | 0.13 | -0.06 | -0.09 | 0.02 | -0.03 | 0.25 | 0.23 | 0.17 |
| c101 | 0.28 | 0.08 | 0.10 | 0.03 | 0.05 | 0.03 | 0.05 | 0.53 |
| **c102** | **0.49** | 0.13 | 0.12 | 0.12 | 0.19 | 0.12 | 0.19 | 0.10 |
| c103 | 0.45 | 0.26 | 0.02 | 0.03 | 0.32 | 0.10 | 0.05 | -0.08 |
| c104 | 0.25 | 0.19 | -0.01 | 0.12 | 0.17 | 0.14 | -0.02 | -0.22 |
| c105 | 0.24 | 0.10 | 0.14 | 0.13 | 0.04 | 0.19 | -0.02 | -0.18 |
| c106 | 0.15 | 0.17 | 0.07 | -0.06 | 0.09 | 0.05 | 0.06 | -0.04 |
| c107 | 0.00 | 0.12 | 0.00 | -0.05 | 0.03 | 0.08 | -0.02 | 0.06 |
| c108 | 0.00 | 0.03 | -0.01 | -0.06 | 0.14 | 0.01 | 0.08 | -0.04 |
| c109 | -0.04 | 0.00 | 0.01 | 0.07 | 0.01 | 0.04 | -0.08 | 0.02 |
| c110 | 0.05 | -0.04 | 0.05 | 0.08 | 0.08 | 0.01 | 0.05 | 0.11 |
| c111 | 0.14 | 0.04 | 0.06 | 0.00 | 0.01 | -0.02 | -0.04 | 0.23 |
| c112 | 0.09 | 0.07 | 0.12 | 0.10 | -0.02 | 0.05 | 0.03 | -0.13 |
| c113 | 0.25 | -0.10 | 0.18 | 0.13 | 0.06 | 0.04 | -0.01 | 0.09 |

| Item | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|---|---|---|---|---|---|
| c1 | 0.10 | 0.21 | 0.10 | 0.08 | 0.27 |
| c2 | -0.11 | -0.07 | 0.03 | -0.06 | 0.22 |
| c3 | 0.09 | 0.03 | -0.02 | 0.09 | 0.17 |
| c4 | -0.15 | 0.04 | -0.09 | -0.03 | 0.37 |
| c5 | -0.11 | 0.10 | 0.35 | 0.20 | 0.43 |
| b13 | 0.02 | -0.05 | 0.41 | 0.14 | 0.46 |
| c6 | 0.06 | -0.03 | 0.08 | 0.55 | 0.45 |
| c7 | -0.01 | -0.08 | -0.06 | -0.02 | 0.32 |
| c8 | 0.06 | -0.11 | -0.02 | 0.00 | 0.28 |
| c9 | -0.01 | -0.03 | -0.31 | 0.13 | 0.58 |
| c13 | 0.06 | -0.08 | 0.06 | 0.08 | 0.30 |
| c14 | -0.11 | 0.17 | -0.06 | -0.05 | 0.33 |
| c15 | 0.05 | 0.02 | 0.01 | 0.03 | 0.22 |
| c16 | -0.02 | 0.01 | 0.02 | -0.02 | 0.23 |
| c17 | 0.10 | 0.01 | 0.00 | 0.02 | 0.20 |
| c18 | -0.08 | 0.11 | 0.04 | -0.11 | 0.29 |
| c19 | -0.07 | 0.15 | 0.23 | 0.00 | 0.37 |
| c20 | -0.14 | 0.12 | 0.22 | 0.03 | 0.39 |
| c23 | -0.17 | -0.12 | 0.11 | 0.02 | 0.50 |
| c24 | -0.06 | 0.11 | -0.05 | 0.09 | 0.38 |
| c25 | -0.03 | -0.15 | -0.05 | 0.00 | 0.31 |
| c26 | 0.07 | 0.10 | 0.06 | 0.03 | 0.45 |
| **c27** | 0.03 | 0.00 | 0.09 | -0.05 | 0.22 |
| **c28** | 0.01 | 0.05 | 0.03 | -0.02 | 0.19 |
| c29 | -0.12 | -0.01 | -0.03 | -0.04 | 0.30 |
| c30 | -0.04 | 0.12 | -0.09 | 0.00 | 0.48 |
| c31 | 0.00 | 0.01 | 0.01 | 0.15 | 0.33 |
| c32 | -0.07 | 0.15 | -0.08 | 0.06 | 0.30 |
| c33 | -0.36 | -0.02 | 0.24 | -0.04 | 0.43 |
| c34 | -0.12 | -0.05 | 0.15 | -0.03 | 0.44 |
| c35 | 0.11 | 0.02 | 0.10 | -0.09 | 0.45 |
| c36 | 0.27 | 0.10 | -0.04 | -0.05 | 0.41 |
| c37 | 0.08 | 0.05 | 0.03 | 0.00 | 0.30 |
| c38 | 0.07 | 0.24 | -0.05 | -0.02 | 0.31 |
| c39 | -0.16 | -0.13 | 0.13 | -0.10 | 0.39 |
| c40 | 0.03 | -0.16 | 0.25 | 0.09 | 0.43 |
| c41 | 0.28 | 0.23 | -0.01 | -0.01 | 0.49 |
| c42 | 0.47 | -0.11 | -0.06 | 0.13 | 0.50 |
| c43 | 0.01 | 0.01 | 0.03 | 0.16 | 0.35 |
| **c46** | 0.05 | 0.04 | 0.07 | 0.11 | 0.23 |
| **c47** | -0.01 | 0.03 | 0.00 | 0.07 | 0.21 |
| c48 | 0.18 | 0.01 | 0.13 | -0.13 | 0.47 |
| **c49** | 0.02 | 0.01 | -0.02 | -0.07 | 0.25 |

| Item | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|---|---|---|---|---|---|
| c50 | 0.21 | 0.01 | 0.07 | 0.05 | 0.50 |
| **c51** | -0.14 | 0.21 | 0.28 | 0.12 | 0.43 |
| **c52** | -0.10 | 0.30 | 0.18 | -0.10 | 0.37 |
| c53 | 0.14 | -0.02 | 0.05 | -0.14 | 0.35 |
| c54 | -0.07 | 0.21 | 0.27 | 0.11 | 0.41 |
| c55 | 0.10 | 0.17 | -0.01 | 0.15 | 0.43 |
| c56 | -0.03 | 0.23 | -0.02 | 0.32 | 0.40 |
| c59 | 0.17 | 0.01 | 0.31 | -0.10 | 0.32 |
| c60 | 0.02 | -0.07 | 0.01 | -0.11 | 0.36 |
| c61 | 0.19 | 0.09 | 0.16 | -0.28 | 0.33 |
| c62 | -0.09 | -0.07 | -0.05 | 0.00 | 0.25 |
| c63 | 0.02 | 0.05 | 0.11 | 0.35 | 0.38 |
| c64 | -0.03 | 0.13 | -0.06 | 0.07 | 0.29 |
| c65 | 0.05 | 0.08 | 0.17 | 0.17 | 0.41 |
| c69 | 0.05 | -0.01 | 0.12 | 0.06 | 0.30 |
| c70 | 0.06 | 0.06 | 0.05 | 0.05 | 0.28 |
| c71 | 0.27 | 0.22 | -0.01 | -0.12 | 0.30 |
| c72 | 0.04 | -0.09 | 0.08 | 0.11 | 0.45 |
| c73 | 0.06 | 0.04 | -0.01 | 0.01 | 0.68 |
| c74 | -0.04 | -0.02 | -0.05 | -0.17 | 0.35 |
| c75 | 0.37 | -0.04 | 0.20 | 0.02 | 0.33 |
| c76 | 0.27 | -0.02 | 0.05 | 0.05 | 0.28 |
| c77 | -0.23 | 0.04 | -0.02 | 0.03 | 0.27 |
| c78 | -0.18 | 0.04 | -0.07 | -0.05 | 0.22 |
| c79 | 0.03 | 0.18 | -0.05 | -0.02 | 0.49 |
| c80 | -0.14 | 0.37 | 0.00 | -0.02 | 0.45 |
| c81 | 0.08 | -0.08 | -0.01 | 0.11 | 0.33 |
| c82 | 0.01 | -0.10 | 0.10 | -0.14 | 0.38 |
| c83 | -0.04 | 0.04 | 0.00 | 0.14 | 0.31 |
| c84 | -0.15 | 0.20 | -0.13 | 0.02 | 0.43 |
| c85 | 0.16 | 0.05 | -0.01 | -0.05 | 0.27 |
| c86 | 0.19 | -0.03 | 0.07 | 0.18 | 0.23 |
| c87 | -0.07 | -0.05 | 0.05 | 0.03 | 0.31 |
| c88 | -0.08 | 0.06 | -0.08 | -0.07 | 0.20 |
| c89 | -0.04 | 0.00 | -0.01 | -0.01 | 0.22 |
| c90 | -0.14 | 0.13 | 0.12 | -0.02 | 0.24 |
| c91 | 0.02 | 0.61 | 0.02 | 0.01 | 0.40 |
| c92 | -0.28 | 0.27 | 0.05 | 0.19 | 0.31 |
| c93 | 0.00 | 0.13 | 0.11 | 0.14 | 0.29 |
| c94 | 0.04 | 0.07 | 0.07 | -0.06 | 0.35 |
| c95 | 0.05 | 0.05 | 0.03 | -0.08 | 0.25 |
| c96 | 0.04 | 0.00 | -0.13 | -0.06 | 0.39 |
| c97 | -0.01 | -0.03 | 0.11 | -0.03 | 0.51 |
| c98 | -0.10 | 0.02 | -0.10 | 0.03 | 0.19 |
| c99 | -0.08 | -0.14 | -0.06 | 0.04 | 0.21 |

| Item | Factor 17 | Factor 18 | Factor 19 | Factor 20 | Uniqueness |
|---|---|---|---|---|---|
| c100 | -0.03 | 0.03 | 0.00 | -0.02 | 0.36 |
| c101 | 0.13 | -0.06 | -0.04 | 0.01 | 0.41 |
| **c102** | -0.05 | 0.06 | -0.01 | -0.07 | 0.37 |
| c103 | -0.06 | 0.02 | -0.16 | 0.09 | 0.33 |
| c104 | -0.02 | -0.04 | -0.27 | 0.02 | 0.31 |
| c105 | 0.01 | 0.03 | -0.17 | -0.09 | 0.31 |
| c106 | -0.19 | -0.08 | 0.11 | -0.27 | 0.28 |
| c107 | 0.05 | -0.13 | 0.12 | -0.19 | 0.32 |
| c108 | 0.06 | 0.09 | -0.02 | 0.02 | 0.33 |
| c109 | 0.06 | 0.04 | -0.04 | 0.06 | 0.22 |
| c110 | -0.02 | 0.03 | 0.03 | 0.13 | 0.21 |
| c111 | 0.10 | -0.09 | -0.09 | 0.04 | 0.33 |
| c112 | -0.02 | 0.03 | -0.06 | -0.06 | 0.29 |
| c113 | -0.26 | -0.06 | -0.09 | 0.15 | 0.28 |

## 8.2 Scale Items, related to Customer Selectivity, selected from the Questionnaire, for content validity

With regard to your SBU, to what extent do you agree to the following statements? We…

- have a formal system for determining which of our current customers are of the highest value.
- continuously track customer information in order to assess customer value.
- systematically attempt to customize products/services based on the value of the customer.
- systematically attempt to manage the expectations of high value customers.
- attempt to build long term relationships with our high-value customers.
- have a formal system for identifying *potential* customers.
- have a formal system for identifying which of the potential customers are more valuable.
- use data from eternal sources for identifying potential high value customers.
- have a formal system in place that facilitates the continuous evaluation of prospects.

- systematically choose not to develop relationships with potential low value customers.

- have a formal system in place that differentiates targeting of our communications based on the prospect's value.

- systematically present different offers to prospects based on their value.

- differentiate its acquisition investments based on customer value.

- have a systematic process/approach to re-establish relationships with valuable customers who have been lost to competitors.

- have formalized procedures for cross-selling to valuable customers.

- have formalized procedures for up-selling to valuable customers.

- offer different incentives for referral generation based on the value of acquired customers.

- have a formal policy or procedure for actively discontinuing relationships with low value or problem customers (e.g. cancelling customer accounts).

With regard to your SBU, to what extent do each of the following activities represent a strength or weakness for you?

- understanding and determining the value of a customer.
- segmenting customer based on value (e.g. high, moderate, and low)

- successfully acquiring high value customers.

## 8.3 Questionnaire

# A. Product and sales

Approximately, what percent of your sales are direct to final customers and are not made through a middleman (e.g. wholesaler, distributor, retailer)? We sell __________ %A1 direct to our final customers.

Please indicate the percentage split of revenues that is attributable to products and services in your organization:

Products: ___________ % A2 Services: ___________ % A3 Total: 100 %

| | strongly disagree 1 | 2 | undeter-mined 3 | 4 | 5 | strongly agree 6 | 7 |
|---|---|---|---|---|---|---|---|
| *On average our assortment of products is larger than that of our biggest competitors.* A4 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

# B 1. Firm Factors

| | *Much less inno-vative* 1 | 2 | 3 | *About equally innovative* 4 | 5 | 6 | *Much more inno-vative* 7 |
|---|---|---|---|---|---|---|---|
| *Relative to our competitors, we consider ourselves.* B1 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| | *strongly disagree* | | | *indifferent* | | | *strongly agree* |
| *In terms of innovations, our market position can be characterized as a follower (relative to our competitors).* B2 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

*Products that were introduced in the* last three years *account for* _________ % B3 *of our sales.*

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements?*** | *strongly dis-agree* 1 | 2 | *undeter-mined* 3 | 4 | 5 | *strongly agree* 6 | 7 |
|---|---|---|---|---|---|---|---|
| *People in this division stress quick response to changing market conditions.* B4 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our division‘s management style encourages a high level of participation.* B5 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our division is dynamic and entrepreneurial.* B6 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Information is credibly and openly shared within our business unit.* B7 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our division emphasizes innovation and change.* B8 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *There is a general feeling of trust and confidence between different groups within our division.* B9 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *People feel that their ideas and information are listened to by others in our business unit.* B10 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our business objectives are primarily driven by customer satisfaction.* B11 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *We constantly monitor our level of commitment and orientation to serving customer needs.* B12 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *We freely communicate information about our successful and unsuccessful customer experiences across all business functions.* B13 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our strategy for competitive advantage is based on our understanding of customers‘ needs.* B14 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *We measure customer satisfaction systematically and frequently.* B15 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *We have routine or regular measures of customer service.* B16 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *We are more customer focused than our competitors.* B17 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *We believe this business primarily exists to serve customers.* B18 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *We poll end users at least once a year to assess the quality of our products and services.* B19 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.* B20 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

In this section, if you operate in different markets with different strategies, please refer only to the most important market.

| ***With regard to your strategic business unit (SBU), to what extent do you* emphasize *the following activities?*** | *strongly disagree* 1 | 2 | 3 | *undeter-mined* 4 | 5 | 6 | *strongly agree* 7 |
|---|---|---|---|---|---|---|---|
| *Competitive advantage through superior products.* B21 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Creating superior customer value through services accompanying the products.* B22 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *New product development.* B23 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Building up a premium product or brand image.* B24 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Obtaining high prices from markets.* B25 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Advertising.* B26 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Pursuing operating efficiencies.* B27 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Pursuing cost advantages in raw material procurement.* B28 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Pursuing economies of scale.* B29 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Gaining market share through low pricing.* B30 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| **With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? Relative to our competitors, ...** | *extremely smaller* 1 | 2 | 3 | *about the same* 4 | 5 | 6 | *extremely larger* 7 |
|---|---|---|---|---|---|---|---|
| *our overall level of resources is:* B31 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *the* quality *of our information technology resources is:* B32 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *the* quantity *of our information technology resources is:* B33 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| ***I believe that our customers see our strategic business unit (SBU) as*** | *strongly disagree* 1 | 2 | 3 | *undeter-mined* 4 | 5 | 6 | *strongly agree* 7 |
|---|---|---|---|---|---|---|---|
| *being trustworthy.* B34 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *having high integrity.* B35 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *being very reliable.* B36 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *meeting their expectations.* B37 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

How many full-time equivalent employees were employed in your firm on average over the last three years? Our company had 1998 _____________ employees. B38

Our company had 1999 _____________ employees. B39

Our company had 2000 _____________ employees. B40

# B 2. Customer Factors

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? On average, ...*** | *strongly disagree* 1 | 2 | 3 | *undeter-mined* 4 | 5 | 6 | *strongly agree* 7 |
|---|---|---|---|---|---|---|---|
| *our customers are not willing to go to extra effort to find lower prices.* B41 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *our customers will buy at more than one competitor to take advantage of low prices.* B42 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *for our customers the money saved by finding low prices is usually not worth the time and effort.* B43 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *our customers would never buy at more than one competitor to find low prices.* B44 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *for our customers the time it takes to find low prices is usually not worth the effort.* B45 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *the majority of our customers seem to be loyal to our firm.* B46 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *the majority of our customers feel a strong sense of attachment to our firm.* B47 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *it matters to our customers if our products and services did not exist and they had to buy from another firm.* B48 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *customers are not interested in long-term relationships with us.* B49 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *customers switch easily to competitors.* B50 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | |
|---|---|
| *our customers are more loyal than those of our main competitors.* B51 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

Please complete the following statements about your customers in general.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *On average our customers know* | *very little* ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ *very much* | *about our products.* B52 |
| *On average our customers are* | *very **in**experienced* ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ *very experienced* | *with our products.* B53 |
| *On average our customers are* | *very **un**informed* ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ *very informed* | *about our products.* B54 |
| *On average our customers are* | *absolutely novice buyers* ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ *absolutely expert buyers.* B55 | |

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? On average, ...*** | *strongly disagree* *1* | *2* | *3* | *undeter-mined* *4* | *5* | *6* | *strongly agree* *7* |
|---|---|---|---|---|---|---|---|
| *our customers incur little effort (time, learning) in order to switch to a competitor.* B56 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *our customers make frequent purchases in the product category.* B57 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *it matters a lot when we win or loose a single customer.* B58 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *our customers are aware of the differences that exist among products of different firms.* B59 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *our customers do incur monetary expenses when they switch to a competitor.* B60 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *every single customer is a very valuable asset for us.* B61 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *it matters to our customers whose products they use in the respective product category.* B62 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *it is very costly to serve an average individual customer.* B63 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *our customers use our products frequently.* B64 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *our customers know which features are important in choosing among products/services.* B65 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| **Regarding your individual customers, how similar or different do you think they tend to be on the following: In terms of ...** | *very similar* *1* | *2* | *3* | *neithe r/ nor* *4* | *5* | *6* | *very different* *7* |
|---|---|---|---|---|---|---|---|
| *their incomes, professions, social-class, education.* B66 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *the variety of products (different brands, product features) they like to consider.* B67 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *their product price/quality preferences.* B68 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *their loyalty.* B69 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *their service needs.* B70 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

It is often quoted that the top 20% of the customers are responsible for the 80% of the revenues.
For your customer base, the top 20% are responsible for approximately ___________ % of the sales. B71
For your customer base, the top 50% are responsible for approximately ___________ % of the sales. B72

Regarding your individual customers, the majority can be described to fall in to which bracket:
Age: B73 ❑ < 30 years ❑ 30 – 40 years ❑ 41 – 50 years ❑ 51 - 60 years ❑ > 61 years
Income: B74 ❑ < Euro 12.500 ❑ Euro 12.500 – 20.000 ❑ Euro 20.001 – 35.000
❑ Euro 35.001 – 50.000 ❑ Euro > 50.000

What year was your firm established? Establishment of the company: ____________ (e.g.: 1972). B75

# B 3. Environmental Factors

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements?*** | *strongly disagree* *1* | *2* | *3* | *undeter-mined* *4* | *5* | *6* | *strongly agree* *7* |
|---|---|---|---|---|---|---|---|
| *Anything that one competitor can offer in this product area, others can match readily.* B76 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| | |
|---|---|
| *Price competition is a hallmark in this area.* B77 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| *One hears of a new competitive move in this product area almost everyday.* B78 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| *Our competitors in this product area are relatively weak.* B79 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

What is the accumulated market share of the largest four companies in your industry? ____ %.. B80

| ***Compared to…*** | *much lower* 1 | 2 | *about average* 3 | 4 | 5 | *much higher* 6 | 7 |
|---|---|---|---|---|---|---|---|
| *other industries, do you consider the amount of R & D in your industry to be....* B81 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *other industries, do you consider the intensity of advertising in your industry to be....* B82 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *your competitors, how much money do you spend for your distribution channels?.* B83 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements?*** | *strongly disagree* 1 | 2 | 3 | *undeter-mined* 4 | 5 | *strongly agree* 6 | 7 |
|---|---|---|---|---|---|---|---|
| *For most products in our industry, customers have favorite brands and limit their purchase to them.* B84 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *In most product categories in our industry, there are certain brands for which customers have a definite preference.* B85 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Customers tend to switch between brands frequently within our product category.* B86 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our products are considered to be high-end products within our industry.* B87 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our customers are willing to pay price premiums for our products.* B88 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

# B 4. Exchange Factors

| ***Please check the following list of alternative channels – which of the channels listed do you currently use as distribution channels?.*** | *strongly disagree* 1 | 2 | 3 | *undeter-mined* 4 | 5 | *strongly agree* 6 | 7 |
|---|---|---|---|---|---|---|---|
| Own sales force B89 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Manufacturer representatives (representing a single company).B90 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Manufacturer representatives (representing several companies). B91 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Own outlets (e.g. branch offices).* B92 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Retailers.* B93 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Wholesaler.* B94 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Franchisees.* B95 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Internal online shops, portals, marketplaces.* B96 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *External online shops, portals, marketplaces.* B97 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Telephone (call center).* B98 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Own direct marketing (mailings, catalogs, etc.).* B99 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *External direct marketing (mailings, catalogs, etc.).* B100 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Broker.* B101 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Others, please specify:* ______________________________ . B102 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| | *much less effective* 1 | 2 | *about the same* 3 | 4 | 5 | *much more effective* 6 | 7 |
|---|---|---|---|---|---|---|---|
| *Compared to your competitors, how effective do you think your distribution channels are?* B103 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

## C. Customer Relationship Management Activities

*CRM is defined as a way of shaping the interactions between a company and its individual customers and/or segments through the process of acquiring, maintaining and leveraging lasting relationships. The goal is to maximize the lifetime value of customers for the company as well as to maximize customer satisfaction.*

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements?*** | *1 strongly disagree* | *2* | *3* | *4 undeter-mined* | *5* | *6* | *7 strongly agree* |
|---|---|---|---|---|---|---|---|
| *CRM is a central aspect of our business strategy.* C1 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our company plans to conduct extensive CRM activities in the near future.* C2 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *CRM has become a top Management issue in our SBU.* C3 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our company attempts to coordinate information across channels in order to optimize interaction with customers.* C4 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our company systematically disseminates customer information to all appropriate individuals in the organization.* C5 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our company proactively addresses customers' privacy concerns.* C6 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our company determines the return on investment (ROI) on our CRM software investments.* C7 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our company determines the return on investment (ROI) on our overall CRM activities.* C8 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Our company is resource-constrained in our CRM activities.* C9 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

*Which functional unit is primarily responsible for your CRM activities?* *Please check only one* C10

❑ *Top management* ❑ *Marketing* ❑ *Sales* ❑ *Customer Service*

❑ *Cross-functionally managed* ❑ *IT (Information Technology)* ❑ *Other: ___________________ .*

*A current trend in marketing is to recognize that some customers are more valuable or contribute more to profitability than others. A key question however, how does one define a valuable customer.*

| **Does your company use one or more of the following factors in determining customer value:** | *1 never* | *2* | *3* | *4 sometimes* | *5* | *6* | *7 always* | **Does your company use one or more of the following factors in determining customer value:** | *1 never* | *2* | *3* | *4 sometimes* | *5* | *6* | *7 always* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Current revenues C11 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | Frequency of purchases/transactions C19 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Past revenues C12 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | RFM (recency/frequency/monetary Value) C20 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Predicted future revenues C13 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | Scoring C21 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Lifetime revenues C14 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | Subjective valuation C22 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Current profits C15 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | Cost of acquiring customers C23 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Past profits C16 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | Share of customer C24 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Predicted future profits C17 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | Responsiveness of customer C25 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Lifetime profits C18 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | Fit of customer with firm C26 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

*Companies vary tremendously in the way they retain customers. Below is a list of activities that companies may or may not engage in to retain customers. Some companies may use most of these activities, some may use none of these. There are no right or wrong answers – we are simply interested which activities YOUR company uses to retain valuable customers.*

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? We...*** | *1 strongly disagree* | *2* | *3* | *4 undeter-mined* | *5* | *6* | *7 strongly agree* |
|---|---|---|---|---|---|---|---|
| have a formal system for determining which of our *current* customers are of the highest value. C27 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| continuously track customer information in order to assess customer value. C28 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| actively attempt to determine the costs of retaining customers. C29 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| invest in technology to acquire and manage 'real time' customer information and feedback. C30 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| | |
|---|---|
| maintain an interactive two-way communication with our customers. C31 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| track the status of the relationship during the entire customer life cycle (relationship maturity). C32 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| *actively stress customer loyalty or retention programs. C33* | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| integrate customer information across customer contact points, (e.g. mail, telephone, Web, fax, face-to-face, …). C34 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| are structured to optimally respond to groups of customers with different values. C35 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| recognize that some customers are short term oriented while others are long-term oriented. C36 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| systematically attempt to customize products/services based on the value of the customer. C37 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| continuously adapt processes to the evolution of the relationship with the customers. C53 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a dedicated CRM technology in place. C38 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have systematic training procedures for helping employees deal differentially with high and low value customers. C39 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| systematically attempt to manage the expectations of high value customers. C40 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| reward employees for building and deepening relationships with high value customers. C41 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| attempt to build long term relationships with our high-value customers. C42 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| Our SBU is organized in such a way that it responds optimally to customer groups of different profitability. C43 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

Our average yearly customer *retention* costs are _____________ Euro per customer. C44
If not known, please check here: ❑ C45

*Companies vary tremendously in the way they acquire customers. Below is a list of activities that companies may or may not engage in to acquire customers. Some companies may use all of these, some may use none of these. There are no right or wrong answers – we are simply interested which activities YOUR company uses to acquire valuable customers.*

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? We...*** | *strongly disagree 1 2 3 undeter-mined 4 5 6 strongly agree 7* |
|---|---|
| have a formal system for identifying *potential* customers. C46 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a formal system for identifying which of the *potential* customers are more *valuable*. C47 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| use data from external sources for identifying potential high value customers. C48 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a formal system in place that facilitates the continuous evaluation of prospects. *C49* | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| systematically choose *not* to develop relationships with potential low value customers. C50 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? We...*** | *strongly disagree 1 2 3 undeter-mined 4 5 6 strongly agree 7* |
|---|---|
| made attempts to attract prospects in order to coordinate messages across media channels. C51 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a formal system in place that differentiates targeting of our communications based on the prospects value. C52 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| systematically present different offers to prospects based on their value. C53 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a continuous process in place for getting feedback to improve the acquisition process. C54 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| differentiate its acquisition investments based on customer value. C55 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have technologies that allow for one-to-one communications with potential customers. C56 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

Our average customer *acquisition* costs are ______________ Euro per customer. C57
*If not known, please check here:* ❑ *C58*

*Also, companies vary tremendously in the way they try to regain customers that have become inactive. Below is a list of activities that companies may or may not engage in to regain customers. Some companies may use most of these activities, some may use none of these. There are no right or wrong answers – we are simply interested which activities YOUR company uses to regain valuable customers.*

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? We...*** | *strongly disagree 1 2 3 undeter-mined 4 5 6 strongly agree 7* |
|---|---|

| | |
|---|---|
| have a systematic process/approach to re-establish relationships with valuable customers who have been lost to competitors. C59 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a system in place to determine the cost of re-establishing a relationship with a lost customer. C60 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a system in place to be able to interact with lost customers. C61 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a systematic process for assessing the value of past customers with whom we no longer have a relationship. C62 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a systematic process for re-establishing a relationship with valued inactive customers. C63 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have a system for determining the costs of re-establishing a relationship with inactive customers. C64 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| develop a system for interacting with inactive customers. C65 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

Our average customer *regain* costs are ______________ Euro per customer. C66
*If not known, please check here:* ❑ *C67*
*What is the percentage of customers that defect per year? ______________ %. C68*

*Companies might choose to actively engage in up-sell and cross-sell strategies. Below is a list of activities that companies may or may not engage in to manage up- and cross-selling. Some companies may use most of these activities, some may use none of these. There are no right or wrong answers – we are simply interested which activities YOUR company uses to manage up- and cross-selling to valuable customers.*

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? We...*** | *strongly disagree — undetermined — strongly agree*<br>*1 2 3 4 5 6 7* |
|---|---|
| have formalized procedures for *cross*-selling to valuable customers. C69 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have formalized procedures for *up*-selling to valuable customers. C70 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| try to systematically extend our "share of customer" with high-value customers. C71 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| do not intensify in relationships with low-value customers. C72 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| have systematic approaches to mature relationships with high-value customers in order to be able to cross-sell or up-sell earlier. C73 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| provide individualized incentives for valuable customers if they intensify their business with us. C74 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

*There are substantial differences in the way companies use their customers' network of relationships. Below is a list of activities that companies may or may not engage in to utilize those networks. Some companies may use all of these, some may use none of these. There are no right or wrong answers – we are simply interested which activities your company uses to manage referrals from valuable customers.*

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following statements? We...*** | *strongly disagree — undetermined — strongly agree*<br>*1 2 3 4 5 6 7* |
|---|---|
| systematically track referrals. C75 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| try to actively manage the customer referral process. C76 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| provide current customers with incentives for acquiring new potential customers. C77 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| offer different incentives for referral generation based on the value of acquired customers. C78 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| build alliances with partner companies, where each partner recommends the products and services of the alliance's members. C79 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |
| utilize virtual communities for improving our referral process. C80 | ❑ ❑ ❑ ❑ ❑ ❑ ❑ |

Often, companies have an option of whether they want to keep the relationship with a customer active. Likewise, if the company chooses not to continue a relationship it might want to consider to actively de-market a customer. Below is a list of activities that companies may or may not engage in to de-market customers. Some companies may use most of these activities, some may not use any of these. There are no right or wrong answers – we are simply interested which activities YOUR company uses to de-market low-value customers.

| ***With regard to your strategic business unit (SBU), to what extent do you agree to the following*** | *strongly disagree — undetermined — strongly agree* |
|---|---|

| *statements? We...* | *1* | *2* | *3* | *4* | *5* | *6* | *7* |
|---|---|---|---|---|---|---|---|
| have a formal system for identifying non-profitable or lower value customers. C81 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| have a formal policy or procedure for actively discontinuing relationships with low value or problem customers (e.g. canceling customer accounts). C82 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| try to passively discontinue relationships with low value or problem customers (e.g. raising basic service fees). C83 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| offer disincentives to low-value customers for terminating their relationships (e.g. offering poorer service). C84 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| ***With regard to your strategic business unit (SBU), to what extent do each of the following activities represent a strength or weakness for you?*** | *major weak-ness* 1 | *2* | *3* | *neither strength nor weakness* 4 | *5* | *major strength* 6 | *7* |
|---|---|---|---|---|---|---|---|
| *The institutionalization of a CRM philosophy.* C85 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Getting* top management *commitment to CRM.* C86 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Getting* front line *commitment to CRM.* C87 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Implementing CRM across* processes *(order fulfillment, billing, after sales,...).* C88 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Implementing CRM across* functions *(marketing, sales, production, ...).* C89 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Implementing CRM across* customer touchpoints *(face to face, phone, web, ...).* C90 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Solving the CRM-(information) technology related problems.* C91 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Implementing systematic customer acquisition.* C92 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Acquiring *high value customers.* C93 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Regaining *high value customers.* C94 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Retaining *high value customers.* C95 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Discontinuing *relationships with low-volume customers.* C96 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Management of word-of-mouth.* C97 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Implementing procedures for* up-selling. C98 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Implementing procedures for* cross-selling. C99 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Managing customer referrals.* C100 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Building long-term relationships with our valued customers.* C101 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Understanding and determining the value of a customer.* C102 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| ***With regard to your strategic business unit (SBU), to what extent do each of the following activities represent a strength or weakness for you?*** | *major weak-ness* 1 | *2* | *3* | *neither strength nor weakness* 4 | *5* | *major strength* 6 | *7* |
|---|---|---|---|---|---|---|---|
| *Segmenting customers based on value (e.g., high, moderate, and low).* C103 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Organizing* people *(i.e., changing organizational structure) to deliver differentiated treatment and products to different customer segments.* C104 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Organizing* processes *to deliver differentiated treatment and products to different customer segments.* C105 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Professional training with regard to customer orientation.* C106 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Determining which skills employees need to work with customers.* C107 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Attracting front-line employees who deal directly with customers.* C108 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Retaining employees who deal directly with customers.* C109 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Motivating employees who have customer contact.* C110 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Successfully acquiring high value prospects.* C111 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Successfully regaining high value but inactive customers.* C112 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Generally providing successful systems to retain high value customers. C113 | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

# D. Performance

Overall Performance

| **Relative to your competitors, how does your SBU perform concerning the following statements?** | *much worse* | *worse* | *a little worse* | *same level as compe-titors* | *a little better* | *better* | *much better* |
|---|---|---|---|---|---|---|---|
| *Achieving overall performance.* D1 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Achieving customer satisfaction.* D2 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Providing customer benefit.* D3 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Attaining market share.* D4 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Attaining growth.* D5 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Keeping existing customers.* D6 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Attracting new customers.* D7 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Building a positive company image.* D8 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| *Current profitability.* D9 | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

**SBU Performance**

Sales

What was the sales of your strategic business unit in the last fiscal year? resp. -__________ Mio Euro. D10

How did this change as compared to the previous year? +______ % resp. -______% D11

**Profit**

What was the return on sales of your strategic business unit in the last fiscal year? D12

❑ negative ❑ 1 – 1,9% ❑ 3 – 3,9 % ❑ 5 – 6,9% ❑ 10 – 14,9%
❑ 0 – 0,9 % ❑ 2 – 2,9 % ❑ 4 – 4,9 % ❑ 7 – 9,9 % ❑ 15% and more

What was your industry's average return on sales in the last fiscal year? D13

❑ negative ❑ 1 – 1,9% ❑ 3 – 3,9 % ❑ 5 – 6,9% ❑ 10 – 14,9%
❑ 0 – 0,9 % ❑ 2 – 2,9 % ❑ 4 – 4,9 % ❑ 7 – 9,9 % ❑ 15% and more

**Concerning yourself**

For which area are you responsible for? D14

❑ Marketing ❑ Sales❑ Customer Service ❑ CRM ❑ IT (Information Technology)
❑ Other, please specify: ____________________________ .

What is your job title (like mentioned in the business mail)? ________________________________________ . D15

How many years of business experience do you have? _______________ years