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Adina Poenaru

Market segmentation capability and business performance: A reconceptualisation and empirical validation

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Supervisor: Dr. Paul Baines

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ABSTRACT

Recent developments in marketing and technological fields have raised concerns about the usefulness of market segmentation as an effective marketing practice. Furthermore, the segmentation literature has highlighted significant implementation problems, due to a gap between academics' focus on the research methodology involved in identifying segments and practitioners' concerns for impactful and implementable segmentation strategies. Consequently, research providing quantifiable evidence of the impact of segmentation has been identified as a priority. This research addresses this issue by reconceptualising market segmentation as a dynamic capability, identifying the components of a firm's segmentation capability and determining its influence on business performance.

The research is conducted within the critical realism paradigm and adopts a sequential qualitative-quantitative methodology. Through 24 in-depth interviews with marketing managers and segmentation experts, the processes, mechanisms and structures affecting segmentation implementation and its outcomes are identified. Based on the qualitative findings and extant literature, market segmentation capability is delineated and a model of the relationships between market segmentation capability and business performance is developed and tested empirically with survey data from a sample of 205 marketing directors from eight industries. The quantitative findings support a process of analysis-integration-execution of segmentation schemes and also suggest three additional pathways of influence from segmentation analysis to business performance. These pathways are found to depend on the market growth rate and firm's marketing resources.

This research bridges the gap between market segmentation theory and practice by broadening the segmentation field to include the study of managerial practices and performance implications of segmentation. The main theoretical contribution relates to the delineation of market segmentation as a dynamic capability, providing new insights into market segmentation as a managerial practice. Significant contributions are also generated by the confirmation of a significant relationship between segmentation capabilities and business performance and the identification of pathways of influence between them, explained by the development of segmentation execution capability and generic marketing capabilities.

ACKNOWLEDGEMENTS

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1. INTRODUCTION

1.1. Purpose of Chapter

Market segmentation was introduced in the marketing literature by Smith (1956: 64), who defined it as a "more precise adjustment of product and marketing effort to consumer requirements". Over the last 50 years, market segmentation has generally become accepted as a fundamental concept in marketing (Wind, 1978; Dibb, 1998), and variously described as: the essence of the marketing concept (Levitt, 1960); "one of the most widely held theories in strategic marketing" (Piercy and Morgan 1993: 123) and a pervasive concept because "markets have been segmented and products and services differentiated for as long as suppliers have differed in their methods of competing for trade" (Dickson and Ginter, 1987: 1). These comments indicate an intuitive recognition that market segmentation plays a critical role in the generation of superior performance for organisations that adopt a segmentation approach in their marketing strategy. However, no empirical study has ever actually tested this relationship, until now.

This chapter outlines the rationale for an investigation of the relationship between market segmentation and business performance and details the research context, objectives and methodology. It also describes the key findings and contribution of this research before presenting an overview of the chapters.

1.2. Research Context

The importance of studying the performance outcomes of segmentation is particularly relevant, since it has been suggested that the concept must be reassessed in view of its problematic implementation and new developments in the marketing and technology fields (Kara and Kaynak, 1997; Dibb, 2001; Dibb and Simkin, 2009).

Among the developments in the marketing environment, market diversity has increased, both in consumer markets (changes in lifestyle, income, ethnicity and age) and business markets (e.g. size, locations, business models, globalisation, blurred market boundaries), which increases the diversity of customer needs and buying behaviour (Sheth, Mittal and Newman, 1999; Day and Montgomery, 1999). The increasing complexity and variety in consumer behaviour and the recent technological changes add a new dimension to the segmentation challenge, as this market diversity contributes to market fragmentation, therefore making it increasingly difficult to create meaningful segments and achieve marketing productivity with a target marketing strategy (Kara and Kaynak, 1997; Sheth and Sisodia, 1999). Thus, it has been argued that, while the segmentation mindset is well suited to a context in which a few major segments can be identified, a mass customisation mindset is more useful when segments proliferate (Sheth and Sisodia, 1999). Postmodernist scholars go even further and argue that the increased market fragmentation "render segmentation strategies and techniques founded on the traditional bases of segmentation less and less useful…using segmentation strategies that try to constrain or anchor consumers to a single, consistent, stable way of behaving is likely to lead to marketing failure" (Firat and Schultz, 1997: 197).

In the technological environment, new information and communication technologies have changed the way companies view, structure and interact with their markets (Day and Montgomery, 1999). More customer data are collected from multiple 'touch-points' (e.g. the Internet, point of purchase and direct marketing), which can be analysed to guide decision making on how to differentiate offerings and the treatment of different types of customers (Sharma and Sheth, 2004). Thus, it is now possible to target more than a few customer segments by using direct/ interactive contact methods and it is possible to customise a product or service more than before by using mass customisation technologies or co-production with the customer (Allenby *et al.*, 2002). Wedel (2001) argues that the recent progress in segmentation methodology, together with the large amounts of customer data now available to companies, help accurately identify profitable segments and make segmentation strategy more effective than ever.

Due to these developments in marketing and technology environments, the role of market segmentation in marketing practice success has come to the fore (Sheth and Sisodia, 1999; Day, 2000; Srivastava, Fahey and Christensen, 2001).

The literature offers little empirical evidence of the success of segmentation strategies under specific market conditions (Dolnicar, Freitag and Randle, 2005). Yet, the importance of this type of research should be self-evident as firms investing heavily in segmentation undoubtedly expect to see financial returns as the following comment indicates: "research which provides quantifiable evidence of the impact of segmentation and the role of success factors must be a priority for the marketing community…Such research should seek to establish a detailed understanding of the make-up and relationship between success factors in segmentation" (Dibb, 1999: 125). Hines and Quinn (2005) and Dibb and Simkin (2009) concur, calling for more systematic academic research evaluating the managerial value of segmentation, and linking segmentation strategy to performance.

Studying segmentation outcomes is tightly linked to the question: what happens when the firm brings the segmentation plan to market, i.e. when segmentation is *implemented*? Recent research into market segmentation implementation emphasises firms' ability to implement strategies around specific segments given internal organisational factors, e.g. related to the organisational culture, structure, skills and information processing (e.g. Freytag and Clarke, 2001; Dibb and Simkin, 2001, 2009, 2010; Quinn, 2009; Harrison and Kjelberg, 2010). Thus, to advance our understanding of the performance outcomes of market segmentation, knowledge is required about the organisational actions and consequences resulting from implementing segmentation schemes (Boejgaard and Ellegaard, 2010).

1.3. Research Aim and Questions

In the research context presented above, this research aims to build upon the findings of recent research into market segmentation implementation. Its central contribution is to adopt a distinct theoretical perspective – namely the dynamic capabilities theory derived from the strategic management literature, to investigate the performance outcomes of market segmentation implementation. The dynamic capabilities theory suggests that a company's competitive advantage derives principally from the way in which it acquires,

configures, exploits and protects the resources available to it – by developing and enhancing their capabilities (Teece, Pisano and Shuen, 1997; Eisenhardt and Martin, 2000; Newbert, 2007). In particular, dynamic capabilities are argued to integrate, build and reconfigure resources and competences to address rapidly changing environments (Teece et al., 1997; Eisenhardt and Martin, 2000). Consequently, this research seeks to identify how companies develop market segmentation capabilities and whether or not those capabilities lead to superior company performance. This aim is translated into the following specific research questions:

1. *How is market segmentation capability constituted within firms?*

2. *Does the firm's market segmentation capability influence its business performance?*

3. *How, if at all, does market segmentation influence business performance?*

4. *What factors moderate the segmentation-performance relationship?*

1.4. Research Methodology

This study adopts a critical realist paradigm, focused on discovering the mechanisms and structures that explain how market segmentation is implemented and how it affects the level of business performance achieved. Within the critical realist paradigm, a retroductive research strategy is adopted, based on two sequential phases of empirical research.

An initial qualitative phase was conducted through in-depth interviews with 24 key informants (marketing managers and segmentation experts), aimed at identifying and characterising the different processes, mechanisms and structures that exist in implementing market segmentation. The qualitative findings were then corroborated with the market segmentation implementation literature and the marketing capabilities literature to re-conceptualise market segmentation as a dynamic capability and develop a conceptual model and a set of hypotheses about the relationship between market segmentation capability and business performance. New measures were developed and validated (in the second phase) for market segmentation capability based on the in-depth interviews and extant literature.

The second phase was quantitative, aimed at testing the hypothesised model by collecting cross-sectional data from key informants (i.e. marketing directors) at 205 strategic business units. Two similar sample frames were used (The Marketing Managers' Yearbook and the Mardev Decision Maker UK list from Reed Business Information), which contained firms with more than 100 employees from eight industries (telecommunications, media/publishing, financial services, retail/wholesale trade, leisure/ travel/ tourism, technology, household products/appliances and fashion/textiles) and provided a more comprehensive coverage of the relevant UK business population. The hypotheses were tested using structural equation modelling and regression analytical procedures.

1.5. Key Findings

The findings of the qualitative phase are presented at length in Chapter 5 and discussed briefly in Chapter 6, while the findings of the quantitative phase are presented in Chapter 7 and discussed in Chapter 8.

The qualitative study yielded the following findings. The challenges, best practices and key success factors mentioned in interviews highlighted the importance of three processes that determine whether or not companies develop a segmentation capability: segmentation analysis (developing actionable segmentation schemes), integration (embedding segmentation schemes in the organisational fabric) and execution (using knowledge generated by segmentation schemes in marketing decisions and activities) as the main components of the market segmentation capability. Furthermore, different types of external (e.g. market dynamism, product lifecycle), firm (e.g. company age, company size, market position) and internal (e.g. a database capability, marketing resources and capabilities) structural factors influence the extent to which market segmentation implementation impacts on business performance. The findings further indicate that there are two types of mechanisms which explain how segmentation implementation may influence business performance. The first type of mechanism (the personal perspective taken on the role of market segmentation) acts at a deeper level of reality because it refers to aspects of managerial cognition that are not readily observable. The second type of mechanisms helps explain how segmentation implementation may influence business performance (from the real to the actual domain of reality). Six such mechanisms were identified. The first three (segment understanding, market structure understanding, customer orientation) influence the extent to which segmentation schemes are used in developing and implementing marketing strategies. The other three (marketing efficiency, organisational focus and winning value propositions) help explain the effect of segmentation-based changes on business performance.

These findings enabled the development of a model of segmentation capability (see Chapter 6) and a richer understanding of how the different components of such a capability interact with structural factors and mechanisms to have an influence on business performance. Based on the qualitative findings and extant segmentation and capabilities literatures, market segmentation is reconceptualised as a dynamic capability and a new definition is provided, as follows. Market segmentation capability is the firm's ability to develop, evaluate and monitor segmentation schemes (segmentation analysis), to embed the resulting segmentation schemes in the organisational plans, structures, control and culture of the organisation (segmentation integration) and to execute the segmentation schemes by guiding strategic, managerial and operational marketing decisions and activities (segmentation execution).

The findings from the quantitative phase of the research confirm that the level of segmentation analysis in a firm positively influences its level of segmentation execution capability. This influence is partially but significantly mediated by segmentation integration capability. Furthermore, the effect of segmentation analysis capability on business performance is completely mediated by segmentation execution capability. The level of segmentation integration capability in a firm positively influences the firm's level of segmentation execution capability. However, segmentation execution capability

only mediates the influence of segmentation integration capability on business performance in growing markets, but not in declining or stagnant markets.

Neither specialised nor architectural marketing capabilities moderate the influence of segmentation execution capability on business performance. However, the findings indicate that they are a significant mediator of the relationship between segmentation analysis and integration capabilities and business performance.

The level of marketing expenditure moderates the influence of segmentation analysis capability on segmentation execution capability in that the higher the marketing expenditure, the lower the influence of segmentation analysis on segmentation execution.

Market growth acts as a moderator on the relationship between segmentation integration and execution capabilities, marketing capabilities and business performance. In decreasing/stagnant markets, the main influence on business performance comes from marketing capabilities (influenced by segmentation analysis and integration capabilities), while in growing marketing, the main influences are a positive influence from segmentation execution capability and a negative influence from segmentation integration capability.

1.6. Key Contributions and Limitations

This research makes contributions to theory, method and practice. The theoretical contributions match the revision and delineation types that MacInnis (2011) has identified in her typology of conceptual contributions to the marketing field. Firstly, this research reviews existing perspectives on market segmentation (research technique, decision making tool, competitive strategy), their elements, explanations and shortcomings. Based on this critical analysis, the research identifies the need for a new perspective and delineates a new perspective on market segmentation – as a dynamic capability, providing new insights into market segmentation as a managerial practice (Quinn, 2009). The research delineates the dimensions of a market segmentation capability, based on mutually reinforcing organisational processes derived from segmentation implementation studies and interviews with practitioners. This new conceptualisation builds on Teece's (2007) micro-foundations of dynamic capabilities and Bruni and Verona's (2009) definition of dynamic marketing capabilities.

Secondly, it provides empirical evidence of a significant relationship between segmentation capability and business performance and identifies different pathways of influence between segmentation analysis and business performance, among which segmentation execution capability and generic marketing capabilities as mediating mechanisms between segmentation analysis and business performance. These relationships are explained through the identification of six mechanisms (from the qualitative study) that explain how segmentation translates into performance outcomes.

Thirdly, the research identifies firm and market related factors that influence the inter-relationships between segmentation capabilities and business performance. Among this, market growth is validated by the quantitative study as influencing the inter-relationships between segmentation capability and business performance.

Fourthly, this research extends the marketing capabilities literature by investigating the relationship between segmentation capabilities and marketing capabilities. The research shows that segmentation capability is different from marketing capabilities and that their relationship depends on market growth. Thus, it extends the marketing capabilities literature by identifying two segmentation capabilities (analysis and integration) as potential predictors of marketing capabilities and one contingency (market growth rate) which affects the relationship between marketing capabilities and business performance.

Methodologically, it makes a contribution by developing disaggregated, reliable and valid measures for a firm's market segmentation capability based on primary data. This is a significant advancement in the measurement of segmentation activities, which has been quite unsophisticated in previous studies of market segmentation practices. Thus, it enables further knowledge development of the role of market segmentation in modern marketing practice.

The first contribution to practice is achieved by helping managers broaden their view of market segmentation, focus on the organisational processes needed to implement new segmentation schemes successfully and broaden the range of marketing activities supported by the market knowledge generated by segmentation schemes. Secondly, this research helps managers by identifying the organisational processes (which go beyond analytical concerns) required to develop a market segmentation capability within firms. Thirdly, the research suggests that organisations do not need high marketing expenditures to invest in developing segmentation schemes in order for them to be successfully executed in decision making. Fourthly, this research provides evidence of a significant relationship between segmentation capabilities and business performance, which helps managers develop a strong business case for investments in segmentation activities. Fifthly, this research suggests that segmentation analysis processes are beneficial for developing a differentiated/targeted marketing strategy, but not exclusively, as segmentation analysis can guide the improvement of existing marketing capabilities as well. Lastly, the research suggests that managers should balance their usage of segmentation schemes depending on the level of market growth.

There are six limitations that characterise this research, including the focus on a selected number of industries that exclude fast moving consumer goods, gathering subjective performance measures, a relatively small sample size, the reliance on key informant data, the use of a cross-sectional design (which cannot test causality) and not controlling for more variables in the quantitative analysis.

1.7. Dissemination

A paper co-authored with Dr. Paul Baines was submitted to *European Journal of Marketing*, based on the insights gained from the qualitative phase of this research. Another paper, co-authored with Dr. Paul Baines, on the quantitative results of this research, will be submitted to the *European Journal of Marketing* or *Journal of the Academy of Marketing Science*. In addition, the following papers based on this research were presented at the following conferences:

- Poenaru, A. and Baines, P. (2001), "An Organizational Capability Model of Market Segmentation", accepted for presentation at the *Australian and New Zealand Marketing Academy Annual Conference*, Perth, November.

- Poenaru, A. (2011), "What is a Market Segmentation Capability?", presented at the *Academy of Marketing Science Annual Conference*, Coral Gables, FL, USA, May.

- Poenaru, A. (2010), "Market Segmentation and Business Performance: A Dynamic Capabilities Perspective", presented at the *Strategic Management Society Annual Conference*, Rome, September.

- Poenaru, A. and Baines, P. (2010), "What Role for Market Segmentation in Enhancing Business Performance: Critical Review, Concept Reconstruction and Research Questions", presented at the *Academy of Marketing Annual Conference*, Coventry, UK, July.

- Poenaru, A. (2010), "Market Segmentation and Performance: A Critical Review of The Literature and a Reconceptualization as a Dynamic Capability", presented at the *Academy of Marketing Science Annual Conference*, Portland, USA, May.

- Poenaru, A. (2009), "The performance outcomes of market segmentation – a critical review and conceptual model", presented at the *Academy of Management Conference*, Chicago, USA, August.

- Poenaru, A. (2009), "Is market segmentation really dead? A conceptual model of the importance of segmentation choices on marketing strategy performance outcomes", presented at the *Academy of Marketing Science Annual Conference*, Baltimore, USA, May.

Finally, an earlier version of this research was awarded Jane K. Fenyo Best Paper Award for Student Research for the paper titled "Is market segmentation really dead: A conceptual model of the importance of segmentation choices on marketing strategy performance outcomes" at the Academy of Marketing Science Annual conference, Baltimore, Maryland, May 2009.

1.8. Structure of Thesis

The thesis is divided into nine chapters. Chapter 2 identifies the three types of perspectives on market segmentation emerging from the vast market segmentation literature and the explanations that they provide for the relationship between market segmentation and business performance. It also uncovers the limited knowledge available on the performance outcomes of market segmentation and its implementation in organisations. These key areas of literature provide a background to this research by identifying the research gaps and driving the choice of theoretical framework and industry context for the present study. Chapter 3 reviews the theories and literature underpinning the dynamic capabilities concept, in particular explanations of what and how organisational (and marketing, in particular) capabilities are developed and how they drive performance outcomes in firms. Chapter 3 finishes with the proposal of a conceptual model of market segmentation capability and business performance.

Chapter 4 explains the research methodology, discusses the epistemological and ontological positions adopted in this research and describes the qualitative and quantitative phases of empirical research in terms of sampling, data collection and data analysis. Chapter 5 presents the findings of the qualitative phase, which are then used in Chapter 6 to refine the conceptual model and develop hypotheses to be tested in the quantitative phase of empirical research. Chapter 7 presents the results of the findings of the quantitative phase, while Chapter 8 provides a detailed discussion of the qualitative and quantitative findings and explains how the research has achieved its aims. Chapter 9 concludes with theoretical and managerial implications of the research, identifies the major limitations of the research and makes suggestions for further research.

1.9. Motivations to Undertake This Research

Beyond the research context described in Section 1.2, this research was also motivated and shaped by two personal factors. Firstly, the interest in market segmentation and its implementation grew out of previous work on customer relationship management (CRM) implementation for a Masters dissertation project. As a result of interviews undertaken for that project, it emerged that CRM had been a difficult concept to implement in organisations and that these implementation challenges had impeded companies from obtaining any business benefits out of such investments. In addition, it was found that CRM implementation encompassed the adoption of CRM analytics processes and technologies, which focused on the analysis of customer behavioural data and relied heavily on customer (as opposed to market) segmentation. Thus, the initial question for this research was related to the relevance of market segmentation in the contemporary marketing environment, characterised by market fragmentation, the availability of huge amounts of customer data and improved manufacturing and marketing technologies.

The second factor that shaped the final focus of the research has been the personal experience as a consultant and researcher. This choice of career had itself been motivated by a passion for continuous improvement, which led to a strong interest in identifying ways of helping companies to improve their performance, decision making and managerial practices. The last six years have been instrumental to the realisation that managers do not implement management or marketing theories well and that this leads to opportunities for performance improvement. As a result of my role as an applied researcher in a business school in the last five years, I have realised that such improvements could be achieved through better training and consulting programmes that offered managers tangible tools and advice to facilitate the implementation of useful theories and the achievement of performance improvements out of successful implementation projects.

I intend to use the theoretical and practical knowledge gained in this PhD to continue helping companies improve their marketing practices and performance, as a marketing specialist working for McKinsey & Company. Such a role will also allow the development of new knowledge about marketing and the dissemination of such knowledge in the academic and business communities.

2. PERSPECTIVES, IMPLEMENTATION AND PERFORMANCE OF MARKET SEGMENTATION

2.1. Introduction

The market segmentation literature has developed extensively over the last fifty years (Wedel and Kamakura, 2000). In the attempt to understand what is known about the segmentation-performance relationship, this chapter identifies three perspectives on market segmentation, which are derived from different marketing schools of thought. The few conceptual arguments and little empirical evidence available are reviewed to identify the performance outcomes resulting from segmentation activities. Furthermore, the chapter identifies and critically evaluates the explanations given by the three perspectives for a potential relationship between market segmentation and business performance in view of the findings of empirical studies of market segmentation practice. The chapter also provides a methodological evaluation of market segmentation practice studies and an overview of the main divergent definitions and issues regarding the implementation of a market segmentation approach in practice and a methodological evaluation of the few studies investigating market segmentation practice. This particular attention to implementation arises from the theory-practice gap that exists in the segmentation literature (Wind, 1978; Dibb and Simkin, 2009a).

The review of these key areas of literature (see Figure 2.1) enables the identification of the research gaps in the market segmentation literature (summarised in Section 2.6) and the choice of theoretical framework adopted for the present study and further detailed in Chapter 3. Each area is explored in turn next.

Figure 2.1 Logical Structure of the Chapter
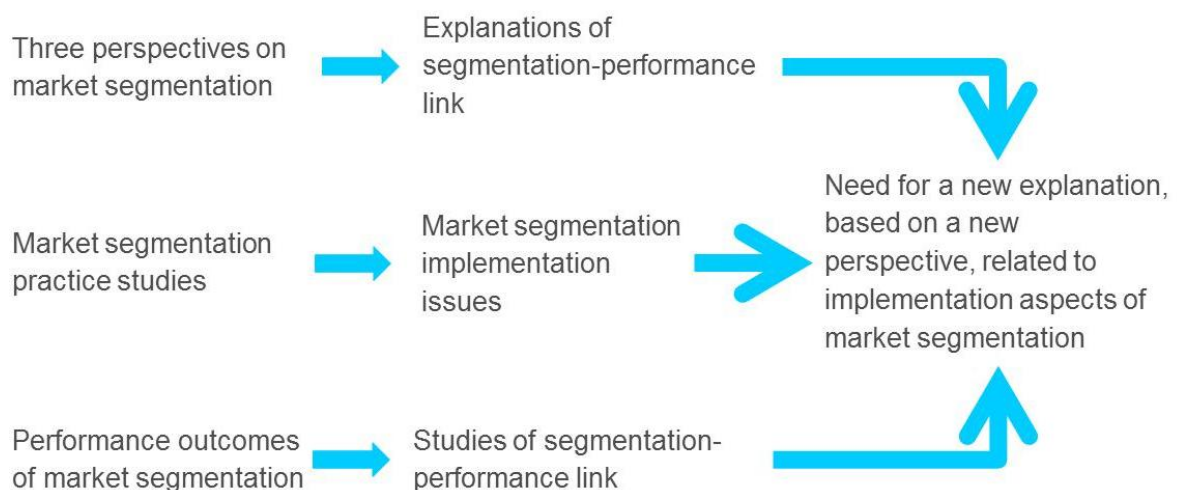
2.2. Schools of Thought on Market Segmentation

The market segmentation concept was officially introduced by Smith (1956) in a seminal paper, where he distinguished between market segmentation and product differentiation as alternative marketing strategies. What Smith (1956: 5) meant by market segmentation was a "more precise adjustment of product and marketing effort to consumer requirements", which is in fact the essence of the marketing concept. In his view, market segmentation is disaggregative, as it recognises several demand schedules where previously only one was recognised.

Market segmentation originates from economic pricing theory which states that firms can maximise profits by using different pricing levels to discriminate between segments (Frank *et al.*, 1972). This theory led to the decision-oriented marketing school of thought which focuses on optimising the marketing resource allocation task. The second school of thought highlighted by Frank *et al.* (1972) in their seminal monograph of market segmentation is the behavioural school of thought, which focuses on identifying and describing generalisable differences among consumers with the purpose of understanding consumer behaviour better. The third school of thought is the industrial organisation view, which adopted the segmentation concept in its investigation of competitive strategy.

The basic assumption of market segmentation is that of demand heterogeneity, whereby consumers differ in their wants and needs. This has been significantly discussed in the literature as it is at the very heart of the marketing concept (Wedel and Kamakura, 2000; Kotler and Keller, 2006). Some other assumptions that market segmentation theory makes are the following: a) firms cannot cater to each and every single consumer need because they need economies of scale; b) markets can be divided into smaller meaningful relatively homogenous segments of consumers who have similar needs and buying behaviour *and* similar responses to marketing stimuli; c) a firm's offerings can be often designed to meet the wants of such segments; d) there is only one objective and single reality of consumer preferences. All of these assumptions have come under attack recently (Hoek, Gendall and Esslemont, 1996; Wright, 1996; Hunt and Arnett, 2004; Hines and Quinn, 2005), leading to some loss of credibility for segmentation as a cornerstone of strategic marketing (e.g. Sheth and Sisodia, 1999).

As a result, several authors have adopted more interpretivist perspectives in looking at market segmentation. For example, Hines and Quinn (2005: 534) adopt a social constructivist stance, criticising the positivist basis of market segmentation, which relies on the belief in one single, unique "reality whereby consumer preferences may be aggregated to represent an understanding which reflects a measurable view of reality". They go further in arguing that acknowledging the socially constructed nature of consumer realities enables the recognition of consumer demand dynamics and that segmentation is not equipped to handle increasingly fragmented consumer markets. Their argument implies that market segmentation is managers' constructed way of viewing markets rather than an objective representation of a market condition. This argument is supported by Millier (2000) and Palmer and Millier (2004).

2.3. Perspectives on Market Segmentation

The differences between the three research traditions highlighted above (decision-oriented, behavioural-oriented and competition-oriented) pertain both to the theoretical underpinnings and implementation of segmentation activities (Wilkie and Cohen, 1977). As a result, three different views on segmentation emerge from the literature (see Figure 2.2). These three perspectives have led researchers to focus only on certain aspects of segmentation in their investigations, which has left us with a patchy understanding of the segmentation concept and implications as a whole. For each perspective, the following sections summarise the definition of market segmentation within the perspective and the elements of segmentation which have been investigated in previous research. Section 2.5 details the explanations suggested by each perspective in relation to how market segmentation affects firm performance.

Figure 2.2 Different Perspectives of Market Segmentation

Research technique	**Decision making tool**	**Competitive strategy**
Bases	Marketing mix	Alternative strategies
Methods	Marketing campaigns	Segment selection
Models	Customer management	Competitive positioning
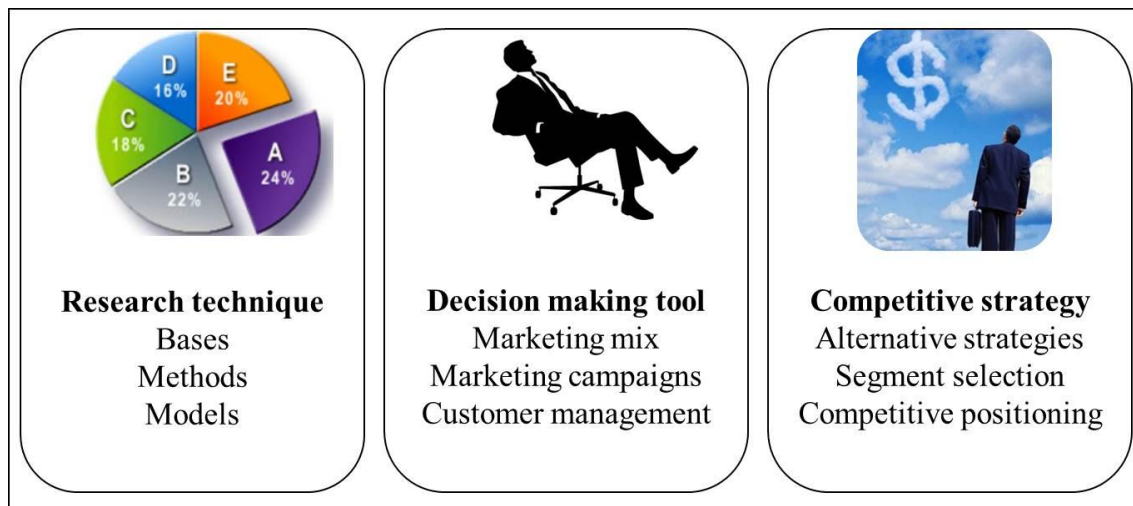
2.3.1. Market segmentation as a research technique

This is historically the predominant view in the literature, according to which market segmentation is a research technique: "the process of separating a market into groups of customers such that the members of each resulting group are more like the other members of that group than like members of other segments" (Bonoma and Shapiro, 1983: 1). Segmentation here serves to identify a map of the market structure and provide information about consumer needs (Allenby *et al.*, 2002; Harrison and Kjellberg, 2010). Authors that subscribe to this view believe that the managerial objective is one of identifying relatively homogeneous customer groups within a defined market (e.g. Wind and Cardozo, 1974; Harrison and Kjellberg, 2010), by using the best possible segmentation bases, models and methods.

A segmentation base is a criterion used to group buyers (Choffray and Lilien, 1978). Many segmentation bases have been proposed in the literature, giving rise to debates about the relative effectiveness of segmentation bases. While many authors agree that situation specific variables are better at predicting buyers' preferences and behaviour than general ones (Vriens *et al.*, 1996; Wedel and Kamakura, 2000; Allenby *et al.*, 2002), two different positions on this issue emerge. Some authors (e.g. Frank and Massy,

1965; Assael and Roscoe, 1976; Dhalia and Mahatoo, 1976; Elrod and Winer, 1982) argue that response elasticities[1] are the ideal bases for segmentation as they allow the identification of different *demand* schedules, which was the original purpose of segmentation (*cf.* Smith, 1956). Other authors argue for needs or benefits based segmentation (e.g. Haley, 1968; Dickson, 1982; Hofstede, Steenkamp and Wedel, 1999) because the benefits buyers seek in consuming an offering are considered to be the reason for the existence of true market segments and to have a causal relationship with future purchase behaviour[2].

Other authors propose normative models to aid in choosing the 'best' base. For example, Bonoma and Shapiro (1983) suggest a nested approach, starting with easier criteria and finishing with the most difficult to obtain. However, this model has been criticised for not offering precise rules to decide when to stop looking for relevant variables and the appropriateness of including circumstances as segmentation variables (Millier 2000). A second model is the macro-micro segmentation (Frank *et al.*, 1972; Wind and Cardozo, 1974), which first identifies macro-segments on the basis of descriptive criteria (size, activity, geographical location, etc.), then sub-segments each segment by using the features of the buying centre. This second model is still popular in international and industrial marketing, despite the finding that cross-national segments do exist (Hofstede *et al.*, 1999) and that the macro approach is not the most effective method for segmentation (Dibb, Stern and Wensley, 2002). Macro variables are not strongly related to customer response to marketing stimuli and the macro approach does not consider competition to provide basic information on segment formation and facilitate the selection of promising segments (Powers and Sterling, 2008).

Segmentation methods can be classified along two important dimensions (Wedel and Kamakura, 2000): a) when to decide the type and number of segments (a-priori[3], post-hoc[4], hybrid[5] methods) and b) using descriptive[6] or predictive[7] statistical methods. A priori methods can be influenced by subjective considerations and may involve much iteration in order to meet segment size constraints (Levin and Zahavi, 2001), whereas post-hoc methods (e.g. cluster analysis) are problematic insofar they place considerable emphasis on the analyst's judgement (Malhotra and Birks, 2003) and "raises important questions about the procedures and undermines the validity of segments derived from the real data" (Dibb and Stern, 1995: 634).

The choice of segmentation method depends on the specific purposes of the segmentation study and the properties of the segmentation bases used (Wedel and Kamakura, 2000). However, there are few studies comparing the accuracy and

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[1] This is defined as the relative changes in demand in response to a relative unit change in a marketing instrument (e.g. price, advertising).
[2] Other segmentation bases rely on descriptive factors pertaining to buyers and are not good predictors of future buyer behaviour.
[3] In a priori methods, the type and number of segments are decided before the data collection.
[4] In post-hoc methods, the number of segments and characteristics of each segment are determined by the data and methodology implemented.
[5] Hybrid methods combine an a priori phase based on more generic variables and a post-hoc phase, where a-priori segments are further disaggregated based on other variables (Wind, 1978).
[6] Descriptive methods investigate the associations across a single set of segmentation bases, with no distinction between dependent and independent variables.
[7] Predictive methods analyse the associations between two sets of variables, where one set includes dependent variables to be explained or predicted by the independent variables.

effectiveness of different methods (e.g. Vriens *et al.*, 1996; Levin and Zahavi, 2001). Furthermore, these methods assume that quantitative data are collected through surveys or purchase data, however some authors (e.g. Millier, 2000; Palmer and Milier, 2004; Harrison and Kjellberg, 2010) argue that intuition and experience can successfully be used instead, particularly in an industrial market and for a new product, where quantitative data or statistical expertise may not exist.

Reviewing this strand of literature, Steenkamp and Hofstede (2002) concluded that most segmentation studies were of exploratory nature and the segmentation bases were selected on ad-hoc criteria. They were also critical of the benefits the segmentation results provided, as these types of studies did not provide explicit guidelines for the development of optimal marketing programmes.

2.3.2. Market segmentation as a decision making tool

This view originates from the managerial school of marketing (Plank, 1985) and views segmentation as a decision-making tool. The purpose for market segmentation derives from the marketing tasks that need decision support (Piercy and Morgan, 1993; Weinstein, 2004). Other authors (e.g. Winter, 1979; Cheron and Kleinschmidt, 1985; Dickson and Ginter, 1987) express a similar understanding of market segmentation, when they define it as the use of information about market segments to design marketing program(s) to appeal to specific identified segments. Thus, market segmentation has been defined as "the development and pursuit of different marketing programmes by the same firm and for the same product but for different components of the market" (Frank and Massy, 1965: 186). Based on this definition, this strand of literature has focused on integrating the results of segmentation research into marketing decision making, in particular regarding marketing mix development, marketing campaign development and customer management.

The most common decision that authors subscribing to this view refer to is designing appropriate marketing mixes for different segments (Winter, 1979; Tynan and Drayton, 1987). The literature provides examples of empirical studies of segmentation analysis undertaken for new product development (e.g. Emmelhainz and Kavan, 1999; Giloni, Seshadri and Tucci, 2008), price setting (e.g. Frank and Massy, 1965; Elrod and Winer, 1982; Bolton and Myers, 2003), and distribution channels selection (e.g. Stern and Sturdivant, 1987; González-Benito and González-Benito, 2004).

The second application is the development of marketing campaigns, both through broadcast media or direct marketing channels. The literature contains many examples of segmentation studies undertaken for: creating advertising messages (e.g. Percy, 1976), media selection and planning (e.g. Wilkie and Cohen, 1977), selecting targets for campaigns (e.g. Levin and Zahavi, 1996; Verhoef *et al.,* 2002; Chan, 2008) and customising the marketing offer/message (e.g. Peltier and Schribrowsky, 1997; Reutterer, Mild, Natter, and Taudes, 2006; Tianyi and Tuzhilin, 2006).

Customer management applications are relatively new, however the recent years have seen many studies proposing segmentation schemes and applications for new customer acquisition (e.g. Cao and Gruca, 2005), increasing customer loyalty (e.g. Libai, Narayandas and Humby, 2002; Story and Hess, 2006; Hulten, 2007), increasing customer profitability (e.g. Cao and Gruca, 2005; Kim, Jung, Suh and Hwang, 2006;

Ansell *et al.*, 2007) and retaining existing customers (e.g. Cooley, 2002; Kim *et al.*, 2006). A gradual transition has been noticed in the literature from market segmentation to customer segmentation, which is related to a classification of current customers based on their market reactions or transactions with the firm (Hulten, 2007). Market segmentation has been proposed to be employed at the business strategy level and customer segmentation at the customer strategy level (Dibb, 2001; Storbacka, 1997). Based on the observation that practitioners do not differentiate between the two (from the qualitative study), in this research, the terms 'market segmentation', 'customer segmentation' and 'segmentation' are used interchangeably.

The literature that considers segmentation as a decision making tool is primarily based on normative models based on simulated data and many assumptions about consumer and firm behaviour. These models attempt to model the decision making processes (i.e. resource allocation to segments and/or marketing activities) as an optimisation algorithm that aims at finding the most profitable allocation of resources (*cf.* Wedel and Kamakura, 2000).

2.3.3. Market segmentation as a competitive strategy

This perspective conforms to Smith's (1956) original argument, acknowledging the strategic importance of segmentation in deciding and communicating a corporate vision and strategic intent (Piercy and Morgan, 1993). Within this view, segmentation aims at selecting a narrow competitive market which is compatible with the core competencies of the firm and defendable in front of the competitors' offerings (Porter, 1980). The two essential factors that lead to a segmentation strategy are heterogeneity of needs/wants and competition (Winter and Thomas, 1985). The market segmentation literature has been criticised for not accounting for competition (e.g. Moorthy, 1984). However, authors subscribing to this view have investigated issues related to alternatives to segmentation strategy, segment selection and product positioning.

Product differentiation has been suggested as the first alternative to segmentation strategy by Smith (1956). It involves developing and offering products and services that are perceived to differ from competing offers on some characteristics (Dickson and Ginter, 1987) and aiming for a horizontal share of a broad market (Smith, 1956). However, Dickson and Ginter (1987) argue that the product differentiation strategy is not an alternative to market segmentation strategy, as it does not require the existence of market segments, but may be used in conjunction with market segmentation strategy when segments are perceived to exist. In this case, firms can employ a segment-based product differentiation strategy (Dickson and Ginter, 1987), otherwise known in the strategy literature as the focus strategy (Porter, 1980). Porter (1980) suggested that there are four generic competitive strategies: 1) a broad, mass-market strategy based on cost leadership; 2) a broad mass-market strategy based on differentiation, through superior value added; 3) a focused or niche strategy aimed exclusively at the most cost-sensitive market segment; and 4) a focused or niche strategy directed at the most quality-driven and value-seeking customers. The choice of alternative strategies is so much more complicated - recent research shows that, faced with these strategic choices, firms find it difficult to commit to only one and this has given rise to hybrid competitive positions (Campbell-Hunt, 2000) whereby firms use an integrated cost leadership and differentiation strategy.

Segment selection represents the strategic choice of segments where the firm will compete (Doyle, 1995) and is an area which has received coverage from many literature strands, including organisational behaviour and corporate strategy (Dibb and Stern, 1995). Selecting market segments involves assessing their attractiveness and mapping them against the company's resources and competences (Hooley *et al.*, 2006). Segmentation researchers have used the same attractiveness criteria as per market and industry level, despite the fact that the segment level is, by definition, more focused than the other two. The industry level factors refer to the level of competition, bargaining power of customers and suppliers and threats from new entrants and substitutes (Porter, 1980). The market attractiveness criteria come from portfolio management tools such as the Boston matrix and include factors like market size/ growth/ profitability, competitive intensity, price levels, technological sophistication and government regulations (Morrison and Wensley, 1991). The firm's competitive position can be evaluated through relative share, customer loyalty, patents, margins (Morrison and Wensley, 1991), available resources and alternative marketing opportunities for other product lines (Zikmund and D'Amico, 1996), marketing assets, managerial capabilities, technological edge and cost advantages (Jobber, 2004).

The choice of positioning dimensions is critical in the development of successful marketing strategy that leads to a strong position in the marketplace (Day and Wensley, 1988). The segmentation literature has not studied the link between segmentation and positioning decisions (Hassan and Craft, 2005). Instead, many studies have looked at the link between segmentation and positioning in very specific contexts through the development of models that derive perceptual maps based on customer preferences and brand usage (e.g. Green and Krieger, 1989; Bhatnagar and Ghose, 2004; DeSarbo, Grewal and Scott, 2008). Such models are argued to provide managers with more meaningful information about the competitive market structure for the evaluation of relative brand positions in the marketplace (Green and Krieger, 1989) and the identification of under-occupied spaces in the marketplace or dispersion of competitors, which could represent market opportunities for a firm to build clear offering and differentiate their offerings from the average (Biggadike, 1981).

These three perspectives on market segmentation provide different definitions, which have led to the investigation of different aspects of the segmentation concept, mainly the research aspect of developing a segmentation scheme (research technique perspective), using information about market segments to develop or optimise marketing activities and decisions (decision making tool perspective) and choosing market positions for competitive advantage (competitive strategy perspective). The review of the segmentation elements that each perspective emphasises indicates that the focus of most research so far has been on attempting to optimise segmentation decisions through the development of normative models, e.g. which segmentation basis or method to choose, how many segments to target, how to allocate resources, which criteria of segment selection to use and so on. Less attention has been given to the impediments that practitioners have in implementing such normative models in their firms (Dibb and Simkin, 2009a), despite consistent evidence in the last 30 years that practitioners encounter significant challenges when implementing segmentation activities (Dibb and Simkin, 2009b). Therefore the next section reviews this small strand of literature with the purpose of assessing the gap between the theory and practice of market segmentation (Dibb and Simkin, 2009a).

2.4. Market Segmentation Implementation

Several authors (e.g. Piercy and Morgan, 1993; Jenkins and McDonald, 1997; Palmer and Millier, 2004; Foedermayr and Diamantopoulos, 2008; Dibb and Simkin, 2009a) argue that the market segmentation literature has been based too much on conceptual, rather than empirical, evidence, and therefore it has a prescriptive nature, in that it indicates how companies should segment their markets, as opposed to how they actually form and sustain their segments. The importance of studying the real-life application of market segmentation is given by the concept's strategic importance in marketing theory (Goller *et al.*, 2002) and the realisation that the implementation phase of the segmentation process is where many companies report difficulties (Littler, 1992; Dibb and Simkin, 2001; Dibb and Simkin, 2009b).   As a result, a literature search[8] on empirical studies of market segmentation practice (i.e. how companies implement segmentation approaches – the choices they make and the challenges they face) resulted in 28 studies (see Appendix A). These studies have emerged in the last 30 years as a response to the criticisms of the normative nature of the segmentation literature. Despite their small number, these studies present considerable diversity. Boejgaard and Ellegaard (2010) argue that there are three perspectives on market segmentation implementation, which are explored in the following sub-sections.

2.4.1. Implementation as adoption of normative models

The first defines implementation as the gap between theory and practice and includes studies which look at the adoption of theoretical models of segmentation in practice, the challenges faced by practitioners in adopting them and the questioning of the assumptions underpinning market segmentation theory (e.g. Wind and Cardozo, 1974; Bonoma and Shapiro, 1984; Hlavacek and Reddy, 1986; Laughlin and Taylor, 1991; Dibb and Simkin, 2001; Danneels, 1996;). The main focus of these studies is still the identification/formation of market segments, rather than the evaluation of market segments and the usage of market segmentation in the formulation of marketing strategy (Goller *et al.,* 2002). Empirical studies indicate that normative models are rarely implemented in practice (Abratt, 1993; Danneels, 1996; Quinn, 2009).

For example, despite the normative recommendation for response elasticities or needs/benefits as segmentation bases, the most widely employed bases were demographic, geographic, benefits/needs sought, extent of usage, type of buying situation (Peterson, 1991; Abratt, 1993; Kalafatis and Cheston, 1997). Managers use demographics despite the fact that they have been shown not to predict behaviour very well (Danneels, 1996) but because they are actionable and observable (Quinn, 2009). Other managers refuse to use segmentation altogether because they perceive demographics to be useless (Danneels, 1996).

Similarly, among the database users surveyed by Verhoef *et al.* (2002), cross-tabulation was the most used method of segmentation research, despite the fact that literature advocates more sophisticated techniques. In fact, many respondents reported being unfamiliar with sophisticated methods such as logit/probit models, neural networks, and

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[8] The search was performed in EBSCOhost Business Source Complete, ABI Inform Complete (Proquest), Science Direct, Emerald Journals and Wiley Online Library.

genetic algorithms. Almost a third (30.6%) indicated they used 'gut feel' or 'experience', which is in line with the intuitive approach found in practice by Quinn *et al.* (2007) and Palmer and Milier (2004). Retailers interviewed by Quinn (2009) preferred their intuitive, simplistic segmentation schemes rather than investing in ad-hoc market research or buying commercial segmentation offerings because they considered their segmentation schemes sufficient for their purposes and enabling operational actions in a more flexible manner than more sophisticated, quantitative solutions. On the other hand, the large companies studied by Bailey *et al.* (2009) reported using propensity modelling, which allows the determination of the likelihood of acceptance of a particular product/service, together with rules which take into account incremental cost/benefit to increase customer communication effectiveness.

The lack of adoption of normative models may be due to several reasons, which include: a) the paucity of practical assistance offered to those trying to implement market segmentation (Laughlin and Taylor, 1991; Dibb, 1999); b) poor understanding of the strategic importance of segmentation (Dibb and Simkin, 1997), c) operational constraints of adopting normative models (Plank, 1985; Clarke and Freytag, 2008); d) the perceived difficulty in understanding and using quantitative segmentation schemes flexibly (Quinn, 2009) and e) a lack of quantifiable evidence for the payoffs of segmentation (Dibb, 2005; Goller *et al.*, 2002).

On the other hand, these studies emphasise the importance of the criteria to judge the usefulness of segmentation schemes. For example, Abratt (1993) found that managers interviewed considered the similarity of needs within segments and the feasibility of marketing action as the two most important criteria used to form segments. The stability of the segment and the difference of needs between segments were slightly less used. In contrast, Dibb and Simkin (1994) found that, in four industrial companies studied, the similarity of needs within segments was not a criterion used due to the appeal of recognised industry structures, which facilitated an 'implementable' segmentation scheme. Similarly, Dibb and Simkin (2010) found that two types of criteria were in use at a large telecommunications company: a) statistical criteria, which facilitated the evaluation of the statistical robustness of the segment scheme and provided additional evidence to enable the judging of segment quality; b) qualitative criteria, including segment vividness, coherence and distinctiveness and usefulness (accessibility and actionability), which guided the selection of segments. Dibb and Simkin (1994) conclude that the importance of implementable, clear, and understandable schemes should not be obscured by the desire for a statistically valid solution.

2.4.2. Implementation as (marketing) planning

The second perspective defines implementation as the planning process (e.g. the development of plans and marketing programs) and ignores the implementation of segmentation research findings beyond the resource allocation task (Boejgaard and Ellegaard, 2010). This conceptualisation started with Wind's (1978) review, where implementation was referred to as analysis-to-plan/strategy conversion, emphasising two aspects of implementation: 1) post-analysis identification and selection of target segments, and 2) the translation of analytical results into strategy. Mahajan and Jain (1978) argue that companies aiming to obtain results from segmentation projects must integrate the proposal with the company's marketing programme and develop actions

that will satisfy the requirements of the target market. More recently, Goller *et al.* (2002) adopt the same perspective, arguing that the various issues of segmentation have been studied in isolation and develop a conceptual framework of the segmentation implementation process, which integrates the antecedent to market segmentation (market orientation), the prerequisites to segmentation (market heterogeneity, factors influencing the decision to segment), the segmentation process itself (analysis, evaluation, implementation and control) and the outcome of segmentation (competitive advantage). This framework will also be adopted for the qualitative empirical research phase on market segmentation implementation.

This implementation perspective as planning process is also reflected in the S–T–P framework, presenting the implementation of market segmentation strategy as three sequential steps (Kotler, 1994): a) segmentation - decision on variables for segmenting markets, profiling of emerging segments, and validation of segments, b) targeting - decision on targeting strategy, and targeting single or multiple segments for marketing strategy development, and c) positioning - understanding consumer perceptions, positioning products in the mind of consumers, and developing appropriate marketing mixes tailored to the target market (Kotler, 1994; Dibb and Simkin, 1997). This framework is placed at a managerial level of implementation (Piercy and Morgan 1993), where the purpose is to plan and budget around identifiable targets in the marketplace. The literature highlights that segmentation implementation can also work at a strategic level and at an operational level (Piercy and Morgan, 1993; Jenkins and McDonald, 1997; Clarke and Freytag, 2008). The implementation issues at the strategic level are related to the translation of segmentation findings into strategy (Wind, 1978) in the effort to inform top management decisions, e.g. the definition of markets, creation of the mission statement, new market entries, design of organisation, and development of radical innovations (Weinstein, 2006). At the operational level, the planning process concerns the development of marketing programmes and plans to secure the effective reach of target segments (Clarke and Freytag, 2008).

The three levels of planning have different purposes and thus could result in different questions to be answered by segmentation analysis. Therefore, the issues impinging on the implementation of segmentation are likely to differ depending on the level of planning (Clarke and Freytag, 2008). While it is intuitively appealing to integrate the different levels of segmentation planning, there is no evidence in the literature to support or deny this proposition (Piercy and Morgan, 1993). Different segmentation schemes could be in use at different levels of planning, separately or jointly, to serve distinct purposes in the organisation (Piercy and Morgan, 1993).

Among empirical studies, Quinn *et al.* (2007), based on their case study in fashion retailing, argued that in dynamic markets, planning for segmentation is less predictable and more complex, which may require a broader and intuitive understanding of the concept. Danneels (1996) finds that segmentation and targeting considerations are not integral to fashion retailers' decisions of retail mix, but rather that these decisions are in an ever-evolving cycle of adjustment. In contrast, Bailey *et al.* (2009) find that their case companies apply segmentation insight for proposition development at the level of market segments, but apply predictive modelling for interactive channels of communication and tailored sales promotions.

Dibb and Simkin (2001) identify planning challenges: understanding which factors might contribute to a successful and implementable outcome, the kinds of qualities that any emerging segments should exhibit, ensuring that attractive segments are selected and suitable propositions developed), inter-departmental agreement with the new segments and their attractiveness, assigning customers to new segments. Finally, Badgett and Stone's (2005) survey of 112 managers in large organisations finds that the main challenges of implementing segmentation approaches include finding 'real' customers that fall into the segments and using the results of segmentation analysis.

2.4.3. Implementation as execution of plans

The third perspective regards implementation as the execution of plans by employees and other stakeholders, based on the fact that organisations are not able to implement strategies around given segment targets (Piercy and Morgan, 1993), without additional resource provision and realignment of resources and personnel to reflect new priorities (Dibb, 2005). Piercy and Morgan (1993) criticise normative frameworks of segmentation implementation and distinguish between explicit (the traditional view that markets are 'out there' and are essentially groups of customers) and implicit aspects of the segmentation strategy, arguing that the implicit perspective is a more powerful factor in the decision, as it relates to the role of organisational culture, information processing and structure in determining the company's view of the market.

There is considerable support for Piercy and Morgan's (1993) arguments in empirical studies. Findings from several authors (e.g. Dibb and Simkin, 1994; Meadows and Dibb, 1998; Dibb and Simkin, 2001; Badgett and Stone, 2005; Dibb and Simkin, 2009b; Quinn, 2009) suggest that there are many implementation barriers to executing segmentation plans, including: a) the power of existing industry, distribution or sales structures that prevent the integration of a segmentation scheme classifying customers along different dimensions, b) the lack of resources such as customer databases, information technology, time commitments, c) organisational culture issues (inter- and intra-functional communication, managerial enthusiasm and involvement, the role of senior leaders, inflexible corporate culture) and d) controlling the segmentation process (measuring the success of segmentation efforts, identifying when customers have migrated between segments, determining when to revisit and how to revise the segments).

These studies indicate that segmentation implementation may have significant implications for employee roles and responsibilities, as well as for the customers of the company, particularly when a new segmentation scheme involves a different choice of target segments (Clarke and Freytag, 2008). In addition, these studies provide empirical evidence that the execution of segmentation plans is constrained by a range of practical and operational factors. It can be concluded that, in practice, market segmentation is a challenging and difficult task, which seems to be context dependent, interactive and dynamic, time and resource intensive, and requiring internal marketing, communication, and coordination within the organisation to bring about effective implementation (Millier, 2000).

2.4.4. Marketing implementation

Similarly to the evolution of studies on segmentation implementation, the last 20 years have seen an increased interest in the implementation aspect of marketing strategies. Marketing implementation has been defined as the communication, interpretation, adoption, and enactment of a marketing strategy or strategic market initiative (Noble and Mokwa, 1999). Thus, their definition is broader than the execution aspect of segmentation implementation, as conceptualised by Boejgaard and Ellegaard (2010).

While reviewing the entire marketing implementation literature is outside the scope of this research, further insights into important implementation factors can be gained from reviewing such literature. The main difference between studies of marketing implementation and segmentation implementation is that the former have focused more heavily on explanation (e.g. influencing factors and dynamics of implementation) based more strongly on relevant theoretical perspectives, whereas the latter have had a more exploratory, a-theoretical nature, focused on describing implementation challenges.

As distinguished by Noble and Mokwa (1999), this literature has highlighted two different types of implementation factors, building on earlier contributions from the strategy and marketing literatures (e.g. Bonoma and Crittenden, 1988; Wooldridge and Floyd, 1989): a) structural variables, such as the company's marketing functions, control systems, and policy directives; and b) behavioural/interpersonal factors, focusing in particular on the role of marketing managers in executing strategies through directing employees' work and developing informal organisational structures. The second category has emerged due to a movement towards analysing marketing implementation in terms of processes rather than (or in addition to) organisational factors, such as structure or control (Piercy, 1998).

In the first category, several recent contributions highlight the role of organisational structure (e.g. Homburg, Workman and Jensen, 2000), processes (e.g. Jayachandran *et al.*, 2005; Shah *et al.*, 2006) and financial control (e.g. Grewal *et al.*, 2009) in implementing marketing strategies successfully. The importance of these factors was also confirmed in a study by Thorpe and Morgan (2007) who found that firms adopting a change implementation model are more effective in their implementation efforts than firms adopting other implementation styles. The change model emphasises the importance of a rigid organisational structure, visible control systems, reward systems, at the expense of fostering consensus and more informal and team-based working cultures (Thorpe and Morgan, 2007).

In the second category, Chimhanzi and Morgan (2005) focus on how the interaction between the human resources and marketing departments (e.g., frequency of communication, amount of inter-functional conflict) affects employee relationships and, thus, the effectiveness of strategic implementation efforts. Rapert, Velliquette and Garretson (2002) examine the roles of inter-functional employee communication and consensus on strategic priorities in the implementation process. Cadwallader, Burke Jarvis, Bitner and Ostrom (2010) highlight the importance of employee empowerment and role clarity (providing information about how an innovative service works) in engaging employees to participate in the implementation of innovative strategies. These studied suggest that implementation capabilities depend on employees' behaviours and motivation and the underlying organisational context in which the process operates (Piercy, 1998).

Combining both structural and behavioural variables, Hartline, Maxham and McKee (2000) investigate how service firms disseminate their customer-oriented strategy to their employees so that the employees share the customer-oriented values of the firm and are inspired to implement the strategy. Their findings indicate that implementing a customer-oriented strategy to achieve shared customer-oriented values happens through managers creating the necessary alignment between strategy and structure and then relying on team socialisation to disseminate the strategy to employees.

Reviewing previous litereature, Shah *et al.* (2006) highlight four key factors that facilitate the implementation of customer-oriented strategies: a) leadership commitment, which is critical for both initiating as well as sustaining all initiatives for customer centricity, b) organisational realignment so that the marketing function connects the customer to the product, the service delivery system and the financial measurement system of the firm, c) systems and process support to enable the provision of more customer value and d) revised financial metrics to measure and manage the efficacy of their marketing initiatives.

2.4.5. Managerial recommendations for segmentation implementation

In response to the identification of significant implementation problems, the literature contains some managerial recommendations, usually in the form of normative or anecdotal accounts of market segmentation 'best practices', as follows:

- Planning: considering past research and market trends before the development of a segmentation scheme and developing implementation plans that include testing and tracking studies (Haley, 1984); setting segmentation objectives that are closely related to the firm's strategy or marketing problem to be solved (Green, 1977; Wind, 1978; Ansell, Harrison and Archibald, 2007).

- Analysis: evaluating the quality of a segmentation scheme on whether the segments are identifiable, measurable, accessible and distinct in their responses to marketing efforts (Kotler, 1994); profiling segments to obtain insight into customer needs, preferred benefits and responses to marketing stimuli (Yankelovich and Meer, 2006); monitoring changes in the homogeneity of segments (e.g. Calantone and Sawyer, 1978; Blocker and Flint, 2007) to re-confirm the existence of originally identified segments (Hlavacek and Reddy, 1986); exploring new markets or new segments and identifying underserved/ dissatisfied/ growing/ least price sensitive segments (Slater and Narver, 2000; Yankelovich and Meer, 2006).

- Implementation in planning: formal processes to select target markets and evaluate segment attractiveness (Lin *et al.*, 2004; Dibb and Simkin, 2010), embedding segmentation schemes into marketing decision-making to provide a coherent focus for managerial thinking (Piercy and Morgan, 1993); allocating marketing resources to marketing activities and market segments, implementing different marketing mixes for each target segment (Frank *et al.,* 1972; Piercy and Morgan, 1993; Lin *et al.*, 2004); monitoring the effectiveness of company's offerings in targeted segments (e.g. Bonoma and Shapiro, 1984) to provide a feedback loop for improving segmentation-based strategies (Goller *et al.*, 2002); using segmentation to select target markets/segments that will align strategically the firm's resources and

objectives with the needs and requirements of these markets and will minimise competition through the choice of target segments (Beik and Buzby, 1973); using segmentation to develop new types of products, new price, distribution and service strategies and new offerings that provide better value to customers and channel members (Hlavacek and Reddy, 1986; Roberts, 1986; Slater and Narver, 2000)

- Execution of plans: communicating the segmentation schemes internally as the basis for organisational market understanding and reaction to its market environment (Twigg and Wolfe, 1968; Jenkins and McDonald 1997; Dibb and Simkin, 2010), establishing organisational processes for segment-based organisational structure, incentive policies, information processing and reporting systems (Piercy and Morgan 1993), providing strong senior management involvement and support for segmentation bases initiatives (Engel *et al.*, 1972; Millier, 2000; Lin *et al.*, 2004; Dibb and Simkin, 2010); ensuring sufficient project resources and staff morale and communication through workshops with all stakeholders to ensure the agreement and understanding of the new segments and to address any staff concerns about the operational implications of the new segments (Lin *et al.*, 2004; Dibb and Simkin, 2010).

Such 'best practices' indicate that some organisational processes that may be more effective than others in implementing segmentation in organisations and achieving performance outcomes, however none of these have been tested empirically. Thus, the conclusion of this section is that the segmentation literature is not geared to assisting managers to overcome these implementation difficulties (Wind and Cardoza, 1974; Wind, 1978; Dibb and Simkin, 2009a), in particular because it does not properly consider the implementation of identified segments in the firm and the type of mechanisms that would ensure successful implementation of segmentation approaches.

2.5. Market Segmentation and Firm Performance

2.5.1. Performance outcomes of market segmentation

In the light of the conclusions of the previous section, it is important to identify whether market segmentation provides companies with enough value to justify the investment and effort required. Sadly, the outcomes of a market segmentation approach have been referred to only in fragmented and cursory arguments, rather than explanatory models or strong empirical evidence. Conceptually, Smith (1956: 64) argued that the outcome of market segmentation should be "depth of market position in the segments that are effectively defined and penetrated", indicating a measure of market performance. On the other hand, Wind and Douglas (1972) and Elrod and Winer (1982) describe market segmentation as a means for price discrimination, which leads to higher profits – a measure of financial performance. Another financial implication of segmentation is cost. Bonoma and Shapiro (1984) underline marketing cost reductions due to selectively and systematically allocating resources to different marketing mix elements according to the idiosyncrasies of target segments. On the other hand, Wind and Cardozo (1974) highlight the increased costs of targeting different segments as comprising product/service modification, selling and advertising costs. Dibb (2005) argues that businesses have found market segmentation useful as customer needs are too diverse to be satisfied by a mass marketing approach, hence focusing on satisfying the needs of

selected segments should lead to higher purchase rates, customer satisfaction and loyalty – measures of customer performance. Thus these conceptual arguments seem to suggest that implementing market segmentation can have an effect on market, customer and financial performance of a firm. These three particular dimensions of performance have been considered as dimensions of business performance in the marketing literature (e.g. Hooley *et al.*, 2005), hence the type of firm performance studied in this research will hence be business performance.

Anecdotal evidence found in practitioner journals and magazines suggests that some firms consistently have seen performance improvements from adopting segmentation strategies (e.g. Waaser, 2004; Jacques, 2007; Harrington and Tjan, 2008), leading to the suggestion that pursuing a segmentation strategy should enhance an organisation's performance (e.g. Hunt and Arnett, 2004; Christensen *et al.*, 2007). In addition, descriptive studies show that the criteria most commonly applied to evaluate the impact of market segmentation strategies are financial performance measures, e.g. sales volume/growth, profit, cost and market share (Craft, 2004). Other, non-financial, evaluation measures used by practitioners include: successful brand building, reputation (Craft, 2004), customer feedback (Schuster and Bodkin, 1987) and the ability to meet customers' needs (Wind and Cardozo, 1974). On the other hand, Bailey *et al.* (2009) found that the large organisations considered did not evaluate the effectiveness of the segmentation schemes adopted and that any assessments of effectiveness were likely to be based on subjective managerial perceptions, which may or may not be accurate.

Only five studies of market segmentation practice provide some inferential insight into the impact of market segmentation strategies. Peterson (1991) finds that firms who employ segmentation strategy have a higher return on invested capital than those who did not pursue this strategy. He notes however that this finding does not prove the efficacy of segmentation strategy but still provides a presumption of effectiveness. Similarly, Verhoef *et al.* (2002) find that companies using segmentation have better results and are more satisfied with their marketing performance than those who do not. Dibb *et al.* (2002) find that practitioners consider segmentation to lead to greater customer understanding, better matching between the firm and its customers, better identification of gaps and better new brand development. Interestingly, in their sample, improved profitability and understanding of competitiveness were the least 'popular' outcomes of segmentation. Foedermayr and Diamantopoulos (2009) find that two dimensions of segmentation effectiveness (cost savings and positioning performance) have the strongest impact on export performance. Panayides (2004) finds market segmentation strategy positively related to market share but not to other measures of performance.

These studies bring some empirical support to the argument that market segmentation has a positive influence on performance outcomes but do not offer any insight into how this happens. However, such insight can be derived from reviewing each of the three perspectives on segmentation identified in Section 2.3 (research technique, decision making tool, competitive strategy). Each of these perspectives provides two explanations of the link between segmentation and performance. These explanations are identified and explained below.

2.5.2. The research technique explanations

The first explanation suggested by the research technique perspective highlights the argument that the selection of appropriate segmentation bases is crucial with respect to the number and type of segments that are identified and their usefulness to the firm (Wedel and Kamakura, 2000). Thus, it has been argued that segmenting based on consumers' response elasticities allows firms to engage in price or promotion discrimination among segments and thus maximise profits based on consumers' willingness to pay (Claycamp and Massy, 1968; Frank *et al.*, 1972; Tollefson and Lessig, 1978). Other authors have argued that segmentation based on consumer needs leads to better understanding of customer needs and characteristics which leads to better fit between customer needs and the firm's offer in the marketplace (Piercy and Morgan, 1993; Hooley *et al.*, 2006), which in turn may lead to price premiums obtained for tailored products/services (Broekhuizen and Alsem, 2002).

The second explanation highlights the importance of targeting quality, achieved through more accurate identification of and access to the consumers most likely to buy (Frank and Massy, 1965; Mahajan and Jain, 1978). Targeting quality can be measured through accuracy, the likelihood that any target segment prediction is correct, and recognition, the likelihood that any member of the target segment is identified (Gal-Or *et al.*, 2006). Targeting quality is seen as the key criterion for assessing the effectiveness of segmentation methods (Mizuno *et al.*, 2008). Segmentation helps through developing methods to identify profitable customers more likely to respond to an offer, both for customer acquisition (e.g. Cao and Gruca, 2005) and customer retention (e.g. Chan, 2008). Several authors (e.g. Roy, 2000; Chen, Narasimhan and Zhang, 2001; Iyer, Soberman and Villas-Boas, 2005) look at the effects of increased individual consumer knowledge and targeting and conclude that firms have an advantage over competitors if they can accurately target their loyal customers because they minimise 'wasted' marketing communications to consumers whose preferences do not match their product's attributes (Iyer *et al.*, 2005).

2.5.3. The decision making tool explanations

The marketing management literature looks at segmentation as a decision-making tool supporting managers in the process of identifying and reaching relevant segments with marketing strategies catering to the specific needs and wants of the selected segment(s) (Cheron and Kleinschmidt, 1985). Thus the decision making tool view suggests that market segmentation may lead to performance improvements primarily through guiding resource allocation and marketing planning.

Resource allocation has been defined as the traditional process of developing marketing mixes for each segment (Mahajan and Jain, 1978), based on the principle of marginal returns to the marketing efforts (Wedel and Kamakura, 2000). Many normative models of resource allocation have been developed, which more recently have ranged from optimising the resource allocation to mix elements to optimising customer management tasks, such as: what marketing actions to take towards different segments (e.g. Piersma and Jonker, 2004), how often to communicate to different segments (e.g. Elsner, Krafft and Huchzermeier, 2004) or how to allocate resources between customer acquisition and customer retention (e.g. Reinartz, Thomas and Kumar, 2005). The ability to allocate

marketing resources has been considered a distinctive marketing capability in many studies (e.g. Conant *et al.*, 1990; Woodside, Sullivan and Trappey, 1999: Song, Di Benedetto and Nason, 2007). In particular, optimal resource allocation in acquisition and retention decisions should lead to increased customer equity, and long term profitability (Rust, Lemon, and Zeithaml, 2004).

Marketing planning refers to developing a marketing strategy and a tactical plan which becomes the framework for directing, implementing and controlling marketing activities (Claycomb, Germain, and Dröge, 2000). The predominant benefits of strategic marketing planning include: better coordination among many individuals whose actions are interrelated; a greater ability to bring together relevant facts, conclusions, and operating decisions for the increased likelihood of identifying expected developments; greater preparedness to meet change; more effective allocation of resources in promoting sales; and the establishment of a framework against which marketing accomplishments can be judged (McDonald, 1996). In addition, it fosters the development of firms because resources are used more effectively, the decision speed is increased, and flexible action is supported (Delmar and Shane, 2003). Market segmentation helps by determining the context within which managers think through and implement every pricing/marketing/quality decision that is not one-off and ad-hoc (Roberts, 1986) and allowing more effective use of firm resources, because it allow firms to focus their resources on segments of consumers that are more likely to purchase their market offerings (Mahajan and Jain, 1978; Rangan, Moriarty and Swartz, 1992). Marketing planning and resource allocation are closely interlinked as the availability and allocation of resources to carry out the firm's planned actions is one of the most critical aspects of planning (Ramanujam *et al.*, 1986).

2.5.4. The competitive strategy explanations

Within this literature, market segmentation is seen as the process of selecting a narrow competitive market which is compatible with the core competencies of the firm and defendable in front of the competitors' offerings (Porter, 1980). This view emphasises the role of market segmentation in achieving a competitive position in the market and identifying new market opportunities.

Segmentation is considered to play a decisive role in the development of a strong market position by providing a deep understanding of consumer's needs and expectations in order to develop a specific positioning that appeals more effectively to them (Wind, 1978). In this way, the firm a) appears as specialist in the chosen segments with a better understanding of customer's needs than competitors (Foote, 1969; McDonald and Dunbar, 2004), b) achieves fit between what consumers want and what the firm can actually deliver based on its resources and capabilities (Beik and Buzby, 1973), and c) increases the barriers to entry in the particular market segment due to customer loyalty (Haley, 1984). If firms select a distinctive positioning in the marketplace, then they are likely to be successful over the long term (Hooley *et al.*, 2006).

Identification of new market opportunities refer to product innovation (new product development) and market development (exploring new markets). Segmentation facilitates knowledge of market preferences and thus highlights new product

opportunities and reduces the degree of incompatibility of new products with customer needs (Cooper and Kleinschmidt, 1987). Finally, segmentation helps in exploring new markets (e.g. secondary, smaller, or fringe markets), providing a systematic approach for controlled market coverage as opposed to the random efforts of mass or unfocused marketing (Weinstein, 2004). This approach is supported by the decision to segment, which enables firms to conceive their markets in terms of needs and functionalities, thus leading to a more creative and broader definition of their markets and products and exploration of new opportunities (Hamel and Prahalad, 1994). Market development and product innovation allow firms to create new markets and ways of competing, which lead to significant and sustainable growth (Christensen, Johnson and Rigby, 2002).

The validity of these six explanations are next analysed in the light of the findings from studies of market segmentation practice and the issues emerging from the literature on market segmentation implementation, which are both covered in the following section. Given the constant concern apparent in the segmentation literature for the emerging gap between theory and practice of market segmentation (Wind, 1978; Dibb and Simkin, 2009a), such a close examination is warranted and long overdue.

2.5.5. Shortcomings of extant explanations

While the studies in the previous sub-section seem to concur that market segmentation may have an influence on performance, they did not offer any explanation as to why. The three perspectives on market segmentation suggest that there are six explanations of the relationship between market segmentation and business performance. The research technique perspective puts forth the role of segmentation bases and targeting quality, the decision making tool perspective emphasises the role of marketing planning and resource allocation and the competitive strategy perspective highlights the role of competitive positioning and identification of new market opportunities.

However, based on the insight from the segmentation implementation literature, these explanations are only partial, as, by definition, they only consider the effect of isolated elements of market segmentation. Thus, they do not consider the holistic nature of the concept. Furthermore, they are plagued by various conceptual and empirical issues (see Table 2.1), mainly related to the inadequacy of conceptualisation and lack of or counter-evidence related to their effect in market segmentation practice.

Finally, they do not consider the dynamic nature of the concept. The dynamic nature of segmentation results from a) changes in customers' needs and what they value within identified market segments, and b) changes in segment membership, reflected by changes in segment contents and segment structure (Blocker and Flint, 2007). The existence of segments with volatile profiles complicates the process of segmentation implementation (Mols, Antvor and Bukh, 1999). For example, targeting a particular segment at one point in time may mean that users who switch from another segment to this segment may be missed. Also, segment size influences its profitability and thus prior choices of segments may become less effective. Very little research has been done on this topic (Blocker and Flint, 2007), despite evidence that segments do change over time (e.g. Calantone and Sawyer, 1978).

Table 2.1 Issues with Explanations of the Segmentation-Performance Relationship

	Explanation	Conceptual Issues	Empirical Issues
Research technique perspective	Segmentation bases (response elasticities or needs/ benefits)	The range and variety of marketing decisions suggest that any attempt to use a single basis for segmentation for all marketing decisions may result in incorrect marketing decisions as well as a waste of resources (Wind, 1978).	The studies researching price discrimination in a segmented market consider market segmentation as a market characteristic and employ game models. While these models are rigorous, most of them are too restrictive in their model specifications to be used in real decision making (Rhim and Cooper, 2005).
	Targeting quality	Some segmentation schemes are not able to discriminate among segments on easily identifiable variables (Wedel and Kamakura, 2000). As a result, a controlled market coverage strategy (i.e. targeting) is not always feasible (Frank *et al.*, 1972) and instead a self-selection strategy must be used (Woodside and Motes, 1981).	Verhoef *et al.* (2002) found very simplistic methods in use. Also, targeting quality requires gathering individual-level data on purchases and general characteristics, which companies struggle with (Dibb and Simkin, 2010). The ability to reach buyers appeared to be a significant constraint in adopting segmentation schemes (e.g. Peterson, 1991; Abratt, 1993). Finally, using a self-selection strategy would negate the financial benefits of targeting.
Decision making tool perspective	Resource allocation	The literature contains many normative models of resource allocation based on optimisation algorithms (cf. Wedel and Kamakura, 2000). In reality, decision making is subject to many forms of influence (Plous, 1993).	Resource allocation and decision making in real life do not follow the rational, optimisation normative models (Piercy and Morgan, 1993; Shrivastava and Grant, 1995; Danneels, 1996). In many situations, resource allocation is a relatively inefficient signal of strategic direction and management priorities (Piercy, 1998).
	Marketing planning	The adequacy of the normative model of planning has been challenged based on 1) the recognition that strategy can be emergent (Mintzberg, 1994) and 2) the implications of consumer empowerment, which may render marketing plans unable to deal with the shift in buyer-brand relationships (Firat and Schultz, 1997).	There is very little, and often conflicting, evidence of the connection between marketing planning and performance (Phillips, Davies, Moutinho, 2001). The normative model of marketing planning is rarely adopted in practice (Danneels, 1996; Quinn *et al.*, 2007; Quinn, 2009; Harrison and Kjellberg, 2010), replaced by an iterative process of making an offer, seeing who responds and adjusting the marketing mix to better serve this market.

Table 2.2 Issues with Explanations of the Segmentation-Performance Relationship (continued)

	Explanation	Conceptual Issues	Empirical Issues
Competitive strategy perspective	Competitive position	Competitive positions can erode over time as market segment requirements change, or segments themselves decline in value or attractiveness. Competitive positions need to be constantly reviewed and, where necessary, adapted or changed to meet changing market requirements (Hooley and Greenley, 2005).	Dibb *et al.* (2002) found that understanding competition is one of the least perceived outcomes of segmentation. The literature does not provide any evidence on how defensible different competitive positions are, and whether different means are employed to defend different positions (Hooley and Greenley, 2005). Chernatony, Daniels and Johnson (1993) found that managers had an overly simplified understanding of the competitive environment.
	Identification of new market opportunities	Segmentation research usually looks at past behaviour, which does not reliably predict the future nor offer insight into potential opportunities (Haley, 1968).	Market definitions are very simplistic and most often than not based on product or channel considerations rather than consumer needs (Jenkins *et al.*, 1994). Managers use traditional, simplistic segmentation bases, which do not allow identification of new segments.

On the other hand, Harrison and Kjellberg (2010) describe an intuitive, dynamic way of identifying segments based on their case company's continuous interactions with lead users, which emerged as a resource for ongoing re-segmentation because the relationships provided updates on customer needs that could be addressed by adjusted marketing offers. This indicates that segmentation can be dynamic in practice.

Overall, these explanations do not account for organisational issues that can hinder even the 'best' (in methodological terms) segmentation scheme, because they ignore the capability of an organisation to implement a segmentation strategy around given segment targets (Piercy and Morgan, 1993).

Given the shortcomings of the existing explanations, instead of adopting one of the existing perspectives and its explanations, which does not reflect segmentation practice very well and would limit the scope of investigation of what has been demonstrated to be a wide ranging organisational phenomenon (and thus would increase the theory-practice gap of segmentation literature), a broader and holistic view of market segmentation would be more appropriate, as its effects are likely to be demonstrated at all levels of decision making and actions in the organisation (Piercy and Morgan, 1993). It will be argued in Chapter 3 that the dynamic capability theory provides a suitable theoretical background to conceptualising a new perspective on market segmentation.

2.5.6. When is segmentation most appropriate?

There is little empirical evidence on the success of certain segmentation strategies under specific market conditions, particularly the kind of evidence that would be useful to managers who want to obtain more than purely theoretical guidance with regard to optimal segmentation strategies in given market conditions (Dolnicar, Freitag and Randle, 2005).

However, a few articles throw light on this issue, suggesting that the question of whether market segmentation has any influence on business performance seems to be contingent on several factors. For example, Young, Ott and Feigin (1978), based on case studies, suggest that market segmentation cannot be used: a) when the market is so small that marketing to only a part of it is unprofitable, b) when heavy users represent so large a proportion of sales that they are the only viable target, and c) where the brand is so dominant that targeting only one or two segments would not benefit sales.

Game theory principles have been applied by several authors to develop models of duopoly or oligopoly markets to study the influence of segmentation versus undifferentiated strategy in varying market conditions on organisational success. For example, Doraszelski and Draganska (2006) adopt a strategic game theory to investigate when companies should choose a market segmentation strategy and concluded that high levels of competition and fixed costs support a segmentation strategy, as well as a high/low degree of fit/misfit of the product offered with customer preferences. Similarly, Galeotti and Moraga-Gonzalez (2008) found that a minimal amount of market segmentation (e.g. recognising two segments in the marketplace for target selection purposes) allows firms to obtain positive profits as long as there is sufficient variation in per-consumer advertising costs across consumer segments. They argue that this happens because segmentation enables firms to randomise advertising strategies across markets, which weakens price competition and thus opens up the possibility to obtain positive profits. Dolnicar *et al.* (2005), through a computer simulation of a market with 6 market segments and 2 types of organisations (mass marketer and segmenter), found that: 1) the more competitive a market environment, the more successful the concentrated market segmentation strategy, 2) increased levels of marketing budget for all competitors does not favour segmenters as they reach advertising effect saturation levels earlier and 3) frequently rethinking and modifying the strategy is not recommended to segmenters because cumulative advertising effects over multiple periods of time are not taken advantage of if the target segment is modified too often.

The major contribution of these studies is that they show that, within a specific market structure and through assumptions of rational strategic behaviour, market segmentation leads to higher profits, particularly in conditions of competitive intensity. The major drawback of these studies is that they are based on economic assumptions and modelled strategic behaviour, focused mainly on the effects of market segmentation (i.e. structure) on the profit equilibrium of the whole industry rather than individual firms. Furthermore, the reality of strategic behaviour of firms does not resemble the assumptions made in those models and is very often an emergent or ad-hoc process (Mintzberg, 1994), while the market structure of many industries is very different from the duopolies or oligopolies found in these models. These drawbacks therefore limit the generalisability of these studies' findings.

2.6. Summary of Research Gaps

Despite the concept's fifty years of history, market segmentation research is in the early stages of development theoretically and methodologically (Wedel and Kamakura, 2000), as demonstrated by the review of segmentation literature strands in the previous sections. Three inter-connected issues emerge as significant research gaps in the segmentation literature and are described below.

2.6.1. Market segmentation and business performance

Pursuing a segmentation approach should enhance an organisation's performance, but there is little practical advice on how to achieve it and very little empirical evidence on the topic (Quinn and Hines, 2005). The literature contains alternative explanations of the relationship between market segmentation and business performance. However, no empirical research could be identified as test of the relationship between market segmentation and business performance. In addition, there has been little attempt to measure market segmentation success (Craft, 2004); one notable exception being Foedermayr and Diamantopoulos (2009) who study market segmentation export performance. Dibb (1999) argues that: "research which provides quantifiable evidence of the impact of segmentation and the role of success factors must be a priority for the marketing community…Such research should seek to establish a detailed understanding of the make-up and relationship between success factors in segmentation" (Dibb, 1999: 125). Ten years later, Dibb and Simkin (2009a) re-iterate the need for more research into the implementation of market segmentation into strategy development, because, 30 years after Wind's (1978) request for further research into this topic, questions remain about segmentation effectiveness and productivity.

One argument that has been put forward for this lack of empirical evidence on the success of certain segmentation strategies is that it is difficult to collect the pseudo-experimental data required to investigate the effectiveness of different strategies under different market conditions (Dolnicar *et al.,* 2005). However, such an approach would not provide more insight into how companies actually derive value from segmentation since it would ignore the capability of the firm to implement a segmentation strategy around given segments given cultural, information processing and organisational structure factors (Piercy and Morgan, 1993; Dibb and Simkin, 2001).

The review of empirical studies on market segmentation practices has revealed that these studies do not provide any inferential insights into, or robust evidence of, the market segmentation practices that work, i.e. have an impact on business performance. Foedermayr and Diamantopoulos (2008: 256) conclude their review of market segmentation practice studies as follows: "the literature offers little practical help and guidance to marketers who are seeking to implement the market segmentation process". Given the significant investment in financial and human resources, advances in the marketing literature, which have produced a host of other marketing variables argued to be significant in driving marketing success (e.g. market/interaction/relationship orientation, brand/customer equity) and the recent accusation of irrelevance in the literature (e.g. Sheth and Sisodia, 1999), this is very surprising.

2.6.2. Market segmentation implementation

The review of implementation issues suggests that a segmentation approach is only as good as its implementation (Plank, 1985). In addition, some authors underline the notion that performance improvements arising from segmentation are only achievable if segmentation is effectively implemented (e.g. Dibb and Simkin, 1994, 2009b). The value of market segmentation is tightly linked to the question: what happens when the company brings the segmentation plan to the market? It then seems necessary to challenge theoretical assumptions of implementation as an automatic process and expand research on the implementation phenomenon to advance the understanding of market segmentation and its effect on business performance (Boejgaard and Ellegaard, 2010). In order to expand research on the implementation phenomenon, knowledge is needed about the action, reactions, and consequences resulting from implementing a segmentation plan that simplifies market realities in an unclear and complex business environment (Boejgaard and Ellegaard 2010).

The area of market segmentation implementation is considerably under-researched and fragmented with three different perspectives on what implementation mean: application of normative models, integration in strategic plans and execution of plans (Boejgaard and Ellegaard, 2010). While recent research has contributed to enhancing our understanding of market segmentation practice, the focus has been on either highlighting the differences between practice and normative models (e.g. Danneels, 1996; Kalafatis and Cheston, 1997; Quinn, 2009) or on identifying implementation barriers related to the execution of plans (e.g. Dibb and Simkin, 1994, 2001, 2009b). There is little knowledge about successful implementation – the mechanisms that make segmentation work in practice, beyond the descriptive contribution from Lin *et al.* (2004) and the suggestions from Dibb and Simkin (2009b). Furthermore, there is no knowledge about how well these mechanisms might work in practice and their impact on organisational performance outcomes. Such knowledge is important because the segmentation literature does not provide any useful guidelines to firms wanting to implement a segmentation approach (Dolnicar *et al.,* 2005; Foedermayr and Diamantopoulos, 2008), despite espousing segmentation as a cornerstone of marketing strategy and teaching the concept in all marketing textbooks. Finally, the literature does not properly consider the implementation of identified segments in the firm and the degree to which the firm is bound by previous choices (Clarke and Freytag, 2008), as researchers usually assume that firms are free to target the newly identified segments without any organisational restrictions (Dibb and Simkin, 2010).

Finally, the few studies identified in Section 2.4 have some methodological shortcomings that lower the reliability of their findings. Among the qualitative studies, all studies claimed to adopt a purposive sampling approach, even though only five studies provided an in-depth justification. Many quantitative studies adopted judgmental or convenience sampling methods. Probability methods were used in only four studies. Furthermore, the sample sizes utilised were generally small – most studies had a sample size of less than 100, making generalisability a significant problem. Finally, inferential statistics were only applied in six studies: cluster analysis (Erem and Mengüc¸ 1997; Sausen *et al.*, 2005), regression (Schuster and Bodkin, 1987; Capon and Palij, 1994; Hassan and Craft, 2005) and most frequently factor analysis (Craft, 2004; Hassan and Craft, 2005; Lin *et al.*, 2004). More sophisticated data analysis techniques such as structural equation modelling were applied only once by Foedermayr and

Diamantopoulos (2009). Thus, from a methodological perspective, it is remarkable to observe the relative lack of sophistication when it comes to investigating market segmentation practices, which is in stark contrast to the sophistication employed in developing new segmentation analytical methodologies.

2.6.3. Alternative segmentation strategies and contextual influences

The literature has highlighted the need to study the conditions under which different market segmentation strategies can be employed successfully (Dolnicar *et al.*, 2005). Given its significant implementation barriers, the resources required for successful implementation and the lack of quantifiable evidence of return on investment, more knowledge is required to guide firms in the right choice regarding segmentation adoption. This is particularly important since many marketing concepts have developed contingency theories around them (e.g. market orientation, customer relationship management), so the claim taught in every marketing class about segmentation being the basic building block of marketing strategy in any market and organisational context should be empirically validated. In addition, starting from Dickson and Ginter (1987) clarification of different market strategies whose appropriateness depends on various market conditions, research is needed on whether such strategies can be used either as complementary or substitute strategies (Sheth and Sisodia, 1999).

2.7. Conclusion

Despite the fact that many academics and practitioners still view it as a research technique that offers a static map of the marketplace, this chapter has shown that there is wide variety of perspectives on how market segmentation is conceptualised and investigated empirically. The distinction among the three different perspectives on market segmentation offers five types of insight relevant to the present research. Firstly, it offers conceptual clarity to the vast segmentation literature by classifying and grouping together the main types of contributions to the literature according to their definition of market segmentation. Secondly, this classification gives preliminary insight into the various roles that market segmentation may take in marketing practice, which proves helpful in the qualitative empirical research phase of this study. Thirdly, it leads to the observation that whatever perspective is adopted, that perspective seems to guide the elements that researchers investigate and the type of segmentation analysis and usage managers undertake. Fourthly, it dismisses the misconception that many academics and practitioners have of market segmentation as a research technique, highlighting the fact that it is a much more versatile concept than previously thought. Fifthly, it frames the contribution of the present research, which allows us to put forward a fourth conceptualisation of market segmentation – as an organisational capability – that differs in important ways from these three perspectives.

The extant explanations of a segmentation-performance link are faced with conceptual and/or empirical shortcomings. The empirical shortcomings in particular emerge from the findings of the review of market segmentation practice and market segmentation implementation. Thus, there is need to identify different explanations. Based on contributions from the market segmentation implementation literature (Piercy and

Morgan, 1993; Jenkins and McDonald, 1997; Dibb and Simkin, 2001; Goller *et al.*, 2002; Clarke and Freytag, 2008), another mechanism that might explain the relationship between market segmentation and business performance seems to be related to implementation aspects, i.e. the organisational processes that make segmentation an organisational reality. This signals the relevance of the resource based view and dynamic capabilities theory, which focus on such organisational processes and the way they explain performance.

The methodological assessment of empirical studies on market segmentation practice has revealed a prevalence of exploratory and descriptive research designs; a heavy reliance on non-probabilistic sampling methods; relatively small sample sizes; lack of adequate psychometric assessment of the measures employed; and, with few exceptions, relatively basic statistical analyses of the collected data. Considering the objective of studying an association between segmentation and business performance, more quantitative and inferential empirical evidence is needed.

Thus, the contribution of this chapter is to guide: a) the choice of theoretical background to support this research, b) the selection of the phenomenon under investigation (the relationship between market segmentation and business performance through the lens of implementation considerations), c) the new conceptualisation of market segmentation as a dynamic capability and d) the choice of research methods to investigate the phenomenon empirically (a combination of qualitative and quantitative methods).

3. RECONCEPTUALISING MARKET SEGMENTATION AS DYNAMIC CAPABILITY

3.1. Introduction

This chapter proposes the dynamic capability perspective as a theoretical background to investigate how market segmentation activities can translate into performance outcomes. The appropriateness of choosing this theory as a background to the empirical research is supported by three rationales. Firstly, the analysis of extant explanations between market segmentation and business performance undertaken in Chapter 2 (Section 2.5.5) leads to the conclusion that extant explanations have significant conceptual, but particularly empirical, shortcomings and hence new explanations are needed. Secondly, the review of market segmentation implementation literature (Chapter 2, Section 2.4) highlights that implementation problems have prevented firms from gaining benefits out of adopting segmentation schemes. This suggests that, contrary to the traditional focus of segmentation literature on segmentation bases, models and methods, the relationship between market segmentation and business performance is linked to the question of what happens within organisations when the implementation of a new segmentation scheme is attempted. This new focus emphasises the role of organisational processes as a potential explanation for a relationship between market segmentation and business performance. Thirdly, the dynamic capabilities theories have been the adopted extensively in the study of the financial impact of marketing activities, in particular market orientation and marketing capabilities.

Therefore, the purposes of this chapter are to: a) identify the characteristics of dynamic capability in order to undertake a conceptual analysis of market segmentation as a dynamic capability, b) understand how dynamic capabilities are developed and how they help firms improve their performance and c) reconceptualise market segmentation as a dynamic capability, in contrast with the set of analytical decisions and choices that has been the focus of the three perspectives identified in Chapter 2 (Section 2.3). This reconceptualisation then allows the development of a conceptual model of market segmentation capability and business performance and the identification of two marketing capabilities which emerge from the literature as possible mechanisms by which market segmentation capability translates into performance outcomes.

3.2. Dynamic Capabilities Theory

3.2.1. Definition and characteristics of dynamic capabilities

The dynamic capabilities theory is a new theoretical approach that specifically defines the type of processes by which firms could exploit resources (Newbert, 2007). This builds on the resource-based view (RBV), which is one of the main theories of the firm that seeks to explain the patterns of performance differences between firms over time (e.g., Barney, 1991, 1997; Mahoney and Pandian, 1992; Peteraf, 1993). According to the RBV, performance differentials among firms result from the heterogeneity of their resources, in particular those that are valuable, rare, inimitable, and non-substitutable (Barney, 1991; Wernerfelt, 1984). The assumptions of the RBV are that resources (and

capabilities) are heterogeneously distributed among firms and that they are imperfectly mobile. These assumptions allow for differences in firms' resource endowments to both exist and persist over time, thereby allowing for a resource-based competitive advantage (Newbert, 2007). However, Mahoney and Pandian (1992) argue that better resources are not enough for firms to achieve sustainable higher performance, but rather the capability of making better use of its resources is the true source of performance, particularly when resources are allocated in such a way that their productivity is maximised.

Hence, Teece, Pisano and Shuen (1997: 510) proposed the dynamic capabilities framework "to explain how combinations of competences and resources can be developed, deployed, and protected" and defined a dynamic capability as "the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments" (Teece *et al.*, 1997: 516). According to dynamic capabilities theory, capabilities improve firm performance when they: (1) efficiently and effectively organise resources so that they may be deployed to gain competitive advantage and (2) enable adaptation through the development of new resources and the re-configuration of existing resources (Teece *et al.*, 1997; Eisenhardt and Martin 2000; Teece, 2007).

Dynamic capabilities enable a firm to perform value-creating tasks effectively and reside in organisational processes and routines that are difficult to replicate (Krasnikov and Jayachandran, 2008). A capability is imperfectly mobile when firms find difficulty in trading that capability, potentially because a capability arises from the complex interaction of resources and firm-specific knowledge (Dutta, Narasimhan and Rajiv, 1999). A capability is imperfectly imitable when competing firms cannot imitate a firm's distinctive capabilities, due to its complexity and tacitness (Lippman and Rumelt, 1982). Thus, an emphasis is put on 'home grown' capabilities – something that is inherent to an organisation and that is in substantial part the result of its experience (Helfat and Winter, 2011).

In addition, capabilities are conceptualised in the context of collective problem-solving (Schreyogg and Kliesch-Eberl, 2007). Capabilities are close to action and cannot be separated from acting or practicing, they are embedded in practice, which means that they represent more than explicit knowledge, encompassing also knowledge contained in technical systems and the management systems and norms that guide the interpretation of knowledge (Day, 1994; Schreyogg and Kliesch-Eberl, 2007). This is why the notion of capability is referred to as habitualised action patterns or routines (e.g. Nelson and Winter, 1982; Winter, 2003). As Helfat and Peteraf (2003: 999) argue, "at a minimum, in order for something to qualify as a capability, it must work in a reliable manner". This means that capabilities represent reliable patterns of problem solving rules, which must be proved successful across various situations and organisations before they are called capabilities (Schreyogg and Kliesch-Eberl, 2007).

Another important characteristic of capabilities is embeddedness, which reflects the extent to which a capability is contextually entrenched within the structural, social, and cultural aspects of the firm (Day, 1994; Grewal and Slotegraaf, 2007). Schreyogg and Kliesch-Eberl (2007) also argue that capabilities are embedded in the organisational context because: a) problem-solving is embedded in organisational design, information procedures and communication channels, which make capabilities distinctive and b) capabilities are brought about by social interaction and represent a common approach to

problem solving. Capability embeddedness is argued to be distinct from the capability itself because it reflects a by-product that occurs as a result of the extent to which a capability is contextually entrenched within the structural and socio-cultural fabric of the firm (Grewal and Slotegraaf, 2007). A greater level of capability embeddedness is determined by greater reliance on tacit and intangible resources and competences that are richly connected and are dispersed and cooperatively shared across individuals and departments (Rumelt, 1984). This embeddedness creates an isolating mechanism, which protects firms from imitation and preserves their revenue streams due to its causal ambiguity (Rumelt, 1984).

Even though dynamic capabilities are sometimes considered unique and idiosyncratic processes that emerge from path-dependent histories of the firm (Teece *et al.,* 1997), Eisenhardt and Martin (2000) argue that dynamic capabilities also exhibit common features associated with effective processes across firms, due to the fact that there are more and less effective ways of dealing with specific challenges that must be addressed by a capability. In other words, Eisenhardt and Martin (2000) argue that commonalities across effective firms or what can be termed '*best practice*' exist even when it comes to dynamic capabilities.

3.2.2. Dynamic versus operational capabilities

Dynamic capabilities are contrasted in the literature with ordinary (or zero-order/ functional) capabilities by being concerned with change (Collis, 1994; Teece *et al.*, 1997; Winter, 2003; Helfat and Winter, 2011). The literature emphasises that dynamic capabilities involve long-term commitments to specialised resources – for these sorts of commitments to be economically sound, the capability must be exercised: "to have a dynamic capability and find no occasion for change is merely to carry a cost burden" (Winter, 2003: 993).

Thus, dynamic capabilities govern the rate of change of ordinary capabilities (Collis, 1994). An organisation that keeps producing and selling the same product, on the same scale and to the same customer base over time, exercises functional or ordinary capabilities, the 'how we earn a living now' capabilities (Winter, 2003; Helfat and Winter, 2011). By contrast, capabilities that would change the product, the production process, the scale, or the customers (markets) served are not ordinary, they are dynamic (Helfat and Winter, 2011). Dynamic capabilities are those that operate to extend, modify or create ordinary capabilities (Winter, 2003), alter the resource base of the organisation (Helfat *et al.*, 2007) or features of the external environment (Teece, 2007). The notion of 'dynamic' reflects: "the continuous renewal of organisational capabilities, thereby matching the demands of (rapidly) changing environments" (Schreyogg and Kliesch-Eberl, 2007: 914). Dynamic capabilities are argued to enable "both the exploitation of existing internal and external firm-specific capabilities and developing new ones" (Teece *et al.*, 1997: 515).

Furthermore, Eisenhardt and Martin (2000) argue that dynamic capabilities vary with market dynamism in that they resemble routines, i.e. complicated, detailed, analytical processes relying on existing knowledge and linear execution to produce predictable outcomes (Nelson and Winter, 1982) when markets are moderately dynamic within stable industry structures. However, in highly dynamic markets where industry

structures are blurring, dynamic capabilities are simple, experiential and unstable processes that rely on quickly created knowledge and iterative execution to produce adaptive, but unpredictable outcomes (Eisenhardt and Martin, 2000). Thus, in Eisenhardt and Martin's (2000: 1107) view, dynamic capabilities are invariably linked to environmental dynamism. These authors in fact define dynamic capabilities as "the processes to integrate, reconfigure, gain and release resources – to match and even create market change" and "the organisational and strategic routines by which firms achieve new resources and configurations as markets emerge, co llide, split, evolve, and die".

Thus, the dynamic capabilities theory aims to revise the RBV by emphasising the dynamic nature of markets but also of organisational capabilities (Helfat and Peteraf, 2003).

3.2.3.   Development of capabilities

There is sparse literature focusing on how capabilities are developed or improved (Vorhies *et al.*, 2011). In the strategic management literature, two factors have been proposed as antecedents or enablers of capability development. Several authors (e.g. Adner and Helfat, 2003; Helfat and Peteraf, 2003; Holcomb, Holmes and Connelly, 2009; Gary and Wood, 2011; Hodgkinson and Healey, 2011) argue that managerial cognition is relevant, particularly in the early stages of capability development, because it determines managerial action and organisational search for resources and competences to solve problems (Pandza, 2011). Adner and Helfat (2003) find that heterogeneity in business performance can be explained by differences in managerial capabilities, i.e. the managerial human capital, social capital and cognition. In particular, managerial cognition represents conceptual and operational frames by which managers make sense of the environment (Daft and Weick, 1984). Since managers are rationally bounded, they must rely on simplified representations of the world to process information (Simon, 1955). These imperfect representations form the basis for the development of the mental models and strategic beliefs that drive managerial actions (Tripsas and Gavetti, 2000), particularly in terms of strategic choices, such as the choice of products and target markets, which are diverse and even contrasting (Kaplan, 2008). The implication of managerial cognition as a driver of capability development is that the process of establishing a new capability as a source of future strategic direction is socially complex – demanding championing, strategic forcing, facilitating, and communicating with top management (Floyd and Lane, 2000), and as a result, it becomes a collective effort that is based on common cognitive frames (Pandza, 2011).

The second factor related to the development of dynamic capabilities rests on organisational learning theory. Many authors argue that capability development takes time and is the result of an organisational learning process (e.g. Grant, 1996), "in which a specific way of 'selecting and linking' resources gradually develops" (Schreyogg and Kliesch-Eberl, 2007: 916). Schreyogg and Kliesch-Eberl (2007) further argue that the development of capabilities arises from a trade-off between exploitation and exploration processes in organisational learning (cf. March, 1991). This trade-off exists because, as Levinthal and March (1993) argue, exploiting current strengths implies that more explorative activities are overlooked. The risk of developing one capability in particular (which increases the opportunity cost of exploration, cf. Levinthal and March, 1993), without paying close attention to changes in the market environment makes such

capabilities transform into core rigidities (Leonard-Barton, 1992). Such risk is incurred by firms due to the impact of managerial cognition earlier referred to. Schreyogg and Kliesch-Eberl (2007) argue that capabilities are embedded into a common belief system, into which managers are socialised. This process of socialisation then leads managers to practice those beliefs, rather than reflect on them. If successful, this automatic implementation of problem-solving routines (or capabilities) then gives rise to cognitive and emotional resistance against critical signals signalling a need for change (Schreyogg and Kliesch-Eberl, 2007).

Teece (2007) has also proposed three processes that further clarify the nature and micro-foundations of the capabilities necessary to sustain superior enterprise performance: a) sensing (and shaping opportunities), referring to the probing and reprobing of customer needs and technological possibilities, understanding latent demand, the structural evolution of industries and markets, and likely supplier and competitor responses; b) seizing opportunities, referring to the design and performance specification of products, and the business model employed, which help define the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit; c) reconfiguring resources, which refers to the ability to recombine and to reconfigure assets and organisational structures as the enterprise grows and markets and technologies change.

In summary, dynamic capabilities are value creating processes, require long term commitment to specialised resources, exhibit commonalities across firms (i.e. 'best practices'), are embedded in the organisational fabric, facilitate resource allocation/ change and vary in nature according to market dynamism. To generate sustainable competitive advantage, capabilities must be rare, imperfectly mobile and imperfectly imitable.

3.3. Marketing Capabilities

3.3.1. Definitions and foundation

Marketing capabilities have been defined as a firm's ability to understand and forecast customer needs better than its competitors and to effectively link its offerings to customers (Day, 1994). The literature suggests that marketing capabilities may be immobile (Capron and Hulland, 1999), inimitable (Bharadwaj, Varadarajan and Fahy, 1993), and largely non-substitutable (Moorman and Rust, 1999) market-relating mechanisms by which superior market knowledge may be deployed by firms to generate economic rents (Day, 1994). Market knowledge has been defined as "organised and structured information about the market" (Li and Calantone, 1998: 18), which in market-oriented firms, is managed in more systematic, thoughtful, and anticipatory ways (Day, 1994). The literature posits that market knowledge endows firms with a greater understanding of customers' expressed and latent needs, competitors' capabilities and strategies, channel requirements and changes and the broader environment (e.g. Hult and Ketchen, 2001). Such knowledge gives firms competitive advantage because it is difficult to codify because of its socially complex nature (Simonin, 1999), which makes it difficult for rivals to copy (Krasnikov and Jayachandran, 2008). Several researchers argue that the development and improvement of marketing capabilities is premised on the availability and quality of market

knowledge (e.g. Sinkula, Baker and Noordewier, 1997; Vorhies *et al.*, 2011). Increasing and deploying market knowledge through a firm's marketing capabilities is argued to improve firm performance (e.g. Dutta *et al.*, 2005; Vorhies *et al.*, 2011).

In order to create and deploy market knowledge, marketing scholars have borrowed the concepts of exploration and exploitation which were posited by March (1991) as adaptive learning processes and key factors for maintaining a competitive advantage. Kyriakopoulos and Moorman (2004) defined marketing exploitation capabilities as involving the improvement and refinement of current skills and routines associated with existing marketing strategies (including existing market segments, positioning, distribution and other marketing mix strategies). Such capabilities strengthen current routines (March, 1991) and capabilities (Leonard-Barton, 1992). On the other hand, marketing exploration capabilities have been defined as involving challenging prior approaches to interfacing with the market, such as a new segmentation, new positioning, new products, new channels and so on (Kyriakopoulos and Moorman, 2004).

It follows that developing dynamic marketing capabilities and developing or improving existing operational marketing capabilities are all determined by embedding new knowledge about various aspects of the market including customers, competitors, market trends, and regulation (Day 1994; Vorhies *et al.*, 2011). Building on this idea, Vorhies (1999) and Vorhies *et al.* (2011) find that the level of market knowledge is positively related to marketing capabilities development. Vorhies *et al.* (2011) further find that market knowledge is also related to marketing exploration and exploitation capabilities, which in turn are related to brand management and CRM capabilities. Their study also seems to indicate that marketing exploitation is more strongly related to the development of brand management and CRM capabilities than marketing exploration, which provides support to the idea that firms engage in exploration activities only when exploitation fails to deliver or when managers actively choose to reconfigure resources and competences (Vorhies *et al.,* 2011).

Most of the previous studies of marketing capabilities have implicitly considered marketing capabilities as ordinary capabilities, thus the dynamic nature of marketing capabilities has only been discussed recently. Bruni and Verona (2009) build on Winter's (2003) distinction between dynamic and operational capabilities and argue that dynamic marketing capabilities are specifically aimed at developing, releasing and integrating market knowledge and marketing resources in order to match and create market and technological change. Thus they differentiate between marketing capabilities, which help firms earn a living in stable market conditions by satisfying current customers, exploiting existing products and distribution channels and advertising existing brands, and dynamic marketing capabilities, which support firms in the process of changing from their stationary process by releasing and integrating market knowledge that helps firms evolve. A similar perspective is proposed by Danneels (2008), who argues that a dynamic marketing capability reflects the firm's ability to add new customer competences to the firm's repertoire, which enable the firm to serve a particular market segment. Customer competences are defined as consisting of knowledge of customer needs, customer purchasing procedures, competitors, distribution and sales access to customers, brand reputation and communication channels. Danneels (2008) conceptualises a dynamic marketing capability as involving: identifying new customers, developing knowledge about those customers, and gaining access to them through sales and distribution channels.

3.3.2. Marketing capabilities and performance

The evidence seems to support the argument that marketing capabilities have an impact on performance, with a recent meta-analysis finding that marketing capabilities are positively linked to performance and have a stronger influence on performance than research and development or operations capabilities (Krasnikov and Jayachandran, 2008). The performance measures to which capabilities are related distinguish between two types of outcomes (Krasnikov and Jayachandran, 2008): firm performance (e.g. market share, profitability, sales) and operational performance (e.g. cost reduction, lead-time reduction, and time to market).

Despite the wealth of articles on marketing capabilities and their relationship with business performance, not many studied have investigated any moderating effects, either firm- or market-specific that might influence this relationship. This is particularly surprising, since the dynamic capabilities literature suggests that capabilities are affected by the environmental context in which the firm operates (Eisenhardt and Martin, 2000). Furthermore, Ireland and Webb (2006) argue that the uncertainty of the market environment decreases the likelihood of developing sustainable competitive advantage, which means that dynamic capabilities, through their effective and efficient allocation of resources, ultimately determine the performance the firm generates and maintains over time.

Interestingly, Krasnikov and Jayachandran's (2008) meta-review of the capabilities-performance relationship studies did not find any moderating effect for industry type (B2B/B2C, manufacturing/ services), firm size, geographic context, level of analysis (SBU versus firm) or scope of research (multi/ single industry). However, Song, Droge, Hanvanich and Calantone (2005) found that marketing capabilities are more strongly associated with performance in environments with low technological turbulence. Furthermore, Song, Di Benedetto and Nason (2007) found that the strategic type of a firm (Miles and Snow, 1978) moderates the relationship between marketing capabilities and firm performance, in particular that defenders had significantly greater marketing capabilities than analyzers, and analyzers had significantly greater marketing capabilities than prospectors.

The market orientation literature, on the other hand, has investigated moderating effects to a larger extent, in particular the effects of environmental dynamism and competitive intensity. While the nature of market orientation has been debated (Menguc and Auh, 2006), several authors regard market orientation as a capability (e.g. Day, 1994; Kyriakopoulos and Moorman, 2004). Morgan, Vorhies and Mason (2009) view market orientation as a key market-based asset, and firms' marketing capabilities as a key market-relating deployment mechanism. Their results show that market orientation, marketing capabilities and their interaction are positively related to firm performance, suggesting bidirectional 'cospecialisation' relationships between these variables.

In terms of moderating effects, Slater and Narver (1994) found no statistically significant interaction terms, but they found significant differences in the magnitude of the partial correlation coefficients of market orientation and firm performance in environments characterised by high versus low market and technological turbulence, suggesting that market orientation is more important in more stable environments. A similar conclusion was reached by Paladino (2008), who found that the impact of market orientation on customer value (a measure of performance) was stronger in

environments of low market turbulence. On the other hand, several studies have found enhancing moderation from environmental dynamism and competitive intensity (e.g. Harris, 2001; Diamantopoulos and Hart, 1993; Kumar, Subramanian and Yauger, 1998). Srinivasan, Lilien, and Rangaswamy (2005) found that marketing proactivity[9] (viewing a recession as an opportunity and executing a marketing response to capitalise on that opportunity) in a recession improves firm performance.

3.4. Market Segmentation as Dynamic Capability

Following Teece's (2007) characterisation of the foundations of dynamic capabilities, market segmentation can indeed be considered such a capability as the segmentation litereature provides some arguments that are in line with the three micro-foundations of dynamic capabilities, as follows:

a) sensing: market segmentation generates superior market knowledge (Piercy and Morgan, 1993), alerts the company to the critically important trends and opportunities (Garda, 1981), allows a firm to identify underserved/growing/least price sensitive segments (Slater and Narver, 2000), identifies the groups most worth pursuing – the underserved, the dissatisfied, and those likely to make a first-time purchase (Yankelovich and Meer, 2006);

b) seizing: market segmentation provides insights into opportunities within the existing customer base to expand the share of customer requirements that the firm can exploit (Morgan, Anderson, and Mittal, 2005), enables uncovering innovative product, prices, distribution and service strategies (Hlavacek and Reddy, 1986) and generates insights into how a firm's product and service offerings may provide the greatest non-price value to customers and channel members (Slater and Narver, 2000);

c) reconfiguring: market segmentation leads to more productive resource use by better matching the firm's resource base with market opportunities (Morgan, Vorhies, and Mason, 2009) and allows firms to focus their resources on segments of consumers that are more likely to purchase their market offerings (Mahajan and Jain, 1978).

Furthermore, market segmentation displays the characteristics of dynamic capabilities uncovered from the literature (see Table 3.1). For each of the characteristics of dynamic capabilities identified in Section 3.2.2, the market segmentation literature provides some empirical or conceptual support.

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[9] While not explicitly focusing on market orientation, the way they defined marketing proactivity is similar to Kohli and Jaworski's (1990) definition of market orientation by focusing on a firm's responsiveness to market conditions.

Table 3.1 Market Segmentation Displays Capability Characteristics

Capability characteristic	Applicability to market segmentation
Capabilities are exercised through value creating processes, which, in marketing, include: new product development, market sensing and customer linking (Day, 1994)	The literature contains examples of market segmentation being used for new product development (e.g. Barnett, 1969; Frank, 1972; Bonoma and Shapiro, 1984; Emmelhainz and Kavan, 1999; Yankelovich and Meer, 2006; Giloni, Seshadri and Tucci, 2008;), customer linking (e.g. Cooley, 2002; Cao and Gruca, 2005; Story and Hess, 2006; Ansell *et al.*, 2007; Hulten, 2007) and market sensing (e.g. Garda, 1981; Badgett and Stone, 2005; Dibb *et al.*, 2002).
Dynamic capabilities require long term commitments to specialised resources (Winter, 2003)	Successful market segmentation implementation requires long term commitments to financial and human resources to implement the segmentation process (Danneels, 1996; Quinn, 2009), as well as expert knowledge and skills regarding the segmentation process, data sources and data analysis and segmentation evaluation (Lin *et al.*, 2004; Dibb and Simkin, 2001, 2010).
Dynamic capabilities develop, deploy, protect and reconfigure resources and competences (Teece *et al.*, 1997)	Hamermesh, Anderson and Harris (1978) identify market segmentation as a strategic element to focus marketing assets by identifying, developing and sustaining activity in lower risk segments – particularly for firms with low market share. McDonald and Dunbar (2004) argue that market segmentation leads to the concentration of resources in markets where competitive advantage is greatest and returns are high. Mahajan and Jain (1978) and Rangan, Mortiarty and Swartz (1992) argue that market segmentation allows more effective use of firm resources, because it allow firms to focus their resources on segments that are more likely to purchase their market offerings.
Dynamic capabilities instil changes in resources and competences (Collis, 1994; Bruni and Verona, 2009).	Market segmentation has been argued to enable the creation of innovative product, pricing, distribution and service strategies (Hlavacek and Reddy, 1986). In addition, the review of studies of market segmentation practice has shown that many implementation barriers have been found in relation to the reconfiguration of strategic priorities, product portfolio, customer segments served, organisational structure and culture and distribution channels – which are all marketing resources (Hooley, Greenley, Cadogan, 2001; Srivastava, Fahey and Christensen, 2001).
Marketing capabilities are processes through which market knowledge is generated and deployed (Bruni and Verona, 2009).	Market segmentation analysis is an important generator of market knowledge (Dibb *et al.,* 2002; Badgett and Stone, 2005; Garda, 1981; Johnson, 1971; Harrington and Tjan, 2008).
Dynamic capabilities are also embedded in the organisational fabric (Grewal and Slotegraaf, 2007; Day, 1994)	Effective implementation of market segmentation requires an organisation-wide acceptance and belief in the way that the organisation chooses to view its market (Jenkins and McDonald, 1997). This unique view of the marketplace then guides the focus of people's thinking in the organisation (Piercy and Morgan, 1993), provides a basis for strategic decision making and tactical marketing activities and a focus for the entire processes and operations of the organisation on the selected market segments (Jenkins and McDonald, 1997).

Table 3.1. Market Segmentation Displays Capability Characteristics (continued)	
Capability characteristic	**Applicability to market segmentation**
Capabilities are rare (Barney, 1991)	Despite findings from various authors that more than 50% of companies surveyed declare they use market segmentation, the percentages of companies truly integrating segmentation schemes in their marketing planning or tailored value propositions are much lower (e.g. Schuster and Bodkin, 1987; Abratt, 1993; Badgett and Stone, 2005). Similarly, while many firms have conducted a major segmentation exercise during the previous two years, but a fraction declare deriving real value from the exercise (Yankelovich and Meer, 2006).
Capabilities are imperfectly mobile and imitable (Barney, 1991)	Segmentation schemes are developed with a specific purpose in mind (Wind, 1978; Yankelovich and Meer, 2006), therefore their development and usefulness will vary depending on many factors, for example different background, market definition and product scope, organisational structure and culture, the level of IT infrastructure and the sophistication of customer databases (Meadows and Dibb, 1998). Furthermore, while commercial segmentation solutions (e.g. PRIZM[10], ACORN[11], VALS[12]) are available for purchase, they cannot provide the benefits of an organically grown segmentation scheme (Quinn, 2009) because they are not adapted to the specific market and internal context of the firm and its strategic objectives (Yankelovich and Meer, 2006; Quinn, 2009) and implementing them requires commitment and support both from top management and daily users – which cannot be acquired without involving them in the segmentation scheme development (Dibb and Simkin, 2010).
Capabilities are developed through managerial cognition (Adner and Helefat, 2003)	Segmentation schemes are recognised, both in the literature and in practice, to be managers' representations of demand heterogeneity. In a survey of Dutch companies using database marketing, Verhoef *et al.* (2002) discover that 30% of managers use their intuition and experience to derive segmentation schemes, a finding that is corroborated by Danneels (1996), Quinn (2009) and Quinn *et al.* (2007) in the fashion retail industry.

In addition, the dynamic capability perspective helps explain some puzzling findings from the empirical studies of market segmentation implementation. Eisenhardt and Martin (2000) have argued that dynamic capabilities vary in their nature with the degree of market dynamism. In the review of market segmentation practices, contrasting findings were highlighted in regards to the degree to which normative models of segmentation were found in practice. Several authors have found that, in the fashion retailing context, normative models of rational and analytical decision making processes

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[10] Prizm is a household segmentation scheme offered by Nielsen, which groups consumers into 66 segments based on a wide variety of consumer behaviour, shopping patterns, media preferences variables and provides their key demographic, socioeconomic rank to offer pre-defined targets for marketing needs.

[11] ACORN is a geodemographic segmentation scheme offered by research agency CACI, which segments small neighbourhoods, postcodes, or households of the UK into 5 categories, 17 groups and 56 types.

[12] VALS is a psychographic segmentation scheme which segments US adults into eight distinct segments using a specific set of psychological traits and key demographics that drive consumer behaviour.

do not exist in practice and are replaced by intuitive and simplistic processes of adjusting the retail mix to the existing customer base (Danneels, 1996; Quinn *et al.,* 2007; Quinn, 2009). In contrast, Kalafatis and Cheston (1997) investigating the pharmaceutical industry, Meadows and Dibb (1998) looking at the financial services industry and Bailey *et al.* (2009) interviewing organisations in telecommunications found that normative models of segmentation implementation can be found in practice. The dynamic capability perspective explains this contrast by arguing that the nature of dynamic capabilities differs according to the dynamism of the markets targeted by organisations in these industries. The simplistic segmentation practices adopted in the fashion retail industry may be due to the fact that this industry tends to be more dynamic and fragmented than the pharmaceutical, financial services or telecommunications industries that were the focus of studies which found a more traditional approach to segmentation and marketing planning.

Finally, according to Eisenhardt and Martin (2000), dynamic capabilities have certain 'best practices' attached to them. Despite the lack of empirical research into market segmentation best practices, Section 2.4.5 (Chapter 2) summarised the managerial recommendations from previous studies of market segmentation. Thus market segmentation also exhibits common features associated with effective processes across firms, which tend to put forward various organisational actions and processes that would support the realisation of the three areas highlighted by Boejgaard and Ellegaard (2010) in their review of market segmentation implementation: the analysis of segments and the development of segmentation schemes, the integration of segmentation schemes in marketing plans and strategies and the execution of plans and strategies by employees.

Thus, market segmentation can be considered a dynamic capability as it fulfils the main characteristics identified in the literature. Therefore, this research adopts a dynamic capabilities view in studying the link between market segmentation and business performance.

3.1. Conceptual Model of Market Segmentation Capability and Business Performance

3.1.1. Dimensions of market segmentation capability

The review of market segmentation roles and implementation from Chapter 2 suggests that market segmentation capability can be regarded as a multi-dimensional concept comprising four processes: research process, implementation process, monitoring process and organisational integration process (see Figure 3.1).

Processes are a series of activities rather than instants of thoughts or unrelated activities (Li and Calantone, 1998). Understanding dynamic capabilities as a series of processes is in line with many contributors to the dynamic capability literature. Day (1994) defines capabilities as bundles of skills and collective learning, exercised through organisational processes. Amit and Schoemaker (1993: 35) also describe how "capabilities refer to a firm's capacity to deploy resources . . . using organisational process, to effect a desired end". Finally, Teece *et al.* (1997: 524) state: "The essence of a firm's dynamic capabilities is presented here as being resident in the firm's organisational processes".

Figure 3.1 A Conceptual Model of Market Segmentation Capability and Business Performance Derived from the Literature
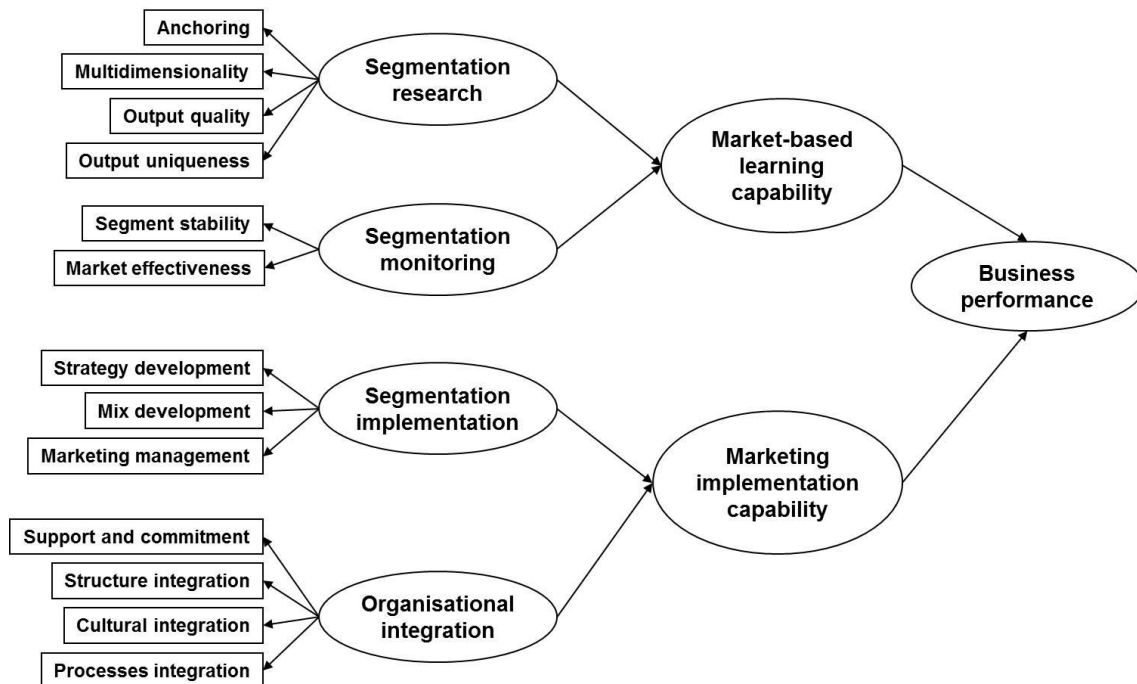
Segment research capability refers to the company's ability to have a clear and consumer-focused picture of how their market is structured, i.e. not in terms of products or sectors or channels, but rather in terms of consumer needs, behaviour and characteristics. Thus a research capability has four characteristics: anchoring, multidimensionality, output quality and output uniqueness. Anchoring refers to setting objectives for segmentation research that are closely related to the firm's strategy (Green, 1977) or marketing problem to be solved (Wind, 1978). Multidimensionality refers to going beyond distinguishing consumers on demographics or other general objective variables (Yankelovich and Meer, 2006) and providing a detailed pictured of consumer segments – who they are, what they buy, when they buy and why they buy, that leads to a deep insight into their needs, preferred benefits and responses to marketing stimuli (Badgett and Stone, 2005). This is because demographics lack content relevant to the specific personal and environmental elements present in the context for action and relevant to the attributes and benefits that consumers likely find valuable in brands (Yankelovich and Meer, 2006). Output quality refers to developing a segmentation scheme whose segments are identifiable (assigning customers to segments), measurable (estimating demand), meaningful (to customers, as well as the firm), accessible (reaching segments with promotional and distributional efforts), actionable (basis for the formulation of effective marketing strategies), and responsive (segments respond uniquely to marketing efforts targeted at them) (Kotler, 1994). Finally, what makes a segment research capability a rare and inimitable resource is the uniqueness of the segmentation scheme and the secrecy with which it is often held. In fact, Dickson and Ginter (1987) argue that the different perceptions of the market segment structure that competing firms may have are an important determinant of competitive performance since they provide the basis for marketing strategy. If each

firm's definition, framing and characterisation of demand heterogeneity in the market is unique, then the accuracy of the firm's perception of market structure is a critical determinant of competitive advantage (Dickson and Ginter, 1987).

Segment monitoring capability refers to the company's ability to monitor segment stability and the effectiveness of the company's offerings in the targeted segments (Goller *et al.*, 2002). There are two main ways of understanding segment stability: internal and dynamic stability. Internal stability relates to the degree to which a segment remains homogeneous in terms of one or more key characteristics over time (Calantone and Sawyer, 1978). When customers undergo changes in their needs and requirements, they may move into or fall out of a firm's target segment, resulting in size dynamics, i.e., the quantity of customers and revenue in a segment increasing or decreasing (Blocker and Flint, 2007). Dynamic stability refers to whether identified segments at a given time remain unchanged over time in terms of number, size and profile. Segment instability is particularly important when segmentation is undertaken for long-term strategic planning. Therefore, a strong monitoring capability will be apparent in the process of periodical re-evaluations through customer tracking and segment monitoring (Hlavacek and Reddy, 1986) in order to re-confirm the existence of the originally identified segments. It will also be apparent when firms use this process of periodical re-evaluation to inform their future choices of segmentation bases and methods.

Monitoring segmentation effectiveness refers to assessing the effectiveness of company's offerings in the targeted segments and it actually represents the biggest challenge for segmenting firms (Badgett and Stone, 2005), which makes it a truly rare resource for companies which are able to identify appropriate measures of performance that will allow a firm to assess the success of its segmentation strategy. The literature contains prescriptions of segment effectiveness analysis. For example, Bonoma and Shapiro (1984) suggest two measures: conversion analysis and segment profitability analysis. Conversion analysis refers to several ratios, e.g. buyers versus prospects, repeat customers versus trial customers. This analysis comments on the effectiveness of management's isolation of prospective or current segments, and thus returns a rough judgment on the adequacy of the segmentations strategy. Segment profitability analysis looks at the revenue coming from each segment, direct and indirect costs of serving that segment and contribution margin per investments in that segment. This analysis uses rough contribution and profit pictures not only as a test of management's efficiency in serving the segments it has elected to approach, but as a proxy measure for management's efficiency at meeting the needs of segments it has elected to serve. Thus, segment monitoring capability is apparent when companies track the costs of penetrating different segments and the return these segments deliver. Such ratios are difficult to compute in practice, as Bonoma and Shapiro (1984: 267) comment: "it is the rare and exceptionally able manager who has been able to… determine the 'back-of-the-envelope ratios' suggested here", suggesting that this capability is truly rare.

Segmentation implementation capability refers to the firm's ability to embed knowledge of the market segments in all levels of decision making (Piercy and Morgan, 1993), including decisions about: defining markets in terms of benefits sought/needs, planning and budgeting around target segments, reaching market segments with different marketing mixes for each target segment. It also refers to firms' ability to consider the current state of need satisfaction in the marketplace, which reflects its own and competitive responses, and its own abilities, in deciding whether or not to continue to

support in the same or altered form, to withdraw its offering, or design a new entry (Allenby *et al.,* 2002). A stronger implementation capability is apparent when companies integrate knowledge about their segments into more levels of their decision making; in other words where the segmentation scheme provides a coherent focus for people's thinking in the organisation (Piercy and Morgan, 1993). This is because capabilities are embedded within organisations in the complex mesh of interconnected actions that follow managerial decisions over time (Krasnikov and Jayachandran, 2008).

Segmentation organisational integration capability refers to the firm's ability to support the segmentation program and commit to integrating a new segmentation solution into the organisation's mission, structure, culture and processes (Dibb and Simkin, 2001). This capability is important as failure to address the cultural and political dimensions of integrating the segmentation scheme in the organisation may have an adverse impact on the implementation of the findings, and ultimately performance of the marketing strategy (McDonald, 1996). Strong senior management involvement and support for the initiatives that come from the segmentation exercise is essential to the success of a segmentation program (Lin *et al.,* 2004). Furthermore, managers need to understand the rationale for segmentation and its scale of impact and dedicate appropriate marketing personnel and budget for undertaking segmentation activities (Dibb and Simkin, 2001). Also, the segmentation scheme should serve as the practical link between the corporate mission and the marketplace by relating the broad concepts and ideas in the mission with the consumer needs and preferred benefits in the market; this is what allows companies to become 'market-driven' (Day, 1994). In terms of organisational structure, a strong integration capability is reflected by the ability of the existing organisational structures of departments, functions and divisions to service the targeted segments (Piercy and Morgan, 1993). In terms of organisational culture, the integration capability refers to the ability to communicate and integrate the knowledge of the target segments throughout the organisation, so that the segments provide the basis for how the organisation understands and reacts to its market and business environment (Jenkins and McDonald, 1997). Integration of the segmentation scheme into organisational processes refers to the ability to assign resources and budgets to segments, create or adapt incentive policies, information processing and reporting systems that can measure and monitor activities and results in the target segments (Piercy and Morgan, 1993).

This reconceptualisation of market segmentation as a dynamic capability fits the description of a second-order capability able to build first-order customer competences. As mentioned in Section 3.3.1, building a new customer capability involves: exploring new markets, identifying new segments, developing new knowledge of these segments and gaining access to them through sales and distribution channels (Danneels, 2008). The monitoring capability enables companies to identify new segments through tracking the changes in segment membership and structure. The research capability enables companies to gain knowledge of these segments by developing rich profiles. The implementation and organisational integration capabilities allow companies to form strategies for reaching these new segments with product/service offers through selected sales and distribution channels.

3.1.2. Link of market segmentation capability to business performance

The decomposition of the market segmentation capability construct also adds clarity to the scope of segmentation and more importantly to the mechanisms by which this capability influences business performance.

Thus, the research and monitoring capabilities allow the development of market-based learning capability, which represents the capacity of the firm relative to its competitors, to acquire, disseminate, unlearn and integrate market information to value creating activities of the firm (Weerawardena and O'Cass, 2004). The monitoring capability enables firms to learn from market changes, and this ability to track changes has emerged as a key source of innovation and firm performance particularly in the literature on the market driven firm (Day, 1994). This approach, which has its roots in the 'market-pull' approach to innovation, which emerged in the 1960s, argues that, to be effective innovators, organisations should constantly scan the horizons for new opportunities to satisfy their customers (Levitt, 1960). The research capability enables companies to generate innovative ideas through the collection and dissemination of marketplace information (Foxall and Fawn, 1992).

The implementation capability together with the organisational integration capability will support the development of a marketing implementation capability (Piercy, 1998), which is the organisation's capability in communicating, interpreting, executing, controlling, and evaluating a marketing strategy or strategic market initiative (Noble and Mokwa, 1999). The development of this capability is facilitated by the guidance provided by market segmentation in decisions about marketing programmes, target segments and resource allocation, as well as by the integration of segment information into organisational structure, culture and processes, which facilitate the execution and control of marketing activities. Marketing implementation is crucial to firm performance (Morgan *et al.,* 2003) since the firm's ability to accomplish market-based goals is dependent on successful implementation of its marketing strategy (Bonoma and Crittenden, 1988).

3.2. Conclusion

Dynamic capabilities theory is a suitable theoretical framework to study the relationship between market segmentation and business performance because it provides insight into the importance of: a) the implementation aspect of market segmentation, which has been highlighted as critical in obtaining performance outcomes from segmentation analysis (Dibb and Simkin, 2009b), b) exercising the capability in changing the resource base and undertaking value-creating tasks, c) the embeddedness of the capability in the organisational context, and d) the focus on organisational processes, as opposed to decisions. Thus, a broader view of market segmentation based on the dynamic capability theory has been suggested to explicitly and holistically account for the organisational processes that are needed to identify a new mechanism that links market segmentation to business performance. It was argued that market segmentation was a dynamic marketing capability, comprised of four separate capabilities: research, monitoring, implementation and organisational integration.

This reconceptualisation thus encompasses the main issues that have been highlighted in the empirical studies of market segmentation practice (see Chapter 2, Section 2.4). In doing so, this research breaks free from the nature of the previous explanations of the segmentation-performance link, which did not reflect actual managerial practice and did not take into account the organisational implications of market segmentation. Chapter 8 will discuss in detail the implications of this reconceptualisation.

This conceptualisation will be submitted to two types of empirical validation. The qualitative phase of empirical research will be used to explore whether this conceptualisation fits managerial reality of segmentation implementation and to enrich the description of the various dimensions, as well as to explore the mechanisms (i.e. the development of other marketing capabilities) and structural factors (organisational characteristics/contexts) influencing the translation of segmentation capability into performance outcomes. Based on the insight generated by the qualitative findings (see Chapter 5, Sections 5.3 and 5.4), the conceptualisation of market segmentation capability will be revised and formal hypotheses will be developed in Chapter 6. The second type of empirical validation (based on the revised model in Chapter 6) is done in the quantitative phase, where survey data is used to assess the dimensionality of the newly proposed construct and to test the hypotheses proposed in Chapter 6.

4. RESEARCH METHODOLOGY

4.1. Introduction

This chapter presents the overall research strategy and design of this research, starting with describing and justifying the choice of a critical realist paradigm. It then explains the choice of and implementation of the retroductive research strategy through a mix of qualitative and quantitative methods in a mixed method research design. The chapter also describes the industry contexts chosen for the empirical study and provides justification and details for the specific research methods used and how they fit within a critical realist paradigm.

With critical realism, the apparent dichotomy between quantitative and qualitative research is replaced by an approach that is considered appropriate given the research topic of interest and level of existing knowledge pertaining to it. Therefore this research consists of two phases: a qualitative, interview-based phase, followed by a quantitative phase based on a cross-sectional survey (see Figure 4.1). This represents a sequential mixed method design (Creswell, 2008). In sequential mixed methods design, the data collected in the first phase contribute to the data collected in the next. In this study, the data analysis in the qualitative phase informs the data collection in the second phase by guiding the selection of key informants and of appropriate items for the measurement of the latent constructs. Furthermore, the data collected in the qualitative study served to develop a hypothesised model of segmentation capabilities and business performance, which is presented in Chapter 6, and facilitate the discussion of the quantitative results in Chapter 8.

Figure 4.1 Research Design and Sequence

Undertake interviews	Analyse interview transcripts	Construct a model	Collect survey data	Test hypotheses
Qualitative phase (Chapter 5)		**Hypothesised model (Chapter 6)**	**Quantitative phase (Chapter 7)**	
• 24 in-depth phone interviews with segmentation practitioners • Semi-structured interview protocol based on Goller et al. (2002)	• Data analysis (Nvivo) following the critical realist analytical process (Danermark et al., 2002): description of the phenomenon, analytical resolution, retroduction and abduction	Interpolation approach to define segmentation capabilities, identify their components and develop hypotheses	• Survey of 205 key respondents • Online questionnaire • Usage of one judgemental sample frame and one random sample frame • New segmentation capabilities measures based on interviews and literature	• Structural equation modelling (AMOS) • Regression analyses (SPSS) • Mediation and moderation testing

4.2. Overall Research Philosophy and Design

4.2.1. Philosophical Approach

The present research adopts a critical realist research paradigm, which in management research has been defined as "a meta-theoretical paradigm focused on explanations of the underlying 'generative mechanisms or structures' that shape the corporate agency and the social relations that it reproduces and transforms" (Reed, 2005: 1623). The critical aspect of critical realism is the endeavour to empower individuals (i.e. managers) by revealing the existence and power of underlying structures and mechanisms acting as barriers or enablers to managerial activity. The main contributors to the development of critical realism have been Bhaskar (1978), Archer (1995), Sayer (2000) and Fleetwood and Ackroyd (2004). Critical realism has been applied in organisation studies (e.g. Tsang and Kwan, 1999) and marketing (e.g. Easton and Harrison, 2004; Zinkhan and Hirschheim, 1992).

Critical realism incorporates the depth realist ontology[13] and the epistemology[14] of neo-realism (Blaikie, 2009). The depth realist ontology is based on the belief that reality is stratified and that it exists independent of our knowledge of it (Danermark, Ekstrom, Jakobsen and Karlsson, 2002). In critical realism, reality consists of three domains: the empirical, the actual and the real (Blaikie, 2009). The empirical domain consists of observable events; the actual domain consists of events that happen regardless of whether or not they are observed and the real domain consists of the structures and mechanisms that produce these events. The empirical domain is by implication superficial, as it is concerned only with what can be experienced. The actual domain refers to what happens if and when those powers are activated, what they do and what occurs when they do (Sayer, 2000). In contrast, the real domain is substantial, as it refers to the powers of objects, which are themselves comprised of structures and mechanisms that may or may not be observed or understood (Danermark *et al*., 2002). Structures are defined as sets of internally related objects and mechanisms as ways of acting (Sayer, 2000).

The epistemology of neo-realism implies that it may be necessary to postulate entities or processes that have never been observed to get beyond surface appearances to the nature and essence of things (Blaikie, 2009). Theory provides a description of structures and mechanisms which generate the observable phenomena (Keat and Urry, 1975). Central to neo-realism is the issue of explanations, but neo-realism rejects empiricism's approach through establishing regularities, within phenomena or between events, and pushes further towards locating the structures or mechanisms that produce the pattern or relationship. Mechanisms include tendencies or powers of things to act in a particular way. The capacity of a thing to exercise its powers, or the likelihood that it will, depends on whether or not the circumstances are favourable. This implies that concepts that are unobservable are appropriate in theories that purport to explain observable phenomena (Sayer, 2000). The aim of critical realism is to explain the relationship

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[13] Ontology is a brand of philosophy concerned with the nature of what exists, i.e. the nature of social reality (Blaikie, 2009)

[14] Epistemology is the study of the criteria by which we can know what does or does not constitute warranted/scientific knowledge (Johnson and Duberley, 2000)

between experiences (the empirical domain), events (the actual domain) and mechanisms (the real domain). In doing so, the perspective emphasises questions of 'how and why' a particular phenomenon came into being.

Critical realists maintain that it is possible to acknowledge that knowledge is socially constructed and subjected to change and also, through a 'scientific method' of explanatory analysis, make judgments on the causal factors affecting a social phenomenon. In other words, critical realism seeks causes of social phenomena in their underlying and interconnected structures, not in the surface events resulting from these structures. The choice of critical realism contrasts with the two other paradigms used to study market segmentation (see Table 4.1).

Table 4.1 Comparison of Critical Realism to Positivism and Constructivism

Paradigm	Place and role of theory	Nature of explanation	Methods of study
Positivism	A set of laws or generalisations from which conclusions can be deduced	Something is explained when shown to be invariably related to something else as suggested by theory and tested by experiments	High level of measurement needed to test hypotheses, ideally through controlled experiments and probability testing
Constructivism	If the idea of theory is used, it has a general meaning as perspective or approach; alternatively, it refers to very low level or local generalisations	Something is explained if it is shown to have properties unique to its essential qualities and particular situation	A focus on the meaning attributed to things and events by specific groups. Immersion in the subject matter to understand it, resulting in extended description of the phenomenon
Critical realism	Theory is a conjecture about the connectedness of events and the causal sequences produced by generative mechanisms	Something is explained if it is allocated a place at the end of a causal sequence; there may be multiple causes of a single event, co-variation and feedback	The aim is to produce a good theory which accurately identifies causal mechanisms. Usually multiple data are required.

Source: adapted from Ackroyd (2004)

Market segmentation has been extensively studied from a positivistic paradigm, which becomes apparent when considering the assumptions of market segmentation theory: a) there is only one objective and single reality of consumer preferences, b) consumers have consistent preferences and behave rationally and c) all markets can be segmented in homogeneous groups of consumers. Broadly speaking, the literature investigating

segmentation bases, methods and models is heavily based on the micro-economics school of thought and most studies adopt a positivistic perspective. However, the positivistic assumptions of market segmentation have been recently criticised on the basis that they do not reflect accurately the current market and marketing reality (e.g. Firat and Schultz, 1997; Hines and Quinn, 2005). Critical realism also opposes positivism, in particular its empiricist epistemology based on theory-neutral observations, its confusion of ontology with epistemology by equating reality with what can be observed and the understanding of causality as constant concurrences (Sayer, 2000).

Hines and Quinn (2005) adopt a social constructivist stance and argue that acknowledging the socially constructed nature of buyer realities enables the recognition of demand dynamics and that segmentation is not equipped to handle increasingly fragmented consumer markets. Within this paradigm, market segmentation becomes a constructed way of viewing markets and markets are seen as socially constructed spaces rather than abstract concepts defined by management. Thus, constructivists believe that reality is a product of different contexts and perspectives.

In contrast, critical realism implies a belief in an externally defined reality that researchers can aim to understand through the identification of the causal mechanisms and structures that influence the realisation of a phenomenon. Critical realism is well suited for the study of market segmentation because the reality of market segmentation implementation is stratified. The empirical domain of market segmentation consists of observable marketing campaigns, a varied product portfolio, marketing budget spent on market segmentation studies, the selection of media and distribution channels based on characteristics of the target market, and the positioning messages printed in marketing materials. Through the observation of all these elements, one could infer what market segment the company might be targeting with their products and services. For example, the mobile network provider, Orange, segmented the market on communication needs and communication products/services usage and developed different phone tariffs and advertising campaigns for different segments (Bonney and Fletcher, 2007).

However market segmentation also exists in the actual domain as not every market segmentation strategy is easily observable, for example in the context of direct mail - if one customer receives a different product catalogue or marketing offer, it is difficult to infer that other customers have received different offers. Nonetheless, marketers implement segmentation approaches, regardless of whether consumers or researchers are aware of them or not. In the real domain, there is currently a knowledge gap in terms of identifying the structures and mechanisms at work that influence market segmentation implementation. There are less than 30 studies on market segmentation practices and the large majority of them are descriptive, capturing only market segmentation choices, not the reasons for those choices or the outcomes of those choices and the influencing mechanisms that affect those outcomes. Therefore we do not know why marketers implement market segmentation and how (in what contexts, under what conditions) such practices affect business performance. Adopting a critical realist paradigm focuses the research on discovering the mechanisms and structures influencing whether market segmentation is implemented in firms and the level of business performance outcomes achieved.

Critical realism is also an appropriate paradigm to study dynamic capabilities, which have been considered to be unobservable constructs (Godfrey and Hill, 1995). As exposed in Chapter 3, resources and capabilities must be difficult to observe and imitate by competitors if they are to endow a firm with competitive advantage. Capabilities are argued to be unobservable if they are tacit, diffused throughout the organisation, or socially embedded (e.g. Grewal and Slotegraaf, 2007). Thus, it can be argued that such capabilities represent the structures and mechanisms that critical realists believe to exist in the 'real' domain of reality (Godfrey and Hill, 1995). Such unobservable mechanisms manifest themselves through observable organisational processes and outcomes in the actual domain of reality and can be empirically measured. Postulating theories about unobservable constructs is not problematic for critical realists (Miller, 2005). In fact, critical realism implies that constructs and the mechanisms that relate constructs to one another may be unobservable, yet nonetheless relevant to scientific theorising (Miller, 2005). This allowance for unobservables comes from the recognition of the limitations of the ability of researchers to learn about reality, given the hidden nature of structures and mechanisms that exist in the real domain and the fallibility of our research instruments to identify and empirically test such hidden causal powers (Ackroyd, 2004). These limitations imply that theories developed by researchers are fallible, but critical realists accept that no knowledge is ever certain and believe that the role of research is to ''use its method to improve our perceptual (measurement) processes . . . and thereby generate the most accurate possible description and understanding of the world'' (Hunt, 1991: 9).

4.2.2. Research Strategy and Design

A research strategy is a guideline for producing new knowledge, which provides a starting point and a set of steps to answer the research questions. According to Blaikie (2009), the retroductive research strategy is particularly appropriate for the critical realist paradigm. The retroductive research strategy can be summarised as follows:

I. In order to explain observable phenomena, and the regularities that obtain between them, researchers must attempt to discover appropriate structures and mechanisms.

II. Since these structures and mechanisms will typically be unavailable to observation, a model is first constructed such that, were it to represent correctly these structures and mechanisms, the phenomena would then be causally explained.

III. The model is then tested as a hypothetical description of actually existing entities and their relations. To do so, further consequences of the model are identified, which can be tested in a manner open to empirical testing.

IV. If these tests are successful, this gives good reason to believe in the existence of these structures and mechanisms. It may be possible to obtain more direct confirmation of these existential claims by the development and use of suitable instruments.

V. The whole process of model building is then repeated in order to explain the structures and mechanisms already discovered (Keat and Urry, 1975).

The present research aims to satisfy the first four steps. Within a critical realism framework, both qualitative and quantitative methodologies are seen as appropriate for researching the underlying mechanisms that drive actions and events (Healy and Perry, 2000). Methods such as case studies and in-depth interviews are appropriate within the paradigm, as are statistical analyses, such as those derived from structural equation modelling (SEM) and other techniques (Healy and Perry, 2000). Thus, in order to discover the appropriate structures and mechanisms needed in step I, an initial qualitative phase was conducted which resulted in the model referred to in step II, followed by a quantitative cross-sectional survey phase, incorporating steps III and IV.

While it may seem that critical realism does not favour the use of statistical research, statistical analysis can help in several ways in discovering underlying structures that generate particular patterns of events: (i) it can be very useful in the exploratory stage in detecting particular patterns within the data, which might indicate an underlying generative mechanism – the results can be the starting point for more substantive investigations; (ii) some techniques do lend themselves more towards identifying underlying structures, especially an analytical technique such as factor analysis, which aims to identify common factors generating observed variables, or path analysis, which involves a series of inter-related equations; (iii) the main use might be in validating possible explanations by corroborating, or falsifying them, by testing the implications of a theory through collecting and analysing data (Mingers, 2004).

In particular, Hunt (1991) argues that structural equation modelling can be categorised within the critical realism paradigm. SEM is considered the only appropriate quantitative analysis technique for a critical realist researcher to use, since it has three attractive features: i) it models structures with complex interdependencies; ii) it explicitly allows for multi-item scales and some measurement error in its 'unobservable' constructs, and iii) it makes a clear distinction between unobserved, theoretical constructs and fallible, empirical measures, thus advocating multiple operationalisations of the underlying construct by *individually* imperfect but *collectively* reliable and valid measures (Hunt, 1991; Steenkamp and Baumgartner, 2000). Also, compared to other modelling techniques, SEM is more focused on explaining marketing phenomena than on predicting specific outcome variables, which is in line with the purpose of this research and the critical realist paradigm (Steenkamp and Baumgartner, 2000). Finally, SEM enables researchers to ascertain the degree to which the theorised models are in agreement with the collected data, which is particularly useful as models are always simplified representations of reality.

4.2.3. Industry Selection

The choice of industries has been guided by two main considerations: the industry selection of market segmentation practices studies and the factors that may influence segmentation implementation. The first is particularly important for the use of structural equation modelling, which requires strong theoretical foundations for the models tested with this method. SEM analysis usually requires having extensive empirical quantitative research to justify each hypothesised relationship in the model (Byrne, 2010). This is why one of the criteria to select industries is the coverage of that industry in previous studies (either qualitative or quantitative) of segmentation implementation.

Most of the studies investigating market segmentation practices (mentioned in Chapter 2, Section 2.4) have adopted a multi-industry selection. For the studies that focused on a single industry, eight industries appear to be more highly represented: retail (fashion in particular), telecommunications, technology, financial services, textiles, household products and appliances. Exporting companies have also been the focus of segmentation research for researchers studying international segmentation. Since this study primarily focuses on the organisational implications of segmentation implementation, exporters were not considered to be a particularly relevant industry selection for this study.

Among the factors that influence segmentation implementation, strategies for segmentation and marketing mix for services differ from the strategies for goods for several reasons (Bolton and Myers, 2003), among which: a) services are highly perishable, and human resource constraints often restrict short-run capacity, which makes demand management issues and pricing strategies important in smoothing demand (Kraus, 2000); b) the intangibility of services compared with goods may lead to greater emphasis on extrinsic cues rather than on the intrinsic attributes or quality of the service itself (Kraus, 2000); and c) the degree of customisation and consumer involvement in service offerings enables services and marketing mix to be tailored jointly to suit customer preferences (Lovelock, 1996). Therefore, it is important to capture both service and manufacturing contexts in the final selection of industries.

The effectiveness of segmentation strategies may also be different according to the characteristics of the market (Dickson and Ginter, 1987), which include the level of existing product differentiation (consumer perceptions of product offerings being different on any physical or non-physical product characteristics), level of demand heterogeneity and product lifecycle stage (i.e. introduction, growth, maturity, decline). Dickson and Ginter (1987) argue that a segment development strategy is feasible only when product differentiation already exists. In addition, the level of perceived differentiation may also affect firm performance, as competition in a highly-differentiated industry is unlikely to be price-based and, thus, is likely to be profitable for all concerned (Porter, 1980). Anderson and Zeithaml (1984) argue that the use of segmentation increases with the evolution of the product lifecycle, while Christensen, Suarez and Utterback (1998) argue that, at the introduction stage, new products tend to be targeted at smaller/new market segments, which value the superior performance attributes, and, if successful, later spread to mainstream markets. It is, therefore, important to include industries that vary according to these three characteristics in the final selection. As mentioned previously, one of the antecedents of market segmentation strategy is the existence of demand heterogeneity (Winter and Thomas, 1985; Goller *et al.*, 2002), i.e. differences in demand functions exist such that market demand can be disaggregated into segments with distinct demand functions. Based on this, Dickson and Ginter (1987) argue that a strategy of product differentiation may be used in conjunction with market segmentation strategy when segments are perceived to exist (i.e. when demand heterogeneity is high).

Summarising these considerations (market segmentation implementation studies, factors influencing segmentation implementation) leads to the identification of five main criteria to choose relevant industries for the sample (see the columns of Table 4.2): 1) coverage in previous studies of market segmentation practice, 2) variation in terms of focus on manufacturing or service delivery, 3) a certain level of demand heterogeneity, 4) variation in product lifecycle and 5) variation in perceived product differentiation.

The chosen eight industries offer a balanced coverage of these criteria, thus representing a good cross-section of industries. These industries were reflected in sampling decisions in the qualitative and quantitative studies.

Table 4.2 Industry Selection according to the Factors Identified

Industry	Studies of segmentation practice	Type of offering	Demand heterogeneity	Product lifecycle	Product differentiation
Retail/ wholesale	Danneels (1996), Quinn *et al.* (2007), Quinn (2009)	Both products and services	High (Kamakura and Russell, 1989)	Decline (Piercy, Cravens and Lane, 2010)	Low-medium (Coughlan and Shaffer, 2009)
Tele-communications	Bailey *et al.* (2009), Dibb and Simkin (2010)	Mostly services	Medium (Kiang, Hu and Fisher, 2006)	Mature (Albon and York, 2008)	Low-Medium (Iimi, 2005)
Technology	Schuster and Bodkin (1987), Bailey *et al.* (2009), Harrison and Kjellberg (2010)	Both products and services	High (Bolton and Myers, 2003)	Growth (McIntyre, 2011)	High (Lee, Ha and Widdows, 2011)
Travel and tourism	Tkaczynski, Rundle-Thiele and Beaumont (2009), Jenkins and McDonald (1997)	Services	High (Bloom, 2004)	Mature (Dolnicar and Laesser, 2007; Kozak and Martin, 2012)	High (Clemons, Hann and Hitt, 2002)
Media and publishing	Sarabia (1996)	Both products and services	Medium (Marchand and Khallaayoune, 2010)	Decline (Currah, 2009)	Low-Medium (Liu, Putler and Weinberg, 2004)
Financial services	Jenkins and McDonald (1997), Meadows and Dibb (1998), Canhoto (2008), Bailey *et al.* (2009)	Services	Medium (Cameron, Cornish and Nelson, 2006)	Mature (Berger, Demsetz, and Strahan, 1999)	Medium (Taylor *et al.*, 2007)
Fashion/ textiles	Jenkins and McDonald (1997), Erem and Menguc (1997)	Mostly products	High (Richards and Sturman, 1977; Birtwistle, Clarke and Freathy, 1998)	Short/ mature (Taplin, 1999)	Medium-High (Richardson, 1996)
Household products/ appliances	Schuster and Bodkin (1987), Hunt and Arnett (2004)	Both products and services	Medium (Bayus and Mehta, 1995)	Mature (Mintel, 2010)	Medium (Kim *et al.*, 2010)

4.3. Methodology Phase 1: Qualitative Methods

4.3.1. Sampling and data collection

The objectives of the qualitative phase are to capture the managerial reality of market segmentation implementation – both integration and execution of segmentation schemes (cf. Boejgaard and Ellegaard, 2010), in order to identify and characterise the different mechanisms and structures that exist in successfully implementing market segmentation. Identification of these mechanisms and structures then help guide the development of hypotheses regarding the relationship between market segmentation and business performance (see Chapter 6).

Because the purpose of the study is theory building (i.e. elicitation of constructs and propositions), it was important to have access to a wide range of managerial approaches to market segmentation in a complex environment (Quinn 2009). Data were collected through in-depth interviews with twenty four marketing managers and segmentation experts in the United Kingdom in the period June 2009 - June 2010.

Sampling was guided by two principles: 1) maximum variation in sample selection (Patton, 2002) and 2) the use of key informants (Phillips, 1981). Maximum variation is a key sample selection criterion used to increase the reliability of any identified common patterns, as long as they hold across different types of organisations (Patton, 2002), while the key informant approach has been used heavily in previous studies of segmentation practices (e.g. Foedermayr and Diamantopoulos, 2008; Quinn, 2009).

Two types of key informants are included in the sample: 13 marketing managers/directors (see Table 4.3) and 11 segmentation experts (see Table 4.4). Interviews with managers were informative because they identify what managers (do not) know, what they think they know and what factors they consider in making decisions (Bromiley and Johnson, 2005). In addition, marketing managers are important facilitators in strategy implementation (Noble and Mokwa, 1999) and users of segmentation models (Wind and Cardozo, 1974), thus their knowledge and practice of segmentation implementation is of particular interest.

Interviews with segmentation experts complemented the managerial accounts, as the segmentation experts often helped managers in developing segmentation models. Many segmentation studies fail due to the lack of communication and collaboration between these two parties (Bonoma and Shapiro, 1984). Thus, this two-pronged sampling strategy enabled us to bridge the theory-practice divide (Dibb and Simkin, 2009a), contrasting the views held by segmentation experts with those of managers.

In order to obtain access to a wide range of perspectives and approaches to market segmentation, six managers were selected from large organisations, six were selected from medium sized companies and one was an entrepreneur. Within the large organisations, three managers had strategic roles, while three were heads of functional departments. Within the medium sized organisations, three were general managers responsible for marketing and three were marketing directors. This distribution of roles ensured that firm size was taken into account, as well as the fact that segmentation can be implemented at both strategic and tactical levels, either jointly or separately (Piercy and Morgan 1993; Clarke and Freytag 2008).

Table 4.3 Description of Segmentation Practitioners Interviewed

Manager	Job title	Industry type	Type of customer	Firm size[15]	Performance [16]
A	Marketing director	Telecoms	B2C	9,000	7.2%
B	Head of Website	Telecoms	B2B	28,000	22%
C	VP of Marketing	Telecoms	B2B	300	N/A
D	Marketing director	Telecoms and media	B2C	16,000	15%
E	Marketing director	Technology	B2B	100	12%
F	Marketing Manager	Technology	B2B	200	1%
G	Managing director	Travel	B2C	840	<5%
H	Marketing Manager	Telecoms and media	B2C	16,000	15%
I	Marketing manager	Travel	B2C	400	Negative
J	Owner	Travel	B2C	1	Positive
K	Head of Mobile Banking	Financial services	B2C	10,000	6%
L	Marketing Manager	Travel	B2B	250	17%
M	Marketing director	Retail	B2B	5,000	-5%

Experts were identified as practitioners with a good knowledge of theoretical and practical aspects of segmentation and were either: a) the directors/managers of segmentation-related services in renowned marketing research or customer analytics agencies or b) authors of well-known practitioner-oriented segmentation books/articles.

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[15] Firm size is measured here as number of employees for the financial year of 2009.
[16] Performance is measured here as operating profit margin for the financial year of 2009.

Table 4.4 Description of Segmentation Experts Interviewed

Expert	Type	Industries covered	Customer sectors covered
A	Academic, consultant and author of market segmentation handbook	Technology	B2B
B	Global client service director at research agency	Products	B2C
C	Segmentation consultant and author of market segmentation handbook	Technology	B2B
D	Academic and author of market segmentation methodology book	Services	B2C
E	Research agency director	Technology	B2C
F	Academic and author of segmentation implementation articles	Retail	B2C
G	Director of analytics for marketing agency	Services	B2C
H	Business consultant for marketing agency	Retail	B2C
I	Global solution owner for segmentation software provider	Services	B2C
J	Research manager for telecom	Services	B2C
K	CEO of research agency	Technology	B2C

Maximum variation was assured by including participants from companies with varying characteristics in terms of size, age, level of diversification and industry.

In-depth interviews were undertaken by telephone and immediately transcribed to minimise loss of information due to audio quality. Each interview lasted between 45 minutes and 2 hours and followed a semi-structured format, based loosely around the segmentation implementation framework proposed by Goller *et al.* (2002), which focused on four key issues:

1. Antecedents of segmentation (e.g. market orientation).

2. Drivers/prerequisites of segmentation (e.g. demand heterogeneity).

3. The segmentation process (segmentation bases, data sources, methodology; target market selection, integration into strategy and resource allocation, evaluation of success)

4. Outcomes of segmentation (competitive advantage/performance).

In addition, building on insights from Chapter 2, in particular related to the different perspectives on market segmentation and the implementation challenges faced by practitioners, the interviews sought to elicit the individuals' perspective on the definition and purposes of market segmentation, as well as challenges/key success factors of implementing segmentation. Two separate interview guides were used – one for managers and a second for the experts, both following the same structure with only slight differences in wording (see Appendix B for the interview guides).

4.3.2. Data analysis

Data analysis followed the critical realist explanatory analysis procedure recommended by Danermark *et al.* (2002):

1. Description of the phenomenon under study (i.e. market segmentation implementation), making use of everyday concepts and including the respondents' choices and activities they undertake when implementing market segmentation. To assist in the description, the transcripts were coded in NViVo 8.0 into conceptual clusters (Berg, 1989, see Appendix C for an example of coded text). Each interview made reference to 25-80 codes and contained 30-180 references to these codes, reflecting the richness of the data derived (see Appendix D for the sources and references based on the interview transcripts and Appendix E for the code structure).

2. Analytical resolution, distinguishing the various components, aspects or dimensions into a number of imaginable causal components (Danermark *et al.*, 2002). In this case, four such aspects were captured: market segmentation drivers (factors that lead companies to segment their markets), challenges (issues that companies struggle with in implementing segmentation), key success factors (practices that were reported as successful in implementing market segmentation) and outcomes (the marketing and financial results of market segmentation implementation). Goller's *et al.* (2002) framework and the rest of the market segmentation implementation literature reviewed in Chapter 2 (Section 2.4) provided the constructs used in the initial analysis of the transcripts, but new categories were constructed to capture residual interview data (McCracken, 1988) and the emerging categories of segmentation capabilities.

3. Retroduction, focusing on the different components being studied and asking questions on the structures and relationships involved, the properties that underpin them and the causal mechanisms that are involved. This stage is usually used in combination with step 2, but may also be used with step 4, when the components are re-described by theories. In this case, structural issues were identified as the factors that influenced whether segmentation has a noticeable effect on performance. This is based on one of the purposes of critical realism in social science – of accounting "for the sense that people have of being constrained or enabled by their circumstances in terms of the structures in which they are located" (Ackroyd, 2004: 147). The causal mechanisms were identified through the comparison of the challenges and key success factors identified by managers as necessary to successfully implement a market segmentation strategy with the recommendations for successful implementation elicited from the segmentation experts.

4. Abduction, interpreting and re-describing the different components from hypothetical conceptual frameworks and theories about structures and relations. The object of study is further developed when placed in new 'contexts of ideas'. In the present research, the dynamic capabilities theory was employed to abduct causal categories and provide more depth to the explanations of the mechanisms and structures involved. These emerging relationships were evaluated against the managerial recommendations for practice and implementation practices identified in the literature. The output of this analysis was a model identifying the structural factors (moderators) and causal mechanisms (organisational processes and intermediary outcomes) which are hypothesised to influence the extent to which a company implements market segmentation and records increases in their business performance (see Chapter 6, Section 6.3).

The reliability of the findings was increased by applying the technique of informant feedback (Miles and Huberman, 1994). A short summary of the findings and the conceptual model was sent to all participants and feedback was gathered in terms of the identification of the market segmentation capability dimensions and the relationship among them. Half of the participants offered feedback, confirming the structure of the three capabilities identified but offering further insights that changed slightly the inter-relationships among the capabilities and the wording of some of the constructs.

This data analysis procedure took place before the data collection for the quantitative phase started, in line with the sequential mixed method research design (Creswell, 2008).

4.4. Methodology Phase 2: Quantitative Methods

4.4.1. Design and objectives

The second phase of research adopts a single cross-sectional survey design with a structural equation modelling analytical approach in line with most studies of organisational capabilities. The benefits of the survey are: a) it enables researchers to gather rich primary data from a carefully selected sample of firms (Daellenbach and Rouse, 2007); b) it allows for a certain level of generalisation of results and c) it is more appropriate than the use of secondary sources for collecting measures of resource bundles or the distinctive value that firms in a suitable sample are attempting to generate (Barney and Mackey, 2005). To the extent that key constructs of RBV are inherently unobservable (Godfrey and Hill, 1995), creatively developing appropriate measures as opposed to using readily available measures will challenge and contribute to further development of the RBV (Barney, 2001). According to Barney and Mackey (2005) and Newbert (2007), the best resource-based empirical design involves collecting primary data from within firms in a carefully drawn sample.

The objectives of the quantitative phase were to determine the: a) inter-relationships between the three segmentation capabilities (conceptualised in Chapter 6) and business performance and b) the moderating effects of several market and firm level characteristics that may impact the relationship between segmentation capability and performance. Thus, the methodology described here for the quantitative phase refers to the concepts defined and hypotheses developed in Chapter 6.

Consistent with the recommendation of Anderson and Gerbing (1988), a two-step approach was undertaken by estimating the measurement model (the mapping of observed measures onto latent theoretical constructs) prior to examining the structural model (relations among the latent variables). Specifying and testing theoretical models using latent variables with multiple-item measures and survey data involves five steps: (i) defining constructs and stating relationships among these constructs, (ii) developing measures of the constructs, (iii) gathering data, (iv) validating the measures, and (v) validating the model (i.e., testing the stated relationships among the constructs) (Ping, 2004).

4.4.2. Defining constructs and stating relationships among constructs

The hypothesised model contains three second-order latent constructs: a) segmentation analysis capability with five first-order latent variables (segment identification, segment qualification, segment evaluation, segment profiling and segment monitoring), b) segmentation integration capability with four first-order latent variables (integration in planning, culture, structure and control), c) segmentation execution capability with four first order latent variables (strategic execution, operational execution, managerial execution, CRM execution). There are another four first-order latent variables (marketing capabilities, market dynamism, technological turbulence, competitive intensity) that are included as moderators and one latent construct measuring business performance. The definitions of the main constructs appear in Table 4.5.

Table 4.5 Main Constructs' Definitions

Construct	Definition	Relevant authors
Segmentation analysis capability	The ability of the firm to develop, evaluate and monitor segmentation schemes	Hlavacek and Reddy (1986), Wedel and Kamakura (2000)
Segmentation execution capability	The ability of the firm to use knowledge about market segments into different levels of their decision making	Piercy and Morgan (1993), Clarke and Freytag (2008)
Segmentation integration capability	The ability of the firm to support the segmentation strategy and embed it into the organisational fabric	Bonoma and Shapiro (1984), Dibb and Simkini (2001), Boejgaard and Ellegaard (2010)
Marketing capabilities	The capabilities to transform resources into valuable outputs based on the marketing mix and to orchestrate marketing mix capabilities and their resource inputs through market information management and marketing strategy development and execution	Vorhies and Morgan (2005)
Market dynamism	The rate of change in the composition of customers and their preferences	Jaworski and Kohli (1993)
Technological turbulence	The rate of technological change in a product market	Jaworski and Kohli (1993)
Competitive intensity	The behaviour, resources and ability of competitors to differentiate	Jaworski and Kohli (1993)
Business performance	A construct capturing various aspects of market and financial performance	Venkatraman and Ramanujam (1986), Vorhies and Morgan (2005)
Marketing resources	Financial resources expended toward specific marketing activities and the skills and number of the marketing human resources	Chebat *et al.* (1994), Varadarajan (2010)

The structural model and hypotheses are presented in Figure 4.2.

Figure 4.2 Structural Model of Relationships among Latent Variables
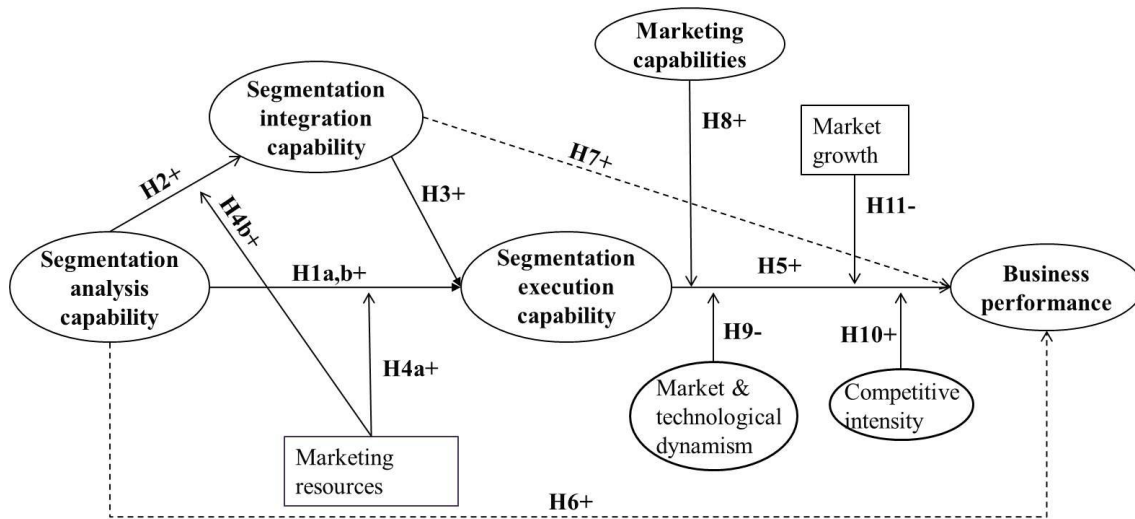
4.4.3. Developing or selecting measures for segmentation capabilities

The present research differentiates among three individual dimensions of market segmentation capability, therefore, there is a clear need to develop new measurement instruments. Since there was no empirical precedent to measure different aspects of segmentation implementation capability and following Armstrong and Shimizu (2007)'s recommendation for developing an appropriate survey based on in-depth interviews with focal firms or experts in the industry to mitigate the construct measurement problems in RBV research (cf. Chen, Farh and MacMillan, 1993), multiple-item scales were developed based on the qualitative fieldwork and extant market segmentation implementation literature.

A pool of thirty items was generated for each dimension of each capability, phrased in terms of organisational processes, typical behaviours or skills. This initial pool then was reduced to 15 items per dimension, based on their ability to convey different shades of meaning (Nunally and Bernstein, 1994). The remaining items were subjected to a content validity assessment by an independent expert panel formed of five segmentation practitioners and five marketing academics, who were provided with an operational definition of each dimension (latent variable) and asked to rate each item on the extent to which the item reflects the definition, on a scale from 1 (not at all representative) to 5 (very representative). They were also asked to comment on the clarity, conciseness and terminology used in the scales. Content validity was ensured by identifying and removing the items with an average rating below 3.5 (on a 5 point scale) (cf. Hardesty and Bearden, 2004), thus leaving each construct with 6-10 items for empirical testing.

Following examples of existing scales for organisational capabilities (see Appendix F), the items of each dimension were measured on a 7 point scale (Krosnick and Presser, 2010), anchored in "strongly agree/strongly disagree" for the segmentation analysis capability dimensions (e.g. Ramaswami *et al.*, 2009; Schreiner *et al.*, 2009; Ngo and O'Cass, 2009; Roberts and Grove, 2011); "not at all/extensively" for segmentation

execution capability and "not at all/to a great extent" for segmentation integration capability dimensions (e.g. Ngo and O'Cass, 2009; O'Cass and Weerawardena, 2009). Many measures of organisational capabilities have involved asking respondents to rate their firm's competences relative to competitors (e.g. Morgan, Vorhies and Mason, 2009), however, in the present study, the pre-test of the questionnaire indicates that practitioners find it difficult to evaluate such detailed segmentation capabilities versus competitors because such capabilities and processes are usually not explicitly visible. In addition, managers tend to be either over-confident about their own resources and capabilities (e.g. Hayward and Hambrick, 1997) or take resources for granted (Rouse and Daellenbach, 1999), therefore the comparison relative to competitors was not used to measure segmentation capability dimensions.

For the purpose of this study, a reflective measurement model[17] is adopted. Firstly, the reflective measurement model is consistent with the critical realist paradigm (Messick, 1981), where constructs are considered real entities that are assessed imperfectly by their measures (Edwards, 2011). In Edwards' (2011: 380) words: "constructs refer to entities that exist in the real world, independent of attempts by the researcher to measure them…the researcher uses various methods to obtain scores that serve as proxies for the construct. The status of the construct causes certain scores to be realised, and the researcher collects these scores, uses them to form measures, and subjects the measures to analysis. At the time of analysis, the measures are inert, they are empirical traces of phenomena that previously occurred… causation happened when the measures were collected, at which time the entities referenced by the constructs caused the measures to take on the values obtained by the researcher".

Secondly, criticisms of the formative measurement view have emerged recently across disciplines, on accounts of the logic and rationale of formative measurement in relation to dimensionality, internal consistency, identification, measurement error, construct validity, and causality (e.g. Bagozzi, 2007; Howell, Breivik, and Wilcox, 2007; Wilcox, Howell, and Breivik, 2008; Iacobucci, 2010), which have led some researchers to argue that formative measurement is not a viable alternative to reflective measurement (e.g. Edwards, 2011).

Thirdly, the conceptualisation of the three segmentation capabilities suggested in Chapter 6 (Section 6.2) is consistent with the assumptions of reflective measurement. For example, segmentation analysis capability is defined as the firm's ability to manage (develop, evaluate and monitor) segmentation schemes. This ability is manifested through a rigorous and regular process of identifying, qualifying, evaluating, profiling and monitoring new segments. These first-order constructs are all effects of an ability and willingness to make distinctions among potential customers, i.e. of the decision to segment (Goller *et al.*, 2002) – so they share a common theme – a focus on analysing the market structure (Grover and Srinivasan, 1987).

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[17] In the case of reflective measurement, meaning flows from the latent construct to the items in the sense that each item is viewed as an imperfect reflection of the underlying latent construct (cf. Bollen, 1989). In formative measurement, meaning/causality is supposed to flow from the items to the latent construct, such that formative indicators do not derive their meaning *from* the latent construct, but instead, themselves define the latent construct (Diamantopoulos and Winklehofer, 2001).

4.4.4. Adopting measures for the other variables

Existing measures have been adopted for the measurement of business performance, marketing capabilities and market characteristics (market dynamism, technological dynamism, competitive intensity).

Business performance

Performance measures have been measured in previous studies of organisational capabilities using either absolute performance figures taken from secondary sources or subjective evaluations based on survey primary data. Absolute performance figures are notoriously difficult to compare between firms of different sizes, operating in different markets and using different accounting standards (Fisher and McGowan, 1983). In addition, many studies report respondents' unwillingness or inability to report actual measures of performance (Neill *et al.*, 2007). On the other hand, executives' perceptions of performance have been shown to exhibit high levels of consistency with objective measures of performance (e.g. Dess and Robinson, 1984; Venkatraman and Ramanujam, 1986; Powell, 1992; Covin *et al.*, 1994; Hart and Banbury 1994). Subjective assessments of performance are also widely used in investigating the relationship between marketing capabilities and performance (e.g. Slotegraaf and Dickson, 2004; Vorhies and Morgan, 2005; Neill *et al.*, 2007; Morgan *et al.*, 2009a). Hence, they are also used in this study.

Some authors have indicated the usefulness of market segmentation in achieving specific marketing objectives (e.g. Wind 1978; Yankelovich and Meer 2006), hence the same approach was adopted in this study, by asking respondents to judge performance outcomes relative to their strategic business unit's business goals. This approach is appropriate also because the participants in the qualitative phase of empirical research (see Chapter 5, Section 5.4) indicated an effectiveness perspective of market segmentation outcomes (cf. Clark, 2000). The idea behind the effectiveness perspective is that any measure of performance should incorporate the objectives of the decision maker. In the organisational management literature, this is referred to as a goal-attainment view of organisational effectiveness (Lewin and Minton, 1986). The referent for an effectiveness measure is therefore a goal rather than an input or external (versus competition) (Morgan, Clark and Gooner, 2002). Many studies adopt an effectiveness of business performance, asking respondents to rate their firm's achievement of various business goals (e.g. Vorhies *et al.*, 2009; Menon, Bharadwaj, Adidam, Edison, 1999). Therefore, business performance is measured with subjective measures, adapted from Vorhies and Morgan (2005) and use a 7 point scale anchored in 'much worse/much better' versus established goals related to market performance (market share, growth in sales revenue, customer acquisition, customer retention) and financial performance (return on investment, gross profit margin, net profits) for the last financial year.

Moderators and controls

Marketing capabilities were measured with selected items from Morgan, Vorhies and Mason (2009), on a 7 point scale anchored in 'much worse/much better than competitors'. Marketing resources were measured in terms of marketing expenditure for the last financial year and number of marketing employees (cf. Chebat *et al.*, 1994).

Market dynamism, technological dynamism and competitive intensity were measured with items adopted from Jaworski and Kohli (1993) and Narver and Slater (1990), on a 7 point scale anchored in 'strongly disagree/strongly agree' labels.

Half of the studies reviewed by Armstrong and Shimizu (2007) examined the RBV empirically in multi-industry settings. This multi-industry approach helps researchers increase both sample size and generalisability (Dess, Ireland, and Hitt, 1990). Conducting RBV tests in multiple-industry settings, however, requires researchers to control for industry effects. Controlling for industry effects is important because the performance of firms is often influenced by industry economic cycles (Dess *et al.*, 1990), and the relationship between resources/capabilities and performance may be industry dependent (Barney, 2001). In the present study, the controls included market growth rate (7 point scale item anchored in 'decreased by more than 10%' and 'increased by more than 10%'), firm size (5 categories measuring total number of employees, full time equivalent), type of end customer (business, consumer or both) and type of offering (percentage of revenue coming from sales of products versus services).

4.4.5. Gathering data

The final questionnaire (see Appendix G) consisted of five parts. Part 1 referred to general information about the company and the respondent. The respondents were asked to consider their answers for the strategic business unit[18] (SBU) most familiar to them. Segmentation practice studies often do not specify the unit of analysis (a glaring weakness in the literature given it operates at different levels). However, most studies of marketing capabilities use the strategic business unit as the unit of analysis (e.g. Slotegraaf and Dickson, 2004; Hult and Ketchen, 2001; Neill *et al.*, 2007). The strategic business unit is a relevant unit of analysis since different segmentation decisions may be applied to different business units, departments, countries and brands according to their specific characteristics, their marketing challenges and their strategic importance to the firm (Piercy and Morgan, 1993). Parts 2, 3 and 4 of the questionnaire included questions designed to measure the dimensions of segmentation analysis capability, segmentation execution capability and segmentation integration capability, respectively. Part 5 included questions designed to measure business performance, marketing capabilities and market characteristics. The questionnaire was pre-tested with 10 marketers to ensure readability, ability/willingness to answer and to measure time to complete (20 minutes). As a result, changes were made to a few questions in terms of format (e.g. annual revenues), wording and reducing the number of scale items for rating.

The questionnaire was administered online via a web-based form and email invitations. The survey and email lists were managed through the Cranfield School of Management survey platform, which allows the design of the online form of the questionnaire, sending email invitations and downloading data into SPSS compatible files. The online survey was selected because: a) it allows easier access to a wider range of managers, irrespective of their geographical location (Illieva, Baron and Healey, 2002), b) marketing managers are required to be online much more than before, particularly

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[18] An SBU is defined as an organisational unit with a defined business strategy and a manager with sales and profit responsibility.

within the social media context[19] and c) it reduces the time and error in data entry (Simsek, Veiga and Lubatkin, 2005). Compared to mail surveys, online surveys are similar in terms of response quality (Deutskens, Jong, de Ruyter, Wetzels, 2006) and response rates (Cobanoglu, Warde and Moreo, 2001), but enable higher speed of data collection, lower levels of missing data (Schaefer and Dillman, 1998) and greater flexibility in question types and ordering (Boyer, Olson, Calantone and Jackson, 2002).

Two sample frames were used for data collection (see Table 4.6). The initial sampling frame was the Marketing Managers Yearbook 2011. The full selection of 1,830 companies available, which belonged to the eight chosen industries, was extracted from this directory. For each company, a key respondent was selected among the marketing contacts listed, based on their job title. An email invitation and two email reminders were sent at weekly intervals from mid-March to mid-April 2011. One hundred and thirty three completed questionnaires were obtained from this sample frame, representing a gross response rate of 7.3%. Due to the low response rate to this initial data collection phase, a second sampling frame was employed – Decision Maker UK database from Reed Business Information. This sampling frame was designed to fit the same criteria as the Yearbook (only the industries pre-specified and only firms with more than 100 employees). The total selection of 1,237 contacts available in this second sample frame was extracted. An email invitation and two reminders were sent to these key respondents at weekly intervals from mid-May to mid-June 2011. Seventy two completed questionnaires were obtained from this sample frame, representing a gross response rate of 5.8%.

Table 4.6 Sampling Frames Used in Data Collection

Directory	Marketing Managers Yearbook 2011	Mardev Decision Maker UK
Number of firms	10,500	3,800,000
Number of marketing contacts	50,000	50,000
Basis for inclusion in directory	Over 100 employees, over £100,000 marketing budget (Top Companies)	Data sourced from B2B publishers, directories and exhibitions
Firm size covered	Over 100 employees	All
Industries covered	All industries	All industries
Firm size selected	Over 100 employees	
Industries selected	Retail (fashion in particular), telecommunications, technology, financial services, textiles, household products/ appliances	
Number of firms fitting size and industry criteria	1,830	1,237
Number of firms selected (sample frame size)	1,830	1,237

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[19] In June 2011, 63% of FTSE 100 companies had an official Twitter account, 33% had an official Facebook presence and 38% had an official YouTube channel (Caroll, 2011).

Interestingly, there was little overlap of companies (less than 10% of companies were included in both sample frames). In addition, both sample frames contained a modest selection of the entire population of firms fitting the selection criteria, which, in the UK, approached 10,000 of firms (Grierson, 2011). Thus, by combining responses from the two sample frames, the final selection was more accurate and complete than either using only one list or a self-compiled list of companies, and so sampling frame error was reduced (Malhotra and Birks, 2003).

Within each firm, a key informant approach was used and the person with the highest marketing position in the company was selected because the capabilities measured in this study relate to marketing practices within a strategic management context. The key informant technique (Phillips, 1981) is common in studies of marketing capabilities, market orientation and product-market strategy (e.g. Slater and Olson, 2001; Hult, Ketchen and Slater, 2005; Hughes and Morgan, 2008; Morgan, Vorhies, Mason, 2009). In addition, King and Zeithaml (2003) found that experienced managers are particularly adept at recognising and articulating organisational knowledge in a meaningful way. Following guidelines from previous research (e.g. Day and Nedungadi, 1994; Menon *et al.*, 1999; Foedermayr and Diamantopoulos, 2009; Morgan, Vorhies and Mason, 2009), the data validity was ensured by screening respondents on their qualification to respond in terms of their knowledge of the use of segmentation in their SBU and the benefits and principles of customer segmentation. Each of these items was measured on a 7 point scale and the respondents whose average rating is less than 4 out of 7 were eliminated from the final sample.

Out of the total of 3,067 key respondents invited to the survey, 392 were out of the office throughout the respective data collection periods and 604 did not receive the email invitation (as inferred from the analysis of the emails that bounced back). This leaves the total valid sample frame size at 2,071. Out of these, a total of valid 232 responses were received – a response rate of 11.2%. This response rate is similar to the one obtained by Slater, Hult and Olson (2010), however it is lower than those obtained in recent studies targeted at senior marketing managers, which range from 14% (e.g. Hughes and Morgan, 2008) to 31% (e.g. Morgan, Slotegraaf and Vorhies, 2009). This is surprising[20] and could be explained by four possible reasons, gleaned from the decline responses received and consistent with explanations in the methodology literature (e.g. Cycyota and Harrison, 2002): a) online surveys have consistently given lower response rates than mail or phone surveys, particularly since managers are being bombarded everyday with dozens of emails; b) the recession has increased the workload and/or stress levels, leading to the strong perception of lack of time to dedicate to other activities; c) the subject of the survey is very specific compared to general surveys about marketing capabilities, which may have led to lack of topic salience and/or perception of inability to contribute due to lack of segmentation sophistication and d) the survey was perceived to be too long, discouraging people from completing it.

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[20] The email invitation contained the elements argued to increase response rates (Dillman, 2000): a social utility appeal that emphasised the worthiness of the survey (diagnosing segmentation capability; improve financial performance); an egoistic appeal that stressed the respondent's importance in completing the survey (marketer in top UK firm); an appeal to help the researcher in completing an important project (PhD study); personalised salutation and promise of anonymity and confidentiality of answers.

A final sample size of 205 was retained after eliminating responses from respondents that did not qualify as key respondents. While it may seem small, the sample size makes this study the third largest academic study of market segmentation implementation. The sample sizes used in previous studies of market segmentation implementation have been fairly small, with only two studies with samples larger than 200 (e.g. Peterson, 1991; Verhoef *et al.,* 2002). Analytically, the sample size marginally fulfils Hair's *et al.* (2008) suggestion of at least 200 responses for SEM analysis and is higher than 150, which is sufficient for confirmatory factor analysis (Anderson and Gerbing, 1988; Muthen and Muthen, 2002). On the other hand, the sample size fails Kline's (2005) recommendation for 5-20 times the number of parameters to be estimated (which could represent a requirement for at least 700 responses for the full model). As a result, the confirmatory factor analysis will be done in sequential steps by estimating parts of the model consisting of theoretically related variables (see Chapter 7, Section 7.3.2) to respect at least a ratio of 5:1, which is considered to be appropriate when there are many indicators of latent variables and the associated factor loadings are large (Bentler and Chou, 1987), which is mostly the case in the present research (see Chapter 7, Section 7.3.2).

4.4.6. Validating the measures

Construct validity is the degree to which a construct achieves empirical and theoretical meaning (Bagozzi, 1980). In the literature, the following criteria have been proposed: (1) unidimensionality, (2) convergent validity, (3) discriminant validity, and (4) nomological validity (Churchill, 1979; Bagozzi, 1980).

To test for uni-dimensionality, exploratory factor analysis was first used for each latent variable (segmentation analysis capability, segmentation integration capability, segmentation execution capability) separately. In exploratory factor analysis, the analysis of the underlying constructs and factors of a certain phenomenon is free of expectations regarding their number and their respective nature. The results of the exploratory factor analysis were then analysed with the purpose of deleting any items that had low corrected item-total correlations (<.40), low factor loadings (<.60), or significant cross-factor loadings (>.40), in line with recommendations from Nunnally and Bernstein (1994) and Anderson and Gerbing (1988). The resulting factor solution was then used as a model in a confirmatory factor analysis.

Confirmatory factor analysis is an established method for assessing both reliability and validity (Bollen, 1989; Raykov and Shrout, 2002; Bentler, 2009). In confirmatory factor analysis, the researcher has specific expectations, which are directly tested through analysing the model fit (Byrne, 2010). The model fit expresses the researcher's expectation of the number of factors, the variables reflecting these factors, and whether these factors are correlated. A series of confirmatory factor analysis models were estimated using the Maximum Likelihood Estimation (MLE) procedure with AMOS[21] 18.0 (Arbuckle, 2009).

Despite some evidence of multivariate non-normality in the data (see Chapter 7, Section 7.2.3), maximum likelihood estimation was used because, in simulation studies (e.g. Hoogland, 1999; Sharma, Durvasula and Dillon, 1989), it was found more robust in

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[21] AMOS stands for Analysis of Moment Structures and was developed by James Arbuckle.

terms of convergence and proper solutions than other methods of estimation (e.g. generalised least squares, elliptical reweighted least squares and the asymptotically distribution-free) to various degrees of data non-normality at a sample size of 200. In addition, maximum likelihood estimation works even better with increasing values of factor loadings, which is the case in this study.

The results of the confirmatory models allowed the assessment of convergent and discriminant validity and the reliability of the new scales (Anderson and Gerbing, 1988). To assess the reliability of the measures, the composite reliability and average variance extracted for each scale was calculated, following the procedures recommended by Fornell and Larcker(1981) using the formulas:

$$CR_\eta = \frac{\left(\sum \lambda \gamma_i\right)^2}{\left(\sum \lambda \gamma_i\right)^2 + \sum \varepsilon_i}$$

$$V_\eta = \frac{\sum \lambda \gamma_i^2}{\sum \lambda \gamma_i^2 + \sum \varepsilon_i}$$

where

CR_η = composite reliability for scale η;

Vη = average variance extracted for η;

λγi = standardised loading for scale item γi, and

εi = measurement error for scale item γi.

Convergent validity was assessed by evaluating the overall fit of the model, the significance of the factor regression coefficients and the correlation of individual items with their latent construct (Steenkamp and van Trijp, 1991).

Discriminant validity was assessed with two methods: a) nested model chi-square difference test - two nested[22] confirmatory factor models were compared for each pair of constructs, once freeing the correlation between the constructs, and once setting the parameter to 1 (Bagozzi, Yi, and Phillips, 1991) - an insignificant difference supports discriminant validity by showing that the factors are not perfectly correlated (Anderson and Gerbing, 1988) and b) observing the confidence intervals for the correlation between each pair of constructs – if 1 is not included in the interval, there is evidence of discriminant validity (Anderson and Gerbing, 1988).

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[22] Two structural models are nested, i.e. hierarchically related, if one of the models includes all of the structural relationships present in the other model plus at least one unique relationship (Byrne, 2010).

4.4.7. Validating the structural model

The model validation was employed to test first the measurement models and second the structural model (i.e. the mediation model). In all cases, model validation proceeded a three-step approach: a) model identification involves specifying every potential parameter (variances, regression coefficients and covariances) in the model to be either a free, fixed or constrained parameter; b) model estimation involves estimating the free parameters such that their values yield a matrix as close as possible to the sample covariance matrix; c) model testing involves evaluating the extent to which the theoretical model fits the data, using three criteria: i) fit indices, ii) the significance of the path estimates, and iii) the amount of variance explained in each of the endogenous constructs.

Two types of indices are recommended to determine the degree to which the specified model reproduces the observed input matrix.

The first type refers to absolute fit measures, which indicate the degree to which the observed input matrix is predicted by the estimated model. Commonly reported measures are chi-square (χ^2), standardised root mean square residual (SRMR) and root mean square error of approximation (RMSEA). Although χ^2 is the only measure with an associated statistical test (which needs to be insignificant for good fit of the model), relying solely on the statistic is not recommended, as it is sensitive to large sample sizes and to non-normality in the data (Hair *et al.*, 2008). RMSEA measures the discrepancy between the observed and estimated model per degree of freedom, in terms of the population and not just the sample at hand (Hair *et al.*, 2008). Small RMSEA values mean low residual variance and, therefore, a good fitting model (Hu and Bentler, 1999). SRMR is a badness-of-fit index (larger values signal worse fit), and it ranges from zero to one (Iacobucci, 2010). The index is a fairly good indicator of whether the researcher's model captures the data, because it is relatively less sensitive to other issues such as violations of distributional assumptions (Byrne, 2010). For a model that fits, the χ^2 would not be significant (p>0.05), the SRMR would be lower than 0.08 and RMSEA would be less than 0.06 (Hu and Bentler, 1999).

To address sample-related inconsistency, the second type of indices refers to incremental fit measures. Two are usually reported: the Tucker–Lewis index (TLI) and the Comparative Fit Index (CFI). Both measures gauge the extent to which the estimated model is superior to a comparison model (e.g. the "null" model of no relationships within the data). TLI combines a measure of parsimony into a relative index between the proposed and null models, resulting in values ranging from zero to one. Comparative Fit Index (CFI) estimates each noncentrality parameter by the difference between its t statistic and the corresponding degrees of freedom and takes values between zero and one as well. For both TLI and CFI, values of .95 and above are generally viewed as acceptable (Hu and Bentler, 1999).

Another measure usually reported is the normed chi-square, which is the ratio of the chi-square divided by the degrees of freedom, such that the chi-square is adjusted by the degrees of freedom to assess model fit for various models. The cut-off value for the normed chi-square is 2, as suggested by Ullman (2001).

4.4.8. Testing the moderation hypotheses

In addition to validating the structural model in SEM, further analyses were undertaken to test the eight moderation hypotheses represented in Figure 4.2 and developed in Chapter 6 (Sections 6.3.1 and 6.3.3). In SEM, testing for moderation usually involves splitting the sample in groups based on values for the moderating variables and then testing several models constraining the paths representing the affected relationships to be equal across groups[23] (e.g. Song *et al.*, 2005). However, this procedure is not the best for continuous variables because groups are created based on median splits. The use of such cut points results in a loss of information and a reduction in power to detect interaction effects (Aiken and West, 1991; MacCallum, Zhang, Preacher and Rucker, 2002; Cohen *et al.*, 2003). In addition, simulation studies have shown that retaining the continuous variables in their original form results in fewer errors of detecting moderating effects compared to procedures that involve the use of cut points (Stone-Romero and Anderson, 1994). Also, testing the structural model for at least two groups doubles the number of parameters to be estimated (which is particularly problematic given the moderately small sample size) and significantly decreases the available information for model estimation. Thus, moderated multiple regression analysis is considered to be the method of choice to detect moderator effects in field research (Aguinis, 1995; Frazier, Tix, Baron, 2004; Cohen *et al.*, 2003).

Consequently, the moderation hypotheses were tested with moderated regression analysis in SPSS 18.0. This analysis requires that certain statistical assumptions be met (Cohen *et al.*, 2003). Firstly, univariate linear relationships between predictors and outcomes were tested by examining scatter plots and correlations - all relationships appeared to be linear. Secondly, the plots for residual versus predicted values and the normal probability plots of the standardised residuals were verified for homoscedasticity and normally distributed residuals. Thirdly, the Durbin-Watson statistics for each regression model were within the acceptable range of 1.50 to 2.50, indicating that the independence of residuals assumption was not violated. Fourthly, multicollinearity between predictors and controls was checked by examining the variance inflation factors (VIF) for each variable in the models. All variables had a variance inflation factor substantially lower than 5 (Menard, 2002). Thus, all assumptions required by regression analysis have been met.

Testing a moderating hypothesis involves the following steps (Cohen *et al.*, 2003):

a) creating or transforming predictor and moderator variables to reduce multi-collinearity and ease interpretation and illustration of interaction (e.g. coding categorical variables, centring or standardising continuous variables, or both),

b) creating product terms to represent the interaction between the predictor and the moderator,

c) structuring the equation by using hierarchical multiple regression and entering the predictor and the moderator in the first step and the product term in the second step,

d) determining the statistical significance of the moderating effect by investigating the significance of the increase in variance explained (ΔR^2).

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[23] The moderating effect is confirmed when the improvement in the chi-square from the restricted to the non-restricted model is significant. If the model fit remained, there was no moderating effect, since this would indicate that the same model fits both groups. If the model fit was lost with this added constraint, this would mean that there was a significant moderation effect.

A moderator effect implies that the moderator variable modifies the form of the relationship (i.e., the slope of the regression line as represented by the regression coefficient) between the predictor variable (e.g. segmentation execution capability) and the outcome variable (e.g. business performance) (Cohen *et al.*, 2003). If the increase in ΔR^2 proved to be significant, then the specific pattern of the interaction was examined further by deriving simple slopes as suggested by Aiken and West (1991). Cohen *et al.* (2003) described three patterns of interactions among two continuous variables: enhancing interactions (in which both the predictor and moderator affect the outcome variable in the same direction and together have a stronger than additive effect), buffering interactions (in which the moderator variable weakens the effect of the predictor variable on the outcome), and antagonistic interactions (in which the predictor and moderator have the same effect on the outcome but the interaction is in the opposite direction). In this study, the hypothesised moderator effects of marketing resources, marketing capabilities and competitive intensity are of enhancing interactions, whereas the effects of market dynamism, technological dynamism, and market growth are hypothesised to be buffering interactions.

4.5. Conclusion

This research proposes a new conceptualisation of market segmentation as a dynamic capability and tests a hypothesised model of segmentation capabilities and business performance. As such, it represents an empirical test of the dynamic capabilities theory. Measuring each segmentation capability dimension separately allows for more precise operationalisation to capture different 'dynamic' aspects of market segmentation. Segmentation execution capability was measured by the extent of using insight generated by market segmentation schemes into strategic, managerial, operational marketing and customer management tasks, thus capturing the change in products or market segments. The other key characteristic of dynamic capability is embeddedness in the organisation – this aspect was captured by measuring segmentation integration capability as the extent to which firms performed several activities to integrate the insight from segmentation schemes in the organisational structure, culture, planning and controls.

This chapter has presented the details of and justified the research philosophy, strategy, design and implementation chosen for the empirical component of this research. A sequential multi-method mixed research design has been adopted to fit within a critical realist paradigm. These choices were implemented through two phases of empirical research. A first phase was a qualitative study based on in-depth interviews with segmentation practitioners. A second, quantitative, phase involved a cross-sectional survey of key respondents in UK companies, aimed at testing a hypothesised model built on insights from the qualitative findings (Chapter 5) and the segmentation and capabilities literatures (Chapters 2 and 3). Thus, the methodology for the quantitative phase refers to the concepts defined and hypotheses developed in Chapter 6.

5. QUALITATIVE RESEARCH PHASE FINDINGS

5.1. Introduction

This chapter presents the findings of the qualitative empirical phase of this research, designed to answer the first research question: *How is market segmentation capability constituted within firms?* In addition, the findings inform the answers to the second and fourth questions by identifying participants' perceptions of the performance outcomes of market segmentation implementation and the factors (mechanisms and structures) that influence the relationship between market segmentation implementation and business performance.

To gain an in-depth understanding of segmentation implementation and its implications for business performance outcomes, a qualitative study based on in-depth interviews was adopted. Building on Goller *et al.*'s (2002) conceptual framework of segmentation implementation and the discussion of the nature of implementation by Boejgaard and Ellegaard (2010), this chapter identifies the main organisational processes, mechanisms and structural factors involved in market segmentation implementation and its translation into performance outcomes. Following the first three phases in the critical realist data analysis approach suggested by Danermark et al. (2002) – description, analytical resolution and retroduction, the findings can be grouped into four categories related to the following aspects of segmentation implementation:

a) Segmentation practices during the segmentation process implementation (description)

b) Drivers, challenges and key success factors of segmentation implementation (analytical resolution)

c) The relationship to business performance (analytical resolution)

d) Structures and mechanisms affecting segmentation implementation (retroduction).

Each of these categories is detailed in the following sections by making ample use of direct quotes [24] from participants (presented in italics) to illustrate the emerging explanations.

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[24] Where necessary, changes were made in direct quotations to correct English grammar and edited comments were added in square brackets [ ] to make sentences clearer.

5.2. Segmentation Practices

5.2.1. Segmentation analysis practices

Segmentation analysis practices relate to choosing the right segmentation bases, data sources and objects of segmentation (Sausen *et al.*, 2005). Among the participants, a wide variety of segmentation bases were being used to develop market segmentation schemes from all the four types of market segmentation bases suggested by Frank et al. (1972). Contrasting segmentation projects described by participants led to the suggestion that the choice of segmentation basis seems to depend on: a) the over-riding marketing purpose, whether it is more customer-focused (e.g. customer acquisition) or whether it is more product-focused (e.g. product development) and b) the characteristics of the segmentation scheme that were more valued in the organisation, for example stability vs. actionability.

General bases, such as demographics and psychographics, were preferred for their relative stability over time, their ability to predict behaviour (in travel and retail), their relatively easy integration into customer databases, their ability to drive new product development based on a full understanding of customer segments, and their ability to cut across product categories and geographies, thus making them particularly useful for multinational diversified companies. An alternative view was that general bases were less actionable and too difficult to grasp, particularly those that segment the market on fundamental life needs. In view of these shortcomings, behavioural (either shopping pattern or product usage) bases were seen to be actionable and specific to a product category, but not stable because "*people wear different hats on different days of the week and at different times of the year they become very different people*" (Manager I) and they do not predict future behaviour: "*how I use that product and how I behave is going to change dramatically depending on what product I've got, for example the iphone will allow me to do so many more things*" (Expert B).

Needs/benefits were perceived to give an in-depth understanding of customer needs and the opportunity to design value propositions (e.g. products, promotions) more closely aligned with those needs to increase value to customers, and hence customer satisfaction and loyalty. Conversely, this type of segmentation was perceived to be more difficult to implement, particularly in terms of identifying and reaching buyers who belong each segment and mapping the segmentation scheme onto the customer database.

Customer value/profitability and responses to marketing mix variables were found to be in use as well, particularly by those companies who relied heavily on propensity modelling and database marketing strategies, where they were implemented for customer management purposes, such as: up-selling or cross-selling customers to other products, allocating resources (e.g. account managers) to segments, retaining customers with high propensity to switch, identifying new segments most likely to buy certain products/services.

Experts believed that segment analysis was best done through primary research rather than managerial intuition or data mining on the customer database because research-based segmentation provides companies with the exact information they need, for their purpose and can prove or disprove managerial intuition and thus increase buy-in for the resultant segmentation scheme. Undertaking segmentation research enables companies to better understand and bring the different segments 'to life'.

Managers, on the other hand, tended to rely on different sources of information to identify and select segments. The first one is managerial intuition/experience: "*Most of it has been informal segmentation… through our own knowledge and experiences and growth*" (Manager F). Two reasons drive the choice of managerial intuition versus research: availability of budget to undertake research or lack of trust in research validity and reliability. The second source of information is existing data, either syndicated data, which are perceived by one segmentation expert as less accurate because the primary research contains the most relevant variables, or customer interaction data, which allow observing real customer behaviour and gaining insight from spontaneous customer feedback, but do not contain necessary information on customers' activities, interests, opinions and attitudes. Conversely, the same expert argues that leveraging existing sources of data would save time and money and produce more actionable segmentation strategy. In recognition of the downsides of each data source, two Managers undertook developed segmentation schemes by integrating both primary (qualitative and quantitative) and third-party data. However this approach led to challenges in terms of managing data reliability and integrating the segmentation into the customer database.

In terms of objects of segmentation, the interviews indicate that segmentation (as a classification technique) can be applied to markets or customers. Market segmentation involves segmenting the market based on customer needs and requirements and evaluating how well the company and its competitors are satisfying these needs. Customer segmentation involves segmenting existing and potential customers of a company by their propensity to buy the company's products. In future, one segmentation expert argues that undertaking market and customer segmentation analysis in parallel would allow the identification of strengths and weaknesses of the company in the whole marketplace: "*If you purely do a segmentation just on your customers, you only identify what you are good at, but that doesn't necessarily identify what you could be good at, from a market perspective, where you could go. You are not getting a full understanding of the market, where you could go in this whole market, it's not just where you are now but is that where you should be, in other parts of the market*" (Expert C).

5.2.2. Segmentation evaluation practices

In terms of evaluation of segmentation, both the quality of segmentation schemes and criteria for target market selection were addressed by participants. Managers were most preoccupied with practical criteria related to whether segmentation schemes are believable or intuitive to stakeholders, manageable in resource terms, vivid (i.e. bringing customers to life) and unique to the company. These four criteria were perceived to help in 'selling' segmentation into the organisation and enabling the internal buy-in from other stakeholders. Experts, on the other hand, emphasised the importance of traditional criteria proposed by Kotler (1994) as key success factors, which managers saw as challenges.

Target market selection is done in a fairly opportunistic way, for example: "*Although we are quite established in these markets, [our segmentations] are kind of historic, and I don't think that anyone in this organisation is still here who was responsible for putting those together*" (Manager F). Only two managers adopted a traditional and structured approach to target market selection, involving segment size and attractiveness

estimation and the evaluation of their own competitiveness within the segment, for example: "*the GE matrix is all about market attractiveness and our attractiveness to that market so we will come up with lots of factors within that segment that are peculiar to that segment and we would then map them against those core competencies. So we're effectively mapping our core competencies against what that segment actually wants from a service*" (Manager L).

5.2.3. Segmentation implementation practices

The implementation stage of the segmentation process revealed a wide range of strategic, managerial and operational purposes that segmentation schemes are used for, supporting Piercy and Morgan's (1993) distinction of strategic, managerial and operational applications of segmentation schemes. This wide variety of applications comes in contrast to the restricted definition of implementation into strategy and resource allocation that Goller *et al.* (2002) proposed (see Table 5.1).

Among the strategic purposes, participants mentioned using segmentation schemes to guide the development of growth strategies (Ansoff, 1965). In fact, for Expert E, the main reason to adopt market segmentation was to grow the business, mainly through new product development or market development. Another salient strategic application of segmentation schemes was the redefinition of the target market for the company as a whole and the selection of target segments based on a matching process between company resources/capabilities and segment needs and requirements.

Among the managerial purposes served by segmentation schemes, product and segment management emerged as the most salient decisions informed by segmentation schemes. Participants applying segmentation schemes for these two purposes argued for the tangible financial benefits derived from such decisions. Product management was perceived to simplify the product structure, minimising the manufacturing costs and streamlining the product-handling operations, while segment management was perceived to improve profitability through the allocation of marketing resources to target segments, depending on their value and evolution.

Operational purposes included reaching target segments with tailored propositions through customer service, advertising campaigns and personal selling channels. The applications of segmentation schemes for customer management purposes were the least salient among all the marketing tasked that participants acknowledged were informed by segmentation schemes.

This variety of marketing tasks informed by segmentation schemes was in many cases achieved by using different segmentation schemes for different purposes, which constituted a significant challenge for all practitioners (see Section 5.3.2).

Table 5.1 Applications of Segmentation Schemes

Application	Sources (References)	Description
Growth strategy • New product development • Market expansion	14 (29) 8 (12)	Market segmentation is used for developing growth strategies, e.g. identifying "remaining pockets of value" in an established market, developing new products around the needs of the target segments or expanding into new segments.
Target market selection	11 (22)	Companies use market segmentation to select a limited number of segments as their core target market which offer the best opportunity and return on investment.
Business planning	5 (7)	Involves setting a strategy for the next 3-5 years based on knowledge of customer needs and high volume/value segments. Operational planning is more tactical, i.e. budgets are segment-specific.
Performance measurement	9 (11)	Companies assess their market performance by measuring their segment share.
Product management	11 (16)	Companies rationalise their product portfolio, once they determine their target market and associated customer benefits required.
Segment management	8 (14)	Companies manage their market share deciding which segments to retain, grow or acquire, typically based on their growth and profitability.
Reaching target segments • customer service and communication • distribution channels • media selection and buying	11 (17) 15 (25) 8 (15) 11 (14)	Reaching the segments has been done through direct channels of communication and distribution (here, integrating the segmentation scheme into the customer database becomes critical) or through indirect channels (media and distribution intermediaries).
Selecting segments for a campaign	9 (14)	Companies can select segments that "*give high value and opportunity or …can be easy to target or [are] currently very competitor-focused*" (Expert B). Segment selection is done by sub-segmenting the target market further for particular campaigns.
Tailored propositions • advertising messages • positioning/branding • pricing • product design • promotions	12 (24) 17 (33) 5 (7) 10 (15) 9 (11) 11 (23)	Market segmentation has been used to better qualify and rationalise specific product design, features, configurations, service, pricing, messages etc. in such a way that there is a match between segment needs and the proposition.
Customer management • Churn management • Rewards management • Value management	2 (4) 4 (5) 2 (3) 5 (10)	Participants have used segmentation and predictive modelling to derive segments based on their value, to implement targeted campaigns to retain customers, reward customers or increase their value.

Source: Derived from interview data

Note: Sources refer to number of interviewees who mentioned a particular construct (a measure of breadth), while references refer to total number of mentions of a particular construct (a measure of depth).

5.2.4. Segmentation control practices

At the control stage of the segmentation process, many participants did not tackle segment instability, and did not have processes in place to monitor the segments, so they preferred to choose stable segmentation schemes, which are expected to last at least 3 years. These participants also used segmentation primarily for strategic planning and new product development, hence their requirement for a stable segmentation scheme. Other participants used ad-hoc/disposable segmentation schemes for very specific purposes: "*It depends what week it is, it depends on how hard we're pushing on sales, whether that customer wants broadband or talk, if they're in a particular region*" (Manager D). For another respondent: "*Our segmentation models are refreshed daily or monthly, and new segmentation schemes appear every 3-6 months, depending on the business need*" (Manager H).

5.3. Drivers, Challenges and Success Factors of Segmentation Implementation

5.3.1. Drivers of market segmentation implementation

The decision to segment markets has many and varied driving factors (see Table 5.2), which range from unspecific, good-to-have knowledge (e.g. common wisdom, market knowledge, unique customer view, competitive environment) to more precise objective-focused ones (e.g. economies of scale, need for growth, marketing efficiency).

Most segmentation drivers are rather internal (e.g. streamlining the organisation), coming from organisational needs to reduce complexity, rather than externally focused (e.g. level of demand heterogeneity, marketplace changes), as the normative literature suggests (e.g. Dickson and Ginter, 1987; Allenby, Arora and Ginter, 1998; Mahajan and Jain, 1978). Nonetheless, half of those motivated by streamlining their organisation refer to their desire to achieve marketing efficiency, the main implication of market segmentation according to the normative theory of segmentation (Mahajan and Jain, 1978).

5.3.1. Challenges of market segmentation implementation

A summary of practices, challenges and key success factors at each stage of the segmentation process (Goller *et al.*, 2002) is found in Table 5.3. Several observations emerge from the contrast between challenges and key success factors.

Despite the considerable literature on segmentation bases and methods, segmentation research still presented challenges for managers, particularly when choosing which segmentation bases, data sources and methods to use in developing new segmentations and how to integrate or map the resultant schemes onto existing customer databases.

In addition, participants described their negative or positive experiences of segmentation through the prism of whether they could use the insight coming from segmentation schemes in developing and executing marketing strategies, suggesting that the execution (i.e. usage) of segmentation schemes is an important organisational process necessary to be mastered to attain performance improvement.

Table 5.2 Segmentation Drivers

Driver	Sources (References)	Typical quote
Change in customer base/ organisation	3 (3)	*"We kicked-off the project in June 2008 because our spectrum was now wider, and we needed to do more work and we realised that our website had 130 products, all vying for attention so navigation was very difficult for the customer"* (Manager B)
Common wisdom	4 (4)	*"a lot of the time it's past experience, a lot of the time it's considered best practice and you do get people discussing it in industry conferences and academic papers and stuff, and I think that prompts them as well"* (Expert E).
Company philosophy	3 (3)	*"I think one of the problems is that segmentation practice is often informed by insiders and organisations practice and how marketing is perceived inside the organisation"* (Expert F).
Cost-benefit analysis	6 (8)	*"I know there are some markets you don't have lots of engineers, but there is a lot of integration work. But we look at the opportunity cost to do that, because we make our money from mobilizing engineers not from system integration"* (Manager E).
Demand heterogeneity	6 (11)	*"We knew that the spectrum was wide and what we were actually achieving on the site wasn't...we weren't looking at our audience carefully enough, we needed to do the segmentation and the redesign at the same time"* (Manager B).
Market insight	4 (6)	*"[It came from]* the realisation that the marketplace is actually very complicated, customers find it hard to navigate tariffs, lots of choice but maybe too much choice, and the realisation from research that posting tariffs which are more appropriate to your needs was a useful benefit"* (Expert J).
Need for growth	2 (3)	*"It's about that kind of light-bulb moment, when the company identifies the fact that they need to go after growth and how they are going to go after that. It's either defensive, maintaining business, or growth."* (Expert B)
Need for new strategy	4 4)	*"They're not thinking about segmentation, often the requests we get is to build a marketing strategy for them. But the first input into that is 'can you tell us what your segments are?'"* (Expert C).
Streamlining the organisation	10 (14)	*"we had two segmentations operating in parallel which was one of the drivers of having a new segmentation, that brought both of them together"* (Manager A)

Note: Sources refer to number of interviewees who mentioned a particular construct (a measure of breadth), while references refer to total number of mentions of a particular construct (a measure of depth).

Many managers highlighted the execution aspect as a challenge ("*I think this is one of those things that people think they should be doing but they don't know how to do it and they know that if they do it, it won't get implemented*" (Manager D), while the experts thought of it as a key success factor in implementing market segmentation: "*If a company just wants to do segmentation, the question is what's the point, do they want to tick a box, that's not the right way to work with segmentation. It's what you do with the segments that counts. The best way to work out what to do with segments is to build them into company structure and the strategy*" (Expert C). Execution was highlighted as critical because it guides the way the company operates at every level, for example: "*News International have a segmentation of their Sun readers ... big maps of each segment around the office, so they are living and breathing them... Whenever we are asked to do work for them, we have to do it around their segments*" (Expert E).

Using segmentation insight for multiple purposes at various levels of decision making increases the complexity of segmentation decisions that managers need to make, in particular regarding the number of segmentation schemes to retain for use and the marketing decisions that those segmentation schemes should be applied to. As a result, managers have adopted one of two approaches. The first is integrating different segmentation schemes, e.g. a research-based segmentation (for customer acquisition) with a behaviour-based segmentation derived from customer databases (for customer retention and development) for greater understanding. The second approach is using multiple segmentation schemes, but each for a different purpose, for example: '*We don't have a universal scheme of segmentation, rather we use it as a way of cutting our database through different lenses, depending on the business challenge at hand*' (Manager H).

The experts were divided. Some suggested developing one segmentation scheme at the strategic level (for target market selection), supplemented with further market research for detailed segment profiling to make the segmentation scheme actionable at the operational level. Others suggested using multiple segmentation schemes when existing marketing resources and capabilities allow. The choice seems to depend on the available marketing, financial and human resources, company size and the sophistication of database marketing practices, as a higher number of segmentation schemes require human resources to manage and financial resources to implement.

These three approaches indicate an increasing level of coordinated segmentation effort and mirror the three definitions of market segmentation found in the literature and in practice (classification technique, decision making tool and competitive strategy). While, due to the research design, it is impossible to say which approach is the best, further analysis of the interviews of the participants adopting each approach indicates that each approach is likely to achieve different performance outcomes because it is used for different purposes. This leads to the suggestion that using (the same or separate) segmentation schemes for multiple purposes might increase the various performance outcomes.

Table 5.3 Activities, Challenges and Success Factors in the Segmentation Process

	Segmentation analysis	Evaluation of segmentation (segmentability and target market selection)	Implementation of segmentation (in strategy and resource allocation)	Control of segmentation (segment stability, effectiveness of marketing strategies)
Practices	A wide range of segmentation bases, both general variables and product-specific variables, are in use. Experts support the use of research-based segmentation, because it validates objectively managerial intuition, while the managers, particularly in smaller companies, rely on either managerial intuition/experience or existing secondary data.	Ten types of criteria are in use to judge the quality of segmentation schemes, four of which have not been emphasised in the literature. Two managers adopt a traditional and structured approach to target market selection, but many managers use an opportunistic approach.	Participants reported using segmentation insight for a wide range of strategic and operational purposes, among which: reaching target segments through media, sales and distribution channels, tailoring propositions to each segment's needs, managing customers, managing products, managing segments, business/marketing planning and performance measurement	Many participants do not tackle segment instability, and do not have processes in place to monitor the segments, so they prefer to choose stable segmentation schemes based on general segmentation bases, due to the belief that these bases lead to more stable segmentation schemes than behavioural ones.
Challenges	Choosing segmentation bases, particularly when using managerial intuition instead of market research. Working with research agencies that do not analyse data with a view to proposition development A skills gap for applying survey-based segmentation schemes to customer databases or prospect lists Over-reliance on customer base segmentation instead of researching the whole market	Participants have experienced segmentation schemes that are difficult to grasp, too abstract or too removed from the product category or not dynamic enough. But the most cited criterion of evaluation was actionability, as this is the main driver of internal buy-in for the segmentation scheme.	Reaching target segments was found to be particularly difficult for Managers lacking a customer database to directly target individuals. Some types of segmentation base lead to segmentation schemes that are difficult to use. Choosing between an over-arching segmentation scheme which can be applied to different marketing tasks (e.g. media planning and product development) and using multiple segmentation schemes that work at different organisational levels (e.g. SBU versus corporate).	Predicting and dealing with market dynamism reduces a segmentation scheme's credibility and durability Skills and processes for tracking the evolution of segments in the marketplace Over-reliance on historical data, which are not able to predict future behaviour Skills gap for gathering information to measure segment/ market sizes/shares Inability to quantify and monitor the value obtained from segmentation projects, which leads to the project being part of other major projects rather than on its own
Key success factors	Success relates to the firm's involvement in the development of segmentation schemes.	The segmentation scheme needs to fulfil certain criteria that make it actionable (e.g. vivid, real, believable, measureable, identifiable).	The embeddedness of segmentation in practice, i.e. the assimilation or incorporation of segmentation insight to marketing decision making, is fundamental to deriving business benefits.	Having a plan for segmentation implementation is crucial due to the pervasive nature of segmentation implementation.

Thirdly, significant challenges were mentioned by all the managers in making their organisations adopt segmentation schemes. Many interviewees were unable to specify how challenges might be tackled, signalling that the barriers identified by Dibb and Simkin (2001) are present in practice, for example:

- At the analysis stage: not including various stakeholders from different departments in segmentation scheme development can result in the scheme not being adopted.

- At the evaluation stage: if the segmentation scheme challenges the internal view of the target market or other segmentation schemes (e.g. database behavioural models), it may not obtain internal buy-in.

At the implementation stage: not having top management support discourages other employees from investing in segmentation; not communicating the segmentation scheme and providing training across the organisation results in other departments, not understanding the benefits of the segmentation scheme for their own functions, reaching target segments when lacking a customer database.

These integration challenges emerge due to a lack of ability to embed the segmentation schemes into employees' mindset and behaviour, which can take time to address, as follows: "*the biggest challenge we had was making the rest of the organisation walk and talk the segmentation… so that it becomes a single voice of the customer that people refer to*" (Manager K). Embedding segmentation was highlighted as critical, but challenging, in all the interviews partly because it is a top-down decision that must be permeated throughout the rest of the organisation: "*Segmentation, more than anything else, is top-down. So if I think about customer satisfaction work and I contrast it with that, once you've done the customer satisfaction project, then in the implementation lots of people can get involved so it can really be bottom up. And so it's quite satisfying in that sense. Segmentation, I would say, is the exact opposite*" (Expert E).

For the controlling stage, managers struggled with monitoring the stability of their segmentation schemes, even though most managers acknowledged the importance of the threat of segment instability. However, since they did not have processes in place to monitor the segments, they preferred to choose segmentation schemes perceived to be stable and expected the segmentation scheme to last around 3-5 years. Managers that had more sophisticated database marketing practices were more confident in dealing with segment stability since they were using segmentation as a classification technique, as a 'slicing and dicing' tool, applied to offer a different lens of the customer base, depending on the marketing task at hand: "*So do I classify as segmentation if someone says to me "show me the segments". It depends what week it is, it depends on how hard we're pushing on sales, whether that customer wants broadband or talk, it depends if they're in a particular region*" (Manager D); "*Our segmentation models are refreshed daily or monthly, and new segmentation schemes appear every 3-6 months, depending on the business need*" (Manager H). Other managers, who segmented the whole market as opposed to known customers, complained that market segmentation offered just a snapshot of the market at one point in time and was impossible to refresh in order to reflect the market dynamics, for example: "*it became a static process, we couldn't actually track them on a monthly or yearly basis to see how they changed. It was a theoretically nice thing to do but from a business practicality we couldn't keep it dynamic enough to be able to say actually we created these people, we now see how they do, how they are growing, in comparison with the market*" (Manager I).

Measuring segmentation success, however, remained a challenge for managers and experts alike, as per Badgett and Stone (2005). However, some measures were put forward: customer metrics (average spend, customer feedback/satisfaction, frequency of purchase), marketing metrics (marketing efficiency[25], market share, overall brand performance), financial performance (sales, profitability) and segment performance (response rates to campaigns, segment share and segment profitability) and growth[26]. These mirror the conceptual arguments put forward in the literature (e.g. Smith, 1956; Bonoma and Shapiro, 1984).

5.3.2. Success factors of market segmentation implementation

Among the key success factors, the embeddedness in practice (i.e. the degree to which the organisation can use segmentation research findings in the daily management of marketing operations) stands out as critical. The importance of this embeddedness is given by the initiatives required to implement segmentation research findings, as exemplified by the contrast between the comment from Expert E ("*what makes a project successful is when the client feels engaged in it. At the end of the project, we always have a workshop where you get as many people from the ad agency, the media agency and staff and say ok, we have identified these segments, what are we going to do about them? ...there [are many projects] where they get very excited about the dearth of mathematical ability, but it's very little about that and it's very much about the level of engagement of client side executives on using the data*") and the situation encountered by Manager D ("*we didn't do research, we used a consultant and it got quite interesting for about 2 months and then people got bored and moved on because it didn't get subsumed into people's day to day work*").

The second key success factor is related to the research aspect of segmentation, where the development of segmentation schemes need to fulfil certain criteria of quality, be unique and offer detailed profiles of the segments that enable a deep understanding of the drivers and actions of customers in the marketplace. It is also related to the firm involvement in the development of segmentation schemes: "*Most successful segmentations are when we as a research business build a segmentation or 3 alternatives segmentations, look at them and go to the client with a recommendation that there are these alternatives and each one works for different reasons. You then have a collaborative discussion, you spend a lot of time working with it, to choose the best one 'cause we are theoretical and analytical experts, they know their business very well and they also know what would work intuitively*". (Expert B)

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[25] "*the success of segmentation is determined by the ability to capture value in the market in an efficient way, so if we capture a greater share of the market value with the same amount of marketing spend or less*" (Manager A).

[26] "*any customer segmentation is done with a view of driving growth because even if you say you want to do effective communications, ultimately you do communications in order to drive growth. Other reasons would be to really understand the market, but ultimately you want to understand the market so that you can drive growth*" (Expert B)

The third key success factor relates to the quality of segmentation schemes, which need to fulfil certain criteria that make it actionable, among which they need to:

- offer detailed segment profiles (including media profiles and distributional coverage) that enable a deep understanding of customers' drivers/actions and allows the firm to reach the segments, once identified

- enable customer assignation to segments by customer-facing employees - Expert B suggests developing a short algorithm (set of questions and decision trees based on the answers) that can be used to assign each potential customer to a segment.

- contain homogeneous and distinct segments in their response to marketing initiatives, to develop differentiated product/service propositions

- contain measurable segments, which experts highlighted as important in targeting the most profitable segments, while managers complained about the difficulty to measure segments due to lack of information at the market level.

The fourth key success factor is related to having a plan for the implementation of segmentation strategies, which includes: a) specific objectives, linked to the business strategy and the market definition of the firm, b) a team of stakeholders to be involved in the whole segmentation process, c) specific policies on tracking the benefits of segmentation, the performance of the segmentation initiatives and any correction actions that can be launched in response to the performance outcomes and d) strong support from top management for segmentation-based initiatives. A well-developed implementation plan is crucial because segmentation initiatives may require changes in organisational structure, data systems or strategy. Specific policies and budget need to be put in place to track segmentation benefits and the performance of segmentation initiatives, so that corrective actions can be undertaken as necessary.

5.4. Performance outcomes of segmentation implementation

Implementing market segmentation is perceived to have positive effects on three types of business performance measures (see Table 5.4 and Figure 5.1).

Firstly, through targeted marketing campaigns and tailored value propositions based on each segment's needs, segmentation implementation is perceived to increase customer performance measures, e.g. customer acquisition, loyalty and satisfaction. Secondly, through identifying remaining 'pockets of value' in a maturing market and/or growing, under-served or valuable segments in a developing market, exiting shrinking segments and adapting brand communications to suit each segment's preferences, segmentation can increase market performance outcomes (e.g. increased market share, stronger competitive position).

Table 5.4 Segmentation Outcomes and Drivers

Segmentation outcome	Segmentation driver	Rationale
Increased customer acquisition	Targeted promotions	Selection of most attractive segments Increased response rates
	Tailored value proposition	Segment need understanding Understanding reactions to marketing mix
Improved customer satisfaction	Tailored winning value propositions	Provides guidance on product choice Helps meet customer needs and maximises value for customers
	Increased customer orientation	"*From an organisational perspective, the reasons are even stronger because the main benefit of having a segmentation is to be able to focus the entire organisation on who the customer is*" (Manager K).
Improved customer loyalty	Segment understanding	Understanding customer motivations, needs and requirements, problems or challenges, likely future behaviour, product choice drivers, and preferred communication channels to grow share of wallet
Cost reductions	Product rationalising	Removing products that do not match the target market
	Targeted promotions	Reduce the cost of marketing
	Common product platform	Tailoring the service offered to specific segments while lowering the cost of production
Increased profitability	Cost reductions (see above)	
	Target market selection	Selecting profitable segments and offering profitable products
	Marketing efficiency	Capturing a greater market share with the same amount of marketing expenditure or less compared to competitors
Revenue growth	Growth strategies	Identification of growing, under-served or valuable segments or niches
	Segment management	Which segments to grow, keep, acquire
Increased market share	Segment share	Targeting campaigns at specific segments
	Segment identification	Identifying remaining pockets of value
Stronger market position	Strategic planning	Identifying and measuring growing, under-served or valuable segments
	Market understanding	High-value segments or those which are less competitive can more easily be targeted. Equally, shrinking segments can be exited or avoided.
	Brand strength increase	Sub-brand by segment, dominating niches More value to customers Sharper and focused brand communications

Source: Derived from interview data

Figure 5.1 Segmentation Implementation Capability and Business Performance
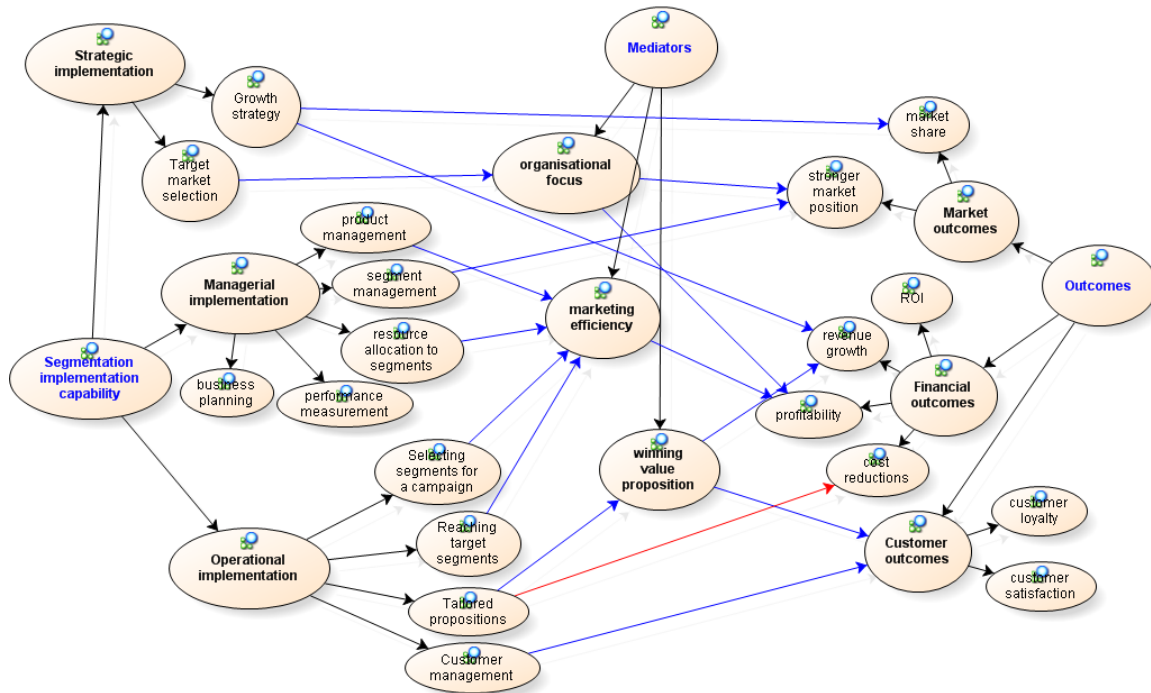
Source: Derived from interview data

Despite general agreement that market segmentation has positive influences on the performance of a firm, the respondents also highlighted some unwanted effects of market segmentation. Thus, while experts argued that market segmentation implementation leads to cost reductions on the bases of achieving marketing efficiency and rationalising product/service portfolio, one manager argued that segmentation will lead to cost increases because it is "*a very extended process and requires different strategies in each. So you typically find it in later lifestages, and ideally if you are provider you don't want to have a massive segmentation, it's actually a very expensive problem*" (Manager C). This idea was acknowledged by other interviewees who instead suggested that a market segmentation strategy should be adopted when the cost structure and product configuration allows it, for example: "*We develop overall a service that will attract people from various segments, but then there are certain segments within each segment that may differ from the core slightly. So essentially what we come up with is that there is a core proposition and then there will be certain things that bolt on depend on the idiosyncrasies of that sector*" (Manager L).

The interviews also help in explaining how segmentation implementation can have an influence on business performance outcomes. Thus, market segmentation implementation at managerial level helps achieve greater marketing efficiency through the pro-active management of products and segments and allocating resources to the most valuable segments. Market segmentation implementation at the strategic level provides organisational focus through the process of choosing target markets. Organisational focus is perceived to influence profitability through the rationalising of marketing and operations efforts required to target a limited number of segments. This

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focus on particular segments will also lead to a stronger market position, as it will enable the business to: "*focus on core target groups that you decided you either need to keep or defend or represent a big opportunity for you, so therefore you're either defending your existing customer base or you're building business or both*" (Expert B). The operational implementation of market segmentation, in particular the development of tailored propositions and the selection of segments to target with these propositions, leads to a winning value proposition which will result in high response rates to campaigns and high customer satisfaction and loyalty, since it is targeting 'the right product to the right people'.

5.5. Mechanisms and Structures Influencing Segmentation Implementation

5.5.1. Perspectives on market segmentation

In the critical realist view, the reasons, motives or intentions of individuals and groups can be causes and feature in generative mechanisms (Fleetwood and Ackroyd, 2004: 158). In the context of segmentation implementation, the individuals' perspectives on the role of market segmentation and its purposes seemed to guide the extent to which they were extracting benefits out of segmentation schemes. The three perspectives identified in the literature, together with two others, emerge from the data (see Table 5.5). Not surprisingly, the 'research technique' and 'decision making tool' perspectives were adopted the most by the managers and experts interviewed. The competitive strategy perspective was dominant in only seven interviews.

Another view was that market segmentation is an intuitive marketing activity, by which marketers attempt to market different propositions to different groups at different times. One respondent was sceptical about calling this activity market segmentation: "*So we do certain things with certain groups of customers, but it's not sitting in a glossy big book with pictures, like two adults and two kids sitting on their sofa with smiley faces, with Happy Families SG1 written underneath it*" (Manager D). This scepticism may be explained by an intuitive use of market segmentation, as Experts E, G and K argue, for example: "*Most clients would have multiple segmentations even if they don't necessarily know it…They may have not done a sophisticated market research segmentation project but segments are always in people's minds anyway, just naturally*" (Expert E). This argument was exemplified by Managers J and G, who display an intuitive understanding of segmentation, like in the following example: "*I provide inbound tours, mainly but not exclusively for Americans and Canadians and the segmentation, if this is where you're coming from, I'm focusing on niche markets, like whiskey tours, ancestry tours, battlefield tours*" (Manager J).

However, the most salient definition of segmentation was as an 'internal currency', which resembles Jenkins and McDonald's (1997) comment that segmentation should be a common language among employees when referring to their target market. Manager H explains: "*Segmentation is useful to talk about our customer base in a more concrete and meaningful way, in concepts more easily understood by stakeholders outside the marketing department, so it creates a sort of internal currency or common language*". Only one example of successful adoption of segmentation as internal currency was

observed in the interviews, which was attributed to the local nature of the segmentation scheme: "*Everyone who was involved in the redesign just got into the habit as we were redesigning each page, the entire team were aware of this paddler-swimmer-diver model. Everyone has a copy of [the segment profiles], the concept is so easy to appreciate that they do refer to it when they make changes and try to test back against those profiles*" (Manager B). However, despite its salience in the interviews, this perspective of segmentation was not always characterising the managers' organisation but it was rather referred to as an ideal state, for example: "*The segmentation was delivered in the marketing department, so people in the marketing department were more prone to understand it, live it and breath the segmentation. It becomes part of the jargon. But when you talked to product [development] people, they were more reluctant to use it. Generally, one of the major challenges in segmentation in any organisation is how do you actually then draw it out across the organisation so that it becomes a single voice of the customer that people refer to*" (Manager K).

Table 5.5 Market Segmentation Definitions

Definition	Sources (References)	Typical quote
Research technique	10 (12)	"*To me the idea of segmenting is about defining common characteristics within a population on the basis of certain clear group criteria, which can be of demographical nature, attitudinal nature*" (Manager K).
Competitive strategy	7 (7)	"*I see it to be how we approach markets, usually what we do is use a sort of derivative of the Boston Matrix to see how attractive are we to a certain sector in terms of mapping our skill sets and how attractive are we then going to that sector*" (Manager L).
Decision making tool	11 (14)	"*segmentation is about identifying different groups of people who we can target with different propositions, and also prioritising segments, having segments that are your prime targets*" (Manager B).
Natural marketing activity	4 (5)	"*So others might say that this is segmentation because you identify people based on where they live. I would still call it us doing our day to day job*" (Manager D)
Internal currency	15 (35)	"*segmentation is a really valuable way of bringing our business together as one, other than on the balance sheet, so it kind of galvanises the marketing operations*" (Manager A)

Source: Derived from the interview data

Note: Sources refer to number of interviewees who mentioned a particular construct (a measure of breadth), while references refer to total number of mentions of a particular construct (a measure of depth)

The perspectives on market segmentation appeared to influence the extent to which participants embedded segmentation schemes in their decision making and the type of benefits they perceived to obtain from segmentation activities. Thus, these perspectives, being at level of personal beliefs, acted at the deepest level of generative mechanisms. In support, Expert E emphasises the role of the marketing director in implementing market segmentation: *"it has absolutely be the marketing director fully buying it, fully wanting all marketing strategies to take hold of this segmentation, and use it to think about the segments every time they come up with an ad in terms of media and message and who they are talking to and how"*.

5.5.2. Emerging organisational processes

The identification and contrast of challenges and key success factors leads to the identification of three main organisational processes that seemed to underline the positive/negative experiences that participants to the study described.

The first process effectively combines and builds on the research and monitoring dimensions identified from the literature, by placing the emphasis on the routine activity (cf. Winter, 2003) of identifying, evaluating, profiling and monitoring segments with the purpose of gaining an in-depth understanding of the segments' needs and behaviour, as well as their place, evolution and value in the marketplace. This process is named segmentation analysis capability and enables the firm to sense opportunities in the marketplace (Teece 2007) by gaining an in-depth understanding of the needs, characteristics, value and position of market segments within the broader market structure.

The second process focuses on embedding segmentation in the organisational fabric so that it becomes an internal currency. The ideas of embeddedness and segmentation as internal currency came out strongly in the interviews because they were regarded as both challenges and key success factors by managers and experts alike. They were the main reason why segmentation insight translated into performance outcomes for those companies that managed to embed segmentation in the organisational structure, information processing and culture and they were the reasons why other segmentation projects failed to show results. The importance of capability embeddedness has been stressed by Grewal and Slotegraaf (2007), who also found that the embeddedness aspect has a separate and additive effect on performance alongside the capability itself. This process is named segmentation integration capability and enables the company to reconfigure their resource base (human and financial resources, organisational culture and knowledge) to become more customer-oriented.

The third process focuses on using insight coming from segmentation analysis for several marketing activities (e.g. strategic planning, new product development, customer management), which have been shown in the literature to create significant organisational value (e.g. Miller and Cardinal, 1994; Langerak, Hultink, and Robben, 2004; Reinartz, Krafft and Hoyer, 2004). This process is named segmentation execution capability. The findings indicate that uses of segmentation go beyond the traditional suggestions from the literature (target market selection and resource allocation), to include all types of marketing decisions, which have been explored in recent segmentation research (see Chapter 2, Section 2.3.2).

5.5.3. Mechanisms linking the real and actual domain of reality

In addition to the organisational processes, which act as unobservable generative mechanisms (Godfrey and Hill, 1995), six mechanisms emerge from the analysis of segmentation outcomes and their drivers (see Table 5.6). These mechanisms explain a) whether segmentation schemes are used in developing and implementing marketing strategies, and b) how segmentation-based decisions turn into positive performance outcomes. Thus, they act between the real and the actual domains of reality (cf. Fleetwood and Ackroyd, 2004).

Table 5.6 Mechanisms Explaining the Segmentation-Performance Relationship

Mechanisms	Sources (References)	Definition
Segment understanding	15 (37)	Understanding customer motivations, needs and requirements, problems or challenges, likely future behaviour, product choice drivers, and preferred communication channels.
Market structure understanding	9 (11)	Understanding of the different growth opportunities, volumes and values, competitive set and relative performance.
Customer orientation	6 (10)	"*the main benefit of having a segmentation is to be able to focus the entire organisation on who the customer is*" (Manager K).
Marketing efficiency	9 (17)	"*The ability to capture value in the market in an efficient way, so if we can capture a greater share of the market value with the same amount of marketing spend or less, that (more for less) is probably the equation for measuring the success of segmentation*" (Manager A).
Organisational focus	8 (20)	"*Something that will enable you to pull everyone together and say look here are the segments, these are the ones we go for and this is what they need; it has a huge impact inside the business if it's communicated properly, and it brings a new focus and a purpose to the business*" (Expert C).
Winning value proposition	8 (15)	"*they briefed their designers to deliver products that met [the target segment's] needs, they allowed communications to focus on these target groups, they also communicated the right kind of emotional and functional needs, so they talked about the right occasions in their advertising. It's really a combination of things*" (Expert B)

Source: Derived from the interview data

Note: Sources refer to number of interviewees who mentioned a particular construct (a measure of breadth), while references refer to total number of mentions of a particular construct (a measure of depth)

The first three mechanisms mediate between undertaking an analysis of the market and integrating the results of that analysis in daily activities. Many participants have referred to segmentation as a way to understand the marketplace and the needs of their customers. Manager B explains: "*so the value we got from this exercise is that we now know our audience, so my team, whenever they do anything to the site,…they now do it with the view of "what would [customer segment] think of this, does this work for them?".* In other words, the understanding has to come first, before the firm can do anything with this insight. Expert C emphasises this sequential order: "*From my perspective, all your successes which come from product/service development, rebranding, that only came from initially reviewing the market and understanding how it broke down in customers according to their needs set they have and developing a strategy for those segments you're best suited to serve in every instance. You need to get this right to get the success at the end.*"

The last three mechanisms, on the other hand, apply once the understanding of the market is implemented in the marketing decisions of the firm. For example, using segmentation insight for targeting implies that the firm can use a controlled market coverage strategy (according to Expert A) and is able to choose the media outlets more selectively, thus making their marketing budget more efficient (Expert E). Similarly, using segmentation insight for defining a target market has enabled one respondent to gain organisational focus: "*So we are very clear, we don't get distracted. Somebody comes to us and says that we want to mobilise this email application…, we won't do that, because you can't really measure the financial benefits that you get from it, and there might well be off the shelf applications that really do it anyway. So segmentation really helps us stay focused on what we really do best*" (Manager E).

The sequential order of these mechanisms, together with the identified challenges and key success factors, indicate that there is not a simple effect from segmentation analysis to business outcomes, but rather that the execution (i.e. embeddedness in practice) of segmentation is a critical intermediate step in achieving performance outcomes from segmentation analysis projects.

5.5.4. Structural factors affecting market segmentation implementation

Structural factors are the contextual factors that affect how segmentation schemes are used in developing and implementing marketing strategies and their concomitant performance outcomes. These structural factors represent the structures (e.g. markets, industries, organisational factors) that enable what can happen (e.g. the extent to which segmentation schemes can be developed and used in marketing) through the workings of mechanisms, in this case organisational processes (Sayer, 2000).

Three types of structural factors appear important in influencing the relationship between market segmentation and business performance (see Table 5.7). The first class of moderators refers to the market context, in particular the type of market that a firm operates in (product lifecycle stage, market growth rate, market dynamism. The second class of structural factors refer to the type of company (age, type of customers - business or consumer, size, type of offering – product or service) and the market position of the company. Company size and market position seem to be important determinants of the choice of segmentation strategy and the benefits expected from adopting segmentation.

Respondents from large, incumbent companies, have justified the use of segmentation schemes to select a smaller number of segments due to implementation and cost implications. In contrast, respondents from small companies displayed a tendency to select niches because they are easier to dominate, as long as entering a new niche is inexpensive.

The third class of structural factors are related to the internal organisation. The first one is the cost structure of the product production and marketing activities: the impact of segmentation on profitability depends on considering the incremental costs and revenues of targeting an additional segment: "*the problem that I've come across in operational marketing in the past is that marketing is a volume game, you've got to drive sales. If you have 40 segments, you end up targeting 15, and you try to aggregate them up to reach volume objectives, and to manage them, you end up sticking them back up, because you can't do 40 different executions of an ad, you can only 3 or 4. So it's an implementation issue and a cost issue*" (Manager A).

Table 5.7 Structural Factors and their Impact

Factors	Sources (References)	Perceptions: market segmentation has a stronger impact on performance for:
External factors		
Product lifecycle	3 (6)	Mature or declining products
Market growth rate	4 (6)	Slower growing markets
Market dynamism	5 (7)	Stable markets
Firm-related factors		
Type of offering	3 (3)	Service offerings
Company age	3 (4)	Older companies
Type of customer	5 (8)	Consumers
Company size and scale	6 (11)	Bigger companies
Market position/strategy	7 (9)	Market leaders, developers and nichers and companies with low cost/product differentiation positions may see performance outcomes, but with different uses of segmentation.
Internal factors		
Cost structure	4 (7)	Segments where incremental costs of reaching the segment with a tailored offer are lower than the incremental revenues
Customer database	17 (45)	Firms with customer databases
Market intelligence	13 (27)	Firms with higher degree of market intelligence
Marketing resources/ competence	10 (30)	Firms with stronger marketing resources/ competence

Source: Derived from the interview data

Note: Sources refer to number of interviewees who mentioned a particular construct (a measure of breadth), while references refer to total number of mentions of a particular construct (a measure of depth)

The second internal factor is the use of database marketing techniques: participants that managed to map the segmentation scheme onto the customer database obtained stronger impact on profitability due to the targeting effect through direct communications and tailoring of the value propositions in order to receive high response rates to the direct marketing campaigns. However, many other participants highlighted the integration in the customer database as negatively affecting the degree to which the segmentation scheme was used.

The third internal factor is the degree of market intelligence generation, which is the extent to which the company understands and monitors its market through identifying market trends, undertaking market research and being open to new developments that challenge the market boundaries, as this increases the power of segmentation: "*I think one of the key things to implementing segmentation is having people who understand the market in which they operate in and to actually talk about these markets in a meaningful way amongst each other and remain connected to the market in which they serve by trying to create opportunities to be in that market.*" (Expert F).

The fourth internal factor is the level of marketing resources (budget, staff and skills) and existing competences present in the company. The notion of 'sophisticated marketing practice' was regularly associated with the practice of market segmentation, suggesting that companies who are more competent at marketing in general also have a stronger segmentation capability, for example: "*you only get a good ROI on segmentation if the marketing department is good anyway.*" (Expert B).

Finally, marketing competences matter because it is the process of execution that eventually leads to financial results. Therefore, if the strategy is poorly executed in terms of product design or advertising, this can lower the impact of market segmentation on business performance: "*Now, to then categorically say which bit of profit did segmentation count for on its own, that's impossible to say, it's the whole process. If you implement segmentation, it requires huge changes for many businesses in product/service proposition, channel, the complete lot. If you have a good segmentation, but do a lousy product or make a mess of your advertising and promotion strategy or choose the wrong channel, you will fail to see results.*" (Expert C).

5.6. Brief Discussion and Conclusion

The qualitative phase of empirical research aimed at understanding how the market segmentation capability is constituted within the firm and helped identify the structural factors and mechanisms that may influence its relationship with business performance.

In order to answer the first research question, the marketing segmentation practices and implementation challenges and key success factors were identified, compared and contrasted in order to infer the organisational processes that ensure a coordinated approach to market segmentation implementation. Three processes emerge as important in implementing market segmentation: 1) the process of identifying and analysing segments and developing segmentation schemes, 2) the process of embedding segmentation in the organisational fabric so that it becomes an internal currency and 3)

the process of using segmentation insight in marketing decision making. The identification of these three processes enable the development of a model of segmentation capability and a richer understanding of how the different components of such a capability interact with structural factors and other mechanisms to have an influence on business performance (see Chapter 6).

Regarding the second research question, the findings suggest market segmentation implementation may have an influence on three main types of business performance outcomes (customer, market and financial), mirroring the suggestions derived from the literature regarding segmentation implementation outcomes (e.g. Smith, 1956; Wind and Douglas 1972; Elrod and Winer 1982). Only one participant mentioned Goller's *et al.* (2002) competitive advantage as a segmentation implementation outcome, however more participants referred to a stronger market position as an outcome of applying the increased market understanding to strategic planning and using segmentation insight to develop tailored brands capable of dominating targeted segments.

Related to the fourth research question, the findings suggest that there are several structural factors that may affect the extent to which market segmentation implementation influences business performance in different industries (due to external structural factors), and within the same industry (due to internal and firm-related factors). The external factors will be included in the quantitative research phase as moderators between market segmentation capability and business performance.

This research phase has also identified two types of mechanisms. The first one acts at a deeper, personal level (the perspective taken on the role of market segmentation). The second type of mechanisms helps explain how segmentation implementation may influence business performance (from the real to the actual domain of reality). Segmentation analysis provide a deep understanding of segment needs and profiles, as well as an understanding of the market structure and a higher level of customer orientation. In turn, these three mechanisms influence the extent to which segmentation schemes are used in developing and implementing marketing strategies. The effect of segmentation-based strategies on business performance is explained through the achievement of marketing efficiency, organisational focus and tailored value propositions. The identification of these mechanisms serves in the development of the conceptual model to be tested in the quantitative phase of empirical research (see Chapter 6), however the testing of such mediating effects will be left to future research.

To conclude, the qualitative phase brings four contributions: a) it provides empirical evidence of the outcomes achieved through segmentation implementation and explains how these outcomes are achieved – through the inter-play of three organisational processes, working together to embed segmentation schemes into decision making and the organisational fabric; b) it facilitates the development of a conceptual model of segmentation capability and business performance, by identifying the capability components and their inter-relationships, as well as the structural factors and mechanisms that influence this relationship; c) it extends the literature by identifying key organisational processes required to implement market segmentation –shifting focus from an historic *research* view of segmentation to an untapped *capability* view and d) it informs the research design and methods of the quantitative phase of empirical research by facilitating the development of a measurement instrument of segmentation capability that taps into the language and mental models used by practitioners.

6. REVISED MODEL OF SEGMENTATION CAPABILITY AND ASSOCIATED HYPOTHESES

6.1. Introduction

This chapter addresses what constitutes a firm's segmentation capability and what effect it has on business performance outcomes. Based on the results of the qualitative study, the chapter modifies the conceptual framework developed in Chapter 3 (Section 3.5). Thus this chapter's purpose is theory-building (i.e. construct and proposition elicitation). Since there are very few studies offering insight into the organisational processes that could constitute market segmentation capability and its outcomes, the in-vivo approach to theory building was adopted (Andersen and Kragh, 2010) – this treats theory, data and analysis as equal, interacting elements of an iterative research process, which relies on constant iterations between theory and data. In adopting this approach, the researcher makes sense of theoretical ideas by linking them to empirical evidence and at the same time, transforms empirical evidence to results through the use of theory and ideas (Ragin, 1992). This process is one of interpolation and it is characterised by a gradual deepening of knowledge of key concepts, in this case segmentation capabilities, and partial explanations, building on broad outlines of theory to refine them and complement them with the data from the qualitative findings with the purpose of generating plausible propositions for empirical testing (Reichertz, 2004).

This approach to theory building is in line with the tenets of critical realism, where reality is viewed as existing independently of our knowledge of it and instead of 'revealing' itself through subjective construction. While the researcher is bound by their theoretical frames of reference, which influence the interpretation process, the empirical referent is assumed to exist regardless of this interpretation (Easton, 2002). As Andersen and Kragh (2010: 52) explain: "although reality may not be directly accessible and perfect knowledge about it not attainable, it is nevertheless possible for the researcher to confront his theoretical pre-understanding with the empirical world as such and to use this confrontation to uncover more aspects of reality. In other words, reality is perceived as being ready for discovery by researchers".

The in-vivo approach was used to extend and combine existing literature on segmentation practices and managerial recommendations from the normative literature (Chapter 2, Section 2.4) with the qualitative empirical findings from Chapter 5 and the capability perspective described in Chapter 3 to build new theory about the nature of market segmentation and its relationship with business performance. More specifically, this chapter refines the conceptual model elaborated in Chapter 3 (Section 3.5) with insight from the qualitative findings (Chapter 5) to derive specific hypotheses about the multi-dimensionality of market segmentation capability, the relationships among the three segmentation capabilities identified, their relationship with business performance, and the structural factors that might influence such relationships.

6.2. Market Segmentation Capability Dimensions

Based exclusively on the literature, four components of market segmentation capability were identified in Chapter 3 (Section 3.5): research, implementation, integration, monitoring. The qualitative findings reported in Chapter 5 provide broad support for these dimensions and richer insight into the characteristics and relationships among different sub-dimensions, as well as a greater understanding of how the different components are inter-linked. However, some changes to the dimensionality were made as a result of the qualitative phase (these are discussed in in detail in Section 6.2.4).

The qualitative phase identified three main processes that emerge as important in implementing market segmentation: 1) the process of undertaking routine segmentation analysis in order to develop relevant segmentation schemes, 2) the process of embedding segmentation in the organisational fabric so that it becomes an internal currency and 3) the process of using segmentation schemes to guide strategic and operational marketing practice. These three processes were taken as the foundations of the new conceptualisation of segmentation capabilities.

The three segmentation capabilities are conceptualised below through a detailed description of the organisational processes and characteristics that reflect each capability, in an attempt to provide a new conceptualisation of market segmentation as a dynamic capability.

6.2.1. Segmentation analysis capability

A large proportion of previous research has been dedicated exclusively to segmentation analysis, with most definitions of the concept restricted only to this aspect of segmentation: "segmentation is the process of separating a market into groups of customers …such that the members of each resulting group are more like the other members of that group than like members of other segments" (Bonoma and Shapiro, 1983: 1). Despite this, there is little known about the required skills that enable a firm to effectively undertake segmentation analysis. Two exceptions are Hlavacek and Reddy (1986), who distinguish among the different steps in segmentation analysis (i.e. segment identification, qualification, attractiveness) and Kotler (1994), who puts forward criteria of evaluation of segmentation quality. Based on these two contributions and the insight generated by the qualitative findings, segmentation analysis capability is defined as the ability of the firm to develop, evaluate and monitor segmentation schemes (see Figure 6.1), manifested through identifying, qualifying, evaluating, profiling and monitoring new segments.

Segment identification refers to the firm's ability to identify certain segments that provide market opportunities. Contrary to Hlavacek and Reddy's (1986) definition of segmentation identification as forming segments based on a common problem to be solved or common requirements satisfied, a common characteristic participants mentioned about successful segmentation projects was the ability to identify segments that provided the company with clear market opportunities, e.g. high-value or high-growth segments. This finding is in line with conceptual arguments from researchers who argue for the importance of identifying underserved segments, those where competitor offerings are not fulfilling customer and channel requirements (Slater and

Narver, 2000), the least price sensitive customers (Morgan, Slotegraaf and Vorhies, 2009), the dissatisfied segments, and those likely to make a first-time purchase (Yankelovich and Meer, 2006). The purpose of segment identification is to help businesses decide how and where to compete by encouraging the identification of the most profitable customers (Jenkins and McDonald, 1997). The interviews also highlight the importance of identifying high-value segments, segments which represent future growth opportunities, are currently very competitor-focused (potential for customer acquisition) or likely to switch to competitors (potential for customer retention).

Figure 6.1 Segment Analysis Capability
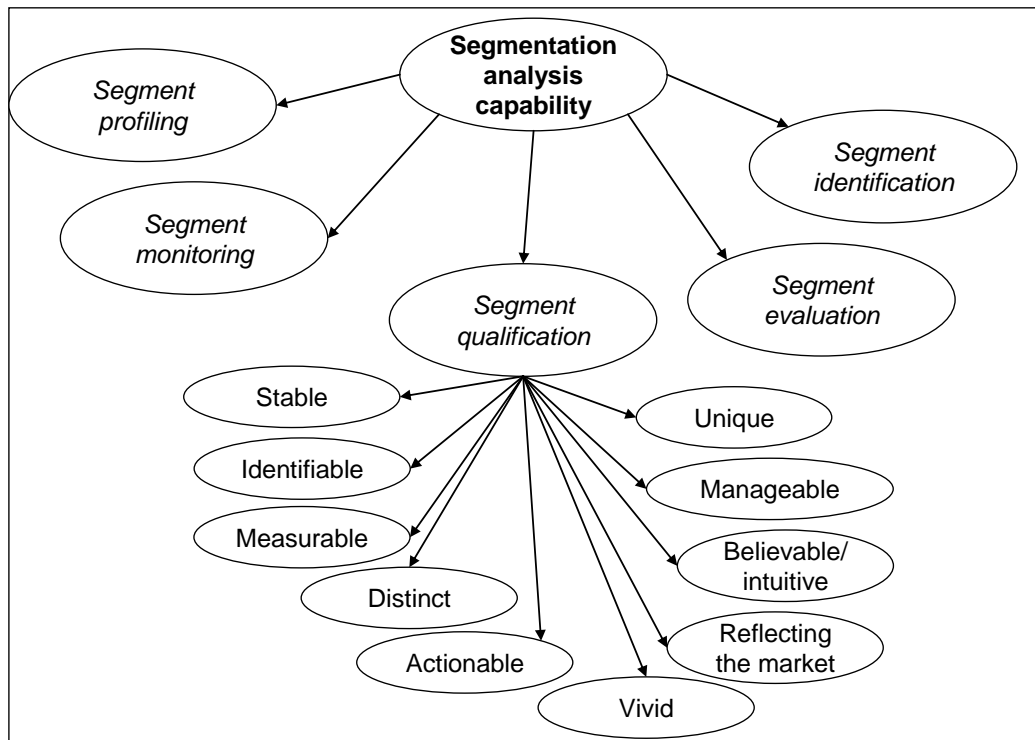
Segment qualification refers to the ability to evaluate the quality and ease of implementation of a segmentation scheme (Dibb, 1999; Hlavacek and Reddy, 1986). Traditionally, this refers to deciding whether a range of segment criteria are satisfied (Dibb, 1995). Four major criteria have been identified in the literature, which are related to the firm's ability to: a) identify segments so that customer-facing employees can place individual consumers in appropriate segments to tailor their approach (Bottcher, Spott, Nauck and Kruse, 2009); b) measure the size, growth, and profit potential of identified segments (Kotler, 1994); c) develop distinct segments in terms of their responsiveness to marketing programmes (Wedel and Kamakura, 2000) or in terms of their needs or purchase behaviour (Doyle, 1995) and d) reach the targeted segments through promotional or distributional efforts (Kotler, 1994). These criteria were also mentioned by participants in the qualitative study (see Table 6.1). The qualitative findings indicated this process is important but challenging to implement due to various organisational constraints (e.g. lack of data, use of inappropriate segmentation bases).

Table 6.1 Segment Qualification Criteria

Qualification criteria	Theoretical explanation	Interview data insight
Identifiability	The extent to which managers can recognise the identified segments in the marketplace and place individual consumers in the segments (Bottcher, Spott, Nauck and Kruse, 2009).	The ability to assign consumers to segments is essential for targeting, but very difficult to execute. Expert B suggests developing a short algorithm (set of questions and decision trees based on the answers) that can be used to assign each potential customer to a segment.
Measurability	The extent to which managers can obtain information about the size, growth, or behaviour of a market segment (Kotler, 1994).	One practitioner highlighted its particular importance in targeting the most profitable segments, while another complained about the difficulty of measuring segments due to lack of market information.
Responsiveness	The extent to which the segments respond uniquely to marketing efforts targeted at them (Wedel and Kamakura, 2000).	Responsiveness is critical for the effectiveness of any market segmentation strategy because differentiated marketing mixes will be effective only if each segment is homogeneous and distinct in its response to them.
Homogeneity	The extent to which segments consist of are homogeneous customers while demonstrating heterogeneity between segments (Doyle, 1995)	Distinct segments make segmentation schemes more actionable and more believable because it shows that customers are different in their needs or purchase behaviour.
Accessibility	The degree to which managers are able to reach the targeted segments through promotional or distributional efforts (Kotler, 1994).	This depends largely on the richness of segment profiles and the available information on media profiles and distributional coverage according to specific variables.
Actionability	The extent to which the segments provide guidance for decisions on the effective development of specific marketing mixes (Wedel and Kamakura, 2000).	This criterion was the most frequently mentioned in the interview, by both managers and experts, and it was stressed as a key success factor for market segmentation execution.

While the interview data contained reference to these academic criteria, participants emphasised the need for actionable segmentation schemes. Managers and experts alike agreed that 'actionability' could be achieved by ensuring that segmentation schemes are: manageable (more segments require more financial and human resources to target), believable/ intuitive (easy to understand by employees who are expected to use the segmentation scheme) and real (reflecting the market reality, not abstract constructs generated by statistical analysis). Participants believed that these practical criteria ensured that the segmentation scheme obtained higher internal buy-in and increased the

chances of it being used daily in marketing activities. These findings echo some isolated observations in the literature that managers were more concerned with identifying segments for which clear marketing programmes can be developed and that will get them "closer" to their targeted customers (Cheron and Kleinschmidt, 1985; Plank 1985; Hlavacek and Reddy, 1986).

Segment profiling represents the firm's ability to gather in-depth knowledge about the identified segments. In the words of Expert C: "*I need to understand these customers both from a human aspect, about them as individuals, where they come from, where I find them, as well as what drives their choices in this particular market*". Segment profiling goes beyond distinguishing consumers on demographics (Yankelovich and Meer, 2006) to providing a detailed picture that leads to a deep insight into their needs, preferred benefits and responses to marketing stimuli (Badgett and Stone, 2005). Having such detailed description of the segments improves the accessibility and identifiability criteria of segment qualification (Wedel and Kamakura, 2000). On the other hand, unsatisfactory profiling of the segments makes the actionability of the segmentation scheme uncertain (Dibb and Simkin, 1994).

In addition, participants interviewed emphasised the need for vivid segment profiles, which enable the effective internal communication and buy-in of the segmentation scheme, for example: "*We worked with our agency…and they helped us put together a set of user personas so that every time we wanted to make changes to the [web]site, we would test them back against the user personas and say actually these pages or this journey satisfy our target audience who come to do their research or purchase online*" (Manager B); "*It's an education and communication process, if you send out a profile or a video of each segment, that gives you an immediate snapshot of what each segment looks like so people don't get drawn down the route of standard profiling exercises, for example people in this group are 25-35, female and live in semi-detached houses*" (Expert G).

Segment evaluation refers to the firm's ability to evaluate the attractiveness of the different segments and their own competitiveness within the segment to match the segment needs with their products or competences: "*we're effectively mapping our core competencies against what that segment actually wants from a service*" (Manager L). This approach is in line with the one suggested by many researchers (e.g. Wind, 1978; Dickson and Ginter, 1987; Hooley *et al.*, 2006), whereby the selection of target markets should be based on both external and internal issues. External issues include segment attractiveness criteria, while internal issues include the current/potential strengths of the business serving the segment and the segment's compatibility with the organisation's objectives and resources. Segment evaluation is an important strategic process which must be made within the context of available resources, environmental conditions and competitive intensity (Dibb, 1995). These approaches imply a structured and proactive method of segment evaluation, which contrasts with the opportunistic approach often occurring in practice: "*Although we are quite established in these markets, they are kind of historic, and I don't think that anyone in this organisation is still here who was responsible for putting those together*" (Manager F). However, a strong capability in segment evaluation enables choosing target segments based on their value and hence marketing efficiency and ultimately profitability through preferential resource allocation to these segments: "*You're still spending the same budget, it's just that you now think that you're spending it on people [who] are more worth spending it on*" (Expert E); "*So*

that's where, if you're really tight on segmentation it can really contribute to profitability and margin because you only select those people who fulfil the correct criteria, in terms of payment systems and speed of payment" (Manager L).

Segment monitoring refers to the ability to track the evolution/stability of the segments, in terms of structure, needs/preferences, size, competitive intensity and technological change (Hlavacek and Reddy, 1986). This ability is an important key success factor of market segmentation implementation (Calantone and Sawyer, 1978; Hu and Rau, 1995; Blocker and Flint, 2007), but was highlighted as an important challenge in the interview data. Neither internal nor dynamic types of segment stability (Blocker and Flint, 2007) were being monitored by practitioners. Hence, many practitioners expressed their scepticism of the market segmentation concept because it seemed to be a static concept that could not be implemented or updated fast enough to keep up with the market dynamics. However, having such a capability facilitates the revision of the segmentation schemes in use and of the required marketing actions for a timely response to a changing market environment (Goller *et al.*, 2002; Blocker and Flint, 2007). Not monitoring the evolution of the segments may lead to the development of already-obsolete products, particularly where long development cycles operate, as in this example:"*…this telecommunications company…did a segmentation study, they developed a new line of cell phones for specific market segments and when those cell phones were ready 5 years later the segments didn't exist anymore. The whole product line completely failed*" (Expert D). In other words, if the segments to which a certain marketing effort is targeted change their composition or behaviour during its implementation, the effort is less likely to succeed (Calantone and Sawyer, 1978).

6.2.2. Segmentation Execution Capability

Segmentation execution capability is the ability of the firm to integrate knowledge about market segments into different levels of their decision making (Piercy and Morgan, 1993). In the interviews, this capability has been highlighted as a challenge by some practitioners ("*I think this is one of those things that people think they should be doing but they don't know how to do it and they know that if they do it, it won't get implemented*", Practitioner D) and a key success factor in implementing market segmentation by the experts: "*If a company just wants to do segmentation, the question is what's the point, do they want to tick a box, that's not the right way to work with segmentation. **It's what you do with the segments that counts**. The best way to work out what to do with segments is to build them into company structure and the strategy*" (Expert C).

Both previous studies of market segmentation practices (e.g. Badget and Stone, 2005; Dibb *et al.*, 2002; Bailey *et al.*, 2009) and the qualitative findings indicate that market segmentation has been used for a wide variety of purposes, ranging from corporate strategy to product or media policy to targeting and managing individual customers. However, several authors have made a distinction between segmentation schemes at strategic, managerial or operational levels (Plank, 1985; Piercy and Morgan, 1993; Clarke and Freytag, 2008) due to the difference between segmentation schemes being used for top management concerns to create a strategic intent, as compared to managerial concerns for planning and budgeting around identifiable targets in the marketplace and operational concerns for reaching target segments and interacting with

customers in the different segments (Piercy and Morgan, 1993). In addition, both recent literature and the qualitative findings indicate that segmentation schemes have been used as part of customer relationship management (CRM) efforts, including increasing customer loyalty (e.g. Libai *et al.*, 2002; Story and Hess, 2006; Hulten, 2007), customer profitability (e.g. Cao and Gruca, 2005; Sausen *et al.*, 2005; Kim *et al.*, 2006; Ansell *et al.*, 2007) and customer retention (e.g. Cooley, 2002; Kim *et al.*, 2006). Following this classification, the segmentation execution capability contains four processes: strategic, managerial, operational and CRM execution (see Figure 6.2).

Figure 6.2 Segmentation Execution Capability
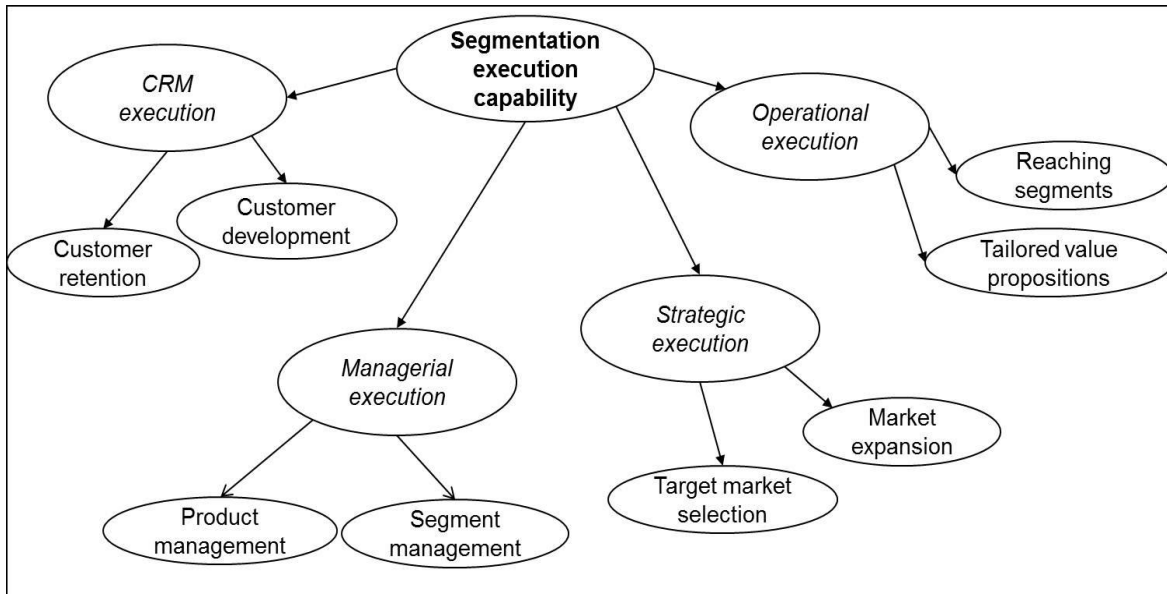
Strategic execution of market segmentation aims at informing top management decisions (Piercy and Morgan, 1993). From a strategic marketing perspective (Varadarajan, 2010), such decisions involve resource commitments that are either relatively difficult to reverse, large in magnitude or made with a relatively longer term outlook and with greater emphasis on the achievement of competitive advantage. The segmentation literature considers such decisions to include the selection of what customers to serve, the creation of mission statements, new market entries, and development of radical innovations (Piercy and Morgan, 1993; Weinstein, 2006; Clarke and Freytag, 2008). By guiding such decisions, strategic execution of segmentation schemes enables top management to provide a link between the firm's capabilities, mission statement and the customer needs in a specific marketplace (Piercy and Morgan, 1993). The interviews provide similar examples of how such a link could be made, namely through using segmentation schemes for selecting target markets (at a business unit/corporate level) and developing growth strategies (either through new product development or through market expansion). These examples are in line with findings from Badgett and Stone (2005), where the vast majority of respondents used segmentation throughout their go-to-market strategy development. A similar example is discussed by Harrison and Kjellberg (2010), where the case organisation used market segmentation for target market selection in a completely new market.

Strategic execution of segmentation schemes is important because marketing strategies need to be consistent with consumer needs, perceptions and preferences in order to be successful (Wind and Robertson, 1983; Levitt, 1960) and segmentation schemes provide that type of insight (Yankelovich and Meer, 2006). In addition, using segmentation schemes for new product development[27] is valuable because it minimises the failure risks of new products (Giloni *et al.,* 2008). However, such a capability is rare: some of the participants in the qualitative study, particularly from technology industries, referred to the usage of segmentation schemes in new product development as an ambition rather than realisation, for example: "*What we work on at the moment is trying to get the segmentation embedded in not just in just propositions, pricing and marcoms, but we're also trying to bring the segmentation into our product development, our R&D, not just building new products and then trying to throw them on to the market them but building products that are designed to meet a specific segments, so that the marketers can market those products in a more effective way - there has been a mismatch sometimes*" (Manager A).

On the other hand, *managerial execution* refers to using segmentation schemes in planning and budgeting around identifiable targets in the marketplace (Piercy and Morgan, 1993). This may involve (re)positioning of offerings in the different segments, creating a connection in its offerings so that the organisational base connects to and assists the value creation better. This process is similar to the one identified also as valuable segmentation execution practice in the interviews, when participants discussed using knowledge generated by segmentation schemes for product portfolio management (e.g. rationalising/redesign the portfolio of products/services to serve the needs of target segments). Executing segmentation schemes for product –related decisions and activities involves paying close attention to the segments' product preferences and redesigning or dropping products that do not meet the target segments' needs. This came across strongly from the qualitative data, for example: "*We've got products that we developed for certain segments that are not selling quickly enough…So it's about understanding what the reasons are, coming together as a team and making a decision whether or not we actually want to spend a lot of time, money and effort putting together solutions, depending on the size of that particular market or segment*" (Manager F).

The second managerial process that participants in the qualitative study emphasised as a critical execution of the knowledge from segmentation schemes is related to segment management, i.e. managing the investments that the firm makes into the different segments depending on the corporate objectives, segment value to the firm and the segment dynamics. The interviews contain a clear example of successful segment management: "*With the share it's not increasing the market share but managing where that market share comes from. We have a project where part of the implementation was to ease the business away from some segments and grow its presence in other segments but leaving an overall balance in the share of the market. At the end of the day, they had about 35% market share but the composition was very different from a few years ago*" (Expert C). This process is similar to the notion of customer portfolio management

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[27] This could involve either identifying specific types of segments (e.g. innovators, early adopters, lead users) to involve in the product development process or developing segmentation schemes based on needs, benefits or product attributes in order to develop new products that fit to the target segments' needs.

suggested by Johnson and Selnes (2004) and empirically tested by Homburg, Steiner and Totzek (2009). Johnson and Selnes (2004) define customer portfolio management as the process of managing the firm's loose and close relationships with different types of segments, which is argued to increase customer equity through guiding the extent to which the firm engages in defensive versus offensive marketing actions with the different segments (Homburg *et al.*, 2009).

Operational execution of segmentation refers to the ability to use information about market segments to design and adjust marketing programmes that appeal to specific market segments in order to provide higher value to customers (Dickson and Ginter, 1987; Clarke and Freytag, 2008). Piercy and Morgan (1993) similarly refer to operational concerns with reaching target markets and interfacing with customers through sales and distribution channels. The operational execution of segmentation scheme was referred to the most by the participants in the qualitative study, who highlighted two main types of operational uses: reaching target segments through media, sales and distribution channels and tailoring propositions to each segment's needs. Using segmentation insight to design value propositions (combinations of product design and marketing programme) tailored to the needs of the target segments enable firms to provide value added to customers (Slater and Narver, 2000). Nonetheless, this is a rare capability, as previous studies of segmentation practice indicate that companies tailor different elements of the marketing offer and in varying degrees (e.g. Schuster and Bodkin, 1987; Abratt, 1993). In addition, using the insight generated by segmentation schemes facilitates the effective and efficient reach of target segments because segment understanding guides the selection of the best media outlets and advertising messages for communications and the most appropriate distribution outlets that fit with the purchasing habits of the target segment. Also, using segmentation schemes for tailoring value propositions may enable uncovering innovative product, prices, distribution and service strategies (Hlavacek and Reddy, 1986) based on a deep understanding of a target segment's characteristics (which is built on strong segment profiling).

Finally, *CRM execution* refers to classifying the customer base in terms of customers' value to the company and reaching each customer segment with tailored promotional offers that aim at developing their value to the company or retaining them as profitable customers. Such an ability has been found rare and difficult to achieve both in the qualitative study as well as by Meadows and Dibb (1998) and Sarabia (1996). And yet such a capability is valuable, since Verhoef *et al.* (2002) confirm that firms with customer databases use segmentation for target selection and tailored promotional offers which are effective for customer acquisition and customer development, which in turn improve marketing return on investment (Sausen *et al.*, 2005; Badgett and Stone, 2005; Reutterer *et al.*, 2006). Using segmentation schemes for CRM execution provides insights into opportunities within the existing customer base to expand the share of customer requirements that the firm can exploit (Morgan, Anderson, and Mittal, 2005). Customers are one of the most important intangible assets for firms as they create revenue streams (Srivastava *et al.*, 2001; Rust *et al.*, 2004). More than half of the value of a firm is composed of intangible assets (Nagar and Rajan, 2005) and, as such, customer assets significantly influence financial performance (Ramaswami, Srivastava and Bhargava, 2009).

The distinction among the four different types of execution of segmentation schemes implies, as indicated by the qualitative findings, that, in the attempt to execute segmentation at various levels, firms have resorted to undertaking and managing multiple segmentation schemes for different purposes. This supports Piercy and Morgan's (1993) argument that different segmentation schemes could be in use at different levels of planning, separately or jointly, to serve distinct purposes in the organisation (Piercy and Morgan, 1993). However, the qualitative findings suggest that this distinction adds another level of complexity to the execution of segmentation schemes, as managers now need to decide on the number of segmentation schemes to retain for use and the marketing decisions that those segmentation schemes should be applied to. Therefore, a real sign of segmentation execution capability is when firms recognise the different purposes and levels where segmentation schemes add value and use it to drive marketing actions as the following comments indicates:

> '*It's about flexibility, it's about understanding that segmentation can be used as a big over-arching thing with set rules and definitions and it's monitored and checked, but also using segmentation as a small, granular thing to understand a business issue, why sales are weak this week, why a promotion didn't work, it's about using segmentation to be flexible*' (Expert H).

> "*the place that everyone would want to reach is a segmentation that works across all those different views or lenses. That would be the nirvana. That probably would cost lots of money and every time something changes, you would have to rebuild or recut the segmentation. If you were to keep these components separate and use them as lenses on top of each other, then you'll end up with a way in which you can change the segmentation but not impact on all the others. So you would be able to compare what happened by switching among lenses like an optician*" (Expert G).

This idea of flexibility leads to the suggestion that a stronger execution capability is apparent when companies integrate knowledge about their segments into more levels of their decision making; in other words where segmentation schemes provide a coherent focus for people's thinking in the organisation (Piercy and Morgan, 1993). This is in line with the idea that capabilities are embedded within organisations in the complex mesh of interconnected actions that follow managerial decisions over time (Krasnikov and Jayachandran, 2008). In effect, segmentation execution is one manifestation of capability embeddedness, which creates barriers to imitation, enabling firms to enjoy sustainable advantage over their rivals (Grewal and Slotegraaf, 2007).

6.2.3. Segmentation Integration Capability

Segmentation integration capability is the ability of the firm to support the segmentation strategy and embed it into the organisational fabric (Dibb and Simkin, 2001). Embedding segmentation was highlighted as critical, but challenging, in all the interviews partly because it was perceived to be a top-down decision that must be permeated throughout the rest of the organisation. The qualitative findings indicated that one of the challenges perceived by practitioners is that the length of time required to undertake segmentation research and implement the segmentation into an organisation can reach up to 3 years and pose problems as the information may no longer be accurate and/or employees lose interest in the segmentation project. Previous studies of segmentation implementation challenges (e.g. Dibb and Simkin, 1994, 2001,

2009b, 2010; Quinn, 2009), as well as the studies on marketing implementation reviewed in Chapter 2 (Section 2.4.4), have highlighted four key processes of organisational integration, which were broadly supported by the qualitative findings: organisational structure, implementation plan, organisational culture and performance measurement (see Figure 6.3).

The importance of segmentation integration capability is given by the fact that organisations are not able to implement strategies around given segment targets (Piercy and Morgan, 1993), without additional resource provision and realignment of resources and personnel to reflect new priorities (Dibb, 2005). In essence, segmentation integration capability is another mechanism of reconfiguring resources in the organisation as a result of adopting and implementing segmentation schemes.

Figure 6.3 Segmentation Integration Capability Dimensions
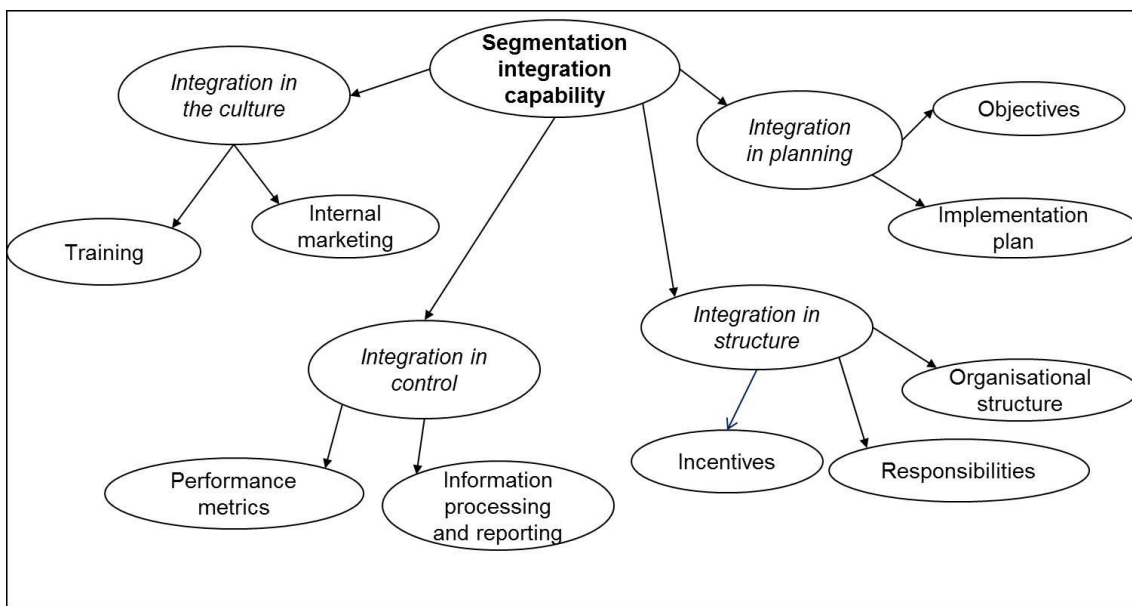
Integration into planning refers to the ability of the firm to develop an implementation plan for the segmentation schemes and to integrate it in its current and future business strategy. At a minimum, the literature suggests that this includes: setting clear objectives for the segmentation analysis (Wind, 1978; Yankelovich and Meer, 2006), which are linked with the business strategy and objectives of the firm (Green, 1977), reviewing the availability of marketing intelligence, identifying personnel with relevant skills and ensuring that the necessary resources are in place (Dibb and Simkin, 2001). The interview data add more richness to the idea of an implementation plan. Experts in particular emphasised the need to have an implementation plan which sets out the 'business case' for segmentation and specifies required actions for: segmentation analysis, tracking segment structure, undertaking corrective actions needed to adjust the segmentation schemes in use. These have been identified as significant challenges by Badgett and Stone (2005) and the qualitative findings in this research. However, such implementation plans enabled the interviewees who used them to increase the internal buy-in from various stakeholders and to identify the best segmentation variables and methods to be used, as well as the most appropriate performance outcomes to measure. In addition, the process of creating a detailed implementation plan would help solve

some of the operational problems (lack of flexibility in distribution, sales force resistance to the radically new segments) and resource barriers (time pressures, data shortfalls, budgets), which have been identified as significant implementation challenges by Dibb and Simkin (2001, 2009b). Nonetheless, the segmentation plan must be designed with sufficient flexibility to allow adaptation of marketing actions (Boejgaard and Ellegaard, 2010), according to the changes in segment size, structure and composition uncovered by segment monitoring.

Integration in control refers to the development of specific processes to ensure the continued implementation, relevance and success of the segmentation-based strategy. Performance assessment is a critical component of the marketing control process in general (Grewal *et al.*, 2009). However, the participants interviewed were able to identify only challenges related to their inability to measure segmentation results. One of the reasons is that accounting systems typically track profitability of products but not of target segments (e.g. Montgomery and Webster, 1997) due to allocating costs to product categories or functional activities rather than market segments. Several authors propose some mechanisms to improve the ability to monitor performance of segmentation-based strategies. Piercy and Morgan (1993) highlight the need to assign resources and budgets to segments and to create information processing and reporting systems. Such systems are important in order to be able to measure and monitor activities and results in the target segments (Bonoma and Shapiro, 1984), allocate sales and costs to market segments (Beik and Buzby, 1973) and calculate segment profitability (Bonoma and Shapiro, 1984; Cheron and Kleinschmidt, 1985; Homburg *et al.*, 2000).

The qualitative findings indicate that one of the reasons for not fully implementing segmentation in business strategy and the organisational fabric of the company is the lack of evidence on the business benefits of segmentation. Therefore, ability to measure the performance of segmentation activities is doubly important as: a) it acts as a feedback loop to the change of segmentation schemes and/or tailored marketing programmes used to target segments (Bonoma and Shapiro, 1984; Doyle and Saunders, 1985; Goller *et al.*, 2002) and b) it increases the internal buy in of the various departments by putting forward the 'business case' for investing in segmentation activities and changing necessary processes and resources in order to implement segmentation schemes. Calculating and tracking segmentation metrics is also important in motivating employees to be more segment-oriented and in helping managers measure the financial implications of their decision making and think of segmentation-related expenses as investments (Shah *et al.*, 2006). This is particularly relevant since the qualitative findings suggest that the inability to quantify and monitor the value obtained from segmentation projects leads to the segmentation programme having to be part of other major projects instead of receiving its own budget.

Integration into the structure of the company refers to adjusting the existing organisational configuration (e.g. structure, responsibilities, reward systems) so that it makes the segmentation schemes more readily implementable in the organisational reality (Dibb and Simkin, 2009b). The qualitative findings suggest that managers were able to identify only challenges related to this issue, supporting evidence from previous research that organisations do not change their existing configurations when adopting of new segmentation schemes, due to the costs involved and the entrenched nature of the existing arrangements (Dibb and Simkin, 1994).

Many times, segmentation schemes that are based on customer needs, product usage or purchase behaviour cut across product/sector/geography-based structures (Homburg *et al.*, 2000) and, as a result, may require a cultural, salesforce and distribution reorientation within the business (Dibb and Simkin, 2001). Other organisational structures (e.g. product category, industry sector or geography-based) decrease inter-departmental coordination and result in failure to respond to customer needs (Abratt, 1993; Dibb and Simkin, 1994), acting as a significant impediment to implementing segmentation (Meadows and Dibb, 1998), because they raise the risk that the segments are never 'owned' or taken seriously (Piercy and Morgan, 1993). However, a segment-focused organisational structure would enable sales people to be closer to the customer's problems and better assess the value chain, thus differentiating the organisation's products and services based on an intimate knowledge of the customer's requirements (Homburg *et al.*, 2000). Another way of moving toward a more segment-focused structure is to assign responsibilities for developing and implementing segment-specific marketing strategies, which could be done either through appointing segment champions or adding market segment managers, who represent the needs of given segments internally (Homburg *et al.*, 2000; Shah *et al.*, 2006). Finally, integration in the structure is also achieved through synchronising the reward systems and incentives for customer-facing employees with the usage of segmentation schemes. This is important because, depending on the organisational implications of a new segmentation scheme, it may have a significant impact on employees' responsibilities and power remit, therefore segmentation implementation can be met with significant resistance (e.g. Dibb and Simkin, 2010; Dibb and Simkin, 2001; Clarke and Freytag, 2008). While the process of integration into culture, which is next discussed, may soften the resistance, Shah *et al.* (2006: 116) note that: "there is no evidence efforts directly aimed at changing a culture are likely to succeed. Culture change is achieved by altering behaviour patterns and helping employees understand how the new behaviours benefit them and improve performance". Thus, aligning reward systems and incentives to the implementation of segmentation schemes represents another useful method of integration.

Integration into the culture of the organisation refers to the ability of the firm to ensure that the segmentation scheme becomes an internal currency that all departments use to refer to their customers. Both experts and managers identified this type of integration as requiring cultural change to be successful, for example: "*That's a big culture change, a big shift from how most organisations work because most of them have no idea what's going on in the marketplace. A big problem is that you have to take people away from mass marketing in the first place. It's such a cultural thing*" (Expert G). This realisation is in line with comments from the segmentation literature (e.g. Piercy and Morgan, 1993; Jenkins and McDonald, 1997; Hines and Quinn, 2005), who argue that a new segmentation scheme represents a new enactment of the environment which is likely to challenge existing views of the world inside the organisation, hence segmentation implementation should be treated as a cultural change. In addition, employees may lack the motivation to use a new segmentation scheme, which is a key challenge for implementation success (Boejgaard and Ellegaard, 2010). The lack of motivation may be caused by a lack of understanding of the purpose and relevance of the segmentation plan (Piercy and Morgan, 1993) and by failure to understand how to approach the task of using segmentation schemes (Palmer and Millier, 2004). Implementing segmentation implies a change in practices and requires managers' time and resources, which often provokes resistance (Dibb and Simkin, 2010; Palmer and Millier, 2004).

Therefore, any actions which involve managers in the segmentation analysis, planning and implementation processes may generate commitment to the new segmentation scheme and facilitates successful implementation (Laughlin and Taylor, 1991; Dibb and Simkin, 2010). Ensuring that senior managers buy-in to the process and are aware of segmentation principles and benefits and maintaining open communication channels between functions is vital in implementing segmentation successfully (Dibb and Simkin, 2001). Failure to engage top management is likely to result in implementation failure, as in this example: "*I'm sort of agnostic [about segmentation] ... I'm not saying that we're not doing any segmentation...we do certain things with certain groups of customers, but it's not sitting in a glossy big book ...I've got a segment profile book sitting on the shelf for the last 5-6 years...it got quite interesting for about 2 months and then people got bored and moved on*" (Manager D). The open communication opportunities allow the marketing function to ensure: a) the fit of the proposed segment schemes with the overall business strategy, b) the shared awareness among departments that the market is segmented in a particular way and that these segments should provide the basis for how the organisation understands and reacts to its environment and c) the clarity of the organisational implications of implementing a particular segmentation scheme (Jenkins and McDonald, 1997; Dibb and Simkin, 2001).

The integration into the culture then enables the firm to achieve a common understanding of the marketplace, facilitating the organisation-wide understanding of the principles and applications of market segmentation (Dibb and Simkin, 2001) and creating an internal currency to exchange marketing best practices and operate cohesively across departments and geographies. Overall, organisational culture can be either an important facilitator of performance or a major impediment (Shah *et al.,* 2006). Nonetheless, market cultures that place the customer's interests first have been found to be the most profitable (Deshpandé, Farley and Webster, 1993).

6.2.4. Changes in dimensionality of market segmentation capability

Beside some minor terminology changes, inspired by the qualitative findings, four main differences emerge between the initial conceptual model (see Chapter 3, Section 3.5) and the qualitative findings in regards to the conceptualisation of the market segmentation capability. Appendix H displays how the dimensions of the segmentation capability have changed in view of the qualitative findings.

The first difference relates to the contrast between the research dimension posited initially and the analysis process found in the qualitative data. The interviews highlighted that participants had developed segmentation schemes based on a variety of data sources including managerial intuition/experience (e.g. Manager F, Manager L), qualitative studies (e.g. Expert E, Manager M) and database analysis (e.g. Manager H). The qualitative findings reinforce arguments from Millier (2000) and evidence from Wind and Cardozo (1974), Quinn (2009) and Harrison and Kjellberg (2010), which indicates that intuition/ experience can successfully be used instead of quantitative methods, particularly in an industrial market or for a new product, where quantitative data or statistical expertise may not exist. Hence, the real emphasis should be on the analysis process rather than the research aspect of segmentation.

The second difference is the formal addition of CRM as part of segmentation execution capability. The qualitative findings indicate that participants have used segmentation, (in particular based on classifying customers according to their transactional past or lifetime value), to retain customers, reward customers and increase their value to the company. These findings are in line with recent articles on applications of segmentation schemes for customer relationship management activities (e.g. Libai *et al.*, 2002; Cao and Gruca, 2005; Story and Hess, 2006; Ansell *et al.*, 2007; Hulten, 2007), thus CRM was included as a separate component of segmentation execution capability.

The third difference is the disappearance of the monitoring dimension, whose two components became assigned to different dimensions. Segment monitoring becomes part of segmentation analysis capability and market effectiveness monitoring becomes part of integration capability (as integration in control). While both processes are likely to happen once an initial segmentation scheme has been developed, evaluated and implemented in strategy and structure (Boejgaard and Elleggard, 2010), the qualitative findings suggest that segment stability monitoring and market effectiveness monitoring require different skills, are under the remit of different people and have different relationships to other dimensions of segmentation capabilities.

Segment monitoring was contrasted with segment stability as a criterion of segmentation scheme evaluation, with some managers suggesting that stable segmentation schemes do not require monitoring. In addition, thematically, it is related to segment identification and profiling as part of a routine analytical process required for segment management (one of the applications of segmentation insight identified in the qualitative findings). Also, the monitoring of segment stability falls within the remit of the segmentation scheme developers, who may either be outside parties (e.g. marketing/research agencies) or analysts/researchers from a different department/team inside the company. In contrast, it is likely that market effectiveness monitoring is undertaken by marketing managers once the tailored marketing programmes have been implemented. In addition, the ability to monitor the marketing results of a segmentation schemes are strongly related to the integration ability of a company, since accounting standards do not usually allow assigning revenues, expenses, profitability to segments. This implies that, in order to compute segment profitability (one of the metrics of segmentation effectiveness, cf. Winter, 1979), the segmentation schemes need to be integrated in the organisational fabric and have the full support of the top management for any segmentation-based organisational initiative. Therefore, it was decided to place these two components in separate dimensions and to retain three dimensions for a market segmentation capability.

6.2.5. Definition of market segmentation capability

Thus, market segmentation capability is seen as a multidimensional construct that comprises the organisational processes to address three critical aspects of implementing market segmentation: analysis, execution and integration of segmentation schemes. Therefore, market segmentation capability is defined as *a firm's ability to develop, evaluate and monitor segmentation schemes, to integrate the resulting segmentation schemes in the organisational plans, structures, control and culture of the organisation and to execute the segmentation schemes by guiding strategic, managerial, operational and CRM marketing decisions and activities.*

6.3. Segmentation Capabilities Model and Hypotheses

6.3.1. Segmentation capabilities inter-relationships

Based on the espoused conceptualisation and the qualitative findings, it can be argued that segmentation analysis, execution and integration can be seen as distinct but inter-related constructs, with specific relationships among them (see Figure 6.4). As it has been noted in Chapter 2 (Section 2.5.1), there is a lack of literature investigating the mechanisms by which segmentation analysis translates into business performance, beyond some anecdotal evidence or passing arguments. Nonetheless, this section will make use of such arguments where they exist. It is important to note that the main sources of hypotheses in this section are the qualitative findings of the present research.

Figure 6.4 Segmentation Capabilities Hypothesised Inter-Relationships
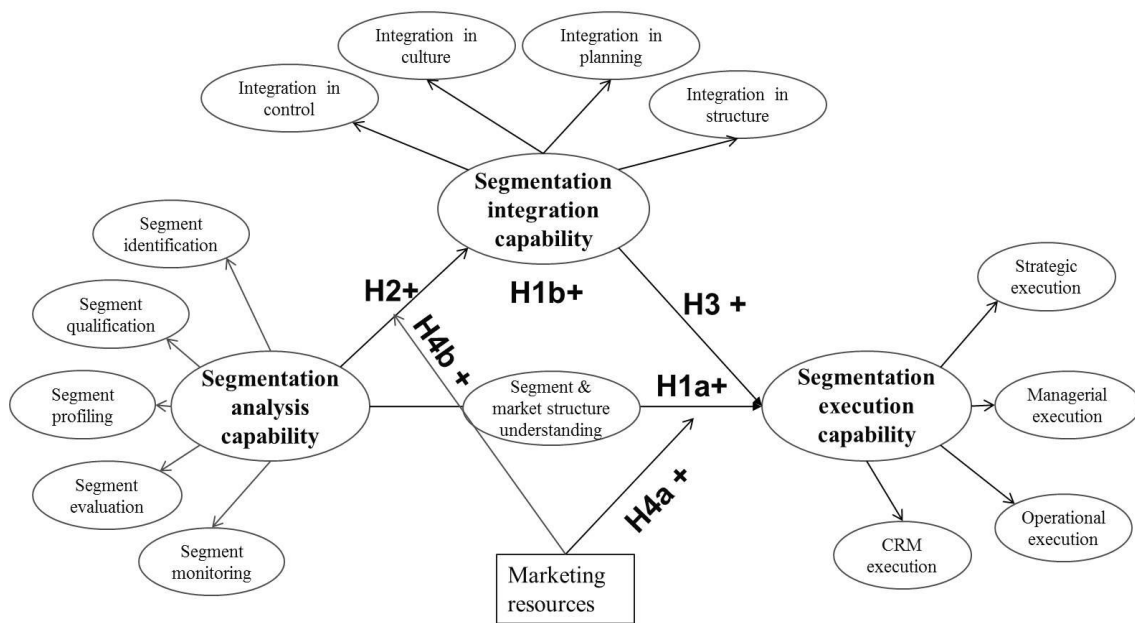
The qualitative findings indicate that segmentation analysis capability may facilitate an in-depth understanding of each segment's needs and requirements (due to segment profiling and qualification) and position and attractiveness vis-à-vis competitors (due to segment identification and segment evaluation). Participants related segment understanding to the ability to develop tailored propositions for each segment and reach those segments successfully through the right channels of communication and distribution. Hence, segment understanding may help in operationally executing segmentation because this understanding enables firms to fine tune their product/service offers more closely to match the desired buying factors of each segment (Brown *et al.*, 1989). Market structure understanding, on the other hand, was associated by participants with the ability to gain insight into which segments are growing or shrinking and their own offerings' competitive strengths in each segment. This understanding facilitated plans for market expansion, the selection of appropriate target segments, segment and product management, and measurement of market performance. So, market structure understanding may help firms in the managerial and strategic execution of segmentation. Thus, the qualitative findings indicate that segmentation

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analysis capability influences positively segmentation execution capability through developing a deep understanding of segment needs/characteristics and the market structure.

In the literature, Cheron and Kleinschmidt (1985) argue that segment identification permits the development of better marketing strategies catering to the specific needs of targeted segments and that segment (target market) identification becomes the core element and provides the structure for marketing planning and control. On the other hand, according to Blattberg *et al.* (1978), the managerial usefulness of segmentation analysis depends on how well customers are divided into relatively homogeneous groups with distinctive buying behaviour, which would suggest that segment qualification is the real mechanism that translates segmentation analysis into execution. Dibb and Simkin (1994: 62) concur, arguing that: "Without schemes that are straightforward to implement, the ability to generate appropriate, targetable, and effective marketing programs will be limited, reducing the likelihood that practitioners will use such schemes". Overall, there is agreement among researchers that market segmentation analysis helps companies make more informed choices between alternative market opportunities and leads to more effective marketing programmes being developed (e.g. Yankelovich, 1964; Webster, 1992). Hence it is hypothesised:

H1: Segmentation analysis capability is positively associated with segmentation execution capability.

The interview data also suggests that the relationship between segmentation analysis capability and segmentation integration capability seems to revolve around the quality of the segmentation schemes. The managers who mentioned that their segmentation schemes were manageable, believable to stakeholders, vivid and actionable, emphasised these characteristics as instrumental to obtaining internal buy-in from stakeholders because such characteristics would facilitate a) understanding the reasoning behind the segmentation scheme, b) the identification of real customers who fall into each segment, and c) integration into the organisational culture. The literature provides some support for this claim. Based on case studies of segmentation implementation, Dibb and Simkin (1994: 62) conclude that: "Where new segmentation solutions are sought, the importance of readily implementable, clear, and understandable schemes should not be obscured by the desire for an academically valid solution that is justified by all the formal statistical routines". In addition, Quinn (2009) concludes that managers value manageable segmentation schemes, which can be easily understood and enable them to react to the rapidly evolving, day-today pressures of their role. This suggests that segment monitoring is also critical in convincing managers to believe in the benefits of segmentation schemes and thus integrate segmentation schemes in the organisational culture and plans. Therefore it is hypothesised:

H2: Segmentation analysis capability is positively associated with segmentation integration capability.

The relationship between segmentation integration capability and segmentation execution capability relies on adopting segmentation as an internal currency, which subsequently enables firms to become more customer-oriented in their marketing actions, as one expert commented: "*The thing about segmentation is once people start questioning a strategy… you can actually backtrack it to the customer you try to target and say this is why we're doing this and why it's working*" (Expert C). This comment is

particular important as segmentation execution capability represents the ability to embed knowledge from segmentation schemes in a wide variety of decisions. In order to achieve this level of embeddedness, a broader range of stakeholders need to be involved in the development and communication of segmentation schemes.

In addition, Dibb and Simkin (2001) argue that segmentation schemes are not used when an organisation's culture or structure are too inflexible to deal with the segmentation process, for example the marketing department in a company with a particularly entrenched organisational structure may fail to implement segmentation if it has not secured the commitment of senior managers. Doyle (1995), on the other hand, suggests that poor managerial understanding of segmentation principles is a major barrier to successful implementation, thus offering training into the benefits and principles of segmentation would alleviate that problem and enable managers to use segmentation schemes effectively. These two arguments then suggest that cultural integration of segmentation schemes increases the degree of segmentation execution capability. The literature also suggests that segmentation execution is strengthened through having a detailed segmentation plan specifying how the segmentation schemes will be used (Weinstein, 2004), dedicating the necessary budget for these initiatives (Dibb and Simkin, 2009b), and integrating the segmentation schemes into the infrastructure of the organisation (Haley, 1984). These activities are in fact part of the other organisational processes (besides cultural integration) reflecting a firm's segmentation integration capability, as conceptualised in Section 6.2.3. Hence it is hypothesised:

H3: Segmentation integration capability is positively associated with segmentation execution capability.

The qualitative findings further suggest that the relationships between segmentation analysis capability and segmentation execution and integration capabilities may be moderated by the marketing resources available. Marketing resources refer to all types of resources expended by an organisation toward the creation, communication and/or delivery of valuable products/services, including financial resources expended toward specific marketing activities, the accumulated stock of marketing assets and the skills and number of the marketing human resources (Chebat *et al.*, 1994; Varadarajan, 2010). The underlying rationale is that firms with higher marketing resources can afford more time and money to spend on collecting and analysing appropriate market data (Dibb and Simkin, 2001) and communicating it internally (Dibb and Simkin, 2010). One of the main impediments to segmentation implementation, highlighted by both interviews and previous research, is that managers complain they do not have the time or the budget to undertake segmentation analysis and then to integrate it in the rest of the organisation. Dibb and Simkin (2010) note how, in the case organisation under study, the lack of financial and human resources for the segmentation project nearly derailed its implementation, while managers interviewed in the qualitative stage of this research stated that a lack of resources prevented them from adopting more sophisticated (i.e. detailed, data-based) segmentation approaches, for example: *"The four segments is the most we could work with right now because we have small teams… we only have 1 person looking after that customer segmentation activity and he's also involved in doing all the research and working with the other teams to develop the ranges for each customer group so even if we wanted to manage 10 segments then all the artwork and*

everything we need to do to support it would be unmanageable for us" (Manager M). Hence it is hypothesised that:

H4a: The larger a firm's marketing financial and human resources, the stronger the effect of segmentation analysis capability on segmentation execution capability.

H4b: The larger a firm's marketing financial and human resources, the stronger the effect of segmentation analysis capability on segmentation integration capability.

Thus, the first four hypotheses propose a theory of how the segmentation capability dimensions interact with each other. It is hypothesised that segmentation analysis capability is the antecedent of both segmentation integration and execution capabilities, facilitated by increasing levels of marketing resources. Indirectly, through H2 and H3, it is also hypothesised that the effect of segmentation analysis on segmentation execution is partially mediated by segmentation integration capability, as segmentation schemes become subsumed into employees' daily decision making only if they believe in and share the segmentation scheme as internal currency. As with any type of market information, after performing the segmentation analysis, the information contained in segmentation schemes is processed through a sense-making process (Slater and Narver, 1995; Johnson *et al.*, 2004; Morgan *et al.*, 2005). Sense-making may consist of meetings, discussions, and other forms of communication and interpersonal interactions (Vorhies *et al.*, 2011), which are facilitated by the development of a high level of segmentation integration capability. The results of these communications are then fed into the organisation's decision-making processes, and the new information is linked to existing knowledge, which may provide the basis for new understanding and new types of marketing actions (Moorman and Miner, 1998). Hence it is hypothesised:

H1b: *The relationship between segmentation analysis capability and segmentation execution capability is mediated by segmentation integration capability.*

6.3.2. Market Segmentation Capability and Business Performance

The qualitative findings suggest that market segmentation implementation has a positive influence on business performance outcomes, which happens through six intermediary mechanisms that link the components of market segmentation capability with each other and performance outcomes (see Figure 6.5).

Figure 6.5 Mechanisms Linking Market Segmentation Capability and Business Performance

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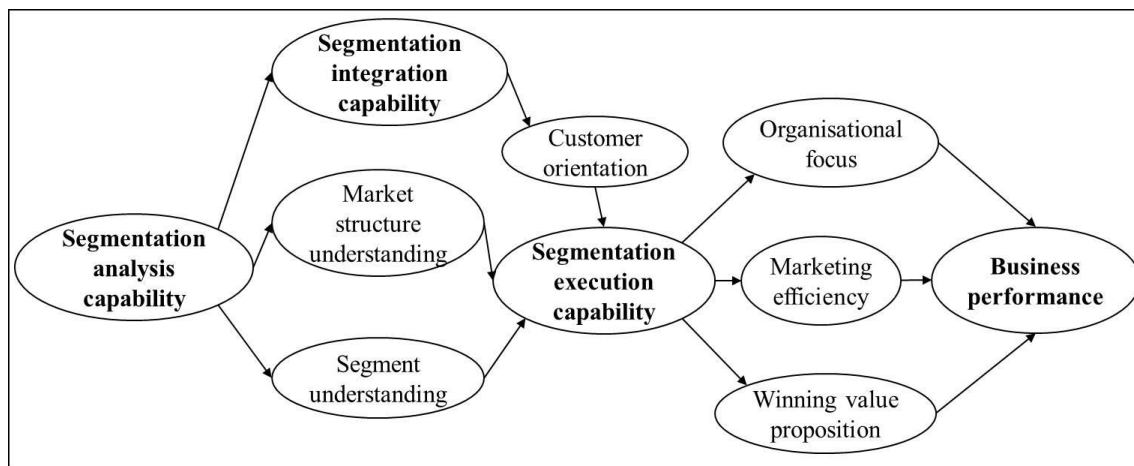
The qualitative findings point to the fact that segmentation execution capability is the main reason why segmentation activities have an impact on business performance (see Table 5.4 in Chapter 5). Three main benefits of segmentation execution capability emerged as follows: achieving organisational focus (common understanding of and dedication to target segments and the strategies required to serve them), marketing efficiency (careful allocation of marketing budget to maximise return on investment) and winning value propositions (tailored value propositions that provide value added to customers). These benefits in fact acted as mechanisms by which participants realised business outcomes from segmentation activities (thus moved from the real domain to the actual domain of reality, in critical realist terms). These mechanisms can be associated with existing concepts in the marketing literature that links them to business performance.

More specifically, the contrast of successful and unsuccessful segmentation projects in the interview data leads to the conclusion that managerial execution helps achieve greater marketing efficiency through the pro-active management of products and segments. In turn, the efficiency in the deployment of marketing resources implies receiving higher gains from a firm's marketing investments, while achieving cost savings that would positively influence the firm's financial bottom-line (Srivastava *et al.*, 1999). Thus marketing efficiency has been found to have a strong direct influence on financial performance (e.g. Dutta *et al.*, 1999; Rust *et al.*, 2004).

Furthermore, strategic and managerial execution can provide organisational focus through the choice of target markets and the ensuing rationalisation of product and segment portfolios. The experts interviewed argued for the importance of organisational focus on the basis that it can influence profitability through the rationalising of marketing and operations efforts required to target a limited number of segments (as opposed to a 'shotgun' approach attempting to cover the whole market). Furthermore, the focus on particular segments also helps in achieving a stronger market position, as it enables firms to focus on their core capabilities and employ them in a limited selection of profitable segments, as in this example: "*So we are very clear, we don't get distracted. Somebody comes to us and says that we want to mobilise this email application or this customer relationship management application, or that I want a management dashboard for my CEO, we won't do that, because you can't really measure the financial benefits that you get from it, and there might well be off the shelf applications that do this. So segmentation really helps us stay focused on what we really do best*" (Manager E). Organisational focus thus can be associated here with the narrow product market scope, i.e. the selection of a narrow portfolio of segments and products (Vorhies *et al.*, 2009). In their cross-sectional study, Vorhies *et al.* (2009) found that a broad product market scope negatively influenced future cash flows. This provides support to the notion that a narrower scope may have a positive influence on financial performance.

Operational execution emerged as a key driver of winning value propositions through tailoring marketing offers to each target segment. Tailoring the value proposition to each segment's needs ensures that customers recognise themselves in the segment and appreciate the customised product and accompanying marketing offer, as in this telecommunications example: "*The segmentation, coupled with those insights, led to the creation of the representation of the tariffs plans and the tariff features, the animals are the representation of the tariffs, they guide you through the jungle of all the tariffs out*

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there, to help you can recognise yourself as belonging to a segment, plus some benefits/features which were closely related to what the segments perceived needs were" (Expert J). This in turn results in higher response rates to marketing campaigns and increased customer satisfaction. Manager M offers an insightful description of their testing of tailored value propositions: "*We've only started testing it properly from the end of last year and we have managed to do some cross-selling and up-selling compared to our control groups. With our standard mailing that goes to everybody, we put an additional item that is bespoke to the customer segment so it's comparing the response from it to the one without the item in*". Creating superior value offerings enable firms to improve their customer performance (O'Cass and Ngo, 2010) and market performance (Srivastava, Shervani, and Fahey, 1998) because customers will be more satisfied with the tailored proposition and thus more loyal (Anderson, Narus and van Rossum, 2006) and willing to pay premium prices (Homburg, Koschate, and Hoyer, 2005).

Based on the effect of these three mechanisms, it is hypothesised that:

H5: Segmentation execution capability is positively associated with business performance.

Based on H1 and H5, it can be inferred that the effect of segmentation analysis capability on business performance may be mediated by segmentation execution capability. In other words, segmentation execution capability may account for a relationship between segmentation analysis capability and business performance. Mediators are the mechanisms that explain how a predictor, in this case segmentation analysis capability, influences an outcome, such as business performance (Baron and Kenny, 1986). According to Baron and Kenny (1986), segmentation execution capability would be a mediator if it meets the following conditions: (a) variations in levels of segmentation analysis capability significantly account for variations in the segmentation execution capability (as stated in Hypothesis 1), (b) variations in segmentation execution capability significantly account for variations in business performance (Hypothesis 5), and (c) when the first two paths are controlled, a previously significant relationship between the segmentation analysis capability and business performance is no longer significant (evidence of partial mediation) or even zero (evidence of full mediation).

The existence of a relationship between segmentation analysis capability and business performance is based on the argument that the outcome of segmentation analysis capability is market knowledge, which has been defined as "organised and structured information about the market" (Li and Calantone, 1998: 18). The information resulting from segmentation analysis capability is organised and structured in the form of a segmentation scheme complete with segment profiles and evaluations. Thus it can be argued that, in fact, the outcome of segmentation analysis capability is a specific form of market knowledge (knowledge about how potential customers are different in their needs/characteristics and value to the firm). In addition, in the literature it is argued that, overall, an organisation's ability to recognise the value of market knowledge, assimilate it, and use it strategically is regarded as crucial for its ability to gain performance advantages (Day, 1994). Thus, a relationship between segmentation analysis capability and business performance can be conceived.

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However, if the outcome of segmentation analysis capability is market knowledge, then this market knowledge needs to be transformed into marketing actions (e.g. marketing campaigns, new products) and this happens through segmentation execution capability. As Vorhies *et al.* (2011) argue, as marketers process and utilise market knowledge, it becomes embedded within organisational routines (in this case processes of segmentation execution), which provide a mechanism for coordination and form the basis for marketing capabilities (Day, 1994). Thus, Vorhies *et al.* (2011) argue that market knowledge needs to be deployed through marketing capabilities in order to result in superior performance. Furthermore, as Dickson and Ginter (1987) argue, competing firms have varying levels of segmentation analysis capability that enable them to develop different segmentation schemes. To the extent that these segmentation schemes provide a basis for marketing strategy, they may be one determinant of competitive performance (Dickson and Ginter, 1987). Therefore, it is hypothesised that:

H6: The effect of segmentation analysis on business performance is mediated by segmentation execution capability.

Similarly, a relationship can be conceived to exist between segmentation integration capability and business performance. The qualitative findings indicate that customer orientation is one of the outcomes of segmentation integration capability. Customer orientation has been defined as "the set of beliefs that puts the customer's interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise" (Hartline, Maxham and McKee, 2000: 35). Previous research suggests that customer-oriented firms tend to enjoy better performance (measured in profitability or service quality) than do firms employing other orientations (e.g. Narver and Slater, 1990; Kelley, 1992).

In addition, the qualitative findings indicate that a segmentation scheme that is well integrated in the organisation enables employees to have a shared vision (and language) of what the organisation is trying to achieve with respect to its market strategy, and thus will be more likely to share the dominant logics of the firm or its desired outcomes (Dougherty, 1992). Having a common understanding of the target market and the structural embeddedness of segmentation schemes facilitates the agreement on the interpretation of market information and the management's ability to respond quickly to emerging trends or problems (Baker and Sinkula, 1999). Thus, it may change managerial collective cognitions related to the marketplace. Managerial cognition is critical to the development of new capabilities (Helfat and Peteraf, 2003). As Tripsas and Gavetti (2000) show, in an in-depth case study of Polaroid, static managerial cognitions about a changing marketplace hindered the firm's ability to develop the new capabilities needed for the company to compete selling software rather than hardware (cameras). Therefore, it can be inferred that changes in managerial cognition related to the marketplace, which are driven by segmentation integration capability, determine changes in managerial action, in this case in the form of segmentation execution capability. Hence it is hypothesised that:

H7: The effect of segmentation integration capability on business performance is mediated by segmentation execution capability.

These three hypotheses (H5 to H7) propose a process of analysis-integration-execution of segmentation schemes that has a positive influence on business performance. This directionality is supported by the literatures reviewed in this research. Firstly, previous

studies (e.g. Dibb and Simkin, 2001, 2009b; Quinn, 2009) suggest that the motivation, understanding (of segmentation principles) and resource availability are significant impediments to firms using segmentation schemes. This implies that firms with a higher level of segmentation integration capability, who can implement the processes of cultural, planning, structural and control integration (as described in Section 6.2.3), may experience these impediments to a lesser degree and hence be able to develop a segmentation execution capability, which is manifested in managers using knowledge from segmentation schemes in the course of marketing decisions and activities. Secondly, in the marketing implementation literature, there is evidence that implementation success depends on the individual behaviours and motivations and the underlying organisational context in which the marketing initiative operates (e.g. Noble and Mokwa, 1999; Cadwallader *et al.*, 2010). This evidence supports Piercy's (1998) argument that effective implementation rests on the underlying beliefs and attitudes of individuals and on the dominating management interests and culture in the organisation.

6.3.3. Structural factors moderating the segmentation execution capability-business performance relationship

The identification of important moderators of relations between predictors and outcomes indicates the maturity and sophistication of a field of inquiry (Aguinis, Boik, and Pierce, 2001) and is at the heart of theory in social science (Cohen *et al.*, 2003). The importance of moderators arises from their ability to enhance understanding of the relationship between relevant predictors and outcomes, both in situations where such a relationship has not been universally confirmed in the literature, as well as in the case of seemingly established relationships, such as the link between customer satisfaction and loyalty (e.g. Walsh, Evanschitzky and Wunderlich, 2008). Thus, a moderator is a variable that alters the direction or strength of the relation between a predictor and an outcome (Baron and Kenny, 1986). In this study, moderators represent variables that may elucidate when or for whom segmentation execution capability most strongly predicts business performance. The search for moderators in this instance starts from the contingency theory espoused by Zeithaml, Varadarajan, and Zeithaml (1988), who suggest that the effects of a firm's actions on its performance are moderated by characteristics of both the firm and the marketplace in which the firm operates.

Thus, the choice of moderators should be based on tested theory regarding why a certain relationship might be stronger or weaker depending on some organisational or industry/market characteristics. Since no such studies have been undertaken in the segmentation literature, the qualitative findings are taken as a starting point in identifying potential moderators (see Table 5.7, Chapter 5, Section 5.5.4). However, due to the complexity of the emerging model, only the ones that have received some support in the literature on either marketing capabilities or market orientation are taken forward for empirical examination. Four such moderators have received support both from the qualitative findings and the literature.

The qualitative findings, together with arguments from the literature, suggest that the relationship between segmentation execution capability and business performance is moderated by the level of existing marketing capabilities. Following Vorhies and Morgan (2005), marketing capabilities here are defined as the capabilities to transform resources into valuable outputs based on the marketing mix and to orchestrate

marketing mix capabilities and their resource inputs through market information management and marketing strategy development and execution. Campbell-Hunt (2000) and Hamel and Prahalad (1993) argue that segmentation strategies are highly dependent on the marketing capabilities of the firm because firms pursuing broad market coverage need to defend their multiple market segments against niche-type players, and therefore they need high levels of market knowledge and segmentation capabilities along with the marketing mix skills needed to support the multiple brand offerings (Frei, 2008). Hence it is hypothesised that:

H8: The stronger a firm's marketing capabilities, the greater the positive effect of a firm's segmentation execution capability on its business performance.

Jenkins and McDonald (1997) argue that industry characteristics may have major implications for segmentation. One important industry characteristic that has been studied in empirical investigations of marketing capability and market orientation is environmental dynamism, which has been defined as the "change and unpredictability in technology, customer and competitor behaviour" (Miller, Droge, and Toulouse, 1988: 548). The possibility of a moderating effect is consistent with a long tradition of support for the theory that environment moderates the effectiveness of organisational characteristics. For example, numerous studies (e.g. McKee, Varadarajan, and Pride, 1989; Snow and Hrebeniak, 1980) have found that the effectiveness of a particular strategic orientation is contingent on the dynamics of the market. In the segmentation literature, Quinn *et al.* (2007), based on interviews in the retail fashion industry, argue that customer segmentation has become a more difficult concept to operationalise in dynamic market contexts as consumer lifestyles have fragmented traditional markets.

Environmental dynamism (market and technological) should have a moderating effect because effective patterns of dynamic capabilities vary with environmental dynamism: in more stable markets, they resemble routines, in dynamic markets, they are simple and experiential (Eisenhardt and Martin, 2000). Since the nature of the conceptualisation of segmentation capabilities is based more on routines rather than experiential processes and segmentation integration and execution may take a long time to take place, it is expected that the moderating effect is going to have a buffering effect, i.e. in more dynamic markets, the effect of segmentation capabilities is going to be lower. The reason for this prediction is that the present conceptualisation of segmentation capabilities takes a more strategic view of segmentation schemes – as medium-term, relatively stable, representations of the marketplace, which drive the change in marketing strategy and internal organisation. Hence this conceptualisation comes in contrast with the examples of customer segmentation based on transactional data held in customer databases (e.g. Expert H, Manager H), where segmentation schemes were developed in a dynamic fashion, for specific diagnostic or problems solving purposes and discarded when no longer needed. Hence it is hypothesised:

H9: *The higher the market and technological dynamism in a firm's main market, the lower the positive effect of a firm's segmentation execution capability on its business performance.*

The level of competitive intensity in the marketplace has been found in simulation studies to influence the success of a segmentation strategy (e.g. Dolnicar *et al.,* 2005; Galeotti and Moraga-Gonzalez, 2008; Doraszelski and Draganska, 2006) because, in situations of highly competitive markets, the ability to develop tailored marketing

campaigns for selected segments (i.e. strategic and operational segmentation execution) leads to the efficiency and effectiveness of the marketing expenditures and lower price competition (Dolnicar *et al.,* 2005). In addition, Dickson and Ginter (1987) argue that competitors who fail to understand thoroughly the true market configuration may pursue other strategies that are inappropriate for the market structure. They further argue that competing firms may have different perceptions of the market heterogeneity and how it can be divided into segments. Since segmentation execution capability represents the implementation of these perceptions of demand heterogeneity into marketing strategy, it can be one determinant of competitive performance. Thus, it can be inferred that segmentation execution capability has a role in increasing business performance in highly competitive environments. Thus, it can be argued that firms that possess a high level of segmentation execution capability are likely to differentiate themselves from their competition in terms of offering better tailored products/services based on the needs of each target segment. Thus it is hypothesised that:

H10: The greater the competitive intensity, the greater is the positive effect of a firm's segmentation execution on its business performance.

Lastly, market segmentation is perceived by practitioners interviewed to be used less in high growth markets as companies and their competitors focus on indiscriminate customer acquisition, whereas in slowly growing markets, segmentation execution capability becomes more valuable in the attempt to find sources of further growth. Doyle and Saunders (1985) offer a similar insight in their case study of segmentation implementation in an industrial company, commenting that the managers involved were more receptive to the adoption of a segmentation strategy due to the tougher market conditions characterised by low growth and low profit margins. Webster (1986) also notes that increased business performance in a growing market should be easier because gain share comes from new users rather than competitors and there is less price competition. A similar argument exists in the market orientation literature. Kohli and Jaworski (1990) argue that the stronger the demand faced by a business, the more the business can 'get away with'' a minimal magnitude of market orientation because customers will accept more readily what is offered if demand exceeds supply. Slater and Narver (1994) tested this argument empirically and found some supporting evidence in the form of a significantly weaker influence of market orientation on sales growth in high growth markets. Hence it is hypothesised that:

H11: The higher the growth in a firm's main market, the lower the positive effect of that firm's segmentation execution capability on its business performance.

6.4.   Conclusion

This chapter combines insights from the qualitative phase of empirical research with the wider segmentation and marketing capabilities literatures to put forward a new conceptualisation of market segmentation. Market segmentation is reconceptualised as a firm's capability to: undertake segmentation analysis on a continuous basis; to integrate the resulting segmentation schemes in the organisational fabric and to execute the segmentation schemes by guiding marketing decisions and activities. This comprehensive reconceptualisation, not previously undertaken, bridges the gap between

market segmentation theory and practice by refocusing market segmentation research on implementation implications. The implications of this new conceptualisation will be discussed in detail in Chapter 8.

The full hypothesised model tested in the quantitative phase appears in Figure 6.6.

Figure 6.6 Hypothesised Model
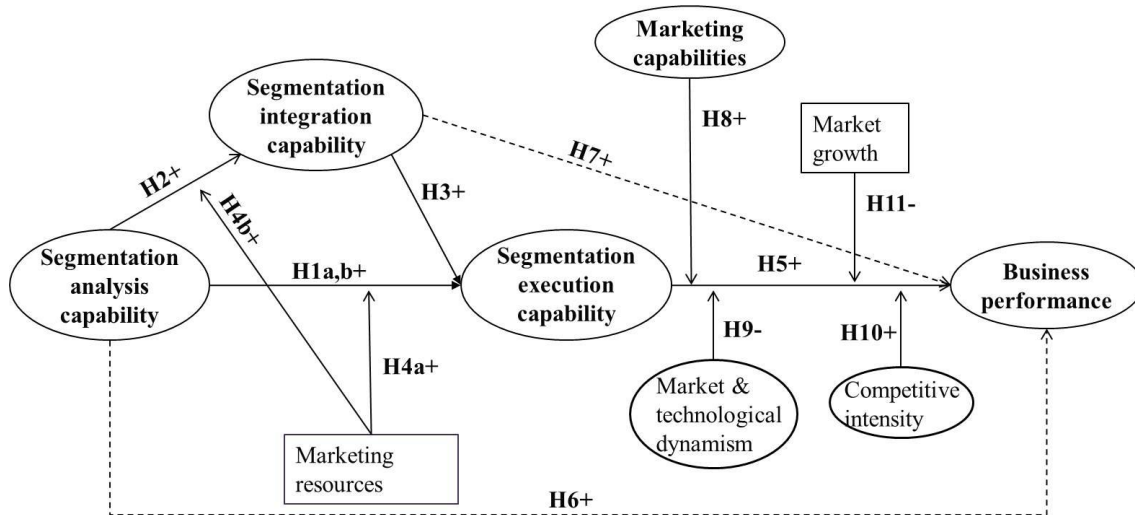
This chapter also proposes the hypotheses to be tested in the quantitative empirical phase of research. These hypotheses are based on the new conceptualisation of market segmentation as comprising three independent but inter-related capabilities: segmentation analysis, segmentation execution and segmentation integration. The hypotheses put forward the mechanisms and structural factors influencing the relationship between market segmentation implementation and business performance. It is hypothesised that the main mechanism translating the influence of segmentation analysis capabilities and segmentation integration capabilities into business performance is segmentation execution capability. In addition, the structural factors are hypothesised as moderators, with different moderators acting at different stages of the segmentation-performance chain. Marketing resources are hypothesised to strengthen the effect of segmentation analysis on segmentation execution and integration, while marketing capabilities and service offerings are hypothesised to strengthen the effect of segmentation execution on business performance. Finally, certain market characteristics (e.g. market dynamism, market growth) are hypothesised to weaken the effect of segmentation execution on business performance, while competitive intensity is hypothesised to strengthen the effect of segmentation execution on business performance.

These hypotheses build on the insights from the qualitative phase of research and the literature on segmentation practices and implementation, as well as market orientation and marketing capabilities empirical studies. Only those hypotheses that were found to be supported both by the qualitative insights and previous literature were proposed. The following chapter will present the detailed results, both for the construct dimensionality and the hypothesis testing procedures.

7. QUANTITATIVE RESEARCH PHASE FINDINGS

7.1. Introduction

Following the conceptualisation of segmentation capabilities and the hypotheses developed in Chapter 6 and the research methods presented in Chapter 4, this chapter presents the findings of the quantitative phase of the empirical research.

In Chapter 6, it was argued that each segmentation capability is multi-dimensional and that the segmentation capabilities were hypothesised to be inter-related but independent constructs. The multi-dimensionality of the constructs, as well as their distinctiveness, is tested in this chapter. The hypothesised structure of each segmentation capability is confirmed. However, based on the results of the exploratory factor analysis, one further dimension is added to the segmentation analysis capability to make the distinction between the two main types of segment evaluation criteria: attractiveness and fit/competitiveness.

Results from six types of analyses are presented. Firstly, preliminary analyses were undertaken to describe the sample composition in terms of industry representation, firm characteristics compared to the sample frame. Also, the non-response and common method biases were examined in the same section to establish the reliability and validity of the data collected.

Secondly, analyses were undertaken to determine the reliability and validity of the measurements used for each of the constructs in the model. Since new measures were developed for the three segmentation capabilities, an exploratory factor analysis was undertaken to purify the measures first. Then confirmatory factor analysis was used to establish dimensionality, reliability and validity of all the measures. Separate models were estimated for theoretically related constructs due to the sample size restriction[28]. For the segmentation capabilities only, since they were hypothesised as second-order constructs, two stages of confirmatory factor modelling were undertaken, at first-order and then second-order construct level.

Thirdly, structural equation modelling was undertaken in AMOS 8.0 to test the hypotheses related to the main mediating model. Further analyses were undertaken for the mediating hypotheses using the nested chi-square approach and the Aroian (1944) mediation test. Fourthly, moderated multiple regression was employed to test the moderating hypotheses. Using the results of the confirmatory models, factor scores were computed for the main constructs (segmentation and marketing capabilities, business performance) in SPSS before the regression analyses. Fifthly, based on the lack of support for some hypotheses, further analyses were undertaken in relation to the role of marketing capabilities and market growth in influencing the model of segmentation capabilities and business performance.

The results are reported here in their entirety and discussed in detail in chapter 8.

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[28] care was taken to estimate models that had at least five observations per parameter estimated (cf. Bentler and Chou, 1987)

7.2. Preliminary Analyses

7.2.1. Descriptives

The main characteristics of the firms in the sample are in Appendix I. The sample is relatively balanced with respect to firm product-market profile (type of offering, type of target market), firm size and turnover.

The knowledgeability of the respondents was asssed in terms of their function and responsibility level, their experience and their relevant knowledge level. The descriptive statistics indicated that almost half are heads of marketing (47.3%), another 16.6% are responsible for general marketing, 12.2% for customer insight/market research, 8.8% sales/business development, 7.8% brand/product marketing, 3.4% customer relationship management/database marketing, 2.4% advertising/ communications and 1.5% online marketing. Almost all were in managerial positions: 44.4% are managers, 37.1% directors/vice-presidents, 12.7% board level executive/owner, 3.9% executives and 2.0% analysts. On average, they have been working in marketing for 11.8 years, using segmentation insight for 8.7 years and working in their strategic business unit for almost 7 years. The average level of knowledge of principles and benefits of segmentation was 5.85 and level of knowledge of how segmentation models were being used in their strategic business unit was 5.6, both on a 7-point scale. These characteristics lead to the conclusion that the respondents were suitably positioned to complete the survey.

7.2.2. Non-response bias

To assess the presence of nonresponse bias, the responding firms were compared against non-respondents on three key characteristics: annual sales, number of employees and industry. A chi-square test of association between non-respondents and respondents was undertaken (see Table 7.1) because: a) the Mardev Decision Maker UK list did not contain firm-level information about revenues and only contained employee numbers in categorical form and b) data about revenues and number of employees was asked in categorical format in the questionnaire due to feedback from the pre-test that respondents were not comfortable revealing this information in precise numbers. The chi-square test is based on a test statistic that measures the divergence of the observed data from the values that would be expected[29] under the null hypothesis of no association (Field, 2009). A significant association was found between the non-respondents and respondents (p<0.01) in both lists.

In line with recommendations from Armstrong and Overton (1977), the means on the main variables in the study were compared between early and late respondents[30] within each sample (that from the Yearbook and the one from Reed Business Information, separately, see Appendix J), with only a few significant differences being found on market characteristics and marketing resources, but not on the main constructs of interest. These results suggest that nonresponse bias is not a serious concern in this study (Armstrong and Overton, 1977). For these reasons, and because of the similar selection of firms in both sample frames (in terms of industry selection, turnover and number of employees) and the low response rates per sample frame (which,

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[29] The expected value for each cell in a two-way table is equal to (row total*column total)/n, where n is the total number of observations included in the table.

[30] Approximately the first and last 30% of the sample in terms of the date of completion of the questionnaire recorded on the survey platform.

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individually, did not yield a sufficient number of responses for the sample size required for structural equation modelling), the two sets of responses were combined.

Table 7.1 Non-Respondents versus Respondents Analysis on Firm Characteristics

Number of employees	Yearbook		Reed Business Information list	
	Non-respondents	Respondents	Non-respondents	Respondents
100-250	508 (30%)	38 (29%)	503 (43%)	19 (26%)
251-500	380 (22%)	26 (20%)	307 (26%)	15 (21%)
501-1000	289 (17%)	17 (13%)	129 (11%)	6 (8%)
1001-5000	385 (23%)	34 (26%)	226 (19%)	32 (44%)
> 5000	135 (8%)	18 (14%)		
Total	1697 (100%)	133 (100%)	1165 (100%)	72 (100%)
Chi-square (df)	47.65 (4), p<0.01		26.18 (3), p<0.01	
Annual revenues	Non-respondents	Respondents	Non-respondents	Respondents
< £10 million	80 (6%)	19 (9%)	132 (11%)	5 (7%)
£10 < £50 million	482 (36%)	52 (25%)	582 (50%)	19 (26%)
£50 < £100 million	238 (18%)	25 (12%)	116 (10%)	8 (11%)
£100 < £500 million	351 (26%)	61 (29%)	277 (24%)	19 (26%)
> £500 million	179 (14%)	48 (23%)	58 (5%)	21 (29%)
Total	1330[31] (100%)	133 (100%)	1165 (100%)	72 (100%)
Chi-square (df)	294.85 (4), p<0.01		71.3 (4), p<0.01	
Industry sector	Non-respondents	Respondents	Non-respondents	Respondents
Banking, Finance & Insurance	184 (11%)	20 (15%)	197 (16%)	10 (14%)
Technology	351 (21%)	20 (15%)	188 (15%)	16 (22%)
Household products/appliances	97 (6%)	8 (6%)	16 (1%)	2 (3%)
Internet and software	118 (7%)	14 (11%)	44 (4%)	9 (13%)
Media	201 (12%)	11 (8%)	13 (1%)	2 (3%)
Retail	295 (17%)	14 (11%)	403 (33%)	10 (14%)
Telecoms	44 (3%)	14 (11%)	180 (15%)	12 (17%)
Textiles	81 (5%)	3 (2%)	56 (5%)	3 (4%)
Travel	318 (19%)	37 (28%)	140 (11%)	8 (11%)
Total	1697 (100%)	133 (100%)	1237 (100%)	72 (100%)
Chi-square (df)	42.32 (8), p<0.01		31.80 (8), p<0.01	

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[31] Revenue information was only available for this number of companies in the Yearbook

7.2.3. Assessment of normality and common method bias

A critical assumption in SEM is that data display multivariate normal distribution – this requirement is rooted in large sample theory which SEM originates from (Byrne, 2010). Univariate and multivariate normality were assessed by examining the skewness and kurtosis values and their critical values as calculated by AMOS in the confirmatory factor analysis (see Appendix K). Kurtosis in particular severely affects tests of variances and covariances, including SEM (DeCarlo, 1997). Most skewness and kurtosis values were between -1 and 1, with only a few variables surpassing ±1. According to West *et al.* (1995), a value of or above 7 is an indication of departure from normality. Based on this criterion, no variable is univariately kurtotic. However the multivariate critical ratio values of kurtosis surpassed the value of 5 as suggested by Yuan and Bentler (2005), suggesting that the data are not multivariate normal.

When both the independent and dependent variables (i.e. segmentation capabilities and business performance) are collected from only one source (the key informant), the possibility of common method bias exists, whereby the variance in the dependent variable is due to the measurement method rather than the constructs of interest (segmentation capabilities). This may cause systematic measurement error and further bias the estimates of the true relationship among the latent constructs. To minimise the effect of common method bias, several remedies as recommended by Podsakoff *et al.* (2003) were used. This study uses an online survey to reduce the possibility of socially desirable responding and evaluation apprehension by ensuring the anonymity of the responses, and also controls for the order bias and demand characteristics by counterbalancing the order of the measurement of the predictor and criterion variables. It also uses scales with different response formats, thus reducing the "method bias caused by the commonalities in scale endpoints and anchoring effects" (Podsakoff *et al.* 2003: 888).

Secondly, the procedures recommended by Podsakoff *et al.* (2003) to test for common method bias were used. The data were analysed using a single-method factor approach, in which a confirmatory factor model was estimated in AMOS with all first-order factors (i.e. the components of each segmentation capability) and the measured indicators of business performance were restricted to load on a single factor. The rationale for this test is that if common method bias poses a serious threat, a single latent factor would account for all manifest variables (Podsakoff and Organ, 1986) as opposed to the a priori specified measurement model. The results indicate a very poor fit of the model: $\chi^2 = 874.48$, df=103, GFI=0.633, AGFI=0.515, TLI=0.623, CFI=0.649, RMSEA=0.192. As such, the worse fit for the one-factor model means that common method bias is not significant enough to warrant concern (Sanchez, Korbin and Viscarra, 1995).

7.3. Measurement Reliability and Validity

7.3.1. Exploratory factor analysis

Consistent with previous studies which involved the development of new measures for some of the constructs (e.g. Morgan, Kaleka, Katsikeas, 2004; Danneels, 2008), an exploratory factor analysis was first performed to identify the underlying factor structure and to remove the items that did not load significantly on their supposed construct or showed evidence of cross-loadings. In removing items from a scale, Anderson and Gerbing's (1988) suggestions regarding maintaining conceptual integrity and explanatory power while also incorporating statistical considerations associated with reliability and validity were followed. Specifically, the list of items for each construct was purified, using item-total correlations and factor loadings in order to obtain a uni-dimensional measurement instrument.

The variables relating to each segmentation capability (analysis, integration and execution), were entered separately in exploratory factor analyses. For the items belonging to each construct, the correlation matrix indicated that a large number of correlations exceeded the recommended minimum level of 0.3 (Hair *et al*., 2008). In addition, the results of the Bartlett's tests for sphericity[32] were large and significant at $p < 0.01$ and the results of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy[33] were meritorious (cf. Norusis, 2011).

In extracting the factors, principal axis factoring method was used. In principal axis factoring, the analysis of data structure focuses on shared variance and not on sources of error that are unique to individual measurements. Thus the purpose is to understand the shared variance in a set of measurements through a small set of latent variables called factors (Bentler and Kano, 1990; Ford, MacCallum and Tait 1986). Since the qualitative phase of this research provided evidence that the components of each segmentation capability are related to each other, a factor solution with oblique rotation (as opposed to varimax rotation which assumes orthogonal – uncorrelated – factors) was obtained by allowing the factors to be correlated (Hair *et al.,* 2008).

In selecting the number of factors to extract, three criteria were used: the eigenvalues, scree tests (see Appendix L) and the percentage of variance explained by the factors. In examining the factor solutions, Hair's *et al.* (2008) recommendations were used regarding the significance of factor loadings. Items with factor loadings below 0.5 and those with high cross-loadings (>0.3) were eliminated and a new factor solution estimated. The final factor solutions (taken from the pattern matrix output in SPSS) for the three segmentation capabilities appear in Tables 7.2, 7.3 and 7.4. For ease of interpretability, factor loadings lower than 0.2 are not shown.

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[32] Bartlett's test of sphericity tests the hypothesis that the variables are uncorrelated in the population, i.e. that the population correlation matrix is an identity matrix, where each variable correlates perfectly with itself (r = 1) but has no correlation with the other variables (r = 0).
[33] The Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations among items are small.

Table 7.2 Final Factor Solution for Segmentation Analysis Capability*

Items	Factors					
	Profiling	Qualification	Attractiveness evaluation	Fit evaluation	Monitoring	Identification
Initial eigenvalue	*5.91*	*2.01*	*1.29*	*1.20*	*1.07*	*.90*
Initial % variance extracted	*32.83*	*11.16*	*7.14*	*6.67*	*5.95*	*5.02*
Rich profiles about needs/ benefits/ business issues	.889					
Rich profiles about their lifestyle/ interests/attitudes	.647					
Rich profiles about what drives purchasing choices	.586		.204			
Segment qualification (Makes intuitive sense for our business)		.841				
Segment qualification (Fits our business needs)		.767				
Segment qualification (Measurable segments)		.621				
Segment qualification (Segments that can be reached through communications/ distribution)		.491		.211		
Segment evaluation (Growth potential)			.713			
Segment evaluation (Profit potential)			.637			.207
Segment evaluation (Sales potential)			.633			
Segment evaluation (How competitive we are in the segment)				.870		
Segment evaluation (Fit with our competencies)				.652		
Segment monitoring (Incorporating segment tracking questions in our market research)					.700	
Segment monitoring (Re-evaluating our segment structure)					.567	
Segment monitoring (Estimating how segments have grown or shrunk)		.203			.495	
Segment identification (Pay more for our products/services)						.661
Segment identification (Adopt a new product/service)						.501
Segment identification (Switch to/from competitors)					.201	.498

* pattern matrix coefficients

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Table 7.3 Final Factor Solution for Segmentation Execution Capability*

Items (Using insight generated by segmentation schemes in…)	Managerial execution	CRM execution	Operational execution	Strategic execution
		Factor		
Initial eigenvalue	*7.50*	*1.64*	*1.29*	*.90*
Initial % variance extracted	*46.87*	*10.22*	*8.07*	*5.60*
Preparing next year's business plan	.819			
Setting business objectives for target segments	.623			
Forecasting market demand/ sales potential	.560	.218		
Rationalising the products/services portfolio to match the needs of target segments	.488			.259
(Re)developing a positioning statement for our business	.483			
Developing targeted campaigns to retain existing customers		.938		
Developing targeted campaigns to re-activate customers		.821		
Developing targeted campaigns to develop existing customers through cross-sell/ up-sell		.750		
Developing targeted campaigns to manage customer value/profitability		.679		
Selecting the media channels to reach target segments			.978	
Developing tailored advertising content			.647	
Selecting distribution channels to reach target segments	.204		.534	
(Re)defining the target market for our products/services				.768
Developing new product/service concepts				.657
Assessing our competitive position in the market				.583
Updating our go-to-market strategy	.205			.554

* pattern matrix coefficients

Table 7.4 Final Factor Solution for Segmentation Integration Capability*

Items	Factor			
	Culture	Control	Structure	Planning
Initial eigenvalue	*6.236*	*1.129*	*.963*	*.708*
Initial % variance extracted	*51.97*	*9.41*	*8.02*	*5.90*
Providing powerful visual representations of the segments	.774			
Using a strong internal marketing programme to explain the benefits of the segmentation models	.664			
Training everyone who needs to use the segmentation models	.637			.294
Measuring our penetration of each targeted segment		.819		
Measuring the profit contribution generated by each segment		.745		
Measuring customer satisfaction		.596		
Organising customer facing staff in segment-oriented departments			.791	
Involving cross-functional groups in generating segment strategies	.224		.556	
Assigning responsibilities to individuals for implementing segment-based strategies			.506	
Dedicating human resources for segmentation analysis				.853
Setting appropriate budgets for segmentation analysis				.722
Setting clear objectives for segmentation analysis				.619

* pattern matrix coefficients

Thus, 18 items were retained to measure the segmentation analysis capability. These items load cleanly on six factors which explain 68.77% of shared variance. Compared to the hypothesised structure of segmentation analysis capability, one additional factor emerges to make a distinction between two types of segmentation evaluation criteria mentioned in the conceptualisation of this construct: segment attractiveness and fit/competitiveness. Thus a six-factor solution is retained for confirmatory factor analysis.

For segmentation execution, four factors, consistent with the conceptualisation of segmentation execution, were retained, explaining 70.76% of shared variance among 15 items. Similarly, consistent with the conceptualisation of segmentation integration capability, four factors emerge to explain 75.3% of shared variance among 12 items retained to measure them.

Overall, these results show the adequacy of the hypothesised structure for each segmentation capability. Also, this analysis allowed the purification of the new measures developed for each segmentation capability. Each factor consists of two to five items, which have high item-to-total correlations, high loadings on intended factors and no substantial cross-loadings. These were retained for confirmatory factor analysis.

7.3.2. Confirmatory factor analysis

Confirmatory factor analysis is used to estimate the measurement model that is composed of the latent factors (Byrne, 2010). Marsh, Hau, Balla and Grayson (1998) recommended at least 200 sample size for confirmatory factor analysis (which is the one achieved in this study) and at least three or four items per factor for such a sample size, arguing that there is a mutual compensatory effect of the sample size and the number of items per factor, meaning that a higher number of items per factor could compensate for small sample sizes (Boomsma and Hoogland, 2001). Thus, three to five items were retained per factor (except fit evaluation) to increase the reliability of the results. Furthermore, due to the relatively large number of items and the small sample size, two stages were employed in building and testing the confirmatory factor models.

First-level analysis of latent constructs

In the first stage, measurement models were built for the first-order latent constructs in the model. In order to observe the ratio of sample size to parameter estimates to at least 5 to 1 (Bentler and Chou, 1987), five measurement models were estimated separately for theoretically related constructs: one for each of the three segmentation capabilities, one for business performance and marketing capabilities, and one for market dynamism and competitive intensity. In each model, all items were restricted to load on their respective factors and were specified as reflective indicators of their corresponding latent constructs, which were allowed to inter-correlate. Thus, each segmentation capability is considered to be a second-order factor composed of first order factors.

To assess the measurement models, the procedure suggested by Bagozzi and Yi (1988) was followed, in analysing the normality assumption (see Appendix L), the convergence of the solution and the model fit indices. Since the data are slightly non-normal and chi-square values have been found to be inflated by non-normal data (Benson and Fleishman, 1994), models were retained even if the chi-square test was found significant, as long as alternative fit indices were within their recommended ranges.

Measurement model 1 (see Table 7.5) estimates segmentation analysis capability as a second-order factor comprised of six first-order factors: segment identification, segment profiling, segment monitoring, segment qualification, segment fit evaluation, segment attractiveness evaluation. All items have high and significant standardised loadings for the first-order constructs, and the first-order constructs load highly and significantly on the segmentation analysis capability construct. Based on the cut-off values [34] recommended by Hu and Bentler (1999), the fit indices show a good fit of the six-dimensional model to the data: $\chi^2_{(113)}$=154.37 (p<0.01), χ^2/df=1.378, SRMR= 0.054, GFI=.917, AGFI=.887, TLI=.957, CFI=.965, RMSEA=0.043 (p=0.750). In contrast, a single factor model where all items were considered to load on one first-order factor obtained much worse fit: $\chi^2_{(119)}$=534.95 (p<0.01), χ^2/df=4.490, SRMR= 0.10, GFI=.738, AGFI=.663, TLI=.602, CFI=.652, RMSEA=0.131. These results support the second-order and multidimensional nature of segmentation analysis capability and the existence of the six first-order components.

Table 7.5 Confirmatory Factor Analysis Results for Segmentation Analysis Capability

Latent constructs and abbreviated items	Standardised weight	Standard error	Critical ratio[35]	P
Segment identification	.829	.114	7.813	***
Switch to/from competitors	.653[a]			
Pay more	.628	.129	7.069	***
Adopt new products/services	.753	.133	7.871	***
Segment profiling	.715	.098	7.740	***
Purchasing habits	.709[a]			
Lifestyle	.715	.118	9.226	***
Needs	.886	.128	10.262	***
Segment attractiveness evaluation	.763	.081	9.127	***
Sales potential	.719	.086	9.425	***
Growth potential	.824[a]			
Profit potential	.653	.105	8.667	***
Segment fit evaluation	.637	.108	7.431	***
How competitive we are	.844[a]			
Fit of the segments with objectives	.702	.121	6.730	***
Segment qualification	.545	.076	6.445	***
Accessible	.549	.094	7.431	***
Measurable	.652	.088	8.909	***
Intuitive	.794	.089	10.551	***
Fit of the model with business needs	.814[a]			
Segment monitoring	.835	.101	6.244	***
Re-evaluate the segment structure	.657[a]			
Tracking the segments in market research	.629	.153	6.210	***
Re-estimation of segment size and worth	.686	.240	5.734	***

[a] The loading of these items was fixed to one for model identification purposes (cf. Byrne, 2010).

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[34] 1<χ^2/df<3; RMSEA<.06, SRMR<.08, GFI>0.9, TLI>.95, CFI>.95

[35] Critical ratio z is obtained by dividing the unstandardised estimate of the regression weight by the standard error of the estimate

Measurement model 2 (see Table 7.6) estimates segmentation execution capability as a second-order factor comprised of four first-order factors: strategic execution, managerial execution, operational execution and customer management execution. The results show that all items have high and significant standardised loadings for the first-order constructs, and that the first-order constructs load highly and significantly on the segmentation execution capability second-order construct. The fit indices show a good fit of the model to the data: $\chi^2_{(100)}$=144.79 (p<0.01), χ^2/df=1.448, SRMR= 0.043, GFI=.917, AGFI=.887, TLI=.971, CFI=.976, RMSEA=0.047 (p=0.612). In contrast, a single factor model where all observed items were set to load on only one first-order factor obtained much worse fit: $\chi^2_{(104)}$=516.89 (p<0.01), χ^2/df=4.97, SRMR= 0.086, GFI=.721, AGFI=.635, TLI=.742, CFI=.777, RMSEA=0.139. These results confirm the second-order and multidimensional nature of segmentation execution capability and the existence of four first-order components.

Table 7.6 Confirmatory Factor Analysis Results for Segmentation Execution Capability

Latent construct and items	Standardised estimate	Standard error	Critical ratio	P
Strategic execution	.829	.092	9.883	***
Update go-to-market strategy	.807	.100	11.133	***
Assess competitive position	.683	.109	9.417	***
Redefine target market	.759[a]			
Develop new products	.694	.104	9.579	***
Operational execution	.741	.111	9.153	***
Tailored advertising	.812	.075	11.330	***
Tailored distribution	.758	.088	10.674	***
Tailored media	.792[a]			
CRM execution	.702	.096	8.971	***
Develop customers	.790[a]			
Retain customers	.894	.085	14.020	***
Re-activate customers	.827	.091	12.851	***
Manage customer value	.750	.090	11.404	***
Managerial execution	.974	.095	12.755	***
Set objectives per segment	.771	.081	12.338	***
Forecast sales	.796	.081	12.888	***
Rationalise product portfolio	.803	.080	13.039	***
Redevelop positioning	.666	.089	10.204	***
Prepare business plan	.818[a]			

[a] The loading of these items was fixed to one for model identification purposes (cf. Byrne, 2010).

Measurement model 3 (see Table 7.7) estimates segmentation integration capability as a second-order factor comprised of four first-order factors: infrastructure, culture, planning and metrics. The results show that all items have high and significant standardised loadings for the first-order constructs, and that the first-order constructs load highly and significantly on the segmentation integration capability second-order construct. Based on the same cut-off values as above, the fit indices show a good fit of the model to the data: $\chi^2_{(50)}$=65.206 (p>0.05), χ^2/df=1.305, SRMR= 0.038, GFI=.948, AGFI=.918, TLI=.983, CFI=.987, RMSEA=0.041 (p=0.707). In contrast, a single factor model where all observed items were set to load on one first-order factor obtained much worse fit: $\chi^2_{(53)}$=190.22 (p<0.01), χ^2/df=3.59, SRMR= 0.067, GFI=.853, AGFI=.783, TLI=.865, CFI=.892, RMSEA=0.114. These results confirm the second-order nature of segmentation integration capability and the existence of four first-order components.

Table 7.7 Confirmatory Factor Analysis Results for Segmentation Integration Capability

Items	Standardised weight	Standard error	Critical ratio	P
Culture	.942	.116	12.346	***
Providing visuals	.772	.081	12.236	***
Providing training	.822[a]			
Undertaking internal marketing	.878	.073	14.389	***
Plan	.884	.111	11.411	***
Providing human resources	.771	.082	11.943	***
Providing budgets	.881	.080	14.192	***
Setting objectives	.816[a]			
Structure	.876	.106	10.604	***
Assign responsibilities	.678[a]			
Organise in segment-oriented departments	.655	.124	7.892	***
Involve teams in segment strategies	.794	.119	9.206	***
Control-metrics	.736	.119	8.273	***
Measure segment profit	.738[a]			
Measure segment penetration	.812	.106	9.554	***
Measure customer satisfaction	.642	.099	8.088	***

[a] The loading of these items was fixed to one for model identification purposes (cf. Byrne, 2010).

Measurement model 4 combined two theoretically related constructs: business performance and marketing capabilities (Table 7.8). Business performance was modelled as two inter-related first-order factors (market and financial performance), while marketing capabilities were modelled as two first-order factors, based on the distinction between specialised and architectural marketing capabilities (Vorhies *et al.,* 2009). According to Vorhies *et al.* (2009), specialised marketing capabilities refer to the ability of the firm to integrate the specialised knowledge held by the firm's marketing department into task-specific marketing activities (e.g. marketing communications, personal selling, pricing, product development, distribution, branding); architectural marketing capabilities were defined as the firm's ability to direct the coordination of the specialised marketing capabilities, by planning, focusing and coordinating resource

deployments to achieve product-market goals. All first-order constructs were allowed to inter-correlate. The fit indices show a good fit of the model to the data: $\chi^2_{(98)}$=142.06 (p<0.01), χ^2/df=1.45, SRMR= 0.050, GFI=.910, AGFI=.874, TLI=.963, CFI=.970, RMSEA=0.050 (p=0.479).

Table 7.8 Confirmatory Factor Analysis Results for Marketing Capabilities and Business Performance

Latent constructs and items	Standardised estimate	Standard error	Critical ratio	P
Financial performance				
Net profits	.920 [a]			
Gross profit margin	.904	.056	16.882	***
Return on investment	.844	.048	16.492	***
Market performance				
Market share	.716 [a]			
Sales growth	.894	.131	10.981	***
Customer acquisition	.754	.112	9.908	***
Customer retention	.731	.104	8.913	***
Specialised marketing capabilities				
Brand image management	.635 [a]			
Supporting sales	.624	.137	6.916	***
Launching new products	.557	.139	6.309	***
Advertising programmes	.623	.144	6.908	***
Architectural marketing capabilities				
Developing marketing strategy	.784 [a]			
Marketing resource allocation	.720	.094	9.905	***
Organising to deliver programmes	.743	.087	10.255	***
Learning about customer needs	.639	.089	8.651	***
Identifying market trends	.705	.084	9.672	***

[a] The loading of these items was fixed to one for model identification purposes (cf. Byrne, 2010).

Measurement model 5 (see Table 7.9) combines two related constructs together: environmental dynamism and competitive intensity, which are allowed to inter-correlate. Two first-order factors are modelled for environmental dynamism, based on the distinction between technological and market dynamism (Jaworski and Kohli, 1993). Competitive intensity is modelled as a first-order factor with two indicators. Based on the same cut-off values as above, the fit indices show a good fit of the model to the data: $\chi^2_{(17)}$=23.439 (p>0.10), χ^2/df=1.379, SRMR= 0.031, GFI=.972, AGFI=.941, TLI=.982, CFI=.989, RMSEA=0.043 (p=0.569).

Table 7.9 Confirmatory Factor Analysis Results for Environmental Dynamism and Competitive Intensity

Latent constructs and items	Standardised estimate	Standard error	Critical ratio	P
Customer dynamism				
Preferences change over time	.786	.106	9.835	***
Tend to look for new products	.753 [a]			
New customers have different needs	.481	.112	6.262	***
Technological dynamism				
Sophistication is changing rapidly	.801 [a]			
Technological changes provide big opportunities	.786	.071	11.291	***
New products based on technological breakthroughs	.810	.088	11.591	***
Competitive intensity				
Cut-throat competition	.583[a]			
New competitive moves happen often	.798	.233	6.078	***

[a] The loading of these items was fixed to one for model identification purposes (cf. Byrne, 2010).

Throughout these first-order models, each loading was large and significant (p <0.01), the modification indices and $\chi 2$ changes associated with the cross-loadings were small and insignificant (p >0.05), indicating that items were assigned to the appropriate constructs. Furthermore, factors and items loaded significantly on their designated constructs and there was little evidence of cross-loadings. The models support the conceptualisation of the three segmentation capabilities as second-order factors, business performance and competitive intensity as a first-order construct and market dynamism and marketing capabilities as two inter-related first-order factors.

Second-level analysis of segmentation capabilities

In the second stage of confirmatory factor analysis, a model of all three segmentation capabilities was built and tested (Measurement Model 6). Due to the sample size per parameter restriction (Bentler and Chou, 1987), a parsimonious approach was adopted in building this model. Weighted composite scales, based on the first-order factor loadings of the measurement models 1 to 3, were calculated (using the factor score weights from the AMOS output for the first-order models) to represent the first-order factors, which were then employed as indicators of the corresponding higher-order latent construct (e.g. Morgan *et al.*, 2004; Hart, 1999). This measurement model shows good fit to the data: $\chi^2_{(69)}$=120.834 (p<0.01), χ^2/df=1.726, SRMR= 0.048, GFI=.921, AGFI=.881, TLI=.966, CFI=.974, RMSEA=0.060 (p=0.181).

The results of this final model support the conceptualisation of three distinct segmentation capabilities as all the factor loadings are significant and large (see Table 7.10) and there is little evidence of cross-loadings (modification indices are low and insignificant).

Table 7.10 Confirmatory Factor Analysis Results for Second-Order Segmentation Capabilities

Second and first order constructs	Standardised estimate	Standard error	Critical ratio	P
Segmentation execution capability				
Strategic execution	.887			
Managerial execution	.943	.052	19.910	***
Operational execution	.636	.081	10.391	***
CRM execution	.610	.080	9.986	***
Segmentation analysis capability				
Identification	.847			
Profiling	.672	.082	10.368	***
Attractiveness evaluation	.683	.068	10.589	***
Fit evaluation	.575	.097	8.696	***
Qualification	.534	.084	7.030	***
Monitoring	.837	.042	13.809	***
Segmentation integration capability				
Structure	.951			
Planning	.929	.055	19.892	***
Culture	.928	.048	24.297	***
Control	.681	.056	12.413	***

However, since the initial conceptualisation of market segmentation capability included four dimensions, another model was estimated where the integration in control and segment monitoring were assigned as indicators of a fourth dimension, called 'feedback loop' (Goller *et al.*, 2002). This model had 2 additional degrees of freedom than Measurement Model 6 and achieved a moderate fit to the data: $\chi^2_{(71)}$=164.42 (p<0.01), χ^2/df=2.316, SRMR= 0.059, GFI=.895, AGFI=.841, TLI=.935, CFI=.950, RMSEA=0.082 (p=0.001). Interestingly, the correlation estimate between segmentation analysis capability and the new construct 'feedback loop' is 1.086, implying that the new construct does not have discriminant validity. In addition, applying the χ^2 difference test, there is a significant difference between the two models: $\Delta\chi^2_{(2)}$=43.59 (p<0.01), with Measurement Model 6 clearly fitting the data better.

Furthermore, since the conceptualisation of segmentation execution and integration capabilities could be considered similar, in that both represent two different aspects of 'capability embeddedness' (in decision making, respectively in organisational fabric), another model was estimated where the indicators of segmentation execution and segmentation integration were specified to load on only one latent construct called 'segmentation embeddedness'. This model achieved much worse fit to the data than Measurement Model 6: $\chi^2_{(76)}$=291.488 (p<0.01), χ^2/df=3.84, SRMR= 0.058, GFI=.818, AGFI=.742, TLI=.861, CFI=.887, RMSEA=0.120 (p<0.001). As a result of the comparisons against two alternative models, Measurement Model 6 is retained and used in the structural model testing, as it achieved better fit to the data.

7.3.3. Reliability and validity analyses

Both first-order and second-order constructs exhibited good reliability with composite reliabilities ranging from .66 to .93 (see Table 7.11), with all but two above the 0.7 threshold suggested by Fornell and Larcker (1981). Similarly, average variance extracted range from 39.2% to 77.3%, with all but six (see shaded cells) above the 50% threshold suggested by Bagozzi *et al*. (1991).

In addition, all items had standardised loadings above 0.6, all factor regression coefficients were significant and the values of each item's loading on its hypothesised factor was greater than twice its standard error, which demonstrates convergent validity (Anderson and Gerbing, 1988).

Table 7.11 Composite Reliabilities and Average Variance Extracted

Construct	Composite reliability	Average variance extracted
Segment identification	.720	46.3%
Segment profiling	.816	60.0%
Segment monitoring	.658	39.2%
Segment attractiveness evaluation	.778	54.1%
Segment fit evaluation	.750	60.3%
Segment qualification	.799	50.5%
Cultural integration	.865	68.1%
Structural integration	.753	50.6%
Planning integration	.863	67.9%
Control integration	.776	53.9%
Strategic execution	.826	54.4%
Managerial execution	.881	59.7%
Operational execution	.830	62.0%
CRM execution	.889	66.7%
Market performance	.858	60.4%
Financial performance	.919	79.2%
Specialised marketing capabilities	.703	37.3%
Architectural marketing capabilities	.843	51.8%
Marketing capabilities	.968	93.8%
Technological dynamism	.773	63.0%
Market dynamism	.720	47.2%
Competitive intensity	.651	48.8%
Segmentation analysis capability	.850	49.2%
Segmentation execution capability	.859	61.3%
Segmentation integration capability	.931	77.3%

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Discriminant validity was assessed by testing two nesting models for each pair of constructs, once freeing the correlation between the constructs[36] and once setting it to 1 (Bagozzi *et al.,* 1991). In all cases, the χ^2 values for the unconstrained models were significantly lower than for the constrained models (see Table 7.12), as the difference between the two chi-square values was larger than 3.84 (the critical value for chi-square difference for 1 degree of freedom). In addition, none of the confidence intervals[37] of the correlation coefficients for each pair of scales included 1.0, showing the discriminant validity of the new scales (Anderson and Gerbing 1988).

Table 7.12 Evidence of Discriminant Validity for Main Constructs

Construct 1	Construct 2	Unconstrained model χ^2 (df)	Constrained model χ^2 (df)
Segmentation analysis	Segmentation integration	76.8 (34)	366.1 (35)
Segmentation analysis	Segmentation execution	82.6 (34)	298.2 (35)
Segmentation analysis	Specialised marketing capabilities	60.1 (34)	149.9 (35)
Segmentation analysis	Architectural marketing capabilities	68.1 (34)	288.2 (35)
Segmentation integration	Segmentation execution	45.7 (19)	191.6 (20)
Segmentation integration	Specialised marketing capabilities	39.3 (19)	139.4 (20)
Segmentation integration	Architectural marketing capabilities	38.5 (19)	239.6 (20)
Segmentation execution	Specialised marketing capabilities	17.7 (19)	115.2 (20)
Segmentation execution	Architectural marketing capabilities	38.1 (19)	250.0 (20)
Specialised marketing capabilities	Architectural marketing capabilities	32.2 (19)	38.6 (20)
Segmentation analysis	Business performance	31.8 (19)	186.4 (20)
Segmentation integration	Business performance	26.8 (8)	181.3 (9)
Segmentation execution	Business performance	13.9 (8)	170.9 (9)
Marketing capabilities	Business performance	2.4 (1)	140.1 (2)

Nomological validity was assessed by examining the correlations between segmentation capabilities and marketing capabilities, which would be expected to correlate, since segmentation skills have been included as an indicator of marketing capabilities in previous studies of marketing capabilities (e.g. Conant *et al.*, 1990). All the correlations between segmentation capabilities and marketing capabilities (see Table 7.13) are significant at $p<0.01$, which indicates the nomological validity of the segmentation capabilities scales.

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[36] The comparisons were made at second-order construct level. The only exception was when comparing segmentation and marketing capabilities dimensions, where comparisons were made separately with specialised, respectively, architectural marketing capabilities, to support the discriminant validity of the segmentation capabilities further.

[37] The confidence intervals around the correlation parameter estimate between any two constructs were calculated by adding/subtracting two standard errors to/from the values in the measurement model.

Table 7.13 Means, Standard Deviations and Correlations for the Main Constructs

	Mean	SD	Correlations									
			MG	BP	MM	MS	CI	TD	CD	SA	SI	SE
Market growth (MG)	4.49	1.71	1									
Business performance (BP)	4.75	1.12	.347**	1								
Marketing mix (MM)	3.38	.63	.149*	.419**	1							
Marketing strategy (MS)	4.71	.91	.133	.406**	.947**	1						
Competitive intensity (CI)	2.46	.66	.268**	.117	.052	.025	1					
Technological dynamism (TD)	4.51	1.11	.182**	.137*	.132	.086	.523**	1				
Customer dynamism (CD)	3.49	.90	.300**	.101	.094	.045	.762**	.730**	1			
Segmentation analysis (SA)	4.00	.62	.170*	.257**	.410**	.399**	.237**	.247**	.294**	1		
Segmentation integration (SI)	2.96	1.03	.151*	.309**	.410**	.447**	.259**	.288**	.311**	.568**	1	
Segmentation execution (SE)	3.08	.72	.194**	.305**	.433**	.440**	.197**	.298**	.309**	.590**	.793**	1

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

7.4. Hypothesis Testing

The hypothesised model developed in Chapter 6 appears in Figure 7.1. Structural equation modelling was employed to test the mediating hypotheses and hierarchical moderated regression was used to test the moderating hypotheses. The results of these two analytical techniques are presented separately in the following two sub-sections. In addition, based on the hypothesis testing results, additional analyses were undertaken and reported in the final sub-section.

Figure 7.1 Hypothesised Model of Segmentation Capabilities and Business Performance
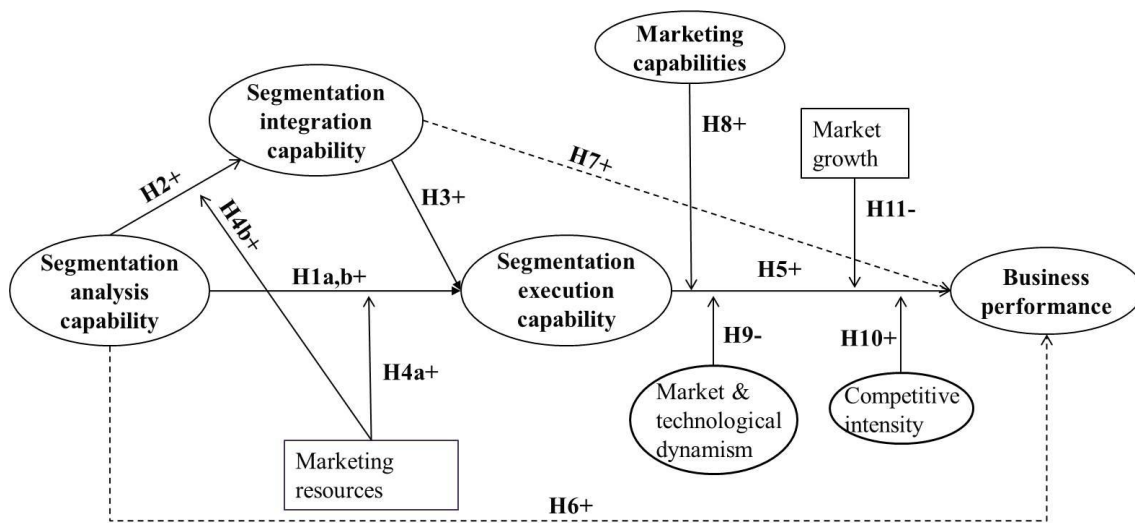
7.4.1. Structural equation modelling results

To test the mediating hypotheses, structural equation modelling with the maximum likelihood estimation method was used, with Figure 7.2 as a baseline model – in line with modelling principles, a parsimonious model representing Hypotheses 1a, 2, 3 and 5 was taken as a baseline model (cf. James, Mulaik and Brett, 2006). This model was then used for further analyses through nested model comparison.

Figure 7.2 Baseline Model for Hypothesis Testing

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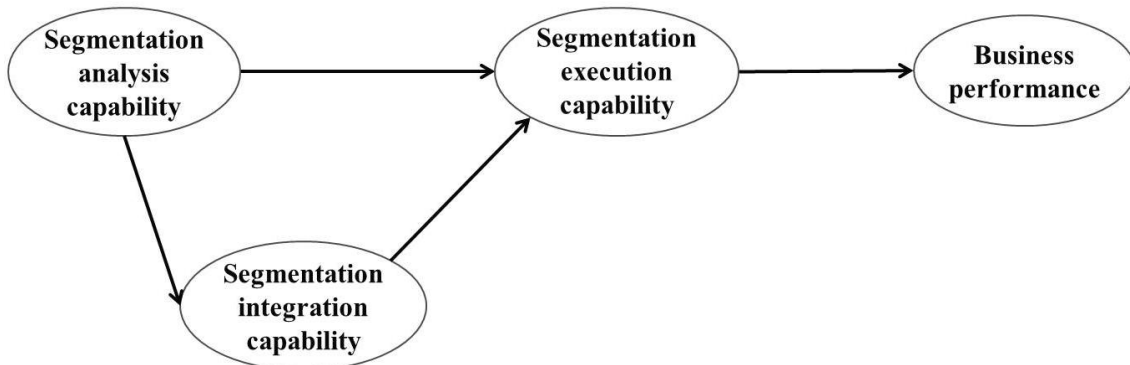
In the baseline model, paths were freed in accordance with the hypotheses. The hypothesised model was assessed by examining the t-values of the path coefficients and their standardised regression weights (see Table 7.14). The results indicate that all four paths were significant at p<0.01 and in the expected direction. The fit indices show a good fit to the data: $\chi^2_{(99)}$=162.98 (p<0.01), χ^2/df=1.65, SRMR= 0.050, GFI=.908, AGFI=.870, TLI=.960, CFI=.968, RMSEA=0.058 (p=0.178). The squared multiple correlation for business performance was .100, implying that segmentation execution capability explains 10% of the variance in business performance (cf. Byrne, 2010).

Table 7.14 Structural Parameters for Baseline Model

Relationship modelled	Hypothesis	Estimate	S.E.	Standardised estimate
Analysis → Integration	H2	.945***	.112	.588
Analysis → Execution	H1a	.263***	.072	.229
Integration → Execution	H3	.475***	.048	.665
Execution → Business performance	H5	.382***	.102	.302

***Coefficient significant at p<0.001; ** Coefficient significant at p<0.01

Thus Hypotheses 1a and 2 were supported, segmentation analysis capability is positively associated with both segmentation execution capability (β=0.23, t=3.63, p<0.01) and segmentation integration capability (β=0.59, t=8.46, p<0.01). Hypothesis 3 was also supported - segmentation integration capability is positively associated with segmentation execution capability (β=0.67, t=9.91, p<0.01). Hypothesis 5 is also supported, in that segmentation execution has a positive influence on business performance (β=0.30, t=3.76, p<0.01).

To test Hypothesis 1b (the mediating effect of segmentation integration capability on the relationship between segmentation analysis capability and segmentation execution capability), the conditions mentioned by Shrout and Bolger (2002) are verified: a) segmentation execution has a significant association with segmentation integration capability – as Table 7.16 above shows, this condition holds (β=0.59, t=8.46, p<0.01); b) segmentation integration capability has a significant association with segmentation execution capability –this condition also holds (β=0.67, t=9.91, p<0.01); c) segmentation analysis capability has a significant association with segmentation execution capability in the absence of segmentation integration capability—an association that reduces when segmentation integration is included in the model. In the absence of segmentation integration capability, the association is positive and higher (β=0.60, t=8.20, p<0.01) than the direct effect observed in the baseline model.

Because the influence of segmentation analysis capability on segmentation execution capability is still statistically significant in the presence of segmentation integration capability in the baseline model, it can be concluded that segmentation integration capability has only a partially mediating influence on the relationship between segmentation analysis capability and segmentation execution capability. To examine

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this mediational influence further, the Aroian (1944) test[38] was used by calculating the z-value – see equation below - and comparing it to a standard normal distribution (MacKinnon, Lockwood, Hoffman, West, and Sheets, 2002). The Aroian test calculates the exact standard error of the mediator based on first and second order Taylor series approximation, and hence is more precise than the Sobel (1982) test (MacKinnon *et al.*, 2002).

$$\text{Aroian test equation: z-value} = \frac{a*b}{\sqrt{(b^2*sa^2 + a^2*sb^2 + s_a^2*s_b^2)}}$$

A z-value of 6.40 was obtained (p<0.01). Thus, it can be concluded that the mediating effect of segmentation integration on the relationship between segmentation analysis and segmentation execution is statistically significant.

To fully test the mediating effect of segmentation execution on the relationship between segmentation analysis and business performance (Hypothesis 6), a separate series of nested models were estimated. The difference between nested models can be tested by subtracting the two chi-square values and testing this value against the critical value associated with the difference in degrees of freedom (Anderson and Gerbing, 1988). The first model represents the fully mediating model, where there is no direct path from segmentation analysis capability to business performance. This model obtained good fit to the data according to the fit indices: $\chi^2_{(52)}$=89.15 (p<0.01), χ^2/df=1.75, SRMR= 0.051, GFI=.930, AGFI=.893, TLI=.957, CFI=.967, RMSEA=0.061 (p=0.194). The path from segmentation analysis to segmentation execution (β=0.62, t=6.68) and from segmentation execution to business performance (β=0.33, t=3.69) are both significant at p<0.01.

Against this model, a new (nested) model is estimated by adding a direct path from segmentation analysis to business performance. The second model achieves a χ^2 of 87.51, $\Delta\chi^2_{(1)}$=1.64, which is less than 3.84[39]. Thus the difference in χ^2 is not significant. In addition, the direct path from segmentation analysis to business performance is not significant either (β=0.14, t=1.33). To test the significance of the mediating effect, the Aroian (1944) test was used again. The z coefficient of the mediating effect, calculated as before, is 2.33 (p<0.05). It can be concluded that segmentation execution fully mediates the influence of segmentation analysis capability on business performance.

To test Hypothesis 7 (the mediating effect of segmentation execution capability on the relationship between segmentation integration capability and business performance), an additional direct path was added to the baseline model – from segmentation integration to business performance (e.g. Wang *et al.*, 2005). This additional path lowers the overall χ^2 to 162.12, leading to an insignificant difference in χ^2 ($\Delta\chi^2_{(1)}$ =0.86, p>.10). In addition, the path coefficient from segmentation integration to business performance is insignificant (β=.132, t=.989, p>.10). Under the principle of model parsimony (Simon, 1977), therefore, these results suggested that the baseline model best fitted the data (cf.

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[38] In this formula, a and b and the unstandardised coefficients of the indirect paths (from analysis to integration and from integration to execution, respectively), sa and sb are the standard errors of the a and b coefficients.

[39] the critical value of for one degree of freedom

James *et al*., 2006). It can be concluded that Hypothesis 7 is supported, i.e. that segmentation execution is a significant mediator of the relationship between segmentation integration and business performance.

7.4.2. Regression analyses results

As argued in Chapter 4 (Section 4.4.8), the hierarchical regression method was used to test the moderation hypotheses.

Before estimating the regression equations, additional variables were computed in SPSS, for each segmentation capability, business performance and marketing capabilities on the basis of the factor score weights[40] outputted by AMOS in the confirmatory factor models. In addition, the number of marketing employees and marketing expenditure displayed high skewness and kurtosis and were logarithmically transformed to alleviate non-normality problems (e.g. Vorhies *et al.,* 2009). Furthermore, in line with recommendations from the literature (Aiken and West, 1991; Cohen *et al.,* 2003; MacCallum, Zhang, Preacher and Rucker, 2002), the scale variables were centred by subtracting the mean from each value in order to deal with potential multi-collinearity and interpretation issues. For the categorical variable (firm size), the initial six categories were collapsed into three categories (less than 250 employees; 250-1000 employees; more than 1000 employees) and the small and medium firms (less than 250 employees) were chosen as a reference group.

To test Hypothesis 4a (the moderating effect of marketing resources on the influence of segmentation analysis on segmentation execution), separate regression models were estimated for number of marketing employees (see Table 7.15) and marketing expenditure (see Table 7.17). The interaction between segmentation analysis capability and number of marketing employees did not explain a significant amount of additional variance (ΔR^2=.007, $\Delta F_{(1,192)}$=2.181, p>.10) and was not statistically significant (β=-.089, t=-1.48).

Table 7.15 Regression Results for Number of Marketing Employees as Moderator on Segmentation Analysis – Execution Relationship

Model		Unstandardised Coefficients		Standardised Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	3.074	.042		72.560
	FTE marketing	.009	.031	.018	.307
	Segmentation analysis (SA)	.673	.069	.579***	9.805
2	(Constant)	3.081	.043		72.472
	FTE marketing	.018	.031	.035	.581
	SA	.653	.070	.561***	9.362
	SAxFTEmarketing	-.072	.049	-.089	-1.478

*** significant at p<0.01; ** significant at p<0.05; * significant at p<.10

The results provided in Table 7.16 show a significant interaction effect between segmentation analysis capability and marketing expenditure on segmentation integration

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[40] as weighted linear additions of the first-order factors already computed

capabilities, but in the opposite direction than hypothesised ($\beta = -.114$, $p < .10$). The interaction accounted for an additional 1.2% of variance in segmentation execution capability ($\Delta F_{(1,182)}=3.42$, $p<0.10$). Thus there is evidence of a significant interaction as predicted by Hypothesis 4a.

Table 7.16 Regression Results for Marketing Expenditure as Moderator on Segmentation Analysis – Execution Relationship

Model		Unstandardised Coefficients		Standardised Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	3.067	.044		69.872
	Segmentation analysis (SA)	.672	.070	.578***	9.581
	Marketing expenditure (ME)	.010	.023	.027	.440
2	(Constant)	3.063	.044		70.191
	SA	.673	.070	.579***	9.649
	ME	.020	.024	.051	.834
	SAxME	-.080	.044	-.114*	-1.849

*** significant at p<0.01; ** significant at p<0.05; * significant at p<.10

The specific pattern of this interaction was examined further by deriving the simple slopes as suggested by Aiken and West (1991). Regressions were conducted at high (one standard deviation above) and low (one standard deviation below) levels of marketing expenditure. The resulting equations were plotted at high, average (mean) and low values of segmentation analysis capability and marketing expenditure (see Figure 7.3). The plots in Figure 7.3 shows that, for a high level of marketing expenditure (approximately £8,000,000), the relationship between segmentation analysis capability and segmentation execution capability was significant and positive ($\beta=.45$, $t=2.22$, $p<0.05$).

Figure 7.3 Moderating Effect of Marketing Expenditure

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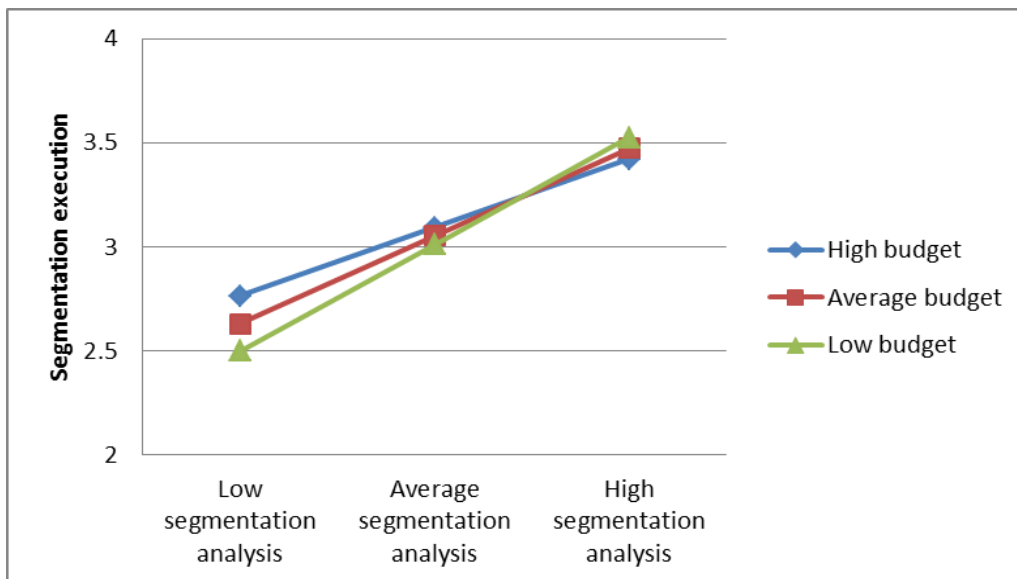
For a low level of marketing expenditure (approximately £200,000), the relationship between segmentation analysis and segmentation execution was stronger, statistically significant and positive (β=.70, t=3.45, p<0.01). These results indicate that the higher the marketing expenditure, the lower the effect of segmentation analysis on segmentation execution capability. It can be concluded that Hypothesis 4a is partially supported for marketing expenditure.

To test the influence of marketing resources on the relationship between segmentation analysis capability and segmentation integration capability (Hypothesis 4b), separate regression models were estimated (see Tables 7.17 and 7.18). The interaction between segmentation analysis capability and number of marketing employees (β= -.011, t=--.18) and the interaction between segmentation analysis capability and marketing expenditure (β= -.073, t=-1.17) are not significant.

Table 7.17 Regression Results for Number of Marketing Employees as Moderator on Segmentation Analysis – Integration Relationship

Model		Unstandardised Coefficients		Standardised Coefficients		Model statistics
		B	Std. Error	Beta	t	
1	(Constant)	2.951	.060		49.156	R^2=.330
	SA	.894	.097	.545***	9.187	$F_{(2,193)}$=47.45
	FTEmarketing	.092	.043	.126**	2.130	(p<0.01)
2	(Constant)	2.952	.061		48.730	ΔR^2=.000
	SA	.891	.099	.543***	8.955	$\Delta F_{(1,192)}$=0.0
	FTEmarketing	.094	.044	.128**	2.120	31 (p>.10)
	SAxFTEmarketing	-.012	.069	-.011	-.176	

*** significant at p<0.01; ** significant at p<0.05; * significant at p<.10

Table 7.18 Regression Results for Marketing Expenditure as Moderator on Segmentation Analysis – Integration Relationship

Model		Unstandardised Coefficients		Standardised Coefficients		Model statistics
		B	Std. Error	Beta	t	
1	(Constant)	2.936	.062		47.173	R^2=.313
	Segmentation analysis (SA)	.907	.100	.559***	9.114	$F_{(2, 183)}$=41.63 (p<0.01)
	Marketing expenditure (ME)	.025	.033	.046	.749	
2	(Constant)	2.933	.062		47.127	ΔR^2=.005
	SA	.907	.099	.559***	9.127	$\Delta F_{(1,192)}$=1.36
	ME	.033	.034	.062	.985	(p>.10)
	SAxME	-.072	.062	-.073	-1.165	

*** significant at p<0.01; ** significant at p<0.05; * significant at p<.10

However, the number of marketing employees has a direct influence on segmentation integration capability (β=.126, p<0.05), which implies that, in a firm with an average

level of segmentation analysis capability, the number of marketing employees is going to increase the level of segmentation integration capability. In fact, number of marketing employees explains an additional R^2 of 1.7%, over and above the influence from segmentation analysis capability which explained 31.3% of variance.

To test Hypothesis 8 (the greater an organisation's marketing capabilities, the stronger the positive influence of segmentation execution capability on business performance), three regression models were estimated, following a hierarchical specification: the first model included only control variables, the second model added the main variables and the third model added the interaction term (see Table 7.19). All the three models explained a significant proportion of variance in business performance. Among the control variables, only market growth rate (β=.360, t=5.11) was a significant predictor of business performance. Segmentation execution capability (β=.121, t=1.705) and marketing capabilities (β=.327, t=4.826) were both predictors of business performance. However, the interaction term was not a significant predictor (β=-0.045, t=-0.613), thus Hypothesis 8 is not supported. However, the significant direct coefficient of marketing capabilities on business performance and the significant correlations among segmentation capabilities and marketing capabilities (see Table 7.13) suggest that, while they are not moderators, marketing capabilities may be mediators instead (Sharma, Durand and Gur-Arie, 1981) – this is explored in additional analyses (see Section 7.5.2).

Table 7.19 Regression Analysis Results for Marketing Capabilities as Moderator on the Segmentation Execution - Business Performance Relationship

	Model	Unstandardised Coefficients		Standardised Coefficients	t	Model statistics
		B	Std. Error	Beta		
1	(Constant)	4.850***	.209		23.210	R^2=.148
	Market growth	.236***	.046	.360	5.110	$F_{(9, 195)}$=3.75
	B2C	-.002	.002	-.054	-.793	(p<0.01)
	B2B	.145	.100	.144	1.448	
	Medium firms	.174	.179	.102	.971	
	Large firms	-.223	.165	-.179	-1.354	
	Competitive intensity	-.074	.213	-.028	-.348	
	Technological dynamism	.083	.176	.037	.472	
	Market dynamism	.086	.193	.035	.444	
	Sales from (Products)	-.129	.182	-.056	-.705	
2	(Constant)	4.901***	.193		25.438	ΔR^2=.140
	Market growth	.194***	.043	.296	4.519	$\Delta F_{(2,193)}$=
	B2C	-.002	.002	-.070	-1.118	18.99
	B2B	.085	.093	.084	.915	(p<0.01)
	Medium firms	.212	.165	.124	1.289	
	Large firms	-.248	.153	-.199	-1.621	
	Competitive intensity	-.060	.197	-.023	-.306	
	Technological dynamism	.055	.162	.024	.338	
	Market dynamism	.010	.178	.004	.056	

	Unstandardised Coefficients		Standardised Coefficients	t	Model statistics
	B	Std. Error	Beta		
Sales from (Products)	-.103	.168	-.045	-.614	
Segmentation execution (SE)	.188*	.110	.121	1.705	
Marketing capabilities (MC)	.424***	.088	.327	4.826	

Model	Unstandardised Coefficients		Standardised Coefficients	t	Model statistics
	B	Std. Error	Beta		
3 (Constant)	4.907	.194		25.283	ΔR^2=.001
Market growth	.193	.043	.294	4.463	$\Delta F_{(1,192)}$=0.87 (p>0. 10)
B2C	-.002	.002	-.070	-1.124	
B2B	.084	.093	.083	.899	
Medium firms	.216	.166	.126	1.304	
Large firms	-.245	.154	-.196	-1.591	
Competitive intensity	-.061	.197	-.023	-.309	
Technological dynamism	.061	.164	.027	.375	
Market dynamism	.008	.179	.003	.046	
Sales from (Products)	-.103	.169	-.045	-.613	
SE	.181	.118	.116	1.530	
SMC	.425***	.088	.327	4.817	
SExSMC	-.017	.087	-.013	-.191	

*** significant at p<0.01; ** significant at p<0.05; * significant at p<.10

In order to test Hypothesis 9, a regression model was developed to test the moderating influence of technological and customer dynamism on the relationship between segmentation execution and business performance (see Table 7.20 for standardised parameters). No significant interactions were found. The interactions between segmentation execution capabilities and technological dynamism (β=.042, t=.485), market dynamism (β=.032, t=.382) were insignificant, explaining 0.4% additional variance in business performance. Hypothesis 10 was not supported.

In order to test Hypothesis 10, a regression model was developed to test the moderating influence of competitive intensity on the relationship between segmentation execution and business performance (see Table 7.20). No significant interaction was found. The interaction between segmentation execution and competitive intensity was insignificant (β=-.035, t=-0.544), explaining only 0.1% additional variance in business performance. Hypothesis 11 was not supported.

In order to test Hypothesis 11, a regression model was developed to test the moderating influence of market growth on the relationship between segmentation execution and business performance (see Table 7.20). No significant interaction was found. The interaction between segmentation execution and market growth was insignificant (β=-.043, t=-0.656), explaining only 0.2% additional variance in business performance. Hypothesis 12 was not supported.

Table 7.20 Regression Results for the Moderating Effect of Market Characteristics

Predictors	Standardised Coefficients		
	Hypothesis 9	Hypothesis 10	Hypothesis 11
Market growth (MG)	.325***	.299***	.298***
Segmentation execution (SE)	.268***	.252***	.236
Technological dynamism (TD)	.136		
Market dynamism (MD)	-.173*		
Competitive intensity (CI)		-0.010	
SExMG			-.043
SExTD	.042		
SExMD	.032		
SExCI		.035	
R^2 (F)	.192*** (11.879)	.179*** (14.597)	.179 (21.984)
ΔR^2 (F)	.004 (.521)	.001 (.296)	.002 (.431)

*** significant at p<0.01; ** significant at p<0.05; * significant at p<.10

7.5. Additional Analyses

Additional analyses were undertaken to investigate further the unsupported hypotheses, in particular with regards to market characteristics and marketing capabilities.

7.5.1. Moderating effect of market growth

Since Hypothesis 11 (the moderating effect of market growth on the relationship between segmentation execution capability and business performance) was not supported, the moderating effect was re-assessed with multi group structural equation modelling to investigate whether individual paths in the structural model indeed did not change in markets with increasing versus declining demand.

The responding firms were split into low and high groups based on their evaluation of market growth, with low representing markets where demand had been stable or decreased over the previous year and high representing markets that had been growing. The indices of this model indicate moderate fit to the data: $\chi^2_{(194)}$=307.46 (p<0.01), χ^2/df=1.58, SRMR= 0.071, GFI=.844, AGFI=.777, TLI=.931, CFI=.945, RMSEA=0.055 (p=0.220).

The standardised parameter estimates for high and low groups appear in Table 7.21. The results indicate that there are differences between the parameters for low versus high growth groups. In particular, while the direct influence of segmentation execution on business performance is not significant in the low growth markets, it is highly significant in high growth markets. In addition, the direct effect of segmentation integration on business performance is significant and positive in low growth group and significant and negative in high growth markets.

Table 7.21 Structural Parameter Estimates for High/Low Market Growth Groups

Paths	Low group	High group
	Standardised regression weights	
Segmentation analysis → Segmentation execution	.191**	.237***
Segmentation analysis → Segmentation integration	.562***	.596***
Segmentation integration→ Segmentation execution	.653***	.670***
Segmentation execution→ Business performance	.151	.448**
Segmentation integration → Business performance	.314**	-.355**

*** significant at p<0.01; ** significant at p<0.05.

In order to evaluate the mediating effects of segmentation execution on the relationship between segmentation integration capability and business performance in markets with stagnant/declining demand, it can be noticed that the influence of segmentation execution on business performance is not significant, whereas the direct influence from segmentation integration on business performance is positive and statistically significant. Therefore it can be concluded that segmentation execution capability is not a mediator between segmentation integration capability and business performance in stagnant/decreasing markets.

On the contrary, in growing markets, both paths from segmentation integration capability to segmentation execution capability and from segmentation execution capability to business performance are positive and statistically significant. Applying the Aroian (1944) test again leads to a significant z-value (p<0.05). However, in growing markets, segmentation integration has a statistically significant and negative direct influence on business performance. This suggests that in high growth markets, segmentation execution does not fully mediate the effect of segmentation integration capability on business performance. The negative sign of the direct path from segmentation integration capability to business performance suggests that there is a competing mediation taking place (Zhao, Lynch and Chen, 2010), where the mediated effect (identified through segmentation execution capability) and another unidentified mediator (that could explain the direct path) both exist and point in opposite directions.

The comparison of the same path coefficient (e.g. from segmentation execution capability to business performance) in two subsamples (e.g. declining/growing markets) may be viewed as equivalent to rejecting H0: $\Delta R^2 = 0$ in a moderated multiple regression analysis with a continuous predictor and a dummy coded nominal variable (Cohen *et al.,* 2003). To ensure that the difference between the path coefficients is not due to the different in measurement of the latent constructs, a series of nested models were compared. The first model was the baseline model used for hypothesis testing in Section 7.4.1. Against this model, another model was estimated where the factor loadings were constrained to be the same across the two groups. Comparing the measurement constrained model with the unconstrained baseline model results in a $\Delta\chi^2_{(14)}=13.23$, which is not significant. Therefore it can be concluded that the measurement properties of the model are the same across the two groups (Byrne, 2010) and that the structural paths between segmentation capabilities and business performance are statistically different between groups and the difference in path coefficient is not due to measurement differences.

7.5.2. Relationship with marketing capabilities

The findings also indicated that marketing capabilities did not moderate the relationship between segmentation execution capability and business performance (Hypothesis 8 not supported). However the regression analyses indicate a direct effect of marketing capabilities on business performance when controlling for segmentation execution capability and thus a mediating influence is further explored. A mediation effect is conceivable based on both conceptual arguments and empirical evidence from the literature.

A link between segmentation capabilities and marketing capabilities can be conceived for each segmentation capability. Firms with high levels of segmentation analysis capability develop a superior stock of market knowledge. They also are able to identify and monitor the evolution of segments in the marketplace. Thus segmentation analysis capability can facilitate the development of architectural marketing capabilities, in particular through the segment and market structure understanding that it provides. Segmentation execution capability can also facilitate the development of architectural marketing capabilities through strategic and managerial execution of segmentation insight, which can lead to architectural marketing capabilities through integrating segment understanding in the development of strong marketing strategies (Capon and Palij, 1994). The operational execution of segment knowledge (through its focus on tailoring marketing mixes to the needs of target segments) guides the development and deployment of specialised marketing capabilities. Finally, segmentation integration capability enables the development and implementation of customer-oriented marketing strategies through its organisation of marketing responsibilities, incentives and performance control and training and involvement of customer-facing employees. The qualitative findings suggest that one of the outcomes of segmentation integration capability is organisational focus (through the development of an internal currency about customers), which could be associated with the development of a strategic intent that reshapes the marketing capabilities required to fulfil it (Danneels, 2008).

Therefore, it could be hypothesised that marketing capabilities are mediators between segmentation capabilities and business performance, i.e. they explain how segmentation capabilities may influence business performance. To formally test this emerging mediating hypothesis, new structural models were estimated, where another latent construct was added, marketing capabilities, with two indicators, each representing the factor score calculated previously for specialised and architectural marketing capabilities[41]. In the interest of model parsimony, the first structural model estimated specifies a full mediation model (see Figure 7.4), where the only paths emerging from segmentation execution and segmentation integration capabilities go to marketing capabilities, with no direct paths from any of the segmentation capabilities to business performance.

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[41] This new factor achieved high composite reliability (.952) and average variance extracted (90.9%).

Figure 7.4 Hypothesised Mediation Model of Segmentation and Marketing Capabilities and Business Performance
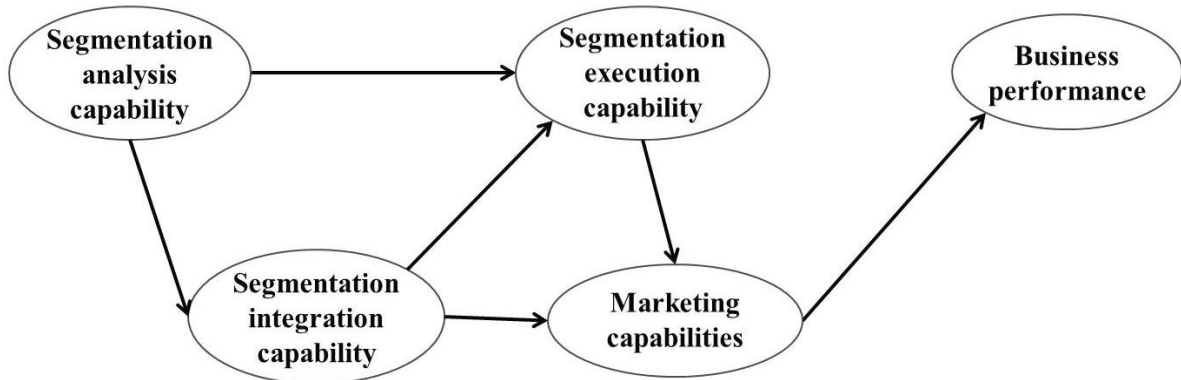
The fit indices of this model suggest that the model fits the data well: $\chi^2_{(129)}$=228.75 (p<0.01), χ^2/df=1.77, SRMR= 0.059, GFI=.886, AGFI=.846, TLI=.953, CFI=.962, RMSEA=0.063 (p=0.05). The path estimates appear in Table 7.22 – all are significant at p<0.05. Segmentation execution capability and segmentation integration capability are both positively related to marketing capabilities, which in turn are positively and significantly related to business performance.

Table 7.22 Structural Path Estimates for Full Mediation Model, Including Marketing Capabilities

Paths	Standardised estimate	t-statistic
Segmentation analysis → Segmentation integration	.599***	8.434
Segmentation analysis → Segmentation execution	.224***	3.446
Segmentation integration → Segmentation execution	.665***	9.610
Segmentation execution → Marketing capabilities	.246**	2.077
Segmentation integration → Marketing capabilities	.271**	2.268
Marketing capabilities → Business performance	.467***	6.834

*** significant at p<0.01; ** significant at p<0.05; * significant at p<0.10

In order to test whether the relationships between segmentation execution and integration capabilities and marketing capabilities are not spurious due to segmentation analysis capability explaining the variance in both, another path is added in the model – from segmentation analysis capability to marketing capabilities. Thus the significance of new path can be assessed by looking at the significance of the new parameter (see Table 7.23) and by performing a nested chi-square different test. The chi-square difference is statistically significant ($\Delta\chi^2_{(1)}$=4.35, p<0.05) and the added path from segmentation analysis capability to marketing capabilities is positive and significant (β=.190, t=2.12, p<0.05). In addition, the parameter estimate of the path from segmentation execution capability to marketing capabilities is no longer significant (β=.188, t=1.52, p>.10). It can be concluded that segmentation integration and analysis capabilities are related to marketing capabilities, however segmentation execution capability is not.

Table 7.23 Structural Parameter Estimates for Full Mediation Model – Additional Path from Segmentation Analysis to Marketing Capabilities

Relationship	Standardised estimate	t-statistics
Segmentation analysis → Segmentation integration	.598***	8.391
Segmentation analysis → Segmentation execution	.221***	3.388
Segmentation integration → Segmentation execution	.666***	9.602
Segmentation integration → Marketing capabilities	.198*	1.656
Segmentation execution → Marketing capabilities	.188	1.520
Segmentation analysis → Marketing capabilities	.190**	2.118
Marketing capabilities → Business performance	.468***	6.871

*** significant at p<0.01; ** significant at p<0.05; * significant at p<0.10

Since a positive and significant relationship has been found between segmentation execution capability and business performance (Hypothesis 5 was confirmed) and marketing capabilities do not mediate this relationship, another model is estimated, this time adding a direct path from segmentation execution capability to business performance (see Table 7.24 below for parameter estimates). The new model results in the following indices, which represent a slightly better fit to the data: $\chi^2_{(127)}$=220.497 (p<0.01), χ^2/df=1.736, SRMR= 0.054, GFI=.889, AGFI=.847, TLI=.954, CFI=.963, RMSEA=0.063 (p=0.06). The chi-square difference is statistically significant ($\Delta\chi^2_{(1)}$=3.90, p<0.05) and the added path from segmentation execution capability to business performance is positive and significant (β=.160, t=2.04, p<0.05).

Drawing additional paths from segmentation integration capability, respectively from segmentation analysis capability, to business performance, result in insignificant chi-square differences (0.5, respectively 0.3). In addition, applying Aroian's (1944) test for the mediating effect of marketing capabilities on the relationship between segmentation integration capability and business performance results in a z value of 3.03 (p<0.01). Similarly, the mediating effect of marketing capabilities on the relationship between segmentation analysis capability and business performance has a z value of 2.25 (p<0.05). The results of these two tests imply that marketing capabilities represent a significant mediator between segmentation analysis and integration capabilities and business performance.

Table 7.24 Structural Parameters for Partial Mediation Model

Relationships	Standardised estimate	t-statistic
Segmentation analysis → Segmentation integration	.600***	8.312
Segmentation analysis → Segmentation execution	.228***	3.453
Segmentation integration → Segmentation execution	.663***	9.544
Segmentation execution → Marketing capabilities	.169	1.355
Segmentation integration → Marketing capabilities	.211*	1.777
Segmentation analysis → Marketing capabilities	.198**	2.168
Marketing capabilities → Business performance	.371***	4.781
Segmentation execution → Business performance	.160*	2.044

*** significant at p<0.01; ** significant at p<0.05; * significant at p<0.10

Thus it can be concluded that marketing capabilities mediate the influence of segmentation analysis and integration capabilities on business performance, but they do not mediate the effect of segmentation execution capability on business performance. Instead both segmentation execution capability and marketing capabilities are significantly associated with business performance.

7.5.3. Segmentation and marketing capabilities in declining/growing markets

It was found in Section 7.5.1 that, in decreasing/stagnating markets, segmentation integration capability is positive and significantly related to business performance, whereas segmentation execution is not. Hence, in decreasing/stagnant markets, segmentation execution capability does not mediate the influence of segmentation integration capability on business performance. Based on the insignificance of segmentation integration capability as a predictor of business performance and the mediating effect of marketing capabilities on the relationship between segmentation integration and business performance (found in Section 7.5.2), it may be that in stagnant/decreasing markets, the relationship between segmentation integration capability and business performance is explained by the development of generic marketing capabilities instead of segmentation execution capability.

Indeed, the re-estimation of the structural equation model with marketing capabilities as mediator in the two groups of companies facing declining/stagnant versus growing markets supports this claim. This model achieved reasonably good fit to the data: $\chi^2_{(252)}$=421.89 (p<0.01), χ^2/df=1.67, SRMR= 0.066, GFI=.818, AGFI=.747, TLI=.921, CFI=.936, RMSEA=0.059 (p=0.057). The standardised path parameters for the relationships modelled in decreasing and growing markets appear in Figure 7.5.

Figure 7.5 The Moderating Effect of Market Growth on Segmentation and Marketing Capabilities and Business Performance Relationships
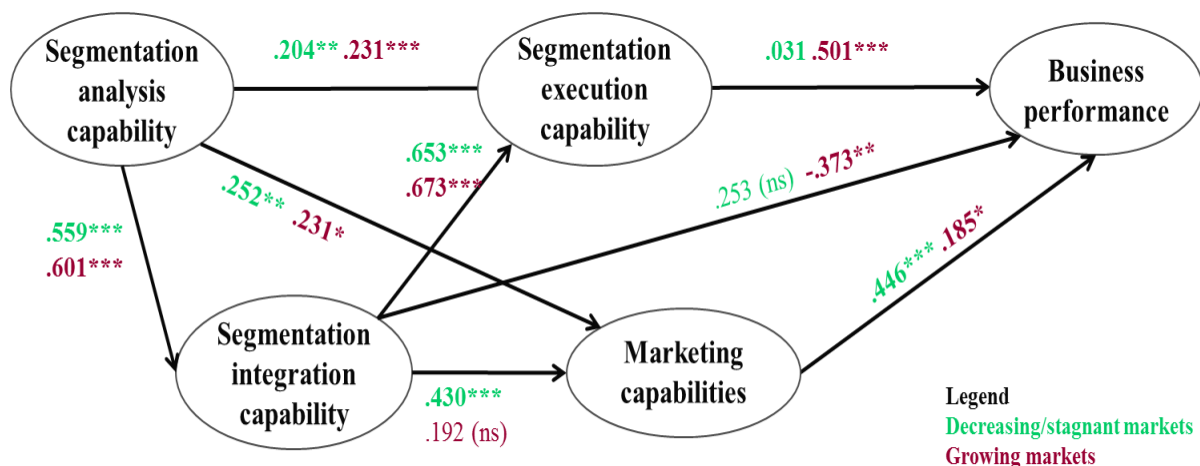
*** p<0.01, ** p<0.05, * p<0.10

From the analysis of the path coefficients, it can be concluded that in decreasing/stagnant markets, marketing capabilities are positively related with business performance and are influenced by segmentation analysis and integration capabilities. The Aroian (1944) test (z=2.80, p<0.01) confirms that the influence of segmentation integration capability on business performance is significantly mediated by marketing

capabilities. In contrast, in growing markets, there are two main influences on business performance, a positive one from segmentation execution capability and a negative one from segmentation integration capability. Segmentation integration is no longer associated with marketing capabilities, however, a significant mediating effect of segmentation execution capability is confirmed by the Aroian (1944) test (z=2.58, p<0.01) on the relationship between segmentation integration capability and business performance.

7.6. Conclusion

In this chapter, three types of findings were described. Firstly, the measurement properties of the latent constructs were assessed and were found to have adequate levels of reliability and validity. Both the exploratory and confirmatory analyses confirmed the multi-dimensional nature of the three segmentation capabilities and the specific dimensions defined in chapter 6, adding only one distinct dimension for segmentation analysis capability to distinguish between segment attractiveness and fit evaluation.

Secondly, the hypotheses proposed in Chapter 6 were tested (see Table 7.25 for summary) – the mediation hypotheses were tested with structural equation modelling (and the Aroian test of mediation) and the moderation hypotheses with multiple regression.

Table 7.25 Summary of Findings of Hypothesis Testing

Hypothesis	Relationship tested	Type of analysis	Finding
H1a	SA → SE	SEM	Supported
H1b	SA → SI → SE	SEM	Supported
H2	SA → SI	SEM	Supported
H3	SI → SE	SEM	Supported
H4a	Marketing resources moderate SA-SE	Moderated hierarchical multiple regression	Partially supported
H4b	Marketing resources moderate SA-SI	Moderated hierarchical multiple regression	Not supported
H5	SE → BP	SEM	Supported
H6	SA – SE – BP	SEM + Aroian test	Supported
H7	SI – SE – BP	SEM + Aroian test	Supported
H8	Marketing capabilities moderate SE – BP	Moderated hierarchical multiple regression	Not supported
H9	Environmental dynamism moderates SE – BP	Moderated hierarchical multiple regression	Not supported
H10	Competitive intensity moderates SE – BP	Moderated hierarchical multiple regression	Not supported
H11	Market growth moderates SE – BP	Moderated hierarchical multiple regression and multi-group SEM	Partially supported

It was found that the level of segmentation analysis capability in a firm positively influences its level of segmentation execution capability. This influence is partially but significantly mediated by segmentation integration capability. In addition, the effect of segmentation analysis capability on business performance was found to be significantly mediated by segmentation execution capability. Furthermore, it was found that the level of segmentation integration capability in a firm positively influenced the firm's level of segmentation execution capability. However segmentation execution only mediated the influence of segmentation integration capability on business performance in high growth markets, but not in stagnant/declining markets.

Related to the influence of marketing capabilities, neither specialised nor architectural marketing capabilities moderate the influence of segmentation execution capability on business performance. However the results showed that marketing capabilities were positively and significantly related with business performance. Further analyses showed that both specialised and architectural marketing capabilities have a significant but partial mediating effect on the relationship between segmentation analysis and integration capabilities and business performance.

Among the moderators, the level of marketing expenditure moderates the influence of segmentation analysis capability on segmentation execution capability in that the higher the marketing expenditure, the lower the influence of segmentation analysis on segmentation execution. None of the external factors (market growth, competitive intensity, environmental dynamism) was confirmed to be moderating the relationship between segmentation execution capabilities and business performance.

However, further analyses showed that market growth acted as a moderator on the full structural model. More specifically, it was found that, in decreasing/stagnant markets, the main influence on business performance comes from marketing capabilities (influenced by segmentation analysis and integration capabilities), while in growing markets, segmentation execution capability has a positive influence and segmentation integration capability has a negative influence on business performance.

The results of both the qualitative and quantitative findings are discussed in detail in Chapter 8.

8. DISCUSSION OF FINDINGS

8.1. Introduction

The purpose of this chapter is to discuss the findings by relating them to the segmentation and marketing capabilities literatures. The findings of the qualitative and quantitative phases of empirical research are discussed here with a view to delineating the nature of market segmentation capability (and the processes it is reflected in), to discuss the paths of influence of segmentation capabilities on business performance and to discuss the significance of the moderating effects found to affect this relationship. This discussion enables the identification of the contributions of the qualitative and quantitative findings in providing answers to the four research questions set in Chapter 1 (Section 1.3).

8.2. Dimensions of Market Segmentation Capability

Whilst the conceptual model proposed in Chapter 3 specified four dimensions of market segmentation capability (research, implementation, integration, monitoring) based on extant segmentation literature (e.g. Hlavacek and Reddy, 1986; Piercy and Morgan, 1993; Kotler, 1994; Dibb and Simkin, 2001; Goller *et al.*, 2002; Yankelovich and Meer, 2006), the qualitative evidence brought by interviews with managers and experts indicated three types of organisational processes at work when implementing market segmentation: i) segmentation analysis (developing, evaluating and monitoring segmentation schemes), ii) segmentation execution (using insight generated by segmentation schemes in marketing decision making) and iii) segmentation integration (integrating segmentation schemes in the organisational fabric). The existence of three segmentation capabilities was supported by the confirmatory factor analyses of the survey data obtained in the quantitative study. Furthermore, the results of the confirmatory factor analysis show that each of these segmentation capabilities is a multi-dimensional construct with good measurement properties. Lastly, the discriminant validity results confirm that these three constructs are separate but inter-related capabilities.

Segmentation analysis capability contains six dimensions, which refer to six key analytical processes: a) identifying new segments in the marketplace, b) qualifying the identified segments to ensure they are operational, c) evaluating their attractiveness, d) evaluating their potential fit with the organisation's resources and objectives, e) monitoring their evolution and f) profiling them in detail. An important characteristic of the segmentation analysis capability is that all six dimensions of segmentation analysis refer to organisational processes, rather than decisions. The review of segmentation decisions in Chapter 2 revealed that the segmentation literature views segmentation analysis almost exclusively in terms of two main decisions: choosing the

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most appropriate segmentation bases and methods to use in empirical quantitative research in order to derive a segmentation scheme. However, both the qualitative findings of this research, as well as recent studies of segmentation practice (e.g. Verhoef *et al*., 2002; Millier, 2004; Quinn, 2009; Harrison and Kjelberg, 2010), suggest that practitioners do not rely exclusively on sophisticated analytical methods of segmentation research, but rather use their intuition/experience or qualitative studies to identify segments that offer growth opportunities. In addition, even when using quantitative research to derive a segmentation scheme, the main concern is on the segmentation scheme quality (i.e. segment qualification) that ensures the actionability of the segmentation scheme. These two arguments support the focus on organisational processes instead of segmentation research decisions in conceptualising segmentation analysis capability.

In addition, this conceptualisation combines both academic and practical considerations that are in line with Mahajan and Jain's (1978) argument that segmentation analysis should develop feasible schemes of homogeneous market segments within organisational and environmental constraints. The inclusion of the six processes ensures that segmentation schemes do not get implemented without ensuring that they fit with the objectives and constraints of the organisation and with the reality of the marketplace. In particular, the organisational and market constraints are considered as part of segment qualification and segment evaluation. The qualitative findings revealed additional criteria that concern managers beyond the traditional criteria of measurability, identifiability, accessibility and distinctiveness. The participants emphasised the need for 'real segments (as opposed to abstract constructs), which are easily understood and manageable, and fit with the organisational objectives. The quantitative findings support the existence of two dimensions of segment evaluation – a quantitative evaluation of segment attractiveness and a 'soft' evaluation of the segment fit with the organisational capabilities, supporting the idea that firms should select segments that display high levels of market attractiveness and where the firm also has substantial business strengths (Kotler, 1994; Hooley *et al*., 2006). It also supports Freytag and Clarke's (2001) argument that segments need to be evaluated on fit because attractive segments may not suit the company if the segment cannot be handled well enough internally.

Segmentation execution capability contains four dimensions, which refer to the different types of marketing activities that are informed by the knowledge generated by segmentation schemes: i) strategic execution refers to revising the definition of the target market and the marketing strategy, ii) managerial execution refers to planning and budgeting around target segments, iii) operational execution refers to developing tailored offerings and reaching out to target segments and iv) customer relationship management refers to managing customer loyalty and value. Previous literature have emphasised different 'applications' of segmentation analysis (e.g. tailored propositions, Bailey *et al*., 2009; segment selection and positioning, Danneels, 1996; individual marketing mix decisions, e.g. Bolton and Myers, 2003). In contrast, this conceptualisation of segmentation execution capability emphasises the importance of using segmentation schemes in all types of marketing decision making.

The distinction between the four different types of execution of segmentation schemes helps clarify the different approaches seen in practice, both in the qualitative study of this research and in previous research on segmentation practice. The differences found

in comparing segmentation execution in fashion retailers (e.g. Danneels, 1996; Quinn, 2009), financial services (e.g. Meadows and Dibb, 1998; Emmelhainz and Kavan, 1999; Bailey *et al*., 2009) and high technology (e.g. Bailey *et al*., 2009; Harrison and Kjellberg, 2010) are explained by the fact that these different types of companies were using segmentation at different levels. Thus, the fashion retailers were focusing on an operational use of segmentation in an iterative adjustment of value proposition to tailor to a self-identified target segment. On the other hand, financial services companies were using segmentation both at a managerial level of planning and budgeting around identified segments and at individual level to optimise customer interactions, hence the finding that these companies used segmentation for broad proposition development, marketing plans and customer management. However, in high technology, which is a newer and more dynamic marketplace, segmentation was used at a strategic level to identify which markets to be in and to design a broad strategy for entering a new product category.

Putting segmentation execution capability at the heart of implementing segmentation schemes fits with Schreyogg and Kliesch-Eberl's (2007) emphasis on embedding organisational capabilities in practice in the form of habitualised action patterns or routines (Winter, 2003), in this case embedding segmentation schemes into various types of strategic, managerial and operational marketing activities and decisions. This is important because the process of using segmentation insight[42] should not be "called a capability unless it has proved to be successful across various situations and organisations are able to reproduce it" (Schreyogg and Kliesch-Eberl's, 2007: 915).

Segmentation integration capability contains four key processes that ensure segmentation schemes become embedded in the organisational fabric: i) developing an implementation plan, ii) aligning the infrastructure to the segmentation schemes, iii) integrating the segmentation schemes in the organisational culture and iv) monitoring the results of the segmentation-based initiatives. Thus, this capability is in line with previous research in highlighting the key processes required for implementing customer-oriented strategies (e.g. Hartline *et al*., 2000; Shah *et al*., 2006). This segmentation capability explains the difference between accounts of successful segmentation projects (e.g. Emmelhainz and Kavan, 1999; Bailey *et al*., 2009), the managerial interviews in the qualitative empirical phase, and accounts of failed segmentation projects (e.g. Danneels, 1996; Dibb and Simkin, 2001; Quinn, 2009), where segmentation schemes were not integrated in the organisational fabric and, as a result, it failed to show any effect on performance outcomes.

Segmentation integration capability captures the embeddedness aspect of segmentation capability - the extent to which segmentation schemes are contextually entrenched within the structural, social, and cultural aspects of the firm (Grewal and Slotegraaf, 2007). The integration of segmentation schemes in a shared understanding of the market (Jenkins and McDonald, 1997), training and communication of segmentation principles, reorganisation of responsibilities, organisational structures and rewards, as well as broad involvement with segmentation schemes enables segmentation schemes to be dispersed and cooperatively shared across individuals and departments, thus creating further embeddedness of the market segmentation capability (cf. Rumelt, 1984). At the same time, the processes that reflect a high level of segmentation integration capability

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[42] Knowledge about market segments generated by the segmentation schemes

also act to change the collective managerial cognition about their target markets. The change in managerial cognition comes from the embeddedness of segmentation schemes in the organisational fabric, particularly through repeated inter-functional coordination and communication, which establishes segmentation schemes as 'internal currency'. It is this status of internal currency that enables the gradual and collective change in managerial cognitive frames about the marketplace.

8.3. Market Segmentation Capability and Business Performance

8.3.1. Insight from Qualitative Findings

Each perspective of market segmentation identified in Chapter 2 (Section 2.5) proposed alternative explanations of the impact of market segmentation on business performance. In a brief summary, the research technique perspective argues that: a) segmenting customers based on response elasticities leads to the ability to engage in price discrimination across segments which leads to increased profits (e.g. Frank *et al*., 1972); b) segmenting based on customer needs enables firms to develop products and services tailored to those needs which then leads to customer satisfaction (Allenby *et al.,* 2002); c) targeting quality (the accuracy of identifying and reaching to only those individual customers belonging to target segments) leads to less waste in marketing expenditure and thus increased productivity (Mizuno *et al*., 2008). The decision making tool perspective argues that marketing planning (developing a marketing strategy and a tactical plan which becomes the framework for directing, implementing and controlling marketing activities, cf. Claycomb *et al.*, 2000) and resource allocation (developing marketing mixes for each segment, based on the principle of marginal returns to the marketing efforts, cf. Wedel and Kamakura, 2000) are the two mechanisms by which segmentation insights translate into performance. The competitive strategy perspective argued that market segmentation leads to the development of competitive market positions (through the selection of target segments and development of product positioning strategies) and the identification of new market opportunities for product and market innovation.

These explanations were critically evaluated based on the insights gathered from segmentation practice studies (see Chapter 2, Section 2.4) to be found conceptually and empirically wanting. Instead, the qualitative findings (see Chapter 5, Section 5.5.3) suggest that there are six mechanisms that are at work explaining how market segmentation influence performance outcomes (see Figure 8.1).

The first of the new explanations presented in Figure 8.1 is actually comprised by two mechanisms, identified in the qualitative study, which explain how companies develop a segmentation execution capability − through gathering in-depth knowledge and understanding of market segments (who they are, what products they buy, why they buy − the needs they have, when and how − the occasions and channels of purchase) and their evolution and position in the marketplace (market structure understanding). These findings are in support of Dibb and Simkin's (2001) comments that businesses engaging in segmentation analysis carry out detailed customer and competitor analysis as part of the process, which allows them to become attuned with customer and competitor behaviour and to understand better customers' needs and wants. While these two outcomes do not support the proposition that segmentation capabilities influence the

development of market-based learning capability[43] (as suggested in Chapter 3, Section 3.5.2), these two outcomes seem to be a specific form of market knowledge, which was defined in Chapter 3 (Section 3.3.1) as organised and structured information about the market (Li and Calantone, 1998). From this definition, it can be inferred that market knowledge is developed through systematic processing of data, which is endowed with useful meaning. The information resulting from segmentation analysis capability is organised and structured in the form of a segmentation scheme complete with segment profiles and evaluations. Thus, the qualitative findings bring support to the claim that market segmentation (analysis) is a generator of market knowledge, as argued in Chapter 3 (Section 3.4). It can be argued that, in fact, the outcome of segmentation analysis capability – and the mediator between segmentation analysis capability and segmentation execution capability - is a specific form of market knowledge. Understanding the markets and customers' needs guides the development of segmentation execution capability, which enables firms to compete effectively and satisfy customers' needs (Sirmon, Hitt and Ireland, 2007).

Figure 8.1 Comparison of Explanations from Extant Literature and Qualitative Findings
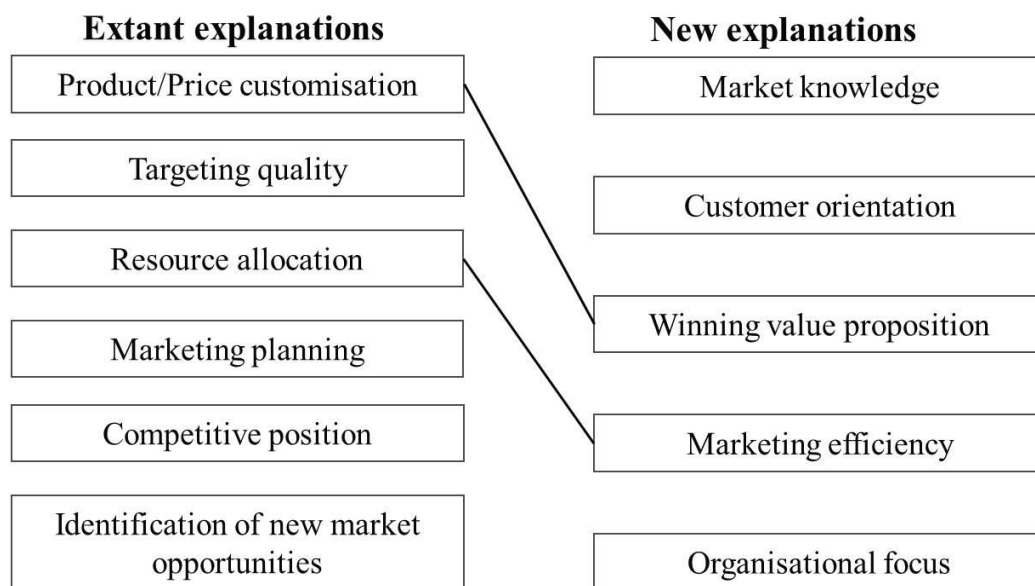
The third mechanism (customer orientation) also explains the development of a segmentation execution capability, this time through an indirect effect. The qualitative findings suggest that customer orientation is an outcome of segmentation integration capability. Firms with a high level of segmentation integration capability are more likely to be customer oriented because they ensure the implementation of integration processes that results in employees adopting segmentation schemes as internal currency – a language used to represent the shared understanding of the marketplace and to facilitate inter-departmental coordination and communication. The internal currency status of segmentation schemes in turn enables the company to be more customer-oriented and more open to implementing insight from segmentation schemes in their

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[43] which was defined as the capacity of the firm, relative to its competitors, to acquire, disseminate, unlearn and integration market information into value creating activities of the firm (Weerawardena and O'Cass, 2004).

marketing decision making. Thus, this mechanism is in line with Shah's *et al.* (2006) conceptual model, which suggests that companies become more customer-centric if they adopt segment-oriented organisational structures, have a high level of support from top management, encourage the adoption of a market-oriented organisational culture and adopt customer-oriented metrics, i.e. if they have a high level of segmentation integration capability.

The other three mechanisms identified in the qualitative stage of empirical research refer to the relationship between segmentation execution capability and business performance. The managers and experts interviewed frequently referred to three intermediary outcomes of using segmentation schemes: 1) developing winning value propositions, 2) improving marketing efficiency and 3) achieving organisational focus.

The winning value proposition mechanism was based on the insight that using segmentation schemes for devising tailored value propositions enables firms to design and deliver a better value offering than competitors. This is consistent with the argument that knowing what customers value and need forces firms to focus on what their offerings are really worth to their customers (Anderson *et al.*, 2006). In addition, the more a company can break down its customers into different groups with different needs and expectations, the better it can serve them (Day, 2003). This argument is also the basis for segmentation theory (cf. Smith, 1956), hence the identification of this mechanism supports to some extent the extant explanation suggested by the research technique perspective – that segmenting based on needs/benefits enables companies to develop tailored products and services. However, the winning value proposition concept is broader in meaning, as it does not restrict segmentation bases to needs/benefits or response elasticities (even though there was evidence of segmentation schemes developed based on buyer needs/benefits in the qualitative study) and it does not restrict the tailoring to only one element of the marketing mix (e.g. product or price), but rather encompasses the whole offering that a firm develops for its target customers (Anderson *et al.*, 2006). The identification of this mechanism is in line with the argument proposed by several authors (e.g. Day, 1994; Slater and Narver, 2000; Hult and Ketchen, 2001) – that the ability to generate superior customer value is dependent on the availability of distinctive marketing capabilities, in this case segmentation execution capability. Providing superior value propositions to customers drives the creation of value for the firm as well (Sirmon, Hitt and Ireland, 2007) because producing greater value for customers than competitors enables firms to achieve a competitive advantage which contributes to increasing profit margins (Powell, 2001).

Marketing efficiency has been considered in the past as a measure of marketing performance (e.g. Vorhies and Morgan, 2003), defined as the ratio of marketing performance outcomes achieved to resource inputs consumed (Bonoma and Clark, 1988). However, marketing efficiency has also been defined as the firm's deployment ability to convert marketing expenses into results (Vorhies and Morgan, 2003) and so it is conceptually related to the resource allocation explanation proposed by the decision making tool perspective. The identification of marketing efficiency as an outcome of segmentation implementation in the qualitative findings supports previous claims from the literature that suggest that organisations applying a segmentation approach are able to focus resources on particular segments (Choffray and Lilien, 1978), which allows for a more efficient application of resources and ensures that customer offerings are carefully targeted (Wind, 1978). The only difference is that participants did not use/cite

any of the normative resource allocation models available in the segmentation literature (e.g. Mahajan and Jain, 1978), but rather used the insight from segmentation schemes to manage products and segments in order to increase the match between organisational objectives and capabilities and the needs and value of the market segments.

Organisational focus – the third mechanism identified in the qualitative findings - was found to have two different interpretations for the participants in the qualitative study. On one hand, some of them referred to the adoption of a 'focus' competitive strategy (Porter, 1980), i.e. the selection of relatively niche target segments and the match of their needs with the capabilities of the organisation. At face value, this would bring some support to the competitive strategy perspective and its explanation of the relationship with business performance focused on competitive positioning. However, the dominant view, shared by other participants, referred to organisational focus to mean a shared vision and mission statement, which facilitated a renewed purpose for the business and dedication to common goals. This second view on organisational focus is in line with arguments from the literature which suggest that sharing a common interpretation of the market structure and customer heterogeneity (Jenkins and McDonald, 1997) enables the organisation to have a sense of purpose and direction (Baker and Sinkula, 1999). Thus, it can be tentatively concluded that this mechanism is different in meaning from the competitive positioning explanation put forward by proponents of the competitive strategy perspective.

Overall, the qualitative findings bring partial support to the resource allocation and product customisation explanations. However, they predominantly propose novel and inter-linked explanations of a relationship between market segmentation and business performance, which have three distinctive characteristics: a) they relate to organisation processes of shaping existing resources and capabilities, b) they represent managerial reality, as opposed to normative recommendations and models and c) they adopt a process view of how segmentation analysis translates into business performance.

8.3.2. Insight from Quantitative Findings

Based on the hypothesis testing results and the additional analyses performed in Chapter 7 (Sections 7.4 and 7.5), the hypothesised model (see Figure 7.1 in Chapter 7, Section 7.4.1) has been further refined to reflect empirical findings (see Figure 8.2). The final model explains a significant proportion of variance in business performance (21.3%), with marketing capabilities and segmentation execution capability both significant predictors of business performance. Thus, these findings support the argument that market segmentation (analysis) does influence business performance, through the development of segmentation execution capabilities and generic marketing capabilities.

In order to identify the pathways through which segmentation influences business performance (following Hartline *et al.*, 2000), a backward analysis of the final model was undertaken to examine the strength of the structural relationships and note the major determinants of each construct (e.g. What are the major determinants of segmentation execution capability? What are the major determinants of marketing capabilities?). This process identified four influence pathways between segmentation analysis and business performance.

Figure 8.2 Pathways of Influence between Segmentation Capabilities, Marketing Capabilities and Business Performance
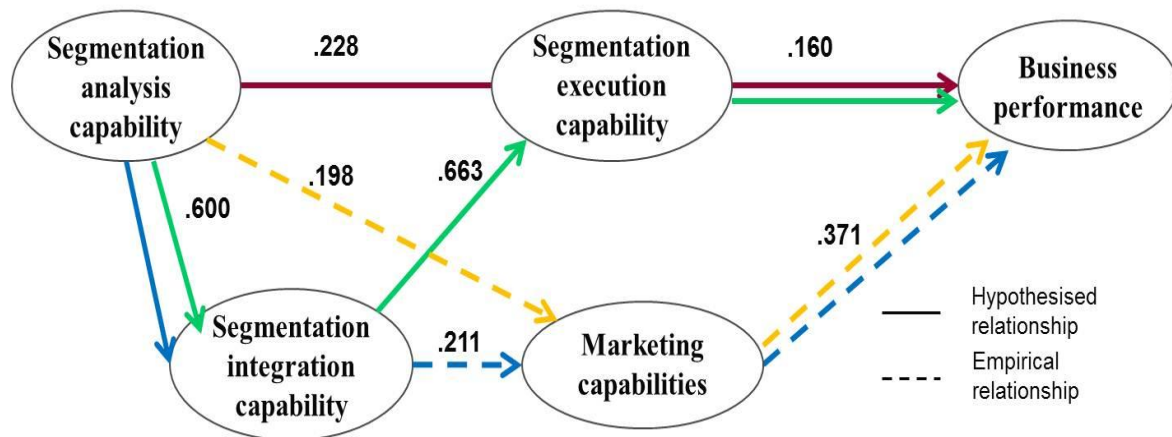
As shown in Figure 8.2, the dominant pathway is one characterised by the influence of segmentation analysis capability on business performance through the development of specialised and architectural marketing capabilities (orange line). In contrast with the hypothesised moderating effect of marketing capabilities, a mediating effect was found instead. Thus, marketing capabilities were found to be mediating the influence of segmentation analysis capability on business performance. This finding contradicts the hypotheses developed on the basis of the qualitative insights. Nonetheless, supporting this finding, some of the participants in the qualitative study did emphasise the role that segmentation plays in enabling their companies to become more sophisticated in their marketing activities, for example: "*you get away from this mad land grab of really tactical offers, to more sophisticated marketing practice, where segmentation plays a more important role to try [to identify] where are remaining pockets of value, who do I want to keep, who do I want to grow, who do I want to get? I think segmentation plays an important role in that*" (Manager A).

In addition, the finding provide some support to the contention proposed in Chapter 3, that segmentation capability influences business performance through the development of market-based learning and marketing implementation capabilities. Whilst the exact form of the marketing capabilities in question is not the same, the findings support market segmentation (analysis) as a dynamic capability that helps build operational marketing capabilities (in this case specialised and architectural marketing capabilities). In this respect, a parallel can be drawn between Danneels's (2008) conceptualisation of dynamic marketing capabilities and segmentation analysis capability. Danneels (2008) defined dynamic marketing capabilities as the ability to add new customer competences to the firm's repertoire to enable the firm to serve a particular market segment by gathering knowledge of customer needs, customer purchasing procedures, competitors and gaining access to them through sales and distribution channels. The knowledge aspect that Danneels (2008) refers to is one of the outcomes of segmentation analysis capability, as segmentation analysis capability enables the firm to gather more information about each segment, in terms of their purchasing habits, lifestyle, needs (segment profiling) and how they fit within the market structure relative to competitors (segment evaluation).

The second influence pathway is from segmentation analysis capability to business performance through the development of segmentation integration and execution capabilities (green line). The findings suggest that there is a significant, but partial mediating effect of segmentation integration capability on the relationship between segmentation analysis and execution capabilities. This mediating effect highlights the importance of integrating segmentation schemes in the organisational plans, culture, structure and performance control of the company. Such an integration process is facilitated by developing and maintaining relevant and updated segmentation schemes that provide powerful and easily understandable segment profiles. In turn, the significant relationship between segmentation integration and execution capabilities implies that communicating these profiles to all stakeholders in the company, involving employees in developing segment-oriented strategies and responsibilities and measuring the results of segment-oriented strategies enable companies to become more segment-oriented and share customer-related beliefs (Tyler and Gnyawali, 2009). The degree of shared understanding that exists among managers then facilitates implementation (Wooldridge and Floyd, 1989; Rapert *et al.,* 2002), here in the form of using segmentation schemes in daily decision making.

This process of analysis→integration→execution contrasts with the traditional view of analysis-planning-execution that has characterised the segmentation process and the marketing strategy process in general (e.g. Boejgaard and Ellegaard, 2010; Piercy, 1998). The traditional view suggests that the marketing process starts from analysis of the market environment which is translated into the development of marketing strategies and marketing programmes which are then implemented by marketing employees (e.g. Kotler, 1994). Qualitative studies in the fashion retailing industry (e.g. Danneels, 1996; Palmer and Millier, 2004; Quinn *et al.,* 2007; Quinn, 2009) have shown that this normative process does not happen in reality in the case of segmentation strategy. The findings in this study support this argument – that the normative process is not reflected in practice – and suggest a different sequence that implies the existence of a process of managerial cognition change as the main driver of segmentation implementation (cf. Gavetti, 2005). The process of analysis→integration→execution supports the contention that segmentation schemes represent managers' estimation of markets and not the full reality of customer heterogeneity (Wedel and Kamakura, 2000) and recent findings in the segmentation implementation literature (e.g. Quinn, 2009; Dibb and Simkin, 2010), which suggest that a key obstacle preventing companies from adopting and implementing segmentation schemes is managers' resistance to change their perceptions of the market segments in the marketplace.

The third influence pathway acts through the development of segmentation integration capabilities which in turn influence business performance through the development of specialised and architectural marketing capabilities (blue line). The relationship between segmentation integration capability and the development or improvement of specialised and architectural marketing capabilities was evidenced in the qualitative study by an expert's claim that "*a really good segmentation that people can grasp can make their marketing more focused*" (Expert B). This suggests that the relationship between segmentation integration capability and marketing capabilities could be explained by the development of shared cognitive frames about the marketplace among managers. Managerial cognition was identified in Chapter 3 (Section 3.2.3) as an antecedent to the development and improvement of dynamic capabilities (Adner and Helfat, 2003; Helfat

and Peteraf, 2003; Holcomb *et al*., 2009). The reason for this is that managerial cognition represents the basis for the development of the mental models and strategic beliefs that drive managerial actions (Tripsas and Gavetti, 2000), particularly in terms of strategic choices, such as the choice of products and target markets, and the development of organisational capabilities (Pandza, 2011). Through the processes of cultural, structural, planning and control integration, firms with a high level of segmentation integration capability can establish new (or improve existing) marketing capabilities, as these processes deal with the socially complex aspect of establishing a capability as a source of future strategic direction (cf. Floyd and Lane, 2000).

This explanation also corresponds with Piercy and Morgan's (1993) argument that strategic segmentation requires a different mindset, as it concerns the actions of top management to create a mission/vision and communicate its strategic intent. However, having a shared understanding of the marketplace and a sense of direction does not automatically translate into segmentation execution capabilities, as in the second influence pathway. Firms may choose to use the knowledge gained to improve their generic marketing capabilities without addressing each market segment individually. The improved focus on the customer brought about by segmentation integration capability could be used to develop more creative advertising, to improve pricing structures or select different distribution channels without creating tailored value propositions or adjusting the planning and allocation of resources to segments.

While the segmentation schemes may be integrated in the organisational fabric and thus determine a change in managerial cognition, the decision to focus on the development of segmentation execution capability or generic marketing capabilities may depend on internal factors (e.g. current levels of marketing resources, such as skilled employees and marketing expenses) or external factors (e.g. market growth, competitive intensity). In fact, additional moderated hierarchical regression analyses (see Appendix M) found a negative and significant moderating effect of both marketing expenditure and number of marketing employees on the relationship between segmentation integration capability and marketing capabilities. This suggests that segmentation integration capability has a stronger relationship with marketing capabilities in firms with lower marketing resources. In addition, the results of the additional analyses performed in Chapter 7 (Section 7.5.3) suggest that the relationship between segmentation integration capability and generic marketing capabilities depends on the characteristics of the market, especially the level of demand growth. The implication of these moderating effects is that there is a delicate balance to be achieved between investing in segmentation execution capabilities versus generic marketing capabilities, similar to the one highlighted by Vorhies *et al.* (2011) in relation to marketing exploration versus exploitation capabilities.

The fourth pathway (red line) relates to the influence of segmentation analysis on business performance through segmentation execution capability. This finding supports the qualitative findings, which identified 'embeddedness in decision making' as a key factor of translating segmentation analysis investment into business performance. The pathway is consistent with previous conceptual arguments in the literature about the relationship between market segmentation and business performance being impeded by implementation problems (e.g. Dibb and Simkin, 2001). It also provides supporting empirical evidence to Boejgaard and Ellegaard's (2010:8) contention that "The execution perspective of implementation is important because it is directly connected to

the outcomes of market segmentation strategy. Execution provides the link between marketing strategy and customer response and is therefore critical to competitive advantage". Thus, the findings highlight the importance of segmentation execution capability as a source of competitive advantage and support the capability view of market segmentation analysis based on Winter's (2003) argument that capabilities must be exercised because they are great change enablers and because they represent significant resource investments: "to have a dynamic capability and find no occasion for change is merely to carry a cost burden" (Winter, 2003: 993). Thus, the fact that segmentation analysis capability generates a specific type of market knowledge, which is then used to revise strategic, managerial, operational and customer related practices supports the dynamic nature of segmentation execution capability through the change it brings in managerial decisions and activities.

The finding that there is no significant relationship between segmentation execution capability and marketing capabilities is in contrast with findings from Bailey *et al*. (2009) who found that companies have found market segmentation useful for building both specialised and architectural marketing capabilities. However, it partially supports findings from Danneels (1996), which suggested that the marketing capabilities developed by the fashion retailers interviewed were built based on close customer and supplier interaction and evaluation of many sources of information (e.g. previous sales data, customer feedback, response to mailings) in an iterative manner.

However, these two distinct paths to business performance resemble closely the distinction between marketing exploitation and marketing exploration capabilities (Kyriakopoulos and Moorman, 2004). Marketing exploitation capabilities involve improving and refining current skills and procedures associated with existing marketing strategies, including current market segments, positioning, distribution, and other marketing mix elements (Kyriakopoulos and Moorman, 2004). Thus, they are akin to the generic marketing capabilities measured in this study because they focus on strengthening current routines and abilities in relation to the marketing mix and the overall marketing strategy but they do not induce dramatic change. They represent 'adaptive learning' (Slater and Narver, 1995). In contrast, marketing exploration capabilities represent 'generative learning' (Slater and Narver, 1995) and "involve challenging prior approaches to interfacing with the market, such as a new segmentation, new positioning, new products, new channels, and other marketing mix strategies" (Kyriakopoulos and Moorman, 2004: 221). The conceptualisation and operationalisation of segmentation execution capability in this research resembles this definition, by focusing on changing existing approaches to marketing mixes (through tailoring to satisfy the needs of targeted segments), building business plans around segment-oriented objectives, allocating resources to segments and rethinking the marketing strategy.

To conclude, the quantitative findings suggest that there are four pathways of influence between segmentation analysis and business performance, which are mediated by either the development of segmentation execution capability or the improvement of existing generic marketing capabilities. Given the fact that capabilities act to combine or reconfigure resources (Teece *et al*., 1997), it can be concluded that the quantitative findings bring partial support to the resource allocation explanation, in line with the qualitative findings.

8.4. Moderating Effects on the Segmentation-Performance Relationship

8.4.1. Marketing resources

The findings provide partial support for Hypothesis 4a about the moderating effect of marketing expenditures on the relationship between segmentation analysis capability and segmentation execution capability. However, while the interaction term has been found to be significant, the form of moderation predicted by Hypothesis 4a was disconfirmed, in that a negative interaction effect was found. The findings suggest that, as marketing expenditures increase, the strength of the relationship between segmentation analysis capability and segmentation execution capability decreases.

The signs of the regression coefficients suggest an antagonistic interaction between segmentation analysis capability and marketing expenditure (cf. Cohen *et al.,* 2003). This could mean that the importance of segmentation analysis capability may be lessened by the level of the financial resources available for marketing in the company, suggesting an 'either-or' approach to developing a segmentation execution capability. It is possible that companies with higher marketing expenditures may be less reliant on segmentation analysis capability as the only avenue to executing segmentation-based marketing strategies. Higher marketing budgets enable firms to purchase external data or consultancy services to arrive at an actionable segmentation scheme – hence the positive 'main effect' sign of the marketing expenditures on segmentation execution capability. On the other hand, at a high level of segmentation analysis capability, marketing expenditures do not have significant influence in changing the level of segmentation execution capability. Marketing expenditures are needed when companies are poor at developing their own segmentation schemes. However, because increased marketing expenditures are used to 'buy' segmentation schemes that were developed outside the company (e.g. by research agencies), implementing segmentation schemes developed by other entities than by the managers in the organisation requires more effort to implement (Hooley, 1980), hence the negative sign of the interaction term.

This explanation is informative for Quinn's (2009) findings of the diversity of data sources and methods of developing segmentation schemes among retailers. Lacking a segmentation analysis capability, these retailers were faced with the dilemma of either developing sub-optimal but low-cost and actionable segmentation schemes based on their own experience in the market or buying off-the-shelf solutions which were perceived to be expensive and not tailored to their own needs.

8.4.2. Market growth

Despite the fact that market growth was not found to moderate the relationship between segmentation execution capability and business performance, further analyses (see Chapter 7, Sections 7.5.1 and 7.5.3) led to the finding that the relationships between segmentation capabilities, marketing capabilities and business performance are influenced by the level of market growth such that: a) in decreasing/stagnant markets, marketing capabilities are the main predictor of business performance (influenced by segmentation analysis and integration capabilities), while b) in growing marketing, segmentation execution capability is positively related with business performance and segmentation integration capability is negatively related to business performance. These findings are discussed below for the two market contexts.

The finding that generic marketing capabilities (and not segmentation execution capability) are the main predictors of business performance in decreasing or stagnant markets corresponds with findings from previous research on marketing capabilities. For example, Srinivasan, Lilien, and Rangaswamy (2005) found that marketing proactivity in a recession improves firm performance and Slater and Narver (1994) found that the relationship between market orientation and sales growth is stronger in low growth markets. Markets with decreasing or stagnant demand are likely to be more stable and thus a drastic change in target segments, product portfolio and marketing offering (implied by a high level of segmentation execution capability) may not be (perceived as) necessary. The lack of a significant relationship between segmentation execution capabilities and business performance contradicts the perceptions of the participants in the qualitative study, who suggested that market segmentation implementation was more effective in maturing markets. However, the findings are in line with a survey of marketing managers undertaken by Hooley (1995) who found that newer markets were likely to be more segmented or even fragmented than those at later stages of the cycle, presumably due to the importance of selecting target segments and adapting the offering in order to gain market share for new products. In addition, in stable markets, Dolnicar *et al.* (2005) found that the frequency of changing target segments and advertising messages hurts the performance of segmenting companies. A high level of segmentation execution capability may imply frequent changes in strategic and operational marketing activities and decisions, thus the development of such a capability may not be warranted in relatively stable markets. In contrast, a high level of generic marketing capabilities ensures that firms are able to refine and improve their current marketing strategies, similar to marketing exploitation capabilities (Kyriakopoulos and Moorman, 2004) - without making any drastic changes to their segments, positioning or marketing mix strategies.

In growing markets, the findings suggest a stronger influence of segmentation execution capabilities on business performance (compared with generic marketing capabilities). High-growth markets are usually associated with the early stages of product the life cycle (Dess and Beard, 1984; Mahajan, Muller and Bass, 1995), therefore it is likely that new buyers are entering the product category. These potential customers are likely to have different needs from early adopters or innovators (Mahajan, Muller and Srivastava, 1990), and so firms need to constantly innovate, putting forward alternative value propositions to create value for and to attract customers (Day and Wensley, 1988). In addition, according to the PLC literature, the growth stage requires a movement toward strategic segmentation and building efficiencies in production and marketing, matching product performance to customer needs and product modification (Anderson and Zeithaml, 1984). These characteristics of the growth stage would explain the significance of both segmentation execution capabilities and generic marketing capabilities. While market growth is not necessarily equivalent to dynamic market conditions[44], market growth signals the potential for future profitability and, therefore, increases the attractiveness of the market (Aaker and Day, 1986), making it more likely to be the target of new entries and of retaliatory reactions from competitors trying to protect their future profitability by counter-attacking a new product with product changes (Ramaswamy, Gatignon, and Reibstein, 1994). Thus, it can be argued that

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[44] and the other market characteristics (market and technological dynamism, competitive intensity) did not show any moderating influences

growth markets are more likely than not to be dynamic. The significant relationship between segmentation execution capability and business performance in such markets therefore provides some further empirical support for the dynamic capability nature of market segmentation. It also supports the similarity of segmentation execution capability to marketing exploration capabilities, which are more appropriate in growing markets because the generation and deployment of new market knowledge is needed (Vorhies *et al.*, 2011) and also because, in growth markets, firms dedicate more resources to marketing (Dess and Beard, 1984), therefore firms are better able to develop the competencies necessary to pursue an exploration strategy (Jansen, Van Den Bosch and Volberda, 2006).

In growing markets, segmentation execution capability has a positive and segmentation integration capability has a negative influence on business performance. These findings suggest that, in growing markets, a delicate balancing act may be required in terms of the speed and frequency of implementing various segmentation schemes – a high focus on building a segmentation execution capability (which may require the development and usage of different segmentation schemes) will have a significant effect on business performance, however this will be lowered by the internal resistance to change which could result from attempting too much and too frequent change required by a high level of segmentation integration capability in a growing market.

The negative sign of the direct relationship between segmentation integration capability and business performance in growing markets suggests that competing mediation is taking place (Zhao, Lynch and Chen, 2010), where the influence of segmentation integration capability on business performance is partly explained by segmentation execution capability and partly explained by an unknown mediator that causes an overall negative effect on the relationship between segmentation integration capability and business performance.

Looking at the literature on market segmentation implementation and market orientation, two alternative propositions could be proposed for the identity of the unknown mediator. The first proposition builds on the identification of 'customer orientation' as an intermediary outcome of segmentation integration capability in the qualitative study. The qualitative findings suggested that customer orientation was the outcome of segmentation integration capability, based on the cultural and structural changes brought about by the integration of segmentation schemes. These changes make the customer more visible within the organisation both in terms of structural factors (e.g. incentive systems, segment-oriented organisational structure, team and individual responsibilities for segments) and the communication, training and internal marketing that reflect an organisation's segmentation integration capability. However, in the market orientation literature, it has been argued that customer orientation is not always positively associated with business performance because it may steer the organisation towards inertia in focusing on the same existing customers at the expense of identifying and reaching different market segments (Christensen *et al.*, 1998; Slater and Narver, 1998). This is particularly punishing in growing markets, where demand growth is likely to emerge, at least to some extent, from new potential customers or from competitors' actions (e.g. developing products targeting the latent needs of customers, decreasing prices). Hence, the organisation may fall pray to the 'tyranny of the served market' (Hamel and Prahalad, 1994), which would have a negative impact of its performance.

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The second alternative proposition is based on the insight provided by the empirical segmentation implementation studies which show that managers may undermine the implementation of segmentation schemes due to their fear of changes to their responsibilities or autonomy (e.g. Palmer and Millier, 2004) and due to their bias towards mass marketing, particularly if the implementation of segmentation schemes implies focusing on targeting a few market segments (Kalafatis and Tsogas, 1998). Related to managers' resistance to change is also the fact that the changes in organisational systems and cultures that result from a high level of segmentation integration capability may create a disruption in organisational life. One participant in the qualitative study explains: "*I think that the strategic segmentations, if they are going to be used successfully by the business, should not be changed very frequently because getting the business to understand the key segments to manage and what the segments look like, that takes a lot of effort to embed into the thinking across the business, and changes in that creates confusion*" (Expert I). Such disruption in the organisational life may affect performance negatively (Mintzberg and Waters, 1982).

To conclude, the empirical investigation of the effect of market growth rate has brought further insight into the model of segmentation and marketing capabilities and business performance. The pathways of influence which emerged from the mediation analyses are different when comparing decreasing/stagnant versus growing market contexts. In contrast with the qualitative findings, which seemed to suggest that adoption of segmentation schemes is more strongly associated with mature markets, which are usually characterised by stagnant or falling demand, the quantitative findings indicate that, in this type of markets, it is generic marketing capabilities built through the market knowledge and customer orientation resulting from segmentation analysis and integration capabilities that have a significant influence on business performance.

8.4.3. Other moderating effects

The potential contingent nature of segmentation strategies or marketing capabilities on either internal or external factors has not been studied, despite its widespread acceptance in the strategy research field (e.g. Zeithaml *et al.*, 1988). This research has identified three types of potential moderating factors in the qualitative phase – external, firm-specific and internal (see Chapter 5, Section 5.5.4). The quantitative study tested empirically the moderating role of external market characteristics (environmental dynamism, competitive intensity, market growth rate). The findings, however, do not show any other significant interactions except for market growth, disconfirming the associated hypotheses and coming in contrast with the propositions emerging from the qualitative study (see Chapter 5, Section 5.5.4). This failure to detect any moderating effects from external factors can be either explained by the lack of a contingent nature of segmentation capabilities or the lack of sufficient statistical power to detect moderating influences. Thus, this area has important implications for future research (see Chapter 9, Section 9.5.1).

The first explanation parallels Slater and Narver's (1994) challenge of environmental moderators on the relationship between market orientation and business performance. This challenge was based on the premise that market orientation endows firms with an external focus and commitment to innovation, therefore a market-oriented business should be prepared to achieve and sustain competitive advantage in any environmental

situation (Slater and Narver, 1994). Supporting this claim are the lack of conclusive evidence characterising some of the studies reviewed by Kirca, Jayachandran and Bearden (2005) which investigated moderating effects of market characteristics on the relationship between market orientation and business performance.

A similar argument to Slater and Narver's (1994) can be made for segmentation capabilities. A firm with highly developed segmentation capabilities should be able to attain successful performance outcomes in any market environment due to the integrative effects of the three segmentation capabilities. Segmentation analysis capability delivers continuously updated knowledge of actionable market segments, while segmentation execution capability enables firms to use this new knowledge to fine-tune their tailored value propositions, customer relationships, plans, budgets, but also to foresee and implement any necessary changes in product portfolios and target markets. Meanwhile, segmentation integration capability ensures that the necessary structures, training and processes are put in place to support the use and track the effectiveness of the newly developed segmentation schemes.

Nonetheless, the lack of moderating effect of competitive intensity and environmental dynamism is in contrast with the findings of several simulation studies (e.g. Dolnicar *et al.*, 2005; Doraszelski and Draganska, 2006; Galeotti and Moraga-Gonzalez, 2008). This is why an alternative explanation for the lack of moderating influences could be inadequate statistical power – the probability of correctly rejecting a false null hypothesis of no moderating effect (Aguinis *et al.*, 2001). Low power is a particular problem in non-experimental studies, such as surveys, which have much less power for detecting interaction effects than experiments (McClelland and Judd, 1993). If power is low, researchers may erroneously dismiss theoretical models that include moderating effects (Aguinis, 1995).

Power is calculated in relation to effect size, significance level (α), and sample size (Armstrong and Shimizu, 2007). Empirical studies need to have a minimum sample size to maintain an acceptable power, such as 0.8 (i.e., 80% probability of detecting an effect in the sample if it exists in the population). The sample size of the present research fulfils the requirements of multiple regression, but it does not fulfil the requirements of hierarchical multiple regression. For multiple regression, Tabachnick and Fidell (2001) suggest a formula to calculate sample size that incorporates the ratio of the number of participants to predictors ($N \geq 104$ + number of predictors). With six control variable (e.g. market growth, market dynamism, technological dynamism, competitive intensity, size1, size2) and three predictors (e.g. segmentation execution capability, marketing capabilities and one interaction term), the required sample size is 113, which has been fulfilled in the present study. The Soper (2007a) online calculator also includes the effect size in its sample size calculation. This calculator was used to calculate required sample size for multiple regression with seven predictors (e.g. market growth, size1, size 2, competitive intensity, segmentation execution, marketing capabilities, interaction term), and a medium effect size of 0.15 (which roughly corresponds to a R^2 of 0.2 obtained in most regressions with business performance as an outcome variable). For a level of desired statistical power of 0.8, the required sample size was 103, which has been fulfilled in this study as well.

For hierarchical regression in particular, which was used in the moderation hypothesis testing, a free sample size calculator (Soper, 2007b) was used to find minimum sample

sizes for small effects[45] (the largest effect size for an interaction term was found to be 0.02, which is small according to Cohen, 1988). For six predictors in the main-effects model and one predictor in the second set of variables (as is the situation in Table 7.20) and an effect size of 0.02 for the interaction term, the sample size required is 391, which is almost double the sample size available in this study.

Furthermore, in the particular case of testing moderation with two continuous variables (e.g. the moderating effect of environmental dynamism), power is even lower (McClelland and Judd, 1993), being affected by several factors, among which: variable distributions (predictor variable range restrictions, error variance heterogeneity), operationalisation of predictor and moderator (measurement error, artificial dichotomisation/polychotomisation) and predictor inter-correlation. Three factors seem to affect power in the present study: i) low sample size, ii) weak predictor inter-correlations and iii) reliabilities. For low correlations (e.g. 0.2), power decreases much lower than 0.8 (Dunlap and Kemery, 1988). Similarly, even for reliabilities considered appropriate for management research (i.e. Cronbach's alpha of 0.8), the power to detect moderating effects is much smaller than the recommended level of 0.8 (Aguinis, 1995).

The results of these analyses produced sample sizes ranging from 103 for simple multiple regression to 391 for a hierarchical moderated regression analysis. Comparing this range with the sample size of 205 in the present study, it can be concluded that power levels were less than adequate for the moderation testing, which may represent a credible explanation as to why no other moderating effects were discovered.

8.5. Combining Qualitative and Quantitative Findings to Answer the Research Questions

This research set out to answer four research questions:

1. How is market segmentation capability constituted within firms?
2. Does firms' market segmentation capability influence their business performance?
3. How does market segmentation influence business performance?
4. What factors moderate the segmentation-performance relationship?

The qualitative and quantitative findings combine to offer answers to these research questions (see Table 8.1).

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[45] The effect size for the interaction in a regression analysis is the amount of incremental variance explained by the interaction term after the first-order effects have been controlled (i.e., the R^2 change associated with the step in which the interaction term is added).

Table 8.1 Combining Qualitative and Quantitative Findings to Answer the Research Questions

Research question	Segmentation literature (Chapter 2)	Qualitative phase insights (Chapter 5)	Quantitative phase insights (Chapter 7)
How is market segmentation capability constituted within firms?	Four dimensions: segmentation research, monitoring, implementation and integration.	Three types of processes: segmentation analysis, execution, integration.	Confirmation of the segmentation analysis, execution and integration capabilities.
Does firms' market segmentation capability influence their business performance?	Inconclusive evidence: Anecdotal evidence of positive benefits, conceptual arguments for the positive and negative influence on performance, plus qualitative evidence of implementation challenges which prevent the realisation of any positive outcomes	Emerging pattern that those companies who use knowledge from segmentation schemes report improved organisational performance outcomes	Conclusive evidence of a significant relationship between segmentation capabilities and business performance; they explain 10% of variance in business performance.
How does market segmentation influence business performance?	The explanations identified in the literature did not completely represent organisational reality; market-based learning and marketing implementation capabilities were proposed as mechanisms in Chapter 3.	Through mechanisms that facilitate successful implementation[46]: market understanding, customer orientation, organisational focus, marketing efficiency, winning value proposition.	Through four different pathways of influence that involve the improvement of marketing capabilities and/or the development of segmentation execution capability.
What factors moderate the segmentation-performance relationship?	Not many have been studied. Competitive intensity and demand heterogeneity were highlighted in simulation studies.	External factors (product lifecycle, market growth rate/ dynamism), firm factors (product-market profile[47], size, age, market position) and internal factors (cost structure, marketing resources and competences, customer database).	Market growth rate influenced the pathways from segmentation analysis capability to business performance. Marketing expenditure had an antagonistic effect on translating segmentation analysis into execution.

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[46] Using knowledge from segmentation schemes to select target segments, develop tailored propositions and adjust strategy and resource allocation accordingly (Goller *et al.*, 2002)

[47] Competing in consumer or industrial markets, offering goods or services (Srinivasan *et al.*, 2011)

The qualitative phase was primarily designed to answer the first and third research questions, by aiming to capture the managerial reality of market segmentation implementation in order to identify and characterise the different mechanisms and structures that enable the successful implementation of segmentation schemes. The quantitative phase was designed to primarily answer the second and fourth research questions. The objectives of the quantitative phase were to determine the: a) inter-relationships between the three segmentation capabilities (conceptualised in Chapter 6) and business performance and b) the moderating effects of several market and firm level characteristics that may impact the relationship between segmentation capabilities and business performance. However, each phase provide evidence that is useful in answering all the research questions.

The qualitative findings have been instrumental in answering the first research question. The evidence brought by interviews with managers and experts indicated three types of organisational capabilities at work when implementing market segmentation: i) segmentation analysis (developing, evaluating and monitoring segmentation schemes), ii) segmentation execution (using insight generated by segmentation schemes in marketing decision making) and iii) segmentation integration (integrating segmentation schemes in the organisational fabric). These were then fully delineated in Chapter 6, by corroborating the qualitative findings with the segmentation and marketing implementation literatures and the marketing capabilities literature. The insight from the qualitative findings helped refine the number, the components and the scope of these capabilities, as detailed in Chapter 6 (Section 6.2.4). Market segmentation capability was conceptualised as being comprised by three distinct and inter-related capabilities: segmentation analysis capability (a firm's ability to develop, evaluate and monitor segmentation schemes), segmentation integration capability (a firm's ability to integrate the resulting segmentation schemes in the organisational fabric) and segmentation execution capability (a firm's ability to execute the segmentation schemes by guiding strategic, managerial and operational marketing decisions and activities). The qualitative phase also helped in delineating the inter-relationships between these capabilities by identifying the mechanisms that explained how market segmentation schemes actually get used within organisations – through the acquisition of market knowledge (i.e. segment and market structure understanding) and the development of a customer orientation. The quantitative phase confirmed the validity and multi-dimensional nature of the three segmentation capabilities – an alternative model with four capabilities (as originally proposed in Chapter 3, Section 3.5.1) instead of three (as inferred from the qualitative phase, see Chapter 5, Section 5.5.2) achieved worse fit than the three-dimensional one (see Chapter 7, Section 7.3.2).

The quantitative phase was instrumental in answering the second research question. The results indicated that all three segmentation capabilities are positively and significantly related with business performance and that the relationship between segmentation analysis, respectively integration, capabilities and business performance are significant mediated by segmentation execution capability and generic marketing capabilities. Segmentation execution capability was found to explain 10% of variance in business performance. Considering that the final empirical model, which also included generic marketing capabilities (presented in Section 8.3.2 of this chapter), explained 21.3% of variance in business performance, it can be concluded that segmentation execution

capability (and, indirectly, segmentation analysis and integration capabilities) is a significant predictor of business performance.

The qualitative and quantitative findings complement each other in answering the third research question. The quality phase's focus on uncovering mechanisms that explain the relationship between market segmentation and business performance led to the identification of six mechanisms that together explained the inter-relationships between segmentation capabilities and between segmentation execution capability and business performance. These mechanisms were found to be similar to existing concepts in the marketing literature, which have been found to be related with business performance in previous studies (see Section 8.3.1). In addition, two of these mechanisms were found to be relatively similar to two explanations from the segmentation literature. However, it was concluded that the qualitative findings predominantly proposed novel and inter-linked explanations of a relationship between market segmentation and business performance, which were more closely related to organisational reality and processes.

The postulation of these mechanisms enabled the development of hypotheses (Chapter 6, Section 6.3) and the explanation of the quantitative findings about the inter-relationships between segmentation capabilities and business performance. Based on the qualitative findings, a process of analysis→integration→execution of segmentation schemes was proposed to have a positive influence on business performance. The existence of this pathway was supported in the quantitative study (see Chapter 7, Section 7.4.1). In addition, three other pathways were identified as explaining the link between market segmentation analysis and business performance (Section 8.3.2): a) using the market knowledge gained from the development of segmentation schemes to rethink the target market, value proposition, product portfolio and customer relationships, which in turn was related to business performance (red line); b) using the market knowledge gained from the development of segmentation schemes to improving existing (generic) marketing approaches and tactics, which were also associated with business performance (orange line); c) integrating the segmentation schemes in the organisational fabric, which changes managerial frames of reference regarding the market and influences business performance through the development of specialised and architectural marketing capabilities (blue line).

Thus, the quantitative findings also helped clarify the relationship between segmentation capabilities and marketing capabilities. This relationship was initially proposed in Chapter 3 (Section 3.5.2) as being one of mediation in that the segmentation capabilities were conceived as dynamic capabilities that affect the development and/or reconfiguration of ordinary marketing capabilities. The managers interviewed in the qualitative phase perceived existing marketing resources and competences as moderators (inhibitors) of the relationship between market segmentation and business performance. The quantitative findings partially supported the moderating effect of marketing expenditure (one type of marketing resources) but disconfirmed the moderating effect of existing marketing capabilities. Instead, the quantitative findings supported the original supposition of marketing capabilities mediating the relationship between market segmentation capabilities and business performance. These findings disconfirm a segmentation myth held by the practitioners interviewed, that existing marketing competences are holding them back from making the most out of segmentation schemes. Instead, they suggest that managers should concentrate on using segmentation schemes to improve their marketing capabilities.

The segmentation literature, qualitative findings and quantitative findings combine to offer an answer to the fourth research question. The segmentation literature contains a few simulation studies that identify competitive intensity and demand heterogeneity as main moderators of segmentation success (see Chapter 2, Section 2.5.6). These factors are mentioned as drivers that managers perceived to influence their decision to undertake segmentation analysis but they did not emerge as moderators of the segmentation-performance relationship. Instead, the qualitative phase identified three types of moderating factors, which were either external (e.g. market growth, market dynamism, product lifecycle), firm-specific (e.g. product market profile, size, age) or internal in nature (e.g. cost structure, customer database, marketing resources and competences). The only external moderating effect on the segmentation-performance supported by the quantitative findings was market growth rate. More specifically, it was found that segmentation execution capability was particularly important in growing markets, whereas generic marketing capabilities were particularly important in decreasing/stagnant markets. This finding dispels another segmentation myth held by practitioners, that segmentation is more appropriate in stable markets.

The other moderating effect supported by the quantitative findings was marketing expenditure. Contrary to the qualitative findings, which suggested that a higher marketing expenditure would facilitate the implementation of segmentation schemes, the quantitative findings suggest an 'either-or' approach to developing a segmentation execution capability. This finding dispels the myth that segmentation implementation requires a large expenditure. The suggestion is that it is more important how the expenditure is used, rather than its absolute monetary value.

From this summary, it can be noticed that there are three main differences between the qualitative and quantitative findings in regards to the relationship between segmentation capabilities and business performance: the role of marketing expenditures (enhancing versus antagonistic effect), the role of marketing capabilities (moderators versus mediators) and the market conditions where segmentation is more effective (stable/mature versus growing). However, these discrepancies do not represent a weakness in the data analysis or the reliability of the findings of this research, because the goal of mixing research methods is not to search for corroboration but rather to expand understanding (Bazeley, 2004). The discrepancies add to our understanding of segmentation implementation by highlighting three segmentation 'myths' – managerial beliefs that emerged from the qualitative study but were disconfirmed in the quantitative study. The segmentation implementation literature and the interviews suggest that managers believe in these myths primarily because of their poor experience with and knowledge about segmentation. It is likely that these myths also have emerged due to the gap between theory and practice (Dibb and Simkin, 2009a), caused by the prescriptive and model-oriented nature of the segmentation literature, which does not offer practical suggestions of how to implement segmentation successfully (Palmer and Millier, 2004; Foedermayr and Diamantopoulos, 2008). This research has an important contribution to the segmentation implementation literature and important implications for managerial practice because it identifies and disconfirms these segmentation myths.

Figure 8.3 summarises the evolution of the model of segmentation capabilities and business performance starting from the initial, literature-based, model proposed in Chapter 3 (Section 3.5.1), and then the hypothesised one which integrated the insights from the qualitative study, and then the empirical one based on the quantitative findings.

Figure 8.3 Evolution of the Model based on the Empirical Findings
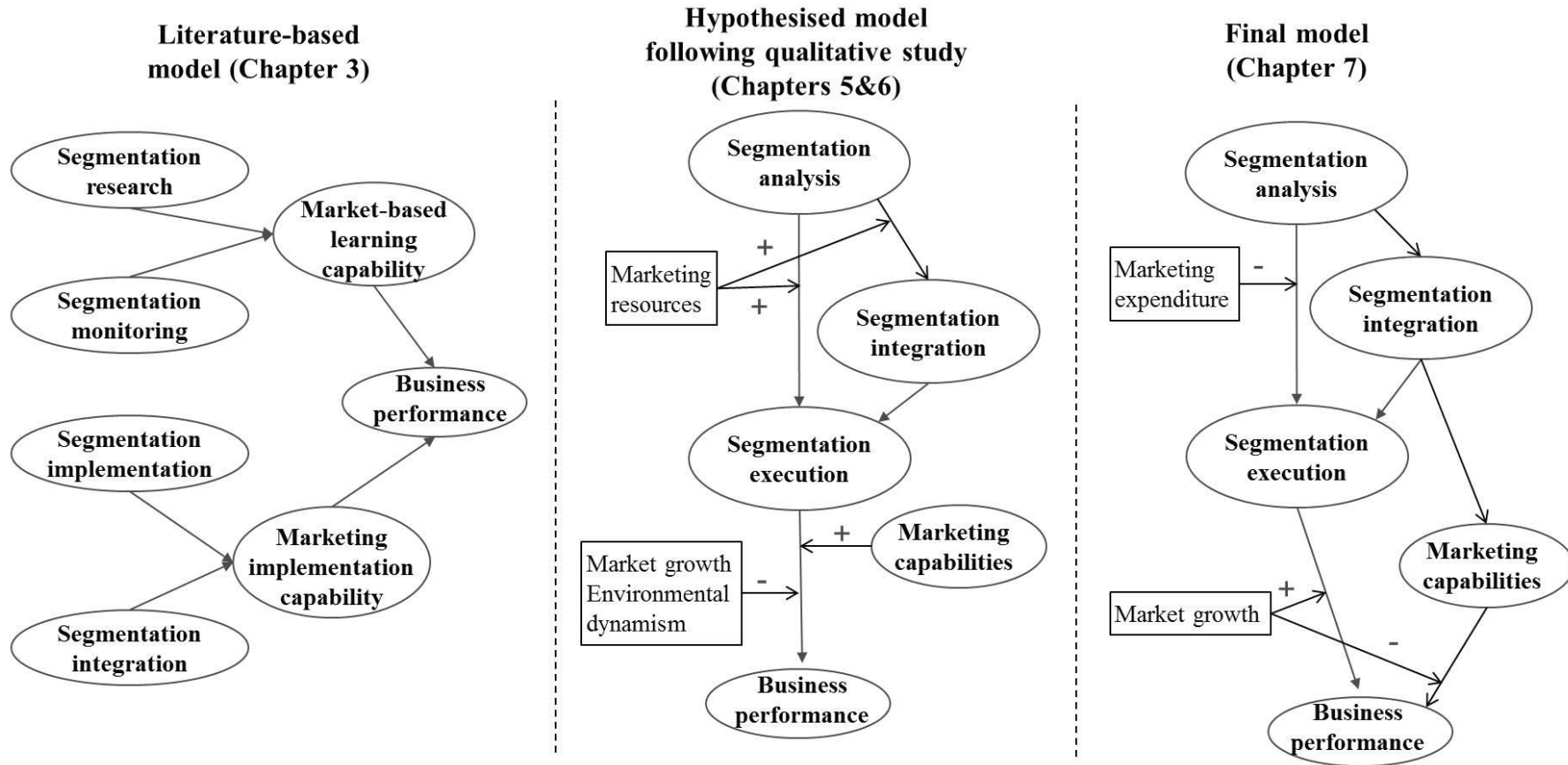
8.6. Conclusion

This discussion chapter integrates findings from the qualitative and quantitative empirical phases of research to address the research questions asked in this thesis.

Firstly, the chapter discusses the re-conceptualisation of market segmentation as a dynamic capability. It is argued that the dynamic capability view of market segmentation brings novel insights, which help explain the findings of recent studies of market segmentation implementation. Also, three dimensions of market segmentation capability are delineated and their conceptualisation discussed vis-à-vis the traditional view of market segmentation and the key success factors of implementation.

Secondly, the relationship between market segmentation and business performance is investigated comparing the qualitative and quantitative insights with the extant explanations in the literature. The qualitative findings provide some support for the resource allocation perspective of market segmentation and product customisation, but primarily suggest the existence of other likely mechanisms at work between segmentation execution capability and business performance. The discussion of quantitative findings identifies four pathways of influence for segmentation analysis on business performance, the dominant one being the development of generic marketing capabilities from segmentation analysis capabilities. The results of further analyses, however, indicate that these pathways differ depending on the market growth rate. The second pathway is through the development of segmentation integration and execution capabilities, which suggests that changing and harmonising managers' perception of their marketplace enables the execution of segmentation based initiatives and subsequently business performance outcomes. The four pathways of influence emphasise the fact that, ultimately, the path to business performance goes through either developing a segmentation execution capability or enhancing existing generic marketing capabilities. Thus, the relationship between segmentation execution capability and marketing capabilities is discussed in view of their insignificant relationship and their different relationship with business performance in decreasing/growing markets. It is argued that this relationship can be explained by drawing a parallel between generic marketing capabilities and segmentation execution capability, on one hand, and marketing exploitation, respectively exploration capabilities, on the other hand.

Thirdly, the moderators influencing the inter-relationship between segmentation capabilities and with business performance are discussed. It is argued that the negative interaction between segmentation analysis capability and marketing expenditures on segmentation execution capability signifies an 'either-or' approach to developing segmentation execution capabilities. In addition, two alternative explanations are proposed for the negative relationship between segmentation integration capability and business performance in growing markets.

Lastly, this chapter integrates both qualitative and quantitative findings to answer the research questions asked in the first chapter. The discussion of findings provides the basis for the identification of the contribution of this research and its implications for future research and for practice, which are addressed in the next, and final, chapter.

9. CONTRIBUTIONS, LIMITATIONS AND IMPLICATIONS

9.1. Introduction

This chapter is the concluding chapter in this thesis. Based on the discussion of the findings in Chapter 8, the primary aim of this chapter is to identify and discuss the contributions that this research makes to theory, methodology and practice. In particular, it is argued that the theoretical contributions made by this research match the revision and delineation types that MacInnis (2011) has identified in her typology of conceptual contributions to the marketing field.

The chapter also highlights the implications of this research for managerial practice and the limitations that characterise the research. In view of the contributions and limitations, the chapter details the implications of the findings for future research, both in terms of topics and methodology of research. The chapter finishes with concluding remarks.

9.2. Theoretical Contributions

This study began with the premise that implementation problems prevent managers from achieving performance improvements as a result of adopting market segmentation (e.g. Dibb and Simkin, 2001) because segmentation strategy is only as good as its implementation (Plank, 1985). This study therefore seeks to builds on Boejgaard and Elleggard's (2010) contribution of highlighting the key role of segmentation execution, which they defined as the ability to implement segmentation plans and strategies. In this study, segmentation execution is reconceptualised as a capability and defined as the ability of the firm to integrate knowledge about market segments into different levels of their decision making (see Chapter 6, Section 6.2.2). Thus, this research answers Boejgaard and Ellegaard's (2010: 5) invitation to "challenge theoretical assumptions of execution as an automatic process and expand research on the execution phenomenon to advance the understanding of the overall implementation problem".

The focus on implementation problems observed in recent empirical contributions to the segmentation literature (e.g. Dibb and Simkin, 2009a, 2009b; Quinn, 2009; Harrison and Kjelberg, 2010) corroborates with another observation - that the financial impact of marketing on business performance has recently been studied extensively by adopting the dynamic capabilities theory. Hence, the research adopts the same theoretical background and aimed to: a) identify the organisational processes required to implement a market segmentation approach, b) determine the extent of their influence on business performance and c) identify any structural factors that affect this relationship.

There are five main theoretical contributions (see Table 9.1). The first four add to the market segmentation literature, while the last one adds to the marketing capabilities literature. These theoretical contributions match the revision and delineation types that MacInnis (2011) has identified in her typology of conceptual contributions to the marketing field. In her view, papers making a revision contribution describe the need

for a revised perspective, indicate what new issues the revised view provides that the extant view cannot accommodate, and show how the new perspective provides a different way of understanding the meaning of various findings or activities. This research makes such a contribution by questioning the validity of the existing perspectives. It explains the relationship between market segmentation and business performance in the context of contemporary marketing practices. Such practices take place in very heterogeneous markets characterised by increased customer information, increased customer empowerment, improved technological facilities and product and media proliferation. In addition, by putting forward a new perspective on market segmentation, this research highlights novel insights that can be gained from such a revised perspective (e.g. the management of segmentation schemes), aspects of market segmentation practice that have not been studied before (e.g. relationship with business performance) and issues (e.g. segmentation integration) that matter for a different reason than was previously believed (e.g. managerial cognition change, segmentation as internal currency).

Table 9.1 Contributions to Knowledge

Area	Contribution to Knowledge
Segmentation as dynamic capability	1. Review of existing perspectives on market segmentation (research technique, decision making tool, competitive strategy), their elements, explanations and shortcomings. 2. Identification of the need for a new perspective and delineation of new perspective on segmentation as dynamic capability, providing new insights into market segmentation as managerial practice. 3. Delineation of three segmentation capabilities, which are in line with Teece's (2007) micro-foundations of dynamic capabilities and Bruni and Verona's (2009) definition of dynamic marketing capabilities.
Segmentation and business performance	4. Confirmation of a significant relationship between segmentation capability and business performance. 5. Addition of explanations of how segmentation analysis translates into performance outcomes.
Structural factors	6. Identification of firm and market related factors that influence the inter-relationships between segmentation capabilities and business performance.
Scale of market segmentation capability	7. Delineates the dimensions of a market segmentation capability, based on mutually reinforcing organisational processes derived from segmentation implementation studies and interviews with practitioners.
Segmentation and marketing capabilities	8. Identification of different inter-relationships between segmentation capabilities, marketing capabilities and business performance depending on market growth. 9. Extension of understanding to 'what' and 'how' marketing capabilities combine to influence performance.

The second type of contribution made by this research matches the delineation type of contribution identified by MacInnis (2011), which refers to detailing, articulating, charting, describing, or depicting an entity. MacInnis (2011) argues that this is usually done by identifying aspects that should be considered in its study, why its study is important, the processes by which it operates or is executed and moderating conditions that may affect it. This research has delineated market segmentation capability as being comprised of three inter-related capabilities covering the analysis, integration and execution aspects of implementing segmentation schemes. The research has further mapped each of these three capabilities as being executed through specific organisational processes. The research has also mapped out how the three segmentation capabilities are related to each other and with marketing capabilities and business performance and has tested various moderating conditions that might affect those relationships.

These contributions are further detailed in the following sections.

9.2.1. Segmentation as dynamic capability

Chapter 2 reviewed the market segmentation literature and identified three perspectives on market segmentation: a) the research technique perspective, which views market segmentation as an analytical technique to identify naturally occurring segments in the marketplace in order to provide managers with an overview of the market (Wedel and Kamakura, 2000); b) the decision making tool perspective, where market segmentation is defined as the use of information about market segments to design marketing offers that appeal to specific segments (Dickson and Ginter, 1987) and c) the competitive strategy perspective, where market segmentation is defined as similar to Porter's (1980) focus strategy – selecting a narrow competitive market which is compatible with the core competencies of the firm and defendable in front of the competitors' offerings.

Regardless of the perspective adopted, previous research has been criticised for not properly considering the implementation of identified segments in the firm (Piercy and Morgan 1993; Jenkins and McDonald 1997; Clarke and Freytag, 2008). The market segmentation literature provide little insight into the organisational implications of implementing market segmentation, even though it has been shown that market segmentation implementation is fraught with barriers that can impede the success of any segmentation undertaking (Clarke and Freytag, 2008; Dibb and Simkin, 2009b). In addition, previous authors have considered elements of segmentation analysis capability (e.g. Calantone and Sawyer, 1978; Hlavacek and Reddy, 1986; Kotler, 1994; Hu and Rau, 1995; Sarabia, 1996; Verhoef *et al.*, 2002; Blocker and Flint, 2007), segmentation execution capability (e.g. Beik and Buzby, 1973; Percy, 1976; Hlavacek and Reddy, 1986; Roberts, 1986) and segmentation integration capability (e.g. Jenkins and McDonald, 1997; Dibb and Simkin, 2001; Lin *et al.*, 2004; Palmer and Millier, 2004), but they have not tackled the different aspects of segmentation implementation simultaneously, nor have they provided empirical evidence for the segmentation 'best practice' that is often associated with the identification of dynamic capabilities (cf. Eisenhardt and Martin, 2000).

This research aimed at filling in these gaps by combining the limited knowledge available in the segmentation implementation literature with empirical accounts of

market segmentation implementation drawn from both segmentation practitioners and segmentation experts to propose a holistic framework of market segmentation implementation, grounded in the dynamic capabilities theory. This approach allows a new conceptualisation of market segmentation: as a dynamic capability.

Boejgaard and Ellegaard (2010) reviewed the segmentation implementation literature and distinguished three main types of segmentation implementation, related to adopting segmentation models, planning and executing segmentation-based strategies. This research builds on their contribution and identifies the organisational processes required for segmentation implementation to occur. By adopting a capability perspective, the main critical dimensions that comprise a firm's capability to successfully manage the organisational complexities that arise in implementing segmentation schemes are highlighted. The definition of market segmentation capability (see Chapter 6, Section 6.2.5) emphasises the constituent skills, behaviours and processes that address the analysis, integration and execution aspects of implementing segmentation schemes.

The distinction between the three segmentation capabilities and the implied process of analysis-integration-execution also extends the implementation literature because it highlights the processes and mechanisms that make segmentation implementation happen, as opposed to the challenges highlighted by previous research. As such, this research opens the black box of segmentation implementation by conceptualising and operationalising constituent dimensions of segmentation capabilities in firms, and showing how they combine to influence business performance.

The research suggests that market segmentation is a dynamic capability because it entails: a) the routine identification, qualification, profiling, selection and monitoring of segments, resulting into an accumulation of market knowledge (Dibb *et al.*, 2002; Bruni and Verona, 2009); b) the embeddedness of segmentation schemes in the fabric of the organisation (Grewal and Slotegraaf, 2007) and changes in managerial cognitions about the marketplace (Sirmon *et al.*, 2007) so that segmentation becomes an internal currency and c) the changes of strategic, managerial and operational marketing decisions and activities, managed flexibly as a result of updating segmentation schemes (Collis, 1994), so that segmentation schemes become embedded also in marketing practice.

While each of these dimensions plays a somewhat distinct role in addressing specific issues relevant in the segmentation implementation process, they are seen as being theoretically related, and uniformly directed toward the same objective (successful implementation of segmentation schemes) —in other words, a common segmentation capability seems to underlie all of them. The organisational processes embodied in these capabilities enable firms to realise the value creation potential of any individual segmentation scheme they use, and thereby achieve the desired business goals. The quantitative findings support this theory, as it was found that the three segmentation capabilities are distinct but inter-related, multi-dimensional, second-order constructs that comprise the dimensions proposed in Chapter 6 (Section 6.2) and are all significantly related to business performance.

Furthermore, this conceptualisation is theoretically sound as the dimensions of segmentation capability map onto previous categorisations of the foundations of dynamic capabilities:

- Segmentation analysis corresponds to the first foundation dynamic capabilities: sensing market opportunities in the language of Teece (2007) or developing market knowledge in Bruni and Verona's (2009) definition. Segment identification enables the identification of segments that offer growth opportunities to the company, segment monitoring enables the detection of changes in customer requirements or market structure and segment evaluation enables the firm to be aware of the competition. These three processes of segmentation analysis capability enable firms to develop specific knowledge about the structure and evolution of markets and also to break free from the tyranny of the served market (Hamel and Prahalad, 1994), due to an active search for new segments and broader market changes.

- Segmentation execution corresponds to seizing market opportunities (Teece, 2007) and releasing market knowledge (Bruni and Verona, 2009). By using segmentation schemes flexibly, segmentation execution capability enables the identification of strategic, managerial or operational changes in marketing decisions and activities, which would take advantage of the market knowledge coded in the segmentation schemes. In addition, segmentation execution also contributes to the reconfiguration of resources, as all the changes induced by the managerial, customer management and operational execution of segmentation have resource implications in terms of planning and budgeting around the targeted segments and managing the existing brands which might be repositioned or redesigned to fit the requirements of the target segments. Through strategic execution of segmentation schemes, a change in the target market for the organisation overall or for specific brands can also occur; through customer management execution, a reconfiguration of the composition and the equity (value to the company) of the customer base may happen through acquisition, development, retention and win-back of customers.

- Segmentation integration corresponds to Teece's (2007) notion of reconfiguring resources and Bruni and Verona's (2009) idea of integrating market knowledge. One of the resources reconfigured is the organisational culture (Barney, 1986), which becomes more market oriented (Shah *et al.*, 2006) through training and communicating segmentation principles across departments, involving relevant stakeholders in the implementation of segmentation schemes and changing the infrastructure to support a more customer-oriented organisation (Hartline *et al.*, 2000). In this way, the market knowledge contained in the segmentation schemes developed by segmentation analysis capability becomes integrated in the structures, inter-departmental communication and coordination mechanisms of the firm, which are advantage-generating resources (Grant, 1996).

This mapping of the three segmentation capabilities would indicate that, only together, they could represent a dynamic capability as each of them can be more strongly associated with a micro-foundation of dynamic capabilities (cf. Teece, 2007). However, based on the characteristics of dynamic capabilities identified in Chapter 3 (Section 3.2.1 and 3.2.2) and on the discussion of the findings in Chapter 8 (Sections 8.2, 8.3.2 and 8.4.2), each segmentation capability can be argued to represent a higher-order dynamic capability. Dynamic capabilities were contrasted with operational capabilities by highlighting three characteristics: a) they govern the rate of change in ordinary

capabilities, b) they produce change inside the organisation, e.g. by changing the product/production/scale/target market and c) their nature varies with market dynamism (Winter, 2003; Collis, 1994; Schreyogg and Kliesch-Eberl, 2007; Teece *et al.*, 1997; Helfat and Peteraf, 2003).

According to the discussion in Chapter 8, segmentation analysis capability can be regarded as a dynamic capability because it is positively related to all the other capabilities in the model, including generic marketing capabilities, thus, through the market knowledge generated in the form of segmentation schemes, it helps govern the change in other marketing capabilities. It also varies with market dynamism because, as it was seen in the qualitative study and in previous research (e.g. Quinn, 2009), the processes of segment identification, monitoring, qualification, evaluation and profiling vary in sophistication and frequency, depending on the rate of change in the marketplace. Also, through the processes of segment identification, evaluation and monitoring, firms are able to identify significant changes in the marketplace and to develop or adjust segmentation schemes to reflect those changes. Thus, the segmentation analysis capability displays the characteristic of self-renewal and, through the segmentation schemes that it provides, may lead to changes in ordinary marketing capabilities. The fact that segmentation analysis capability is significantly related to all the other three capabilities in the empirical model suggests that it can be regarded as a dynamic capability inasmuch as it facilitates the development of other capabilities within the organisation and it also produces new market knowledge through developing, evaluating and monitoring segmentation schemes of the marketplace (Bruni and Verona, 2009).

However, a similar argument can be developed for segmentation integration capability which generates change in the organisational fabric to adjust it to new segmentation schemes and also generates change in managerial cognitions, which in turn govern the decision to develop new capabilities (cf. Holcomb *et al.*, 2009). In addition, the relationship between segmentation integration capability and business performance was found to vary with the level of market growth rate. Finally, segmentation execution capability also governs the rate of change in the product, target market and scale of operations and its relationship with business performance varies with market growth rate as well – the findings indicated that this relationship is stronger in growing markets, making it similar in nature to marketing exploration capabilities. Thus, each segmentation capability displays some of the characteristics distinguishing dynamic capabilities put forward by the literature.

A capability perspective brings the following new insights into the nature, purpose, outcomes and implementation of market segmentation:

- Market segmentation is not a set of decisions (which the other perspectives imply, see Chapter 2, Section 2.3), but rather it is a set of organisational processes that have an impact on the resources of the organisation. This argument was supported by the qualitative findings which identified three main organisational processes of market segmentation. The focus on organisational processes helps refocus the research field away from debating the *statistical merits of various bases and methods* of segmentation research that allow the development of segmentation schemes, to studying *the structural factors and mechanisms that allow firms to benefit from the insight* generated by segmentation schemes.

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- The dynamic capability literature emphasise the fact that a capability is used flexibly and routinely (Winter, 2003). Applying this thinking to market segmentation, it results that market segmentation is not an external market characteristic that cannot be influenced but just identified, as it is considered in the research technique perspective. The capability perspective brings the idea that market segmentation is an internal, proactiveprocess, employed continuously rather than every few years as in the traditional views (Badgett and Stone, 2005), so it becomes a routine of developing, managing and using segmentation schemes to provide firms with continuous opportunities for change.

- Dynamic capabilities are specific strategic and organisational processes that create value for firms by manipulating resources into new value-creating strategies (Wernerfelt, 1984) and involve long-term commitments to specialised resources – for these sorts of commitments to be economically sound, the capability must be exercised (Winter, 2003). Hence, the capability perspective also emphasises a broader understanding of how market segmentation can be used within organisations. Despite the dominant views that market segmentation is used as a guide for marketing planning in the decision making tool or a selection of segments and market positions in the competitive strategy perspective, the literature contains many examples where segmentation has been used for pricing, new product development, advertising creative development, media selection, customer loyalty development and so on. Combining this with the qualitative findings which support Piercy and Morgan's (1993) argument for the existence of separate segmentation schemes, which may be in use for different decisions and at different levels of decision making, this perspective highlights the importance of the management and application of segmentation schemes rather than the development of segmentation schemes.

- The capability perspective also emphasises the embedded nature of market segmentation, which is supported by the qualitative findings - companies may find it useful as an internal language, as part of their organisational culture (at best) or enabling inter-department coordination (at least). The embeddedness aspect of segmentation has been ignored in the literature, despite evidence from implementation studies (e.g. Dibb and Simkin, 2001, 2010; Quinn, 2009) that segmentation implementation fails when it is not embedded in the surrounding context of the organisation. However, unlike previous studies of segmentation practices, which have been instrumental in highlighting the challenges of segmentation implementation, a capability perspective (and this research) brings new focus on the mechanisms and structures that encourage effective implementation. As such, it contains both content and process aspects of the concept. It also emphasises the practices and competences that are critical to managing a segmentation-based marketing strategy, rather than challenges that prevent implementation.

9.2.2. Segmentation and business performance

The main purpose of this study was to investigate the relationship between market segmentation and business performance. Despite over 50 years of research into market segmentation, the relationship with business performance has not been studied rigorously beyond conceptual arguments on the topic and some evidence from practitioner accounts (e.g. Waaser, 2004; Jacques, 2007; Harrington and Tjan, 2008). This lack of evidence of influence in business performance has given rise to repeated requests for more research into the key success factors and impact on performance of market segmentation adoption (e.g. Wind, 1978; Foedermayr and Diamantopoulos, 2008; Dibb and Simkin, 2009b).

In addition, investigating this relationship in the context of contemporary marketing practice is particularly timely, given the perceived demise of market segmentation as one of the building blocks of strategic marketing, on account of the increased market and media fragmentation, product proliferation and consumer empowerment generated by the Internet (e.g. Sheth and Sisodia, 1999) and practitioners' disenchantment with market segmentation due to its severe implementation problems, diagnosed by recent studies investigating market segmentation practice (e.g. Dibb and Simkin, 2001, 2009b, 2010; Quinn, 2009; Bailey *et al.*, 2009; Harrison and Kjelberg, 2010).

This research addresses this issue to fill the research gap. By using SBU-level data with a relatively large number of respondents, this research moves beyond the theoretical (e.g. Goller *et al.*, 2002) and case-based (e.g. Dibb and Simkin, 2001; Quinn, 2009) research that dominates the segmentation implementation literature. The qualitative empirical phase provides evidence of practitioners' recognition of the benefits of market segmentation, which are similar to the ones argued in the literature but highlights the fact that practitioners find measuring segmentation success difficult, similar to findings from other authors (e.g. Schuster and Bodkin, 1987; Badgett and Stone, 2005; Bailey *et al.*, 2009; Quinn, 2009). The quantitative phase provides support for a significant positive relationship between segmentation capabilities and a composite measure of business performance. The quantitative phase also enables the identification of four pathways of influence between segmentation analysis and business performance. The main characteristic of these pathways is that they follow a chain of capabilities linked together by organisational resources.

In addition, this research identifies and critically evaluates extant explanations put forward by proponents of the three perspectives on market segmentation of the effect of adopting a segmentation approach on business performance. These explanations are found inadequate on both conceptual and empirical grounds. Instead, both qualitative and quantitative phases of the research support the contention that segmentation execution capability (i.e. the use of segmentation schemes in guiding/changing strategic, managerial and operational marketing decisions and activities) is the main mechanism of translating segmentation analysis into business performance outcomes. Thus, this research extends the literature investigating market segmentation implementation by moving beyond identifying implementation challenges to identifying mechanisms (in the form of organisational resources and capabilities) that enable a positive relationship between market segmentation and business performance.

9.2.3. Structural factors influencing relationships between segmentation capabilities and business performance

Until now, market segmentation has been considered a cornerstone of strategic marketing (Biggadike 1981) and, thus, implicitly recommended as managerial practice regardless of the type of firm or the characteristics of the market where the firm is competing. However, the qualitative study identified many structural factors that may influence segmentation implementation and the relationship of market segmentation capability with business performance. Two of these were supported by the quantitative findings: marketing expenditures (a marketing resource according to Dutta *et al.*, 2005) and market growth rate (a market characteristic).

Firstly, a negative interaction between segmentation analysis capability and marketing expenditure was found to affect segmentation execution capability. This represents an important contribution because it signals that there are two alternatives to developing segmentation execution capabilities – as it can be seen in practice (e.g. Quinn, 2009): developing an internal capability in segmentation analysis or paying for external agencies to develop and deliver segmentation schemes. Another contribution of examining the moderating role of marketing expenditure is offering additional insight into the interaction between capabilities and resources. The quantitative findings suggest that the relationship between segmentation analysis capability and segmentation execution capability is stronger in firms with lower marketing expenditures compared to those firms with higher marketing expenditures. This suggests that, when faced with scarce resources, firms use bundles of capabilities instead to achieve business outcomes. In this particular case, it is likely that managers' experience, knowledge and skills are the key resources used in developing and using segmentation schemes. Thus, another contribution of this research is to bring some empirical support for the increasing interest in the role of managerial cognition and decision making as a significant resource in developing organisational capabilities (Holcomb *et al.*, 2009).

Secondly, this research brings some empirical support for a contingency approach to investigating the relationship between segmentation and performance. In the segmentation literature, this research is the first to investigate moderating effects affecting the success of segmentation strategies with primary data, responding to Dolnicar *et al.*'s (2005) criticism that the literature has paid little attention to identifying the market conditions that are conducive to adopting a market segmentation approach. This research identifies market growth rate as a significant moderator of the relationship between segmentation capabilities and business performance. Furthermore, it identifies interesting patterns of influence in growing markets, where segmentation execution capability is strongly and positively related to business performance, while segmentation integration capability is negatively related to business performance. Such patterns of influence are difficult to interpret based on the existing segmentation literature, as no study has ever investigated the relationship between market segmentation practices and business performance. Therefore, this research paves the way for more research into the market conditions that might affect the relationship between segmentation and performance, by identifying possible moderators in the qualitative study and confirming one moderator in the quantitative study.

9.2.4. New measures for market segmentation capability

This research develops disaggregated, reliable and valid multi-dimensional measures for a firm's market segmentation capability, with a particular focus on organisational processes of segmentation implementation. While the focus of this research is not scale development, this contribution is significant for three reasons.

Firstly, Chapter 1 (Section 1.2) has highlighted an increase in both practitioners' and academics' perceptions of obsolescence of the market segmentation concept. The lack of suitable measurements of segmentation practice has prevented researchers from developing further knowledge about the role of market segmentation in practice (Dolnicar *et al.*, 2005). By developing detailed, reliable and valid measures of segmentation implementation processes, this research enables further empirical studies to investigate the relationships between segmentation and other recent marketing concepts that have gained high status within the marketing literature and that are conceptually related to segmentation (e.g. market orientation, market sensing capability, customer relationship management, customer prioritisation, personalisation). Such research can attempt to re-evaluate the conceptual and practical boundaries and relevance of the segmentation concept, its nomological network in marketing theory and its role and outcomes in managerial practice.

Secondly, the new measures developed in this research allow for a more rigorous evaluation of the effect of market segmentation implementation on business performance, which has been recently called for (Dibb and Simkin, 2009a; Boejgaard and Ellegaard, 2010). This is a significant advancement in the measurement of segmentation activities, which has been quite unsophisticated in previous studies of market segmentation practices. Thus, it continues Foedermayr and Diamantopoulos' (2009) effort to develop measures of segmentation implementation and success.

Thirdly, this research shows that segmentation capability is a multi-dimensional construct and that the three dimensions of segmentation capability are conceptually and operationally different from specialised and architectural marketing capabilities. These findings add further credibility to this thesis' argument that market segmentation can be considered as a distinct and valuable organisational capability.

9.2.5. Contributions to the marketing capabilities literature

This research extends the marketing capabilities literature in three main ways.

Firstly, this research extends the marketing capabilities literature by investigating the relationship between segmentation capabilities and marketing capabilities. The findings of the quantitative phase clarify the relationship between segmentation capabilities and marketing capabilities, which is found to depend on market growth. Thus, the research identifies two segmentation capabilities (analysis and integration) as potential predictors of marketing capabilities and one contingency (market growth rate) which affects the relationship between marketing capabilities and business performance.

Secondly, by identifying the pathways of influence between segmentation capabilities, marketing capabilities and business performance, this research extends the literature in the direction advocated by Ethiraj *et al.* (2005), of a shift in the debate from whether or not capabilities matter to 'what' capabilities matter and 'how'. This research identifies

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different pathways from segmentation analysis to business performance, which involve either the development of segmentation execution capabilities or marketing capabilities and which vary in their magnitude. Considering that capabilities require resource investments to be developed or acquired (Einsenhardt and Martin, 2000), the identification of the pathways of influence represent a significant contribution because of the trade-off inherent in making investments in capability development, even more so when the performance outcomes of these capabilities are dependent on various contingencies.

Thirdly, this research supports the argument that Levinthal and March (1993) have proposed that firms must engage in both marketing exploration and marketing exploitation. The findings of this research draw a parallel between segmentation execution capability and marketing exploration capabilities and between generic marketing capabilities and marketing exploitation capabilities. Whilst it is generally argued that marketing exploration and marketing exploitation represent competing approaches to developing capabilities - because they may require distinct structures, cultures and compete for limited resources (March, 1991), the findings of this research show that both segmentation execution capability and marketing capabilities are significant positive predictors of business performance, thus firms should balance the investments they make in the development of these two capabilities, in particular depending on the level of market growth rate.

9.3. Implications for Practice

By grounding the new conceptualisation of market segmentation in interviews with practitioners and in empirical studies of market segmentation implementation, this research is more aligned to the reality of managerial practice. Studying managerial practice is particularly important in the market segmentation field because previous research is perceived to provide little support to practising marketers due to its bias on analytical aspects of developing segmentation schemes and providing normative models of market structuring and resource allocation to segments (Dibb and Simkin, 2009a; Jenkins and McDonald, 1997; Foedermayr and Diamantopoulos, 2008).

The first managerial implication comes from identifying a new perspective on market segmentation, i.e. as a dynamic organisational capability. The managerial implication of this new perspective is that it helps managers change their view of market segmentation, from an analytical technique or a market characteristic to a capability. Such a change involves recognition of the resource investment required to develop the capability, but also recognition of the potential benefits that emerge from exercising this capability, in the form of improved value propositions, marketing efficiency and organisational focus. At the same time, a capability perspective implies a broader understanding and higher expectations of what market segmentation can do within the organisation, no longer restricted to providing a general understanding of the marketplace or input to the marketing planning process but rather specific insight that can be used to improve the value created for the customers and eventually for the firm. A capability perspective emphasises the role of segmentation schemes as valuable resources that should be

protected (to ensure they are truly rare and inimitable) and monitored to maintain their value-creation ability. If segmentation schemes are valuable resources, then the management and allocation (to managerial decisions and activities) of segmentation schemes, as opposed to the development of segmentation schemes, takes a central role in developing a market segmentation capability within the organisation. Finally, a capability perspective emphasises the role of organisational processes in market segmentation implementation, in particular the routine aspect of segmentation capabilities. What distinguishes an organisation with a market segmentation capability from one applying segmentation principles and practice is the existence of routines within processes that support learning about different customer groups in the marketplace and the subsequent adjustments made to systems, structures, cognitions and norms of customer interaction throughout the stages of integration and execution of segmentation schemes.

The second managerial implication comes from identifying the organisational processes required to develop a market segmentation capability within firms. The 14 processes can represent a diagnostic test to assess the level of segmentation capability inside a company and identify potential areas of improvement. The segmentation framework (represented by the inter-relationships between segmentation capabilities) provides managers with a tool to evaluate, over time, the development of a market segmentation capability within various functional areas of their marketing and sales organisation and across all key marketing decisions in terms of whether the outcomes of market knowledge, internal currency, customer value and marketing efficiency are obtained. In contrast with other studies of segmentation implementation, which have identified implementation challenges that practitioners face, this research proposes organisational processes that are helpful in counter-acting the implementation challenges that practitioners face when adopting a segmentation approach to their marketing. In addition, these processes go beyond the development of segmentation schemes to focus on the management of segmentation schemes. In addition, by their very nature, processes are rigorous and repetitive activities, which contrast with the ad-hoc nature of segmentation analysis and implementation seen in qualitative studies of market segmentation. Thus, this research emphasises the importance of adopting such organisational processes to facilitate the implementation of market segmentation.

The third managerial implication emerges from identifying the inter-relationships between segmentation capabilities. In particular, the identification of three capabilities implies that market segmentation practice should go beyond segmentation analysis, to focus on improving the use of segmentation insights in all aspects of marketing decision making. The execution of segmentation insight allows companies to achieve organisational focus on a target market, efficiency of market budget allocation and tailored value propositions, which together may increase business performance outcomes. The significant mediating effect of segmentation integration capability on the relationship between segmentation analysis and execution capabilities highlights the importance of embedding segmentation schemes inside the organisational fabric – culture, structure and control. These processes facilitate the development of an internal currency – a common language used to refer to target segments in a consistent manner throughout the organisation, which in turn facilitates the use of segmentation schemes in decision making. This has significant implications for managers, because the findings of this research suggest that the most influential mechanism of executing segmentation

schemes is through ensuring that the segmentation schemes are integrated in people's mindsets first before being able to see segmentation schemes being actively used in decision making. This emphasises the critical importance of recognising the cultural change implications of integrating segmentation schemes. Since a segmentation scheme is actually a simplified representation of the marketplace and managers implicitly develop their own representations as their experience within a market increases, the adoption of a new segmentation scheme can be met with resistance if there are significant differences between alternative representations of the marketplace. Managers wanting to implement segmentation in their organisations need to be aware of the cultural changes required in shifting people's mindsets to achieve a coherent focus for managerial thinking (Piercy and Morgan, 1993).

The fourth managerial implication comes from the negative moderating effect of marketing expenditures on the relationship between segmentation analysis and execution capabilities. One of the implications is that organisations do not need high marketing budgets to invest in developing segmentation schemes in order for them to be successfully executed in decision making. The other implication is that it is possible to acquire segmentation schemes without having a strong segmentation analysis capability (which represents current marketing practice – i.e. commissioning research agencies/consultancies to develop segmentation schemes), however the results indicate that the level of segmentation execution capability is higher for a higher segmentation analysis capability rather than higher marketing expenditures. This suggests that the *best practice* to ensure that segmentation schemes are used in decision making is to develop a strong segmentation analysis capability in the first place. This is also supported by the shift to a capability view of market segmentation where analysis should be a routine process of identifying new valuable segments and segmentation schemes, which is particularly valuable in a growing market where segmentation schemes that are not updated frequently may no longer represent the market structure accurately.

The fifth managerial implication relates to the positive and significant relationship between segmentation capabilities and business performance. The qualitative findings highlighted some managers' scepticism of market segmentation's impact as a serious barrier to implementation. Therefore, evidence of a significant relationship between segmentation capabilities and business performance enables marketers to develop a strong business case for investments in segmentation activities. Nonetheless, the modest variance explained by segmentation capabilities suggests that using segmentation schemes may not be the best choice for all companies in all markets. This claim is supported by the moderating effect of market growth rate, which implies that there is a delicate balance to be achieved between investing in segmentation execution capabilities versus generic marketing capabilities.

The sixth managerial implication relates to identifying four pathways of influence between segmentation analysis and business performance. This suggests that there are different ways of obtaining business results from segmentation analysis activities. Since the four pathways involve the development of either segmentation execution capabilities or marketing capabilities, it can be inferred that segmentation analysis and integration capabilities are not only useful to implement segmentation-based strategies but also to develop generic marketing capabilities. In fact the strongest relationship with business performance was found to be through segmentation analysis capability and marketing

capabilities. This finding implies that segmentation analysis processes are beneficial to improving generic marketing strategies and tactics without generating drastic change in the marketing approach of the organisation. Such an approach is particularly desirable in decreasing or stagnating markets, where marketing capabilities have been found to be significantly related to business performance in contrast to an insignificant relationship found for segmentation execution capabilities. The second pathway of influence was through a combination of the three segmentation capabilities. Thus, this research highlights the importance of embedding segmentation schemes both in organisational fabric and decision making in order to achieve business outcomes from segmentation analysis activities. Here the implication for managers is that just undertaking segmentation analysis on its own is not enough to see any implementation benefits. Thus, the usual approach of commissioning an external party (e.g. research agency or marketing consultancy) to develop a segmentation scheme for the company is not going to have a visible effect for the organisation, unless organisational processes are put into place to make that segmentation scheme actionable (through segment qualification, profiling, evaluation and monitoring) and to embed it in the organisational fabric and decision making. These processes require significant change and therefore require the full support of top management and the involvement of a wide range of stakeholders in the implementation effort.

The seventh managerial implication emerges from the identification of market growth rate as a moderator of the relationship between segmentation capabilities, marketing capabilities and business performance. While these inter-relationships warrant further research, the preliminary implication is that managers are advised to execute segmentation schemes primarily in growing markets in order to take advantage of the growing demand, which might be caused by the emergence of new segments in the marketplace, with potentially different needs or behaviours.

Lastly, the contrast between qualitative and quantitative findings (see Chapter 8, Section 8.5) identified and disconfirmed three 'segmentation myths' – managerial beliefs identified in the qualitative study that were not supported by the empirical findings of the quantitative phase. These myths were that: a) existing marketing competences are preventing organisations from making the most out of segmentation schemes; b) segmentation is more appropriate in stable markets; c) segmentation implementation requires a large expenditure. The implication of these myths is that they perpetuate some managers' distrust and act as a vicious circle in preventing companies from obtaining tangible benefits from segmentation analysis capabilities. For example, if companies invest too much money in buying a segmentation schemes from outside parties (e.g. commercial segmentation models or segmentation schemes developed by research agencies), then there is a risk that segmentation implementation will fail or be less profitable. As we have seen in the previous paragraphs, this research suggests that managers should: a) concentrate on using segmentation schemes to improve their marketing capabilities; b) use segmentation in growing markets to improve their performance and c) use their marketing budget wisely, as a higher budget does not increase the ability to execute segmentation schemes – it is more important how the budget is used, rather than its absolute monetary value.

9.4. Limitations

Given the research design adopted for this study, there are six main limitations that apply. The first two refer to both phases of empirical research and the last four refer in particular to the quantitative phase.

Firstly, the industry setting of the empirical phases limits the generalisability of the findings. The industry sectors included in the sample (both for qualitative and quantitative phases) belong to a wide range of SIC codes, however they mainly include durables and services, both for consumers and businesses. The samples are well balanced across the product-market choices (B2C, B2B, product/service focus), however they do not include any companies producing fast moving consumer goods (FMCG). It may be possible that different relationships exist in this context. According to Wind (1978) and Frank *et al.* (1972), many segmentation studies in the academic literature and managerial practice focused on consumer goods in the 1960s and 1970s before attention was drawn to the specific characteristics of services and industrial contexts. Thus, future studies are needed to establish the generalisability of the findings outlined here in FMCG contexts.

Secondly, potential problems can be associated with collecting data on market segmentation practices from a single informant. While the key informants were chosen based on their experience with segmentation projects, they may not be fully aware of the implementation aspects of all the segmentation schemes in use within their firm. While obtaining data from multiple informants would have been ideal, the interviews and the low response rates to the survey indicate that this was unlikely to be a realistic option in the context of the present research. In addition, accepted methodological guidelines (e.g. Kumar, Stern, and Anderson 1993) were employed to mitigate these potential problems concerning locating the most knowledgeable informants, ensuring their knowledgeability about the use of segmentation schemes in their companies and designing and pretesting the measurement scales and survey instrument to maximise the validity of the data collected.

Thirdly, the performance measures were subjective evaluations made by the managers answering the questionnaire in regards to their firm achieving their performance goals, which may vary considerably in terms of absolute levels of performance goals set and achieved. This method of measurement may be subject to bias, in particular the reluctance to disclose confidential information to outsiders and the ability to judge the relative degree to which performance goals have been achieved. However, there is evidence in the strategic management literature that points to the general reliability of subjective, self-reported performance data (Dess and Robinson, 1984; Venkatraman and Ramanujam, 1986). This position is based on the premise that, since the unit of analysis is the SBU, responding managers have detailed knowledge of their performance and use this information to develop or fine-tune their marketing strategies (Leonidou, Katsikeas and Samiee, 2002). Collecting secondary objective data would have been another way of collecting performance measures, however such data were not available at SBU level, because many companies in the sample are large and contain several business units and do not report publicly on their performance. In addition, secondary objective performance data are financial in nature and may be potentially biased due to their

limited time horizon, variance in the level of data aggregation across organisations and departures from the actual purpose of such measures (Richard, Devinney, Yip and Johnson, 2009).

Fourthly, the hypotheses were tested with cross-sectional data, therefore causality cannot be imputed in the relationships examined, nor can the sustainability of the performance outcomes observed. Reliance on cross-sectional data warrants caution in interpreting the results, as the hypothesised model contains an implicit sequential order to the development and use of the segmentation and marketing capabilities. In a cross sectional design, causality and dynamics, which are two key assumptions in testing the nature and impact of dynamic capabilities, are hard to demonstrate. Additionally, there may be a number of causal loops among the constructs. For instance, the control dimension of segmentation integration capability may impact future types of segmentation analyses based on the feedback on the performance of segmentation schemes in use. A longitudinal study could further clarify the causal order between marketing capabilities, segmentation capabilities and performance outcomes. Having established associations among segmentation capabilities, marketing capabilities and business performance using cross-sectional data, it may be worthwhile utilising longitudinal research designs to empirically confirm the direction of causality and assess performance outcomes over time.

Fifthly, by focusing specifically on an extensive examination of market segmentation capabilities, it was not feasible to control for differences between companies in terms of other types of marketing resources and capabilities and other firm level variables that would interact with the constructs of interest. Only those organisational characteristics that have been highlighted as important in both the segmentation literature and studies of the relationship between dynamic capabilities and performance, have well-established operationalisations to minimise measurement error, and were viewed as important by managers in the qualitative study, were included in the quantitative study (similar to the approach adopted by Vorhies and Morgan, 2005). As the ability to develop valid and reliable measures of segmentation capabilities improves, the potential for controlling for a wider range of factors in future studies should increase.

Sixthly, the sample size was relatively small for the complexity of the hypothesised model. The fundamental problem with small sample sizes is that sampling error tends to be higher (Henry, 1990), thus negatively impacting on the precision of population parameter estimates (Barnett, 1991). Hence, the resulting confidence intervals tend to be wider and significance tests less powerful than is the case with large samples (Kalton, 1983). However the purpose of this study is not generalisation of findings about level of segmentation capabilities to the whole population but rather inferential testing of a relationship among constructs. In addition, bootstrapping procedures in AMOS were also used to estimate the standard errors. No differences in the significance of the relationships were found, which increases the reliability of the findings.

9.5. Implications for Further Research

In view of the contributions and limitations of the present research, several promising avenues for further research can be identified, both in terms of topics and methodology of research.

9.5.1. Topics of research

Firstly, based on the relationships identified between segmentation capabilities and generic marketing capabilities and marketing expenditures, future research could identify relationships between segmentation capabilities and other marketing capabilities. For example, Goller *et al.* (2002) proposes market orientation to be an antecedent of market segmentation, while the qualitative findings of the present research suggest that customer orientation is an outcome of segmentation integration capability. In addition, Morgan *et al.* (2009a) found a positive interaction effect between market orientation and marketing capabilities. Thus, the relationship between segmentation capabilities and market orientation represents an interesting topic for future research. Another marketing capability that could be related with segmentation capabilities is marketing planning capability, defined as the ability to anticipate and respond to the market environment in order to direct a firm's resources and actions in ways that align the firm with the environment and achieve the firm's financial goals (Slotegraaf and Dickson, 2004). The relationship with marketing planning capability comes from the traditional explanation provided by the decision making tool perspective that market segmentation capability leads to a better ability to develop a marketing plan based on information about market segments (Rangan *et al.*, 1992). While the qualitative findings did not find strong evidence to support a relationship between the two, a few of the participants did mention using segmentation insight for business planning purposes, thus this relationship is worth investigating in future research, particularly as the relationship between marketing planning and business performance has been hotly disputed in the marketing and strategy literatures (Phillips *et al.*, 2001).

A third capability that segmentation capabilities could be related to is market sensing capability[48], defined as a firm's ability to learn about customers, competitors, channel members and the broader market environment in which it operates (Day, 1994). A segmentation scheme provides information about the marketplace in a certain format, i.e. descriptions and evaluations of identified market segments. Morgan *et al.* (2009b) build an argument for a relationship between market sensing capability and revenue growth based on the ability to identify underserved/unsatisfied segments and opportunities from existing customer segments. This ability to identify valuable segments is actually part of segmentation analysis capability as defined in the present research (segment identification). This suggests that an overlap and/or a relationship

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[48] This is similar to the concept of market focused intelligence generation capability suggested and tested by Slater and Narver (2000), which was found to be a structural factor in the qualitative findings, where managers referred to market intelligence as one factor that increases the usefulness of segmentation schemes.

between the two capabilities might exist, which should be investigated in future research.

Investigating such relationships among different specific marketing capabilities is important because in the last decade the marketing literature has been very prolific in identifying many different types of marketing capabilities. While a significant relationship with performance has been confirmed (Krasnikov and Jayachandran, 2008), there is now a lack of knowledge about how these different marketing capabilities interact (Neill *et al*., 2007). Previous studies have either linked a generic measure of marketing capabilities to other constructs (e.g. Vorhies *et al*., 2009, on the relationship between product-market strategy and marketing capabilities) or have identified new specific marketing capabilities (e.g. customer response capability, Jayachandran *et al*., 2004). More research is needed about how these marketing capabilities are linked to each other, both causally and hierarchically. The present research suggests the feasibility of a process of one capability leading to the development of other capabilities through the means of developing certain intermediary resources. This supports the distinction between dynamic and operational marketing capabilities (Collis, 1994). However, the complexity present in mapping marketing capabilities suggests that the distinction between dynamic capabilities and operational/functional capabilities is insufficient to describe the relationship between capabilities in general. Thus, future research should investigate the relationships between different marketing capabilities, in particular their additive or trade-off effects on performance (Neill *et al*., 2007).

Secondly, future research should investigate further moderators of the relationships identified. The qualitative findings suggested three types of structural factors that might influence the success of market segmentation implementation: external factors (e.g. market dynamism, product lifecycle), firm-related factors (e.g. size, age, scope, market position/strategy) and internal factors (e.g. customer database, market intelligence, cost structure). In the interests of focus, the quantitative study tested empirically only the moderating role of external market characteristics and did not find any other significant interactions except for market growth, disconfirming the associated hypotheses and coming in contrast with the propositions emerging from the qualitative study.

Thus, future research could replicate the quantitative study (possibly with a larger sample) in order to further investigate the moderating role of external factors. This particular research avenue is warranted by the small sample in the present study and the results of computer simulations provided by a few authors (e.g. Dolnicar *et al.*, 2005; Doraszelski and Draganska, 2006; Galeotti and Moraga-Gonzalez, 2008) to support the existence of such moderating effects. Such research would contribute significantly to the segmentation literature because there is very scarce knowledge and/or evidence about any moderators affecting the success of segmentation strategies and also because finding no moderating effects in different samples may further provide evidence to the gap between theory (or simulations) and practice of segmentation.

Furthermore, future research should empirically test the other structural factors identified in the qualitative study (i.e. firm-related and internal factors). Among the firm-related factors, one interesting moderator might be the Miles-Snow strategic type of organisation (i.e. prospector, analyser, defender, reactor). The findings from previous studies of marketing capabilities and performance seem to suggest differential relationships between marketing capabilities and performance depending on the

strategic type. For example, Song *et al.* (2007) found that market-linking and marketing capabilities are positively related to financial performance for defender organisations, whereas technology and information technology capabilities are positively related with financial performance for prospector organisations. Among the internal factors, the impact of the cost structure on the relationship between market segmentation execution capability is a particularly interesting topic for further research. Both the qualitative study and previous research (e.g. Winter, 1979) highlight the fact that using segmentation insight for tailoring value propositions to each target segment has important implications for the manufacturing and marketing costs of the firm – these may be justified (i.e. profitable) only when customers in the target segments are willing to pay a premium for tailored offerings. Thus, it is likely that the production flexibility or the product portfolio design have a moderating effect on the relationship between segmentation execution and business performance.

Thirdly, future research should investigate the relationship between segmentation capabilities and product-market strategy (Porter, 1980). Market segmentation has been associated with the focus/niche strategy as in selecting one segment as target market. However, segmentation analysis can be used to developed tailored propositions for multiple segments in the market (i.e. differentiated marketing, cf. Kotler, 1994), which can be combined with a product differentiation strategy when heterogeneous segments are perceived to exist in the marketplace (Dickson and Ginter, 1987) because firms pursuing broad market coverage need to defend their multiple market segments against more niche-type players and therefore need high levels of market knowledge and segmentation capabilities along with the implementation skills needed to support the multiple brand offerings (Frei, 2008). In addition, Vorhies *et al.* (2009) have found that the three elements of product-market strategy are all positively related to both specialised and architectural marketing capabilities, hence an inter-relationship between segmentation capabilities, marketing capabilities and product-market strategy can be envisaged. Furthermore, while Vorhies *et al.* (2009) build an argument for why the choice of a product-market strategy would generate changes in the marketing capabilities required to implement the chosen strategy, an argument could be built for the segmentation capabilities to support both the choice and implementation of product-market strategy. This argument is in line with the idea of competency traps – existing resources and capabilities constrain companies to certain strategic choices because of the path dependent nature of knowledge. Competency traps effectively limit firms to pursue a narrow set of opportunities suited to their existing capabilities (Leonard-Barton, 1992).

Fourthly, the present research has established a significant relationship between segmentation capabilities and business performance (quantitative phase) and identified six mechanisms that may link the segmentation capabilities to business performance (qualitative phase), two of which provided some support to the ones provided by proponents of the three main existing perspectives on market segmentation (i.e. segmentation as research technique, decision-making tool or competitive strategy). Building on these findings, and since the quantitative phase does not include an empirical test of these explanations, future research should test empirically the extent to which the relationships established in the quantitative research are mediated by the mechanisms identified in the qualitative stage. Furthermore, further research could empirically test the predictive validity of the alternative explanations (generated by the

third extant perspectives) against the mechanisms arising from the quantitative findings (the significance of segmentation execution capability and marketing capabilities) to assess their relative importance in explaining the source of business performance.

Fifthly, the qualitative phase uncovered the complex reality that managers face when developing a segmentation capability in regards to the development, maintenance, integration and execution of multiple segmentation schemes. These findings support Piercy and Morgan's (1993) argument that multiple segmentation schemes may be in use within an organisation simultaneously, either at different organisational levels or applied for different purposes. The qualitative phase identified several approaches used in practice to navigate this complexity but offered limited insight into the relative effectiveness or influencing factors governing the choice of how many segmentation schemes to develop and what decisions to use each of them. Therefore, future research could explore further the use of multiple segmentation schemes, in particular the notion of segmentation schemes as advantage-driving marketing resources (Hooley *et al*., 2005; Srivastava *et al*., 1998).

Related to segmentation schemes as a marketing resource, another venue for future research relates to the initially surprising negative moderating effect of marketing expenditures found on the relationship between segmentation analysis and execution capabilities. Considering the lack of evidence for a moderating effect of number of marketing employees (but a direct influence of the number of marketing employees on segmentation integration capability), an interesting topic for further research is to identify further relationships (e.g. moderation, mediation, antecedents) with other marketing resources. One such resource is the quality and sources of the market information used to develop segmentation schemes, e.g. managerial intuition/experience, market research and/or transactional customer data.

Lastly, in the interest of parsimony and focus, in this study market segmentation capabilities have been conceptualised primarily in terms of skills to manage the analysis, integration and execution of segmentation schemes, since these aspects have not been studied in sufficient depth in the literature thus far. However, this conceptualisation of market segmentation capability in this manner may be limited to the extent that it does not include some critical choices required to develop segmentation schemes, such as choosing: the right combination of segmentation bases, the methods and data for analysis, the number of segments in each segmentation scheme, the frequency of monitoring segmentation schemes and so on. While the segment formation aspect was beyond the scope of this study, due to the challenges that managers have faced in terms of managing the data and the development of segmentation schemes, future research can investigate the impact of market segmentation capability on business performance in conjunction with the effect of these segment formation choices.

9.5.2. Methodology of research

Considering the limitations of the present research, future research may adopt different avenues for data collection and analysis.

Firstly, collecting data from multiple informants could assist in two ways: a) gathering data at the level of the segmentation scheme (by capturing information from individuals responsible for each segmentation scheme in use) and b) assessing the level of outcome of segmentation integration capability (segmentation as internal currency) by computing the degree of consistency among individuals when answering questions about the company's target market segments.

Secondly, a longitudinal setting would enable the empirical test of the performance sustainability achieved by companies after adopting or reconfiguring a segmentation scheme. By adopting time-series approaches, dynamic relationships over time could be analysed to see how the conditions under which segmentation schemes are developed or acquired, exercised and integrated in one period affect the performance outcomes of firms in subsequent periods (Barney, 2001). A longitudinal setting is also important for controlling unobserved heterogeneity that can confound the relationships under investigation (Henderson and Cockburn, 1994).

Thirdly, given the industry and country setting of this research, future research can investigate the measure equivalence of the segmentation capabilities scales and the generalisability of the relationships found among segmentation capabilities and business performance across contexts (both industry sectors and geographies). As previously mentioned, an interesting context to investigate would be fast moving consumer goods. Historically, this industry sector has seen many segmentation studies both in academic and commercial research. Despite their historical advantage in using segmentation schemes, for companies manufacturing fast moving consumer goods, the recent market and media fragmentation of consumer markets have made segmentation more difficult to execute. On the other hand, manufacturers now have more information about consumer shopping habits and product preferences through the retail transactional data, brand communities, retail/own loyalty programmes, social networks profiles and brand interaction data. These additional data should provide manufacturers with richer insight into the different types of segments that can be identified in the marketplace. Thus, the relationship between segmentation capabilities and business performance in this context is particularly interesting for further research.

9.6. Concluding Remarks

This chapter concludes this research by outlining the contributions of this research to the segmentation implementation and marketing capabilities literatures. The two main contributions relate to the identification of a new perspective on market segmentation and the empirical confirmation of a significant relationship between segmentation capability and business performance.

These contributions enable this research to have important implications for managerial practice, in particular in changing the way that segmentation is implemented in the organisation. It is hoped that the findings of this research will enable managers to have a better view of what needs to happen in order to develop a segmentation capability and obtain consequent performance improvements as a result of executing this capability.

Based on the contributions and the limitations of the study, ten promising avenues for further research were outlined. The findings of this research, together with the suggested avenues for further research, provide an opportunity for other segmentation researchers to build a foundation, based on the capability perspective, for the systematic development of a theory of market segmentation implementation, in answer to Wind's (1978) 30 years-old quest for research linking segmentation, marketing strategy and performance.

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Appendix A: Previous studies of market segmentation practice

Author(s)	Research Question	Method	Research purpose	Data collection	Sampling	No.	Industry scope	Type of companies	Data analysis	Bases and models	Methods	Dynamics	Marketing mix	Marketing planning	Resource allocation	Market definition	Alternatives	Selection	Positioning	Evaluation	Implementation	Coverage
Schuster and Bodkin (1987)	What are the market segmentation practices of industrial companies that are currently exporting their products?	Quantitative	Descriptive	Phone survey	systematic sampling based on export directory from one state	68	Multi	Moderately large US exporters in agriculture, equipment, technology, retail	Descriptives, regression	x			x							x		3
Cross, Belich and Rudelius (1990)	How do marketing managers use market segmentation?	Quantitative	Exploratory	Phone survey	Nonprobabilistic method (quota)	32	Multi	B2C (goods and services) and B2B (goods and services):	Content analysis Descriptive statistics	x							x					2
Peterson (1991)	To what extent do small businesses use target marketing?	Quantitative	Descriptive	Mail survey	Snowball	519	Multi	Small companies, primarily retail and services	Descriptives, t-test	x										x		2
Abratt (1993)	How do industrial marketers apply market segmentation?	Quantitative	Descriptive	Mail survey	Financial Mail Top companies - judgemental	32	Multi	B2B, South Africa	Descriptives	x		x					x			x		4
Dibb and Simkin (1994)	How to implement market segmentation in industrial markets?	Qualitative	Exploratory	Action research	European construction equipment market, agricultural machinery, and the car parts aftermarket	3	Multi	B2B	Content analysis											x	x	2

Author(s)	Research Question	Method	Research purpose	Data collection	Sampling	No.	Industry scope	Type of companies	Data analysis	Bases and models	Methods	Dynamics	Marketing mix	Marketing planning	Resource allocation	Market definition	Alternatives	Selection	Positioning	Evaluation	Implementation	Coverage
Capon and Palij (1994)	What criteria do managers use to select target segments? What is the level of accuracy of the firm's forecasts of strategic dimensions used for segment selection?	Quantitative	Explanatory	Experiment	purposive	250	Single	MBA students	regression analysis									x				1
Danneels (1996)	How is market segmentation applied in apparel retailing in Belgium?	Qualitative	Exploratory	Interviews	Judgemental	22	Single	Fashion	Content analysis	x			x	x				x				4
Sarabia (1996)	What is the level of difficulty in the evaluation and selection of segments? What is the frequency with which firms assess and select segments and the methods used?	Quantitative	Descriptive	Mail survey	Judgemental	57	Duo	Market research and advertising agencies		x								x				2
Kalafatis and Cheston (1997)	What segmentation bases are employed in the UK pharmaceutical sector?	Quantitative	Descriptive	Mail survey	Directory of Key British Enterprises & Pharmafile	107	Single	Pharmaceuticals	descriptives (frequencies and cross-tabs)	x												1
Erem and Menguc (1997)	What are the perceived importance levels of various types of segmentation categories and the relative importance of categories to segment potential export markets across industries and principal export destinations?	Quantitative	Descriptive	Mail survey	List of largest 100 Turkish exporters	74	Multi	Turkish exporters	descriptives, ANOVA	x								x				2

Appendix A: Previous studies of market segmentation practice (continued)

Author(s)	Research Question	Method	Research purpose	Data collection	Sampling	No.	Industry scope	Type of companies	Data analysis	Bases and models	Methods	Dynamics	Marketing mix	Marketing planning	Resource allocation	Market definition	Alternatives	Selection	Positioning	Evaluation	Implementation	Coverage
Jenkins and McDonald (1997)	What are the different ways in which organizations may divide up and respond to their marketplace?	Qualitative	Descriptive	Case studies		4	Multi	Large: bank, airline, fashion, chemicals													x	1
Meadows and Dibb (1998)	How is market segmentation applied in the financial service sector in the UK and which implementation barriers exist?	Qualitative	Exploratory	Case studies	Judgemental	4	Single	Financial services	Content analysis					x							x	2
Dibb and Simkin (2001)	What are the causes of segmentation failure and how can these problems be overcome?	Qualitative	Exploratory	Case studies	judgemental	4	Multi	B2B (construction, agrochemicals, electricity, audit)	Content analysis												x	
Verhoef et al (2002)	What is the extent of adoption of segmentation and predictive modelling techniques for database marketing?	Quantitative	Descriptive	Mail survey	A commercial list of a direct marketing (DM) services provider	228	Multi	Database marketing users, B2C, many financial services and charities	descriptives, cross-tabulations and chi-square tests	x	x							x	x			4
Dibb, Stern and Wensley (2002)	How do marketing academics and MBA students view market segmentation?	Quantitative	Descriptive	Online survey	convenience	38 + 95	Multi	MBA students/academics	descriptive		x								x			2
Craft (2004)	What are the segmentation strategy performance measures utilized by firms in actual practice?	Quantitative	Descriptive	Mail survey	convenience	62	Multi	Exporters	factor analysis												x	1

Appendix A: Previous studies of market segmentation practice (continued)

Author(s)	Research Question	Method	Research purpose	Data collection	Sampling	No.	Industry scope	Type of companies	Data analysis	Bases and models	Methods	Dynamics	Marketing mix	Marketing planning	Resource allocation	Market definition	Alternatives	Selection	Positioning	Evaluation	Implementation	Coverage
Lin (2004)	What the critical success factors in internet market segmentation?	Quantitative	Descriptive	Email survey	systematic sampling	137	Multi	Taiwan	factor analysis												x	1
Sausen et. Al. (2005)	What market segmentation strategies do companies in Switzerland use?	Quantitative	Descriptive	Mail survey	random from a database	69	Multi	Switzerland	cluster analysis and ANOVA													0
Hassan and Craft (2005)	What is the relationship between positioning strategies and bases of segmentation in international markets?	Quantitative	Descriptive	Mail survey	random from a database	112	Multi	International	factor and regression analysis	x									x			2
Badgett and Stone (2005)	How do companies use segmentation?	Mixed	Descriptive	Online survey	not specified	122	Multi	Large US	descriptives	x		x	x	x						x	x	6
Quinn, Hines and Bennison (2007)	What is the organisational practice of market segmentation in fashion retailing?	Qualitative	Exploratory	Case studies	judgemental	1	Single	Fashion	Content analysis	x				x						x		3
Foedermayr and Diamantopoulos (2008)	What are the relevant dimensions of segmentation success, which are different from conventional measures of international performance?	Qualitative	Exploratory	Interviews	purposive	33	Multi	FMCG, services, durables, experts	Content analysis											x		1
Bailey, Baines, Wilson, Clark (2009)	How do contemporary companies define their segments? How is segmentation being implemented/actioned?	Qualitative	Exploratory	Case studies	purposive	25 (5)	Multi	Services	Content analysis		x		x	x			x			x		5

Appendix A: Previous studies of market segmentation practice (continued)

Author(s)	Research Question	Method	Research purpose	Data collection	Sampling	No.	Industry scope	Type of companies	Data analysis	Bases and models	Methods	Dynamics	Marketing mix	Marketing planning	Resource allocation	Market definition	Alternatives	Selection	Positioning	Evaluation	Implementation	Coverage
Foedermayr and Diamantopoulos (2009)	How can segmentation effectiveness be defined? Which dimensions of export segmentation effectiveness mostly impact the firm's export performance?	Quantitative	Explanatory	Online survey	random from a database of austrian exporters	86	Multi	74% b2b, all exporters	structural equation modeling PLS											x		1
Quinn (2009)	How do marketing practitioners select the most appropriate variables for the purpose of market segmentation?	Qualitative	Exploratory	Interviews	purposive	12	Single	Fashion	Content analysis	x	x		x									3
Dibb and Simkin (2009)	What are the main types of barriers and rules in implementing market segmentation projects?	Qualitative	Exploratory	Case study	purposive	1	Single	Utilities	Content analysis												x	1
Harrison and Kjellberg (2010)	What is the character of the market segmentation process when performed on a market for a new technology that is 'in the making'? How do a firm's segmentation activities contribute to (re)shape the market being segmented?	Qualitative	Exploratory	Case study	purposive	1	Single	Technology, 40 interviews	Content analysis		x	x	x			x						4
Dibb and Simkin (2010)	How do organisations choose and use different segment quality criteria throughout the course of the segmentation project and its implementation?	Qualitative	Exploratory	Case study	purposive	1	Single	Telecommunications	Content analysis	x	x								x	x		

Appendix B: Interview guides

Interview guide for marketing directors

Introduction
- Could you please briefly describe your role?
- What do you understand market segmentation to be?
- Why does your company segment its markets? PROBE on reasons to identify several possibilities, e.g. ARE THERE ANY OTHER REASONS?

Segmentation activities
- How often do you undertake a segmentation exercise?
- Can you briefly take me through a previous segmentation programme that your company has undertaken?
- What specific outcomes have you achieved by implementing the segmentation scheme? How did you evaluate these outcomes?
- How do you keep track of the evolution of the segments you found?

Segmentation challenges/key success factors
- To what extent would you agree that your company is excellent at segmentation? Why/why not?
- What organisational factors fostered or discouraged the implementation of the segmentation scheme?
- How do you keep up to date with the latest thinking in segmentation?

Interview guide for experts

Introduction
- What do you understand market segmentation to be?

Drivers of segmentation
- What are the main positive drivers that ought to influence companies when deciding to segment their markets?
- What other drivers are companies usually prone to when conducting their segmentation programmes?

Segmentation activities
- What marketing or strategic tasks or capabilities is segmentation particularly useful for?
- What is the frequency with which companies ought to segment?
- How should companies keep track of the evolution of the segments they find in the marketplace?
- How should managers evaluate the success of segmentation activities?

Segmentation challenges/key success factors
- How would you describe a company that's excellent at implementing segmentation?
- To what extent do you think that current segmentation research informs marketing practice? Why?

Appendix C: Example of coded interview transcript

How did you decide to adopt a segmentation perspective in developing the website?
We first looked at it when we decided to do a major redesign of the website. Big corporate websites tend to do major redesigns every few years. Ours was well over-due and it was in January 2009 that we actually launched the redesign.[49] We kick-offed the project in June 2008 and it was at that time that we realised that our website had 130 products, all those products were vying for attention so navigation was very difficult for the customer, we looked a lot of verbatim that they were leaving on our surveys, on the site, they were finding the pricing confusing, the naming confusing[50] and also we had this challenge that we cover the business section of the site so our audience is actually very different. We have employees who have solo/soho businesses, not very tech savvy, they might be a hairdressers and they want business broadband, right up to 500 employees and more recently even more than that, so people with larger budgets, tech savvy[51]. We knew that the spectrum was wide and what we were actually achieving on the site wasn't…we weren't looking at our audience carefully enough, we needed to do the segmentation and the redesign at the same time. So we worked with our agency on the redesign and they helped us put together a set of user personas so that we at least, every time we wanted to make changes to the site, test them back against the user personas and say actually these pages or this journey satisfy our target audience who come to do the research and purchase online.[52]

And how were the personas developed, on research or your experience?
There was a little bit of market research involved in that. So we tapped into the data that we had on our existing audience and that was people who were typically buying off line, but we also did a landscaping study on our website to get a feel for people who were navigating on our pages, how big was their business, what sort of solutions they were looking for, how much were they willing to spend, to get an idea about the audience navigating the site at that stage.[53] The other aspect is that we realised there is an audience for small businesses out there, who just want to buy phone lines or broadband and they were happily do that on the website, they don't need to pick up the phone and talk to anyone.[54] But there's also an end of the portfolio where is a complex product, high level of investment involved and these people are less likely to buy online, but they are more likely to do their research online and require a lot of more evidence and case studies. We reviewed it from the sense of: what does our portfolio tells us, what do we need to sell more of, so we can try to identify the audiences for those particular products, so that fed into our segmentation piece.[55]

The research you did was on people that were already browsing your website?
That's right.

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[49] Coded as 'streamlining the organisation' under DRIVERS
[50] Coded as 'market insight' under DRIVERS
[51] Coded as 'demand heterogeneity' under DRIVERS
[52] Coded as 'product redesign' under MANAGERIAL EXECUTION; also coded as 'segment profiling' and 'segment qualification- identifiable' under SEGMENTATION ANALYSIS
[53] Coded as 'data sources' under ANALYSIS
[54] Coded as 'segment identification' under SEGMENTATION ANALYSIS and as 'segment understanding' under MEDIATORS
[55] Coded as 'product management' under MANAGERIAL EXECUTION and as 'target market selection' under STRATEGIC EXECUTION

And what other sources of information did you use in deriving the segments?

We did some user testing of potential templates and layouts we could have used on the website. And when we did that we worked with the agencies, user testing experts, and they were very good at identifying audiences to test against. So there was a bit of insight that came from them as well as to other companies that have websites that cater to the SME audience tend to look at existing customers, non-existing customers, we segmented the user testing based on their advice.[56] They had insight from other clients how they would segment. So I think it probably wasn't as structured as we would've liked but we tried to take the insight, whatever insight was there, from landscaping survey, internal market research, whatever the agency had and cover as many bases as possible.[57]

When you developed the personas, how did you arrive at the set of personas that you have?

The insight was telling us that, in a simple sense, when applying this model and simplifying what our audience is all about, we could segment into 3 different types: the paddler, the swimmer and the diver. [58]That gives you a nice view of how people might navigate through your site. So how your site hierarchy and your content is structured should bear in mind that the majority of your audience will fit one of those 3 categories. [59]So paddlers, these are people non-tech savvy, they know they have a problem, they have no idea what the solution is. So it could be a chef who is freelance and he's on the move a lot but he wants his customers to keep in touch with him while he is on the move. He doesn't realise that a blackberry with outlook is probably the right solution for him. So that's your paddler, they will navigate the site in a particular way, they will exhibit certain behaviours of how they navigate, they won't want to dip in detail too much, they just want to see on the surface – "will this help me? I've got this problem, tell me what the answer is." So that's why we developed a tool to find the right products for that audience. The second segment is the swimmers, so these are people who are perhaps the office administrators of a small business, they usually order broadband and install new phone lines. They are not extremely tech savvy but they do have some technical awareness, they do research, they look at other websites, they navigate in a certain way, and they want to see content in a certain way. The third one is the diver, so this is someone who is very technical, they probably work for a larger organisation and they are the head of IT, looking for very complex system and they don't want to see the marketing spiel, they don't want to see the business benefits, they know exactly what they want, they just want to see the technical specification, the case studies, they want you to help them build the business case to get the funding for it so there is a certain way they will navigate the site and the type of content they will need.[60] So we found it very easy to categorise our entire audience into those 3. The user personas you have here typically embody one of those 3 or a combination of paddler-swimmer or swimmer-diver. [61]So I think that helps whenever we make future changes to the website, that are quite major in terms of the structure, we will always test that back, well

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[56] Coded as 'data sources' under ANALYSIS
[57] Coded as 'methodologies' under ANALYSIS
[58] Coded as 'number of segments' under ANALYSIS
[59] Coded as 'product redesign' under MANAGERIAL EXECUTION
[60] Coded as 'segment profiling' under SEGMENTATION ANALYSIS CAPABILITY, 'needs/benefits' and 'behaviours' under ANALYSIS/BASES and 'segment understanding' under MEDIATORS
[61] Coded as 'manageable' under SEGMENT QUALIFICATION

how would a paddler respond to it or do we have a gap in our content for the divers. So I think it makes the application a lot more straightforward to use this model.[62]

So the main criteria to have this segmentation model is that it makes to the people who are supposed to use it, it's more actionable so you can implement it more easily.

Yes.

So you were talking about implementing this in terms of the changes of content on the website, the products that you offer online versus other channels…

That's right. And how people find those products. Typically, when you have a portfolio of 130 products, ranging from straightforward business phone line to a leased line, highly complex for multiple offices…we have such a range of products that people finding products was an issue for us, finding the right solution for them. So this model really helps work out how these people navigate, what techniques they use to find solutions, some use search, some might look at most popular things, some want the tool to help them, so that helps us figure out not only what content we need but also how people are going to get to that content.[63]

And you developed this segmentation scheme in June 2008?

It's probably more autumn 2008, when we finalised these personas and the whole team use them now, as and when we do any major changes to the website. [64]Since we launched the redesigned website and the tool for the paddler audience…so if you go on the homepage there is "find the right products easily", so the customer can self-segment there, say "I'm a growing business, or I'm a start-up and I have 3 employees and I'm looking for IT support, phone line and a website" and we'll come back with what we think is the right solution for them. So it could even be down to which flavour of broadband we think it suits their business. So we've got several options which they could buy so I think it helps them pitch which one cause I think customers were also struggling with that, "I know I want broadband but which one suits my business". [65]

And the tool was based on what? Was it predictive modelling?

Yeah, the algorithm is something we worked on with the agency and there is a number of outcomes. We have looked at competitor tools for this, e.g. Cisco and Dell, they have dabbled with this, and I don't think that anyone has done it particularly well online, so we wanted to make sure that if a customer did decide to go back and say "I've got 5 employees", that they would be recommended a different solution, they wouldn't think that we were forcing a particular marketing message. So it's quite simple, it's going to evolve, but we think we're getting good use out of it and good sales out of it so it's certainly helping this part of audience, who is typically bamboozled by the choice on offer and also didn't really know what was going to be the solution for their problem.[66]

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[62] Coded as 'actionable' under SEGMENT QUALIFICATION and 'product redesign' under MANAGERIAL EXECUTION and segmentation execution capability

[63] Coded as 'segment understanding' under MEDIATORS and 'product management' under MANAGERIAL EXECUTION and tailored messages under OPERATIONAL EXECUTION

[64] Coded as 'segment profiling' under SEGMENTATION ANALYSIS and as segmentation execution capability

[65] Coded as 'segment profiling' under SEGMENTATION ANALYSIS and 'product targeting' under OPERATIONAL EXECUTION

[66] Coded as 'product targeting' under OPERATIONAL EXECUTION and as 'revenue growth' under BUSINESS OUTCOMES

Appendix D: Sources and references based on the interview transcripts

Interviewee	Number of codes	Number of references
Manager A	74	107
Expert J	57	72
Expert A	40	51
Manager C	34	54
Manager D	39	57
Manager E	30	37
Manager F	37	54
Manager B	43	78
Expert H	43	71
Expert G	81	204
Expert B	75	170
Expert C	81	182
Expert K	37	65
Manager G	34	63
Manager H	44	68
Expert D	47	91
Manager I	51	90
Expert I	61	101
Manager J	30	49
Manager M	58	83
Manager K	54	110
Expert E	72	144
Expert F	38	54
Manager L	35	59

Appendix E: Code tree structure and code salience from qualitative analysis

Category	Code	Sources	References
ANALYSIS: segmentation decisions in the research process: bases, methods, models, sources of data etc.		0	0
Bases		5	11
	General		
	demographics	10	13
	geodemographics	4	6
	psychographics	7	19
	Specific		
	Application/ usage type	3	4
	Behaviours	13	26
	Customer value or profitability	8	14
	Innovation adoption	2	2
	Likelihood to buy	5	6
	Loyalty or share of wallet	2	4
	Marketing mix responses	8	10
	Needs or benefits	13	28
	Product features	5	10
Data sources		19	45
Degree of segmentation		13	20
Dynamics of segmentation		11	22
Methodologies		13	22
Multiple segmentations		11	31
Number of segments		9	11
Object of segmentation		8	16
BUSINESS OUTCOMES: outcomes/benefits of using market segmentation			
Customer outcomes		0	0
	Customer acquisition	7	10
	Customer loyalty	6	10
	Customer satisfaction	9	11
Financial outcomes		0	0
	Cost increase	2	3
	Cost reductions	7	10
	Profitability	9	16
	Revenue growth	13	20
	ROI	5	9
Market outcomes		0	0

	Competitive advantage	1	3
	Confused brand message	2	2
	Higher competition	1	2
	Market share	7	11
	Product proliferation	1	1
	Stronger market position	8	14
Metrics		1	3
	Average spend growth	2	2
	Consumer feedback or satisfaction	3	3
	Frequency of purchase	2	2
	Revenue growth	3	3
	Market share growth	4	4
	Marketing efficiency	2	2
	Overall brand performance	2	2
	Reaching objectives	1	1
	Response rates to campaigns	4	5
	Segment profitability	4	4
	Segment share	5	6
	Tricky not possible for certain	7	9
CHALLENGES: Factors that managers and experts struggle with in regards to developing and implementing segmentation schemes			
Analysis			
	Choosing bases	6	12
	Data analysis	3	4
	Data management	3	6
	Market dynamics	3	4
	Measurement of share	3	4
	Placing individuals into segments	5	6
	Predicting future	3	7
Execution			
	Implementation	7	13
	Lack of best practices	2	2
	Lack of results	1	1
Integration		0	0
	Difficult to grasp	4	5
	Inter-department communication	3	6
	Lack of internal buy-in	7	11
	Transparent segmentation	2	4

DEFINITIONS: definitions/ perspectives/ on the meaning of market segmentation and contrast with alternative targeting strategies			
Alternatives		1	1
	database marketing	7	11
	mass marketing	6	14
	niche marketing	3	3
	one to one marketing	4	4
Classification technique		10	12
Competitive strategy		7	7
Decision making tool		11	14
Market structuring		6	8
Natural activity		3	5
DRIVERS: factors that lead companies to segment their markets			
Change in customer base		3	3
Common wisdom		4	4
Company philosophy		3	3
Competitive environment		2	2
Cost benefit analysis		6	8
Demand heterogeneity		6	11
Market knowledge or insight		4	6
Need for growth		2	3
Strategic marketing planning		4	4
Streamlining the organisation		10	14
MEDIATORS: Mechanisms that explain how segmentation implementation translates into performance outcomes			
Customer orientation		6	10
Market structure understanding		9	11
Segment understanding		15	37
Marketing efficiency		9	17
Organisational focus		8	20
Winning value proposition		8	15
MODERATORS: Factors that increase or decrease the impact of segmentation on performance			
External factors			
	Type of company		
	Age	3	4
	B2B vs B2C	5	8
	Multinational	4	5
	Size and scale	6	11
	Technology oriented	2	2

	Type of market		
	Market growth rate	4	6
	Stable versus dynamic	5	7
	Type of product		
	Product configuration	2	2
	Product lifecycle stage	3	6
	Product or service	3	3
Internal factors			
	Cost structure	4	7
	Customer database	17	45
	Generic strategy	5	5
	Market intelligence	13	27
	Marketing resources available	10	30
SEGMENTATION ANALYSIS CAPABILITY: the ability of the firm to identify new segments, qualify these segments, monitor their evolution, profile them to provide insightful characterisations and evaluate their attractiveness to the firm		1	2
Segment evaluation		11	16
Segment identification		9	20
Segment monitoring		13	43
Segment profiling		14	36
Segment qualification	Actionable	9	18
	Believable or intuitive	10	30
	Distinct	5	8
	Identifiable	8	14
	Manageable	6	8
	Measurable	8	18
	Reflecting the marketplace	3	11
	Stable	3	5
	Unique	3	7
SEGMENTATION EXECUTION CAPABILITY: the ability to use segmentation schemes into marketing decisions and activities		14	24
Managing customers		2	4
	Churn management	4	5
	Rewards management	2	3
	Value management	5	10
Operational execution			
	Tailored propositions	12	24
	Advertising messages	17	33
	Pricing	10	15
	Promotions	11	23
	Product redesign	9	11

	Targeting	11	17
	Customer service and communication	15	25
	Distribution channels	8	15
	Media buying	11	14
	Product targeting	7	13
	Selecting segments for a campaign	9	14
Managerial execution		1	1
	Business planning	5	7
	New marketing mix ideas	7	8
	Performance measurement	9	11
	Positioning and branding	5	7
	Product management	11	16
	Segment management	8	14
Strategic execution			
	New product development	14	29
	Market expansion	8	12
	Match segment needs with capabilities	7	10
	Target market selection	11	22
SEGMENTATION INTEGRATION CAPABILITY: The ability to embed segmentation schemes into organisational fabric		3	5
Integration in infrastructure			
	Customer databases	8	14
	Organisational structure	5	11
	Value chain	6	9
Integration in planning		0	0
	Implementation plan	4	13
	Involved project team	7	15
	Objectives	7	18
Integration in processes		0	0
	Budget	7	16
	Incentives	3	3
	Information processing and reporting	5	9
Integration in the culture		0	0
	Change programme	4	10
	Internal currency	15	35
	Internal marketing	13	35
	Segmentation training	14	27
	Segmentation understanding	6	8
	Support and commitment from senior management	6	17

Appendix F: Measurements of organisational capabilities

Authors	Capability	Response scale	Measuring focus
Jones *et al.* (2005)	Organisational learning	1= very weak 5=very strong	The firm's strength or weakness of each capability
Jerez-Gomez *et al.* (2005)	Organisational learning	1=totally disagree 7=totally agree	
Morgan *et al.* (2009a)	Marketing capabilities	-3=much worse +3=much better	…than competitors
Fang and Zou (2009)	Marketing capabilities	1=much worse 7=much better	…than competitors
Ngo and O'Cass (2009)	Marketing capabilities	1=strongly disagree 7=strongly agree 1=not at all 7=extensively 1=minimal 7=extensive	possession, application, utilisation of capabilities
Morgan *et al.* (2003)	Marketing capabilities	1=strongly disagree 7=strongly agree	
O'Sullivan and Abela (2007)	Marketing performance measurement capability	1=poor 7=excellent	
Slotegraaf and Dickson (2004)	Marketing planning capability	1=far below average in industry 7=best in world across industries	Industry average
Song *et al.* (2008)	Marketing capabilities	0=much worse 10=much better	Than competitors
Vorhies and Morgan (2005)	Marketing benchmarking capability	-3=much worse +3=much better	…than competitors
Vorhies *et al.* (2009)	Marketing capabilities	1=not very well 7=very well	Compared to main competitors
Woodside *et al.* (1999)	Marketing competence	1=much worse 7=much better	…than competitors
O'Cass and Weerawardena (2009)	Marketing capability	1=never 7=extensively 1=limited 7=extensive	

Authors	Capability	Response scale	Measuring focus
Ramaswami *et al.* (2009)	Market-based capabilities	1=strongly disagree 5=strongly agree	Multiplied by capability uniqueness (4 point scale)
Hooley *et al.* (2005)	Marketing resources	1=strong competitors' advantage 5=our strong advantage	Advantage vs competitors
	Market orientation	1=not at all 7=to an extreme extent	
Marcus and Anderson (2006)	General dynamic capability	1=to not extent 5=great extent	
Spanos and Lioukas (2001)	Marketing capabilities	1=much weaker 5=much stronger	The extent to which marketing capabilities represent particular strengths relative to competition
Roberts and Grover (2011)	Customer sensing capability Customer responding capability	1=strongly disagree 7=strongly agree	
Drnevich and Kriauciunas (2011)	Ordinary vs dynamic capabilities	1=the firm never uses IT in this manner 7=the firm frequently uses IT in this manner	

Appendix G: Questionnaire for the quantitative phase

Part 1: Introduction

Thank you for your interest in the Market Segmentation Implementation Best Practice Survey, organised by Cranfield School of Management.

This survey covers 30 questions about your company's practices of implementing and integrating segmentation models (representations of different customer groups in the marketplace) into marketing strategy and organisation. If your company contains more strategic business units (organisational units with a defined business strategy and a manager with sales and profit responsibilities), please consider your answers for the strategic business unit (SBU) with which you are most familiar.

In order to receive your free copy of the Segmentation Implementation Best Practice report, please insert your email address at the end of the survey. Once you complete the survey, you will be able to download immediately the Market Segmentation Whitepaper, written as a result of our previous interviews with practitioners and experts.

Thank you very much for your time!

1. To which industry does your SBU belong?
   - o Financial services
   - o Travel and tourism
   - o Hotels, leisure and entertainment
   - o Retail or wholesale trade
   - o Telecommunications& ICT
   - o Media, publishing and communications
   - o Electronics and electrical engineering
   - o Computer & electronic product manufacturing
   - o Computer software
   - o Internet and e-commerce
   - o Motor vehicles
   - o Other (please specify) _____

2. How many full time equivalent employees does your SBU have?
   - o Less than 100
   - o 100-249
   - o 250-499
   - o 500 – 999
   - o 1,000 – 5,000
   - o More than 5,000

3. What type of end customers does your SBU serve?
   - o Mainly businesses (B2B)
   - o Mainly consumers (B2C)
   - o Both businesses and consumers equally

4. How many marketing employees (full time equivalent) does your SBU have? ___

5. What was your SBU's overall marketing expenditure last financial year? ___

6. What best describes your current function within the SBU?
   - o CMO/ head of marketing
   - o Online marketing/ e-commerce
   - o General marketing
   - o Brand/ product marketing
   - o Advertising/communications
   - o Customer insight/market research
   - o CRM/data/direct marketing
   - o Sales/business development

7. What best describes your current job role within the SBU?
   - o Board level executive/owner
   - o Director/VP
   - o Manager
   - o Executive
   - o Analyst
   - o Consultant

8. How many years have you been…

	Never	Less than 3 years	4 to 5 years	5 to 10 years	More than 10 years
Working in marketing?					
Working in this SBU?					
Using segmentation insight?					

9. Please rate your level of knowledge regarding the following aspects of segmentation.

	Not existent	Very poor	Poor	Moderate	Good	Very good	Excellent
The benefits and principles of customer segmentation							
How segmentation models are used in this SBU							

Part 2: Segmentation models

Note: Any customer classification, either done through managerial intuition/experience, market research, customer database analysis or predictive modelling should be considered as a **segmentation model**. We are interested in all the models your SBU uses, i.e. all the different representations of customer groups in a target market.

10. How do you ensure the quality of your segmentation models? Please rate the extent to which you agree with the following statements, using a scale from 1 to 7, where 1means strongly disagree and 7 means strongly agree.

Before using segmentation models, we ensure that the model ….
   - Fits our business needs
   - Is easy to understand
   - Makes intuitive sense for our business
   - Contains segments that can be reached through communication/ distribution activities
   - Enables us to place individuals into segments
   - Contains measurable segments
   - Contains segments that respond differently to marketing activities
   - Contains segments with different needs or purchasing criteria

11. How does your SBU keep your segmentation models up to date? Please rate the extent to which you agree with the following statements, using a scale from 1 to 7, where 1means strongly disagree and 7 means strongly agree.

We periodically refresh our segmentation models by…
   - Incorporating new customer transaction data
   - Incorporating third-party data (e.g. prospect lists)
   - Incorporating segment tracking questions in our marketing research
   - Estimating how segments have grown or shrunk
   - Re-evaluating our segment structure

12. What type of segments can your SBU identify in your marketplace? Please rate the extent to which you agree with the following statements, using a scale from 1 to 7, where 1means strongly disagree and 7 means strongly agree.

We can identify the segments that are likely to…
- Switch to or from competitors
- Pay more for our products/services
- Make an initial purchase
- Respond to our marketing offer
- Be loyal to our company
- Adopt a newly developed product/service

13. How does your SBU evaluate segment attractiveness in order to choose which ones to target? Please rate the extent to which you agree with the following statements, using a scale from 1 to 7, where 1means strongly disagree and 7 means strongly agree.

We assess each segment on…
- Fit with our competencies
- Ability to fulfil our business goals
- How competitive we are in the segment
- Sales potential
- Growth potential
- Profit potential
- Degree of product/service customisation needed

14. How rich is the information your SBU holds about each of your target segments of CONSUMERS? Please rate the extent to which you agree with the following statements, using a scale from 1 to 7, where 1means strongly disagree and 7 means strongly agree.

For each identified segment, we have rich profiles about…
- Their demographic characteristics
- What drives their purchasing choices
- Their needs and benefits sought
- Their lifestyle and interests
- Their media consumption habits
- Their shopping and purchasing habits
- Their product preferences

15. How rich is the information your SBU holds about each of your target segments of BUSINESSES? Please rate the extent to which you agree with the following statements, using a scale from 1 to 7, where 1means strongly disagree and 7 means strongly agree.

For each identified segment, we have rich profiles about…
- Firmographic characteristics (e.g. size, SIC code, ownership etc)
- What drives their purchasing choices
- The business issues being addressed by the segment (e.g. cash flow, cost cutting, expansion)
- Attitudes to risk and innovation
- Media, exhibition and conference habits
- Their supplier and purchasing habits
- Their product preferences

16. To what extent does your SBU use insight generated by segmentation models for the following STRATEGIC tasks? Please rate each task on a scale from 1 to 7 where 1=not at all and 7=extensively.
    - Updating our go-to-market strategy
    - Making the business case for an investment
    - (Re)defining the target market for our services
    - Assessing our competitive position in the market
    - Updating our internal capabilities to ensure they match our target segments' needs
    - (Re)developing a positioning statement for what our business stands for
    - Developing new product/service concepts

17. To what extent does your SBU use insight generated by segmentation models for the following MANAGERIAL tasks? Please rate each task on a scale from 1 to 7 where 1=not at all and 7=extensively.
    - Setting business objectives for target segments
    - Preparing next year's business plan
    - Rationalising the product portfolio according to the needs of the target segments
    - Redesigning existing products to match the needs of the target segments
    - Allocating marketing resources to segments based on their potential
    - Revising the media budget allocation to ensure it's targeting the right segments
    - Forecasting market demand/ sales potential

18. To what extent does your SBU use insight generated by segmentation models for TAILORING its value propositions to reach targeted segments? Please rate each task on a scale from 1 to 7 where 1=not at all and 7=extensively.
    - The product/service main features
    - The advertising content
    - The pricing tactics
    - The media channels to reach them
    - The distribution channels to reach them
    - The personal selling approach

19. How often does your SBU use insight generated by segmentation models for implementing TARGETED CAMPAIGNS for the following customer management tasks? Please rate each task on a scale from 1 to 7 where 1=not at all and 7=extensively.
    - Develop existing customers through cross-sell/ up-sell
    - Re-activate passive/ lost customers
    - Retain existing customers
    - Manage customer value/profitability

Part 4: Segmentation integration in the organisation

20. To what extent does your SBU perform the following **activities** to integrate the insight from segmentation models in the ORGANISATIONAL STRUCTURE? Please rate each activity on a scale from 1 to 7 where 1=not at all and 7=great extent.
    - Assigning responsibilities to individuals for implementing segment-specific strategies
    - Organising customer facing staff in segment-oriented departments
    - Briefing our marketing agencies to work with our segmentation models
    - Working with our business partners to use our segmentation models
    - Involving cross-functional groups in generating segment targeting strategies

21. To what extent does your SBU perform the following **activities** to ensure that the segmentation models are integrated in PEOPLE'S MINDSET? Please rate each activity on a scale from 1 to 7 where 1=not at all and 7=great extent.
    - Obtaining full support and commitment from top management for implementing segmentation strategies
    - Incentivising people to use the segmentation models in their daily decisions
    - Providing powerful visual representations of the segments' profiles
    - Training everyone who needs to use the segmentation models
    - Using a strong internal marketing programme to explain the objectives and benefits of our segmentation models

22. To what extent does your SBU implement **processes** for the following activities to ensure EFFECTIVE PLANNING of segmentation-based initiatives? Please rate each process on a scale from 1 to 7 where 1=not at all and 7=great extent.
    - Set appropriate budgets for segmentation analysis
    - Dedicate human resources for segmentation analysis
    - Set clear objectives for segmentation analysis
    - Prepare a business case for investing in segmentation activities

23. To what extent does your SBU use the following metrics to evaluate the success of segmentation based initiatives? Please rate each key performance indicator on a scale from 1 to 7 where 1=not at all and 7=great extent.
    - The profit contribution generated by each segment
    - Our penetration of each targeted segment
    - The price premium we can charge for offering a tailored value proposition
    - The response rates to our targeted communication campaigns
    - The percentage of prospect customers who convert to buyers
    - Achievement of our business goals

24. In the last financial year, how well has your SBU performed on the following criteria in respect to established goals?

	Much worse	Fairly worse	Slightly worse	On par	Slightly better	Fairly better	Much better
Customer retention							
Customer acquisition							
Market share							
Growth in sales revenue							
Return on investment							
Gross profit margin							
Net profits							

25. How would you describe the characteristics of your SBU's main INDUSTRY? Please rate your agreement with the following statements.

	Strongly disagree						Strongly agree
Customers' preferences change quite a bit over time							
Customers tend to look for new products / services to satisfy their needs							
New customers tend to have different needs than our existing customers							
The technological sophistication is changing rapidly							
Technological changes provide big opportunities							
Many new product ideas have been made possible through technological breakthroughs							
Competition is cut-throat							
New competitive moves happen almost every day							

26. What growth has your SBU's main industry experienced in the last financial year over the previous financial year?
    o Decreased by more than 10%   o Increased by more than 10%
    o Decreased by 5-10%
    o Decreased by less than 5%
    o Remained stable
    o Increased by up to 5%
    o Increased by 5-10%

27. Please rate your SBU, relative to your major competitors, in terms of its capabilities in the following areas of marketing.

Capability	Much worse	Fairly worse	Slightly worse	On par	Slightly better	Fairly better	Much better
Using pricing to respond quickly to market changes							
Launching new products/services successfully							
Attracting and retaining the best channel partners							
Developing and executing advertising programmes							
Managing our brand(s) image							
Providing effective support to the sales force							
Developing effective marketing strategies							
Allocating marketing resources effectively							
Organising to deliver marketing programs effectively							
Learning about customer needs							
Identifying market trends							

28. What was the total sales revenue of your SBU for the past financial year?
    o Less than £10 million
    o £10- £24.99 million
    o £25 - £49.99 million
    o £50-£99.99 million
    o £100-£500 million
    o More than £500 million

29. How much of your sales revenue comes from the following sources? Please distribute 100% between products and services in proportion to their contribution to your total sales revenue.
    • Products   ___
    • Services   ___
              Total   100

Thank you very much for completing this survey. If you're interested in receiving a copy of the findings, please leave your email address in the box below.
_____

Appendix H: Changes in Dimensionality of Market Segmentation Capability

Dimension	Change	Observations
Research	Changed to analysis	See discussion in text
Anchoring	Part of integration in planning	Under the new segmentation analysis capability conceptualisation, anchoring is not an analytical process but rather an integration process – setting the scope and objectives of the segmentation project in relation to the broader corporate and marketing goals of the firm (Wind, 1978).
Multidimensionality	Expanded as segment profiling	Additional insight from qualitative study about the importance of having vivid segment profiles, which facilitate the execution and integration of segmentation schemes.
Output quality	Expanded as segment qualification	Additional insight from qualitative study about other (practical) qualification criteria that facilitate the organisational integration of segmentation schemes.
Output uniqueness	Implicit in the conceptualisation of segmentation analysis capability	The five processes that reflect the segmentation analysis capability implicitly result in a unique perspective of the marketplace, even if commercial segmentation solutions are used as data sources, because the focus is not to identify the state of demand heterogeneity 'as is', but rather to routinely identify, qualify, profile and evaluate new segments that offer the firm opportunities.
Monitoring	Eliminated	See discussion in text
Segment stability	Renamed as segment monitoring	In the interviews, segment stability emerged as a segment qualification criterion, based on practitioners' inability/ unwillingness to monitor changes in the segment structure. However, given the dynamic nature of most markets and the wide variety of short and long term usages of segmentation schemes, segment monitoring is a valuable process.
Market effectiveness	Expanded as integration in control	The qualitative findings indicate the managers' inability to measure the results of segmentation-based initiatives decreases the firms' likelihood to invest and believe in segmentation projects.
Implementation	Changed terminology to execution	Implementation refers to the whole phenomenon of what happens in practice when firms adopt the market segmentation concept. Execution is one type of implementation (Boejgaard and Ellegaard, 2010), thus it is more specific and action-oriented.
Strategy development	Expanded as strategic execution	The qualitative findings make a stronger link between segmentations schemes and growth, rather than marketing, strategies.

Dimension	Change	Observations
Mix development	Expanded as operational execution	The qualitative findings indicate that segmentation schemes are valuable not only in developing marketing mixes but rather in developing tailored value propositions and taking them to market through various channels of interaction with potential customers.
Marketing management	Expanded as managerial execution	The qualitative findings evidence the importance of product and segment management as managerial executions of segmentation schemes, in addition to the traditional application of marketing planning.
Integration	Not changed	The concept of organisational integration emerged as a strong mechanism of segmentation implementation in the qualitative findings, in line with the literature.
Top management support	Included in integration in culture	The qualitative findings evidenced the role of top marketers as role models and enablers of segmentation integration, having a key role in the cultural changed required by adopting segmentation schemes.
Structure	Not changed	
Culture	Expanded as integration in culture	Additional insight of the cultural change required when adopting segmentation schemes; the powerful implications when segmentation schemes become internal currency for the internal communication and coordination in executing segmentation-based initiatives and providing unity across departments or geographies.
Processes	Changed to integration in planning	The processes referred to in the initial conceptualisation are embedded in the other dimensions of the segmentation integration capability, as they are all organisational processes. On the other hand, the integration in planning is an addition, following the new insight from the qualitative study that an implementation plan facilitates both the other integration processes and execution processes by clarifying the scope of activities and providing the necessary resources and performance guidelines for the segmentation project.

Appendix I: Descriptive characteristics of the firms in the sample

Type of offering	Percentage	Type of target customer	Percentage
Pure services	20%	Consumers	29.3%
Mostly services	8.3%	Businesses	47.8%
Mostly products	34.1%	Both	22.9%
Pure products	24.4%		
Firm size	**Percentage**	**Revenues**	**Percentage**
Less than 250 employees	27.8%	Less than £10 million	9.3%
250-1,000 employees	31.2%	£10-£49.99 million	25.4%
More than 1,000 employees	41.0%	£50-£99.99 million	12.2%
		£100-£500 million	29.8%
		More than £500 million	23.4%
Type of industry	**Percentage**	**Type of industry**	**Percentage**
Financial services	14.6%	Technology	17.6%
Telecommunications and ICT	12.7%	Media/publishing	6.3%
Retail/wholesale trade	11.7%	Household products/appliances	4.9%
Computer software/Internet	11.2%	Textiles, clothing, footwear	2.9%
Travel, tourism, leisure	18%		

Appendix J: Early versus Late Respondents Mean Comparison on Main Variables

Scale scores, unless specified	Yearbook			Reed		
	Early (n=42)	Late (n=42)	Average (n=133)	Early (n=24	Late (n=23)	Average (n=72)
Business performance	4.58	4.74	4.71	5.10	4.88	4.85
Segmentation analysis	3.94	4.05	4.00	4.02	3.78	3.98
Segmentation integration	2.75	3.05	2.92	3.03	2.93	3.03
Segmentation execution	2.99	3.21	3.07	3.03	3.02	3.10
Market growth	4.00	4.38	4.20	5.38	4.70	4.99††
Technical dynamism	4.30	4.58	4.43	4.38	4.65	4.65
Customer dynamism	3.29	3.53	3.41	3.40	3.64	3.58
Competitive intensity	2.10*	2.59*	2.33	2.58	2.70	2.69††
Marketing capabilities	4.69	4.75	4.73	4.44	4.65	4.62
Number of marketing employees[a]	19.38**	42.69**	26.77	19.61	53.10	53.48†
Marketing expenditure[b] (£ millions)	3.83	7.72	5.03	6.79	11.82	9.25†
Sales from Products (%)	56.76	63.29	59.98	52.13	58.04	62.44

** significant differences between early and late respondents within samples at $p<0.05$ *significant differences between early and late respondents within samples at $p<0.10$

†† significant differences between averages from the Yearbook sample vs. Reed sample at $p<0.05$

† significant differences between averages from the Yearbook sample vs. Reed sample at $p<0.05$

[a] due to missing data, there are data only for 42 early respondents and 39 late respondents for the Yearbook and 23 (early) and 21 (late) for Reed

[b] due to missing data, there are data only for 41 early respondents and 36 late respondents for the Yearbook and 21 (early) and 21 (late) for Reed

Appendix K: Assessment of normality for main constructs

Segmentation integration capability

Variable	min	max	skew	c.r.	kurtosis	c.r.
Infra_organise	1.000	7.000	-.107	-.615	-1.229	-3.547
Infra_assign	1.000	7.000	-.538	-3.107	-.782	-2.257
SMsatisfaction	1.000	7.000	-.684	-3.947	-.274	-.790
SMpenetration	1.000	7.000	-.690	-3.983	-.287	-.828
SMprofit	1.000	7.000	-.628	-3.625	-.572	-1.651
Culture_training	1.000	7.000	-.186	-1.076	-1.039	-2.999
Culture_involve	1.000	7.000	-.222	-1.281	-1.010	-2.914
Process_budgets	1.000	7.000	-.031	-.181	-1.087	-3.138
Process_objectives	1.000	7.000	-.372	-2.147	-.803	-2.317
Process_HR	1.000	7.000	-.012	-.068	-1.060	-3.060
Culture_internal	1.000	7.000	-.127	-.736	-1.178	-3.400
Culture_visuals	1.000	7.000	-.190	-1.095	-1.157	-3.339
Multivariate					46.357	17.883

Segmentation analysis capability

Variable	min	max	skew	c.r.	kurtosis	c.r.
SmEstimation	1.000	7.000	-1.009	-5.898	.481	1.406
SmReeval	1.000	7.000	-1.017	-5.944	.771	2.255
SqAccesible	1.000	7.000	-1.494	-8.731	2.993	8.748
SeProfit	1.000	7.000	-1.839	-10.747	3.751	10.964
SeGrowth	1.000	7.000	-1.669	-9.757	3.596	10.510
SpNeeds	1.000	7.000	-.842	-4.924	.111	.323
SpLifestyle	1.000	7.000	-.652	-3.813	-.439	-1.284
SpPurchasing	1.000	7.000	-.979	-5.725	.435	1.270
SeSales	1.000	7.000	-1.928	-11.269	4.989	14.582
SeCompetitive	1.000	7.000	-1.173	-6.858	.930	2.718
Sefit	1.000	7.000	-1.338	-7.823	1.644	4.805
SqMeasurable	1.000	7.000	-1.678	-9.807	3.914	11.439
SqIntuitive	1.000	7.000	-1.517	-8.869	3.120	9.120
SqFit	1.000	7.000	-1.708	-9.981	3.555	10.389
SiAdopt	1.000	7.000	-1.222	-7.144	1.178	3.444
SiPaymore	1.000	7.000	-1.015	-5.933	.520	1.521
SiSwitchers	1.000	7.000	-.744	-4.351	-.176	-.514
Multivariate					116.246	32.742

Segmentation execution capability

Variable	min	max	skew	c.r.	kurtosis	c.r.
MEPlan	1.000	7.000	-1.040	-6.093	.780	2.286
StrateRedelop	1.000	7.000	-.524	-3.068	-.440	-1.288
CRMmanage	1.000	7.000	-.572	-3.353	-.441	-1.293
StrateAssess	1.000	7.000	-.777	-4.553	-.123	-.362
StrateUpdate_strategy	1.000	7.000	-.699	-4.093	-.022	-.064
StrateDevelop_NPD	1.000	7.000	-.871	-5.104	.239	.700
CRMreactive	1.000	7.000	-.458	-2.682	-.588	-1.724
CRMretain	1.000	7.000	-.977	-5.724	.370	1.083
CRMdevelop	1.000	7.000	-.804	-4.712	.221	.648
TVPmedia	1.000	7.000	-.608	-3.565	-.531	-1.555
TVPdistribution	1.000	7.000	-.669	-3.920	-.278	-.816
TVP_comms	1.000	7.000	-.456	-2.669	-.180	-.529
MEForecast	1.000	7.000	-.794	-4.652	-.103	-.303
MERationalise	1.000	7.000	-.645	-3.781	-.126	-.369
MEObjectives	1.000	7.000	-.995	-5.831	.380	1.114
StrateRedefine	1.000	7.000	-1.162	-6.806	1.167	3.419
Multivariate					135.515	40.521

Business performance and marketing capabilities

Variable	min	max	skew	c.r.	kurtosis	c.r.
Grossprofitmargin	1.000	7.000	-.330	-1.904	-.350	-1.011
Netprofits	1.000	7.000	-.448	-2.586	-.275	-.794
Salesgrowth	1.000	7.000	-.479	-2.767	-.208	-.600
Marketshare	1.000	7.000	-.223	-1.289	-.168	-.485
Customerretention	1.000	7.000	-.217	-1.253	.036	.104
MCchannels	1.000	7.000	-.009	-.049	-.230	-.664
MCneeds	1.000	7.000	-.249	-1.436	-.393	-1.134
MCsupportsales	1.000	7.000	-.314	-1.812	-.042	-.121
MCtrends	1.000	7.000	-.160	-.923	-.207	-.599
MCbrand	1.000	7.000	-.460	-2.657	-.264	-.764
MCorganising	1.000	7.000	.160	.923	-.375	-1.083
MCstrategy	1.000	7.000	-.364	-2.102	-.336	-.970
MCNPD	2.000	7.000	-.028	-.160	-.819	-2.365
Multivariate					30.318	10.856

Segmentation capabilities – second order model

Variable	min	max	skew	c.r.	kurtosis	c.r.
Infrastructure	.759	5.266	-.217	-1.267	-.752	-2.197
Qualification	.871	6.097	-1.743	-10.186	4.938	14.432
Profiling	.645	4.515	-.827	-4.834	.258	.754
Identification	.770	5.390	-1.139	-6.660	1.965	5.742
Financial evaluation	.742	5.194	-1.970	-11.517	6.076	17.759
Monitoring	.458	3.206	-1.092	-6.382	1.866	5.454
Evaluation	.780	5.460	-1.219	-7.123	1.412	4.126
CRM	.707	4.949	-.907	-5.301	.440	1.286
Operational	.695	4.865	-.666	-3.893	-.169	-.494
Managerial	.704	4.928	-1.094	-6.397	1.235	3.610
Strategic	.747	5.229	-.901	-5.264	1.088	3.179
Metrics	.746	5.222	-.704	-4.115	-.128	-.374
Culture	.839	5.873	-.165	-.965	-.910	-2.661
Process	.773	5.411	-.103	-.604	-.926	-2.707
Multivariate					77.340	26.159

Appendix L: Scree tests for exploratory factor analysis of segmentation capabilities
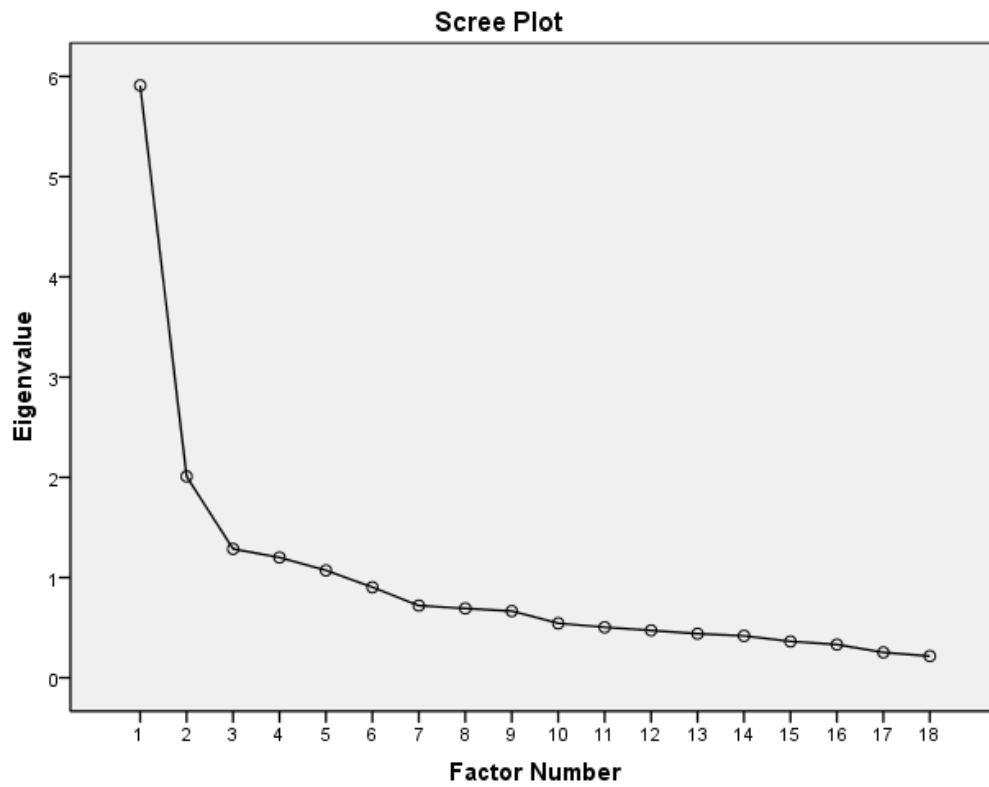
Scree test segmentation integration capability
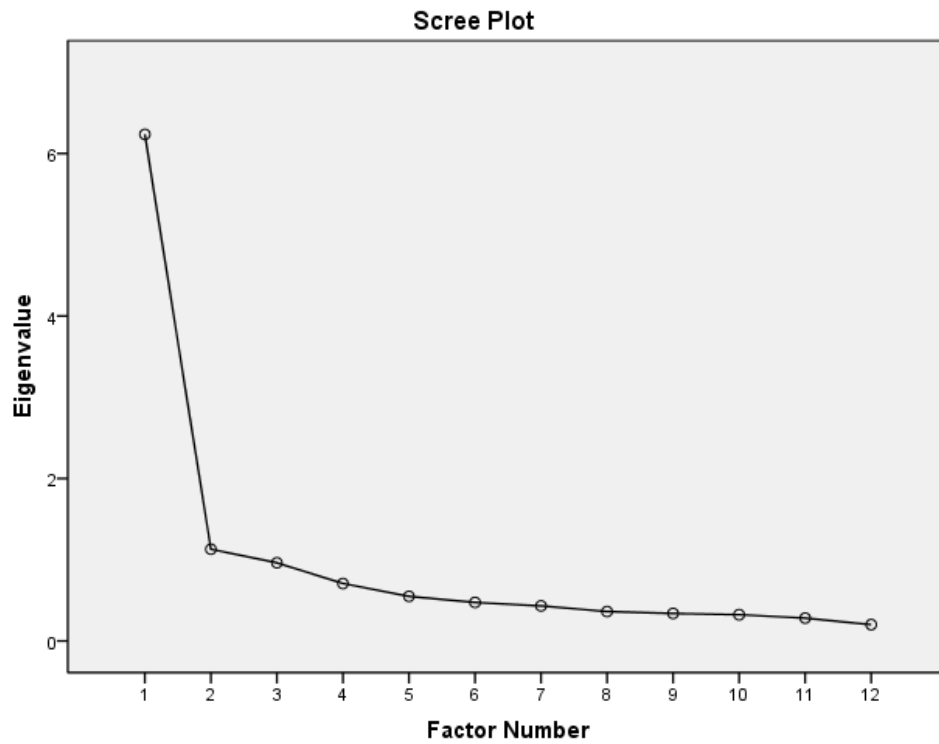
Segmentation execution capability

Scree Plot

Segmentation analysis capability

Scree Plot
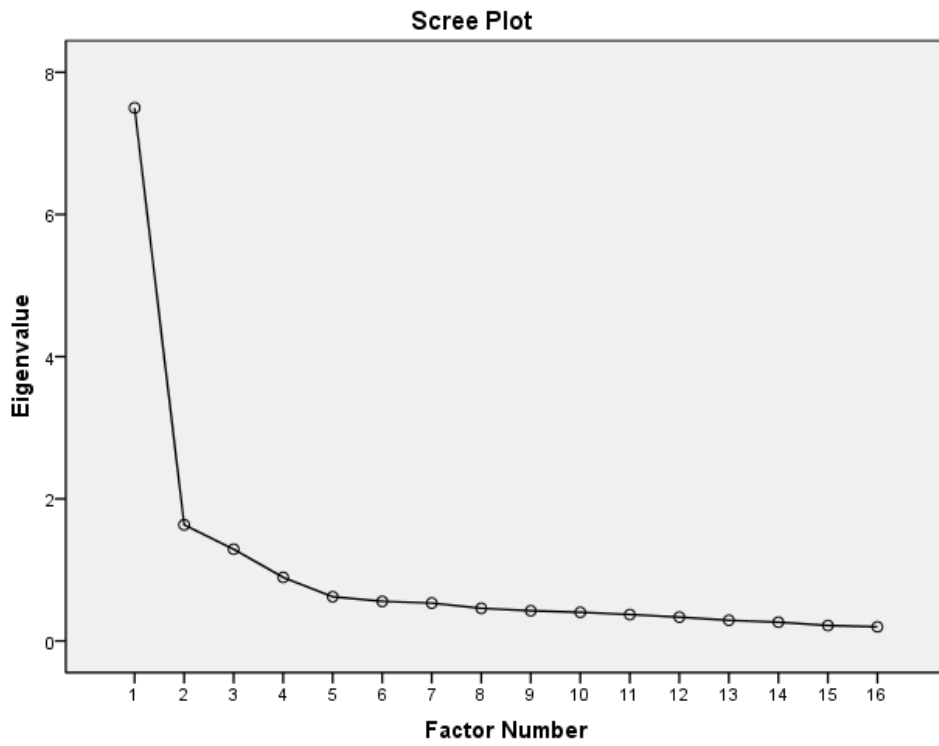
Appendix M: Additional moderated hierarchical regression analyses on the moderating effect of marketing resources on the relationship between segmentation integration and generic marketing capabilities

Marketing expenditure

Model		Unstandardised Coefficients		Standardised Coefficients		Model statistics
		B	Std. Error	Beta	t	
1	(Constant)	4.695	.058		81.537	R^2=.175
	Segmentation integration (SI)	.352	.057	.417***	6.209	$F_{(2, 183)}$=19.43, p<0.01
	Marketing expenditure (ME)	.012	.031	.027	.404	
2	(Constant)	4.699	.056		83.193	ΔR^2=.036,
	SI	.343	.056	.406***	6.158	$\Delta F_{(1,182)}$=8.30,
	ME	.019	.030	.041	.618	p<0.01
	SIxME	-.085	.030	-.190***	-2.882	

*** significant at p<0.01

Number of marketing employees

Model		Unstandardised Coefficients		Standardised Coefficients		Model statistics
		B	Std. Error	Beta	t	
1	(Constant)	4.703	.056		84.552	R^2=.184
	Segmentation integration (SI)	.364	.056	.433***	6.544	$F_{(2, 193)}$=21.76, p<0.01
	Number of marketing employees (FTE)	-.017	.041	-.028	-.425	
2	(Constant)	4.722	.056		84.142	ΔR^2=.015,
	SI	.352	.056	.419	6.319	$\Delta F_{(1,192)}$=3.67,
	FTE	-.007	.041	-.011	-.161	p=0.06
	SIxFTE	-.071	.037	-.125*	-1.917	

* significant at p<.10