ENTREPRENEURIAL ORIENTATION AND MARKETING CAPABILITIES: A STUDY ON THE PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN THE UNITED KINGDOM

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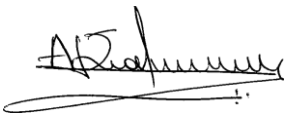
Signed: 

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Abstract

Organisational performance has been the focal point of research for many years. Throughout the development of business studies, marketing has been suggested to play a key role in improving business performance. However, previous studies are inconclusive about the impact of specific organisational phenomena on company's performance. Moreover, some complexities should be considered, like the interrelationships between orientations, marketing capabilities, and competitive positioning.

Building upon the resource-based view of the firm, this study employed a survey to investigate the relationships among entrepreneurial orientation, marketing capabilities (specifically marker sensing capabilities, customer linking capabilities and adaptive marketing capabilities), competitive positioning and organisational performance. A scale was developed regarding a new set of marketing capabilities, namely adaptive marketing capabilities, while 221 completed questionnaires from small and medium UK manufacturing companies were utilised. Further information from secondary sources was collected to complement questionnaire responses regarding objective performance indicators. Eventually the theoretical model was estimated using structural equation modelling.

By explicating the concepts of marketing capabilities and focusing on their explorative and exploitative nature, the study contributes to the theories which support the important role of those outside-in capabilities. Another contribution is the suggestion that an entrepreneurial orientation will create an environment for the development of such capabilities. Out of the three marketing capabilities studied, adaptive marketing capabilities are found to be most important, considering that they affect most performance indicators directly, and indirectly by mediating other relationships. In this vein, another contribution is the development of a construct to measure them. Meanwhile, analysing the moderating role of the external environment on the relationships between entrepreneurial orientation and performance, and between marketing capabilities and performance, the study contributes to the literature that supports contingency approaches. Finally, the present study employs different

performance indicators for assessing marketing functions, which provide more clarity about their role and effects.

Chapter 1 Introduction

The following chapter describes the important role of marketing capabilities in organisational performance. It first starts with a brief theoretical background, where the main concepts are introduced, and the research gap is identified. Then the aim, and objectives of the current study are presented, summarising main theoretical contributions. Subsequently, the research framework and methodology are also discussed. Finally, the chapter closes with an outline of the thesis, and a brief description of each of its parts.

1.1 Theoretical background

One of the key concepts in the strategy literature (Zhou *et al.*, 2008), and one of the main pillars in the marketing discipline, is the creation and maintenance of competitive advantage (Day, 1994) which will lead to higher organisational performance. Throughout the years scholars and practitioners have been trying to unfold the reasons as to why some companies perform better than others. Two different theories have been the most influential in examining those factors: the *structure-conduct-performance* paradigm and the *resource-based view of the firm* (subsequently adapted to include capabilities).

The ability of a firm to find or create and exploit market imperfections that reduce competition was considered to be the main reason explaining the differences in organisational performance among different companies. As such, it was itself a competitive advantage according to the *structure-conduct-performance paradigm* (Porter, 1991). The concept of *structure* incorporates all those variables that affect the behaviour of buyers and sellers. This behaviour is then referred as *conduct*. Eventually, the *performance* is measured by comparing the organisational results of companies operating within the same industry. Porter (1985) suggests that the primary drivers of competitive advantage are the firm's strategic positioning and the industry. Nevertheless, considering that organisational resources are the basis of strategic positioning, (Rumelt *et al.*, 1991), those resources should be ultimately considered to be the source of competitive advantage.

In this vein, for almost the past 30 years, the *resource-based view of the firm*, which focuses on firm-specific resources rather than market characteristics as the foundation of competitive advantage (Jaakkola *et al.*, 2010), has gained increased ground in the literature exploring factors affecting organisational performance. The resource-based approach to strategy relates organisation's unique resources and capabilities to its competitive positioning. Therefore, there is a shift in the focus from industry to firm specific effects on organisational performance (Spanos and Lioukas, 2001). This heterogeneity of resources and capabilities can explain performance differences between close competitors (Hoopes *et al.*, 2003; Peteraf and Bergen, 2003).

Nevertheless, although resources are important and significant, they are not sufficient for superior performance (Morgan *et al.*, 2002) as they can be valued and traded. In contrast, capabilities, which are activity chains or processes, cannot be obtained but they can be developed, or transferred as parts of an entire organisational unit in which they are embedded (Makadok, 2001; DeSarbo *et al.*, 2007). As such, they are valuable on their own but also because they transform resources (Hoopes *et al.*, 2003). The latter explains why capabilities have been the focal point of the studies which investigate the topic of organisational performance (e.g. Newbert, 2007; Liao *et al.*, 2009; Merrilees *et al.*, 2011). Previous research has examined the role of either zero-level capabilities (or ordinary capabilities) which allow a firm to 'make a living' in the short term (Winter, 2003) or higher-level capabilities that operate to change ordinary capabilities and in this vein are much more complicated and eventually valuable (Zahra *et al.*, 2006) as they consist of multiple separate capabilities that are combined, transformed, and reconfigured (Lambe *et al.*, 2002).

Meanwhile, evidence from the extant literature suggests that organisational orientations have a strategic implication for the deployment of its resources (Liu *et al.*, 2004) and therefore, they can be considered to influence different sets of capabilities (Matsuno *et al.*, 2002). In this vein, organisational orientations play a significant role in creating a fruitful environment for the development of specific capabilities, in particular – entrepreneurial orientation which is often placed at the core of market-driven strategies (e.g. Miles and Arnold, 1991; Hult and Ketchen, 2001). Orientations are the '*guiding principles*' affecting strategic activities, and they represent elements of organisational culture that guide interactions with customers and competitors

(Noble *et al.*, 2002), and in this vein, they shape the broad outlines of a strategy (Slater *et al.*, 2006). With this in mind, the present study will also incorporate entrepreneurial orientation aiming to reveal its role in the development of specific marketing capabilities. Considering that capabilities cannot be obtained, it is important to understand the exact conditions which will create an environment that can support their development.

Meanwhile, although the effect of the entrepreneurial orientation on firm's performance has been widely researched, the results are not unanimous. There are numerous studies suggesting that companies that incorporate an entrepreneurial orientation enjoy a better performance (e.g. Wiklund and Shepherd, 2005; Rauch *et al.*, 2009), others found no such evidence (Soininen *et al.*, 2012). Therefore, the empirical findings of the entrepreneurship-performance link appear to be inconclusive and researchers should identify the reasons of the inconsistency (Hughes and Morgan, 2007). One reason could be that its effect on performance might be mediated by specific internal factors (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003).

Moreover, capabilities apart from affecting performance, are also drivers of competitive advantage (Zou *et al.*, 2003) as they are central in formulating a company's strategy (Grant, 1991). They are important predictors of its competitive positioning, in terms of marketing differentiation, innovation differentiation and cost leadership (Spanos and Lioukas, 2001) which in turn, might have an effect on performance (e.g. Tan and Sousa, 2015).

Additionally, mixed results are revealed as far as performance is concerned, mainly explained by methodological and/or contextual reasons: the type of performance indicators that are examined (e.g. market, financial), the way performance has been measured (e.g. objectively, subjectively), and the wider context of the study (industry specific). For instance a meta-analysis from Ellis (2006) indicates that subjective performance indicators return stronger effects than objective performance data. The present study employs a wide range of marketing related performance outcomes (Katsikeas *et al.*, 2016) both subjective and objective: objective profitability (return on assets (ROA), gross profits and net profit margin), objective market performance

(turnover), and subjective customer performance (related to satisfaction, loyalty and gaining new customers).

Profitability is an essential criterion of businesses and the selection of ROA is vital as it measures important aspects of performance (Kumar *et al.*, 1998), and it is commonly used to set marketing-specific objectives and evaluate marketing performance (Katsikeas *et al.*, 2016). The same rationale is elaborated for gross profits and net profit margin (e.g. Pelham, 1999; Agarwal *et al.*, 2003; Calantone *et al.*, 2003), which are also employed. Moreover, the research is focused on market performance in terms of turnover (Katsikeas *et al.*, 2016), aiming at identifying whether or not the aforementioned factors have an effect on revenues. The final measurement of marketing related performance is customer performance which demonstrates the effectiveness of marketing activities to attract and retain customers (Hughes and Morgan, 2007), being one of the closest and more distinct measures of marketing actions (Katsikeas *et al.*, 2016).

Additionally, other factors can potentially moderate the relationship between entrepreneurial orientation and performance, arising mainly from the external environment (Lumpkin and Dess, 1996). As such, the effect of entrepreneurial orientation on performance may eventually be dependent on the environment (Wiklund and Shepherd, 2005). The same can be said for the relationship between marketing capabilities and performance. For example, market turbulence has been found to affect the relationship between market sensing capabilities and overall firm performance (Olavarrieta and Friedmann, 2008), while environmental dynamism has been found to have a positive moderating effect on the relationship between customer linking capabilities and performance (Rapp *et al.*, 2010). In general, literature has focused on examining the role of dynamism and hostility (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2005), however, the role of munificence and complexity has received less attention or it has revealed mixed results.

1.2 Research Gaps

The present research is focusing on marketing capabilities and specifically higher-level marketing capabilities. Although their role in affecting organisational performance has been extensively investigated in the past, still much remains unknown about their role, especially considering that earlier studies have not provided unequivocal results. Such capabilities (i.e. marketing) have an outside-in approach which allows companies to step outside the narrow organisational borders, adopting a stance where everything is viewed through the customer's eyes (Day and Moorman, 2010). They are based on knowledge that exists outside the firm and is developed from customers, suppliers and competitors, and the market as a whole (Saeed *et al.*, 2015). Businesses with high levels of marketing capabilities will have a competitive advantage by anticipating market requirements before their competitors as they make all decisions by watching the market and opportunities that this market might have (Day and Moorman, 2010).

Previous studies exploring the role of higher-level marketing capabilities in affecting organisational performance, have focused on the role of such capabilities with an exploitative function, like market sensing and customer linking capabilities, leaving other marketing capabilities and specifically those with an explorative function insufficiently investigated and leading to a theoretical gap. The concepts of exploration and exploitation will be discussed in the next chapter, but in principle exploitation refers to the development of new knowledge about the firm's *existing* markets, products, technologies and skills. Such marketing capabilities refine and extend existing skills and capabilities, aiming at improving operational efficiency through knowledge which is closely related to a company's current organisational routines (March, 1991; Lisboa *et al.*, 2011; Vorhies *et al.*, 2011). Meanwhile exploration refers to the development of new knowledge that goes *beyond* what is currently known about markets, products, technologies and skills (March, 1991; Vorhies *et al.*, 2011).

Nevertheless, exploitative marketing capabilities might have already lost their importance considering that technological advances, the internet and social media have changed the way that customers behave and how companies operate, while offering new tools that can be used to implement a marketing strategy (Rust and

Espinoza, 2006; Day, 2011). As such, the maintenance of superior performance should depend on the firm's ability to deploy resources and capabilities from one business environment to another and to develop new knowledge that goes beyond what is currently known and eventually expand into new product markets (Vorhies *et al.*, 2011). In this vein, organisations should be adaptive to the changes of the external environment (Day, 2011; Day, 2014) and able to explore and capture consumer activities and extract hidden insights (Erevelles *et al.*, 2016), while identifying and capitalising on emerging market opportunities (Hooley *et al.*, 2017). Companies with such competencies have high levels of what Day (2011) called adaptive marketing capabilities, which have an explorative function (as opposed to exploitation).

However, there is still gap in understanding what adaptive marketing capabilities are, how they are measured, their antecedents, and how they affect organisational performance. In this vein, although the concept has been conceptually introduced, its empirical validation is still in very early stages. Moreover, an investigation of how both exploitative and adaptive marketing capabilities affect organisational performance is still missing, as to the best of our knowledge, up until today no other study has utilised concurrently those two types. A study that investigates their simultaneous effect on performance, will improve the knowledge about their role and effect, as people will be able to make direct comparisons between them; for instance the effect of exploitative marketing capabilities on performance might change or vanish once adaptive marketing capabilities are taken into account and in this vein, and this might also explain the reason why previous studies have demonstrated mixed results.

It also appears that depending on the context, the significance of the relationships varies. For example there is a gap in the understanding about the effect of different higher-order marketing capabilities for small and medium enterprises (SMEs), considering that many studies have been dealing with lower-order marketing capabilities (Merrilees *et al.*, 2011). The majority of previous research investigating the strategic behaviours and firm performance has targeted large firms in large economies (Parnell, 2013), creating a gap in terms of understanding SMEs' behaviour. Smaller firms might be different to large organisations in terms of capabilities development. Because they may not have access to as many resources as larger firms,

their ability to transform their resources (through the capabilities) could be very valuable and as such come out as a key competitive advantage (Raju *et al.*, 2011). Therefore, to distinguish the reasons for performance differences among SMEs, it is required to identify and analyse different capabilities (Floyd and Wooldridge, 1999; Jerez-Gómez *et al.*, 2005). As it was mentioned earlier, this is the first study that concurrently evaluates the effect of exploitative and explorative marketing capabilities on performance, and it is also the first to do it in an SME context.

This theoretical gap is especially acute, considering that explorative capabilities might be even more important for modern organisations and also more valuable for SMEs. By investigating the effect that adaptive marketing capabilities have on organisational performance, in conjunction with exploitative marketing capabilities, marketing scholars will have a better understanding as to which capabilities can be considered to be a source of competitive advantage. Moreover, the role of adaptive marketing capabilities in developing new knowledge that goes beyond what is currently known about markets, products, technologies and skills (March, 1991; Vorhies *et al.*, 2011) might be considered to be of paramount importance in the current business environment. In this vein, managers will benefit as they will be able to identify which specific competencies, they need to develop in order to improve organisational performance. Modern businesses usually rely on outsourcing several marketing activities like customer relationship management (Kalaignanam and Varadarajan, 2012), they rely on different members of the marketing channel to deliver value, while the space of social media which has been led by new developments in technological advancements (Trainor *et al.*, 2014) has created additional challenges in terms of their relationship with the customers. As such, it is vital for them to know which specific competencies need to be developed that will help them to perform those activities in a more effective way.

The study further extends the resource-based view, where its novelty is manifested in the investigation of the simultaneous effect of explorative and exploitative adaptive marketing capabilities on specific aspects of small and medium firms' performance in conjunction with other organisational and environmental factors. It builds on the sequence: orientation-capabilities-positioning-performance which has been adoped in the literature quite recently (Murray *et al.*, 2011). Capabilities are in the centre of the

focus, being guided by entrepreneurial orientation and further predicting competitive positioning of a firm, which in its turn defines organisational performance.

1.3 Research aim and objectives

The main research aim is to further our understanding about the role of both explorative and exploitative marketing capabilities in organisational performance of small and medium enterprises.

To serve this aim, this thesis is set to meet the following objectives:

1. create appropriate means for measuring the explorative nature of marketing capabilities;
2. examine the relationship between entrepreneurial orientation and different marketing capabilities;
3. investigate the relationship between different marketing capabilities and performance;
4. examine the role of the environmental conditions in affecting the relationships between entrepreneurial orientation and performance, and between different marketing capabilities and performance.

The present study aims to contribute to the marketing discipline in the following ways. First investigating the concepts of exploitative and explorative marketing capabilities will improve knowledge and understanding about them: what they are, how they work and why they are important. In this vein, the research aims to contribute to the SME literature as well, considering that the role of capabilities for such companies is even more important (due to them having access to less resources). The second contribution of the research is the empirical validation of the construct that captures the concept of explorative capabilities (i.e. adaptive marketing capabilities). Moreover, this is the first study to incorporate both exploitative and explorative capabilities in the same model, test their effect simultaneously, and relate them to certain aspects of organisational behaviour and performance, constituting the third contribution. To the best of our knowledge, up until today no other study has utilised concurrently the two types of capabilities (exploitative and explorative). The exact conditions under which marketing capabilities will flourish, still remain unclear. As a result, the fourth contribution of the research is the incorporation of entrepreneurial orientation as an antecedent to specific marketing capabilities.

Meanwhile the exact mechanisms under which entrepreneurial orientation and marketing capabilities affect organisational performance remain vague, as past research has revealed mixed results. To resolve this, mediating mechanisms, capturing the direct and indirect effects that the aforementioned notions have on organisational performance, are proposed, leading to the fifth contribution. By examining the role of the external environment through moderating effects on the relationships between entrepreneurial orientation and performance, and between marketing capabilities and performance, the findings contribute to the literature that supports contingency approaches (sixth contribution). The seventh and final contribution of the present study is related to utilising different performance indicators for assessing marketing functions, improving our understanding of which specifics aspects of performance can be affected by certain organisational elements.

1.4 Research framework and methodology

The present study adopts a realist approach which will allow generalisations and identify causal relationships between organisational phenomena within a value-free framework. To provide data which are necessary for hypotheses testing, an empirical study was designed and completed. To meet the objectives, and deliver the contributions, a research framework was developed, and pertinent hypotheses were constructed based on the literature review. The theoretical framework of the study includes: entrepreneurial orientation, marketing capabilities (i.e. specifically customer linking, market sensing and adaptive marketing capabilities), and finally the two concepts of competitive positioning (i.e. cost leadership and differentiation), while the role of the external environment is also examined in terms of its munificence and complexity.

The sampling frame for this study was drawn from the FAME database. The population under the study consisted of small and medium sized enterprises in the secondary sector in the UK. Small and medium sized companies are important for the economic development (Karpak and Topcu, 2010), while more research is needed in order to identify the fundamental strategic characteristics which affect their growth and profitability (Soininen *et al.*, 2012). The services sector is dominant in the UK economy, however, the secondary sector is equally important as, it is responsible for 10% of the gross value added, while in 2014 it accounted for 44% of all exports that the UK performed (Rhodes, 2015).

The data collection was conducted through an analytical questionnaire-based survey which can be used to describe phenomena and investigate relationships. Overall, 221 questionnaires were used (a response rate of almost 40%), while the method of structural equation modelling was employed to examine the significance, and the strength of the relationships between the variables under investigation. The majority of the constructs were measured by using established scales, apart from the one of adaptive marketing capabilities, for which a new scale was developed. Additionally, secondary data were gathered by accessing companies' financial information (i.e. ROA, turnover, net profit margin, gross profits) in FAME database in order to measure organisational performance objectively, and to define the number of employees.

1.5 Structure of the thesis

The remaining of the thesis is structured as follows:

The second chapter of the study is devoted to reviewing the extant literature related to organisational performance. In particular, the theories of structure-conduct-performance and the resource-based view of the firm are scrutinised to explain differences among firms in terms of organisational performance. Then the important role of marketing capabilities is highlighted along with the notions of entrepreneurial orientation and competitive positioning. Finally, the chapter concludes with describing the role of environmental munificence and complexity.

In chapter 3 of the thesis the model development takes place. The different concepts that are presented in chapter 2 are converged and brought together, setting the ground for the hypotheses development by drawing evidence from the relevant literature.

In chapter 4 the research methodology is presented. Specifically, the research paradigm and research design are followed by the research method, whereas particular focus is given to the research instrument and its development. Moreover, tests for non-response bias (early vs late respondents, respondent and non-respondents) and common method bias are also performed, indicating that such problems are not present.

The beginning of chapter 5 assesses the quality of the data in terms of their reliability and validity. The remainder of the chapter is devoted to presenting the results of the structural models, as well as the outcomes from the tests that were conducted to investigate the mediating and moderating effects.

In chapter 6 the results of the research are discussed. While evidence is found to support some of the hypotheses, few turned out to be rejected. Therefore, this chapter also emphasises the results that were not aligned with the developed hypotheses. As such, potential reasons for these outcomes are proposed.

Finally, chapter 7 presents the theoretical and managerial implications of the study along with some limitations and recommendations as to how future research can elaborate further on the research findings.

Chapter 2 Literature Review

The following chapter will provide a review of the relevant literature, aiming to provide an understanding of the previous research and the resulting constructs that are known so far to impact the market performance and profitability of organisations. The chapter will focus on presenting and discussing the prevailing theories that explain performance discrepancies among companies. In this vein, the important role that resources and capabilities play as key drivers of organisational performance will be elaborated on, focusing on the unique function of capabilities as processes which transform organisational resources. A classification of capabilities will be carried out according the purpose that they serve (i.e. exploiting current resources or exploring the development/deployment of new ones), and the focus that they have (internal vs external).

Meanwhile, it will be justified why there is a need to focus on those capabilities that have an outside-in orientation. The presence of such processes would allow firms to connect better and stronger with the market (e.g. customers, competitors, suppliers) resulting in improved market performance and profitability. Having an entrepreneurial mindset will favour the presence of such capabilities, and consequently the chapter will continue by drawing on the entrepreneurship literature, in particular regarding entrepreneurial orientation.

Next, the chapter will elaborate on the two fundamental approaches that have been suggested regarding the competitive positioning of the firm and its relation to the capabilities' theory: cost leadership and differentiation. Finally, the chapter will discuss the role of the external environmental, under the prism of contingency theory, and with a focus on two specific aspects: environmental munificence and environmental complexity.

2.1 Performance variation among firms

For many years scholars, using multiple perspectives, have been trying to identify the basis for competitive advantage and, consequently, the reasons for performance discrepancies among companies (Helfat and Peteraf, 2009). As a result, two main theories have been in the focus of the literature: structure-conduct-performance and the resource-based view of the firm.

2.1.1 Structure – conduct – performance theory

The structure-conduct-performance has been one of the two most influential theories for most than thirty years. It has its roots in industrial organisation theory (1959), and it implies that differences in organisational performance are the result of the degree of competition and the structural characteristics of the marketplaces (Morgan, 2012). Finding and operating in a market where competition is low, and having a competitive advantage there, will result in a strong organisational performance (Porter, 1985). In other words, the structure of a market (e.g. the number and size of the competitors) determines how companies behave (conduct), while this behaviour will determine the performance.

Therefore, the sources of competitive advantage are based on the position of a company in an industry and its strategic group (Gammeltoft *et al.*, 2012). The strategic groups concept, supports that firms within the same industry can be classified based on certain characteristics such as their strategic orientation and their actions (Baker and Cullen, 1993). Meanwhile, the external environmental characteristics do not have any significant influence on differences in the performance among firms belonging in the same strategic group. These groups are very stable since they reflect strategic choices that are long-term, costly and difficult to change (McGee and Thomas, 1986), and for that reason companies are unable to move rapidly from one strategic group to another. In a similar way, it is expected to find significant performance differences across different groups.

Porter (1980) suggests that firms should first analyse their competitive environment, then formulate their competitive strategy, and afterwards acquire the resources to implement these strategies. This is an '*outside*-in' perspective regarding the

competitive strategy (Porter, 1980; Porter, 1985) according to which a company aims to adapt its activities, and therefore its positioning (Porter, 1991) to the industry environment. Positioning decisions try to match market requirements and company abilities to serve them (Hooley *et al.*, 1998).

However, a competitive positioning within the industry is based on distinctive organisational resources (Rumelt *et al.*, 1991), and when it comes to strategy formulation, the central consideration should be around the resources of a firm which are the main determinants of a firm's identity (Grant, 1991). This can explain why there was a shift in the focus of the research regarding the sources of competitive advantage from industry to firm specific effects (Spanos and Lioukas, 2001).

As such, over the past 15 years the structure-conduct-performance approach has been challenged by the resource-based view of the firm, which considers firm-specific resources rather than market characteristics as the foundation of competitive advantage (Jaakkola *et al.*, 2010). Being positioned against the structure-conduct-performance approach, the resource-based view of the firm focuses on internal sources of competitive advantage.

2.1.2 Resource-based view of the firm

The resource-based view was developed based on the economics and strategy literature (Hooley *et al.*, 2005). Although the emergence of the theory of organisational resources took place in the late 50's (Penrose, 1995), it was Wernerfelt (1984) who linked them with the notion of competitive advantage. The theory suggests that the basis of competitive advantage (and therefore performance) is not the industry (i.e. the 'structure' element of the structure-conduct-performance approach) but the firm's resources. As a result, it contributes to the understanding of the conditions under which resources, capabilities, and environment enable firms to achieve an improved performance (Boso *et al.*, 2013b). A resource-based approach to strategy (named SPP: sources-position-performance outcome) is indeed the most appropriate one to explain the source of sustainable competitive advantage: a firm's unique resources will determine its competitive positioning.

One of the principles of the resource-based view is the heterogeneity/idiosyncrasy of such resources among organisations (Helfat and Peteraf, 2003). This heterogeneity is used to explain the enduring and systematic performance differences between fairly close competitors (Hoopes *et al.*, 2003; Peteraf and Bergen, 2003), as for some firms the same set of resources generates more value than for others, or has no other use outside a particular firm (Peteraf, 1993). Therefore, the resources which enhance value creation will generate economic rents (Peteraf and Barney, 2003).

However, strategic resources have potential value only if they are aligned with other important organisational elements (Hult *et al.*, 2005). Contrary to the industry-based view of Porter, the resource-based view of the firm suggests that organisational factors are responsible for the creation of sustainable competitive advantage. Since strategy formation is based on available resources, these resources can be valuable as they are driving the choice of strategy (Spanos and Lioukas, 2001).

Barney (1991) describes resources (and capabilities which will be explained later in section 2.2) as bundles of tangible and intangible assets, which include a firm's management skills, organisational processes and routines. This theory highlights their significance as they are *'...the tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment(s)*' (Hunt, 1995, p. 318). The competitive positioning of each company should be built on the identification of key resources that must be valuable, rare, inimitable and non-substitutable. However, out of the four aforementioned characteristics only value and inimitability are ultimately important; rareness is important provided a resource is valuable and exists only if it is inimitable (Hoopes *et al.*, 2003). The resource-based view of the firm implies that resources are imperfectly mobile - a characteristic that enhances their inimitability (Dierickx *et al.*, 1989; Collis, 1991; Peteraf, 1993).

Nevertheless, according to the neoclassical economic theory, resources are factors of production like land, labour and capital (Hunt, 1995). Hence, the resource-based view of the firm differs from neoclassical theory (Hunt, 1995), in the sense that it views the firm as a combiner of heterogeneous and imperfectly mobile resources. Although these resources may be individually necessary they are not sufficient for a sustainable

competitive advantage (Barney, 1991). Easily acquired or imitated resources offer at best only a temporary basis for sustainable competitive advantage. Resources that can be purchased do not provide the basis of sustainable competitive advantage since they are tradable in the market (Dierickx *et al.*, 1989). Therefore, business resources should be acquired and transformed by means of organisational procedure that converts inputs into outputs, and generate economic value for the business (Srivastava *et al.*, 2001). In Table 2.1 the main differences between structure-conduct-performance and resource-based view of the firm are depicted.

Table 2.1: Comparison between structure-conduct-performance and resource-based view theories

Theory	**structure-conduct-performance**	**resource-based view of the firm**
Focus	external (i.e. industry)	internal (i.e. firm)
Characteristics	resources are homogenous	resources are idiosyncratic (individual to the firm)
Sources of competitive advantage	choice of industry and positioning within industry	resources
Influential contributors	Porter (1980) ; Porter (1985) ; Schmalensee (1985)	Wernerfelt (1984) ; Barney (1991) ; Peteraf (1993) ; Hoopes *et al.* (2003)

However, the resource-based view has been considered (in principle) to be static and to lack the ability to explain dynamic phenomena (Priem and Butler, 2001) which are related to the modern business environment. Not only it cannot explain how resources are developed and deployed to achieve sustainable competitive advantage (Priem and Butler, 2001), but it also fails to assess their impact on performance in more dynamic environments. Meanwhile, having an internal focus can be considered to be myopic, especially from a marketing-related point of view, as it focuses on the firm (inside-out approach) rather than the market (outside-in approach). In order to address these issues, scholars have constructively extended the resource-based view of the firm,

focusing on capabilities which can capitalise those resources (Theodosiou *et al.*, 2012) in what can be called the capabilities based view of the firm (Teece, 2019). In this vein, the focal point of the present research is the capabilities, and therefore, the next part of the chapter will focus on explaining the concept of capabilities, its relationship to resources, and the classification that this study adopts.

2.2 An overview of capabilities

Capabilities differ from resources since they are activity chains or processes (Hooley *et al.*, 1998). Although resources are important, they are not sufficient for superior performance (Morgan *et al.*, 2002). They are observable (although not necessarily tangible) assets that can be valued and traded, while capabilities are not observable (and hence necessarily intangible), they cannot be valued, and they are transferred only as parts of the entire unit (Makadok, 2001; DeSarbo *et al.*, 2007). Therefore, capabilities are valuable either on their own or because they augment the value of resources (Hoopes *et al.*, 2003). That is why many scholars put an emphasis on capabilities rather than resources regarding their impact on performance (Newbert, 2007; Liao *et al.*, 2009; Merrilees *et al.*, 2011).

They combine, develop and transform resources to create value offerings for customers (Grant, 1991; Day, 1994; Morgan *et al.*, 2009b). These skills and collective learning (Day, 1994) are difficult to develop, and therefore resist imitation. In addition to that, in order for an activity to establish a capability, it must have reached some threshold level of practice, and it must have worked in a reliable manner (Helfat and Peteraf, 2003). The outcomes of production inputs are the key evaluation factor that determines not only the presence or absence but also the value of each capability (Srivastava *et al.*, 2001).

Capabilities can be defined as those organisational routines that exploit and combine resources (Amit and Schoemaker, 1993). In other words, capabilities are *'... the capacity of an organisation to purposefully create, extend or modify its resource base'* (Helfat *et al.*, 2007, p. 1), or *'... complex bundle of skills and collective learning, exercised through organisational process that enable firms to coordinate activities and make use of their assets'* (Day, 1994, p. 38). They are the competencies or efficacies to deploy, implement, or execute resources for a firm's advantage, and they capture the process domain of deployment (Menguc and Auh, 2008), which *'...occurs when resources are put into action'* (Slotegraaf *et al.*, 2003, p. 296). In the present study, resources are considered as assets or inputs to production, while capabilities as those abilities of a firm helping it to perform a coordinated set of tasks, which employ

organisational resources for the purpose of achieving a particular result (Helfat and Peteraf, 2003).

Based on the '*resources-position-performance outcomes'* framework a firm's unique resources and capabilities determine its competitive positioning, which in turn, leads to improved organisational performance (Day and Wensley, 1988). Market-based resources and capabilities can lead to the creation of superior value for the customers (Ngo and O'Cass, 2009; Ramaswami *et al.*, 2009) and hence to a sustainable competitive advantage for the firm (Barney, 1991; Peteraf, 1993; Slater and Narver, 1994).

Companies that place an emphasis on capabilities would consistently create superior value for their customers (Slater and Narver, 1994) and in this vein, a firm can gain sustainable competitive advantage by developing the capabilities through which it can exploit its competencies (Day, 1994). These capabilities function as transformational competencies that reconfigure, combine, and transform existing resources into complex bundles that are less susceptible to imitation, ultimately creating a source of sustainable competitive advantage that leads to superior firm performance (Teece *et al.*, 1997). However, researchers should identify which capabilities are the most important, as not all of them can lead to sustainable competitive advantage, and to an improved organisational performance (DeSarbo *et al.*, 2007).

Capabilities can be classified based on a two-level hierarchy. *Zero-level capabilities* (or ordinary capabilities) allow a firm to 'make a living' in the short term (Winter, 2003) and *higher-level capabilities* that operate to change ordinary capabilities are called dynamic capabilities (Zahra *et al.*, 2006). Higher-level capabilities are based on complicated routines which demand skills and knowledge to manage information (Menguc and Auh, 2008). Therefore, a higher-level capability consists of multiple separate capabilities that are combined, transformed, and reconfigured (Lambe *et al.*, 2002). These separate capabilities are similar to zero-level capabilities, because primarily they depend on well-specified routines and established practices (Menguc and Auh, 2008). Notably, it is not possible to provide specific examples of zero and higher-level capabilities, as they are locally defined (Winter, 2003). Besides, what can be zero-level capability for one firm (e.g. R&D), might be a higher-level capability for

another one. However, customer linking capabilities are considered to be an example of higher level capabilities (Vorhies and Morgan, 2005).

The dynamic capabilities are considered to be higher-level capabilities and the theory is an evolutionary version of the resource-based view of the firm. Being still an inside-out approach (more details on that in section 0), yet it acknowledges the influence of outside events, thereby incorporating Porter's (1980) strategic determinism to some extent (Li and Liu, 2012). This type of capabilities are emphasised internally (Jaakkola *et al.*, 2010), and they are developed (or acquired) to enhance operational performance by making the company more efficient in terms of reducing operating costs, human resource management etc. (Blois and Ramirez, 2006).

Similarly, marketing capabilities have been suggested to create superior value offerings (Vorhies, 1998) through converting available marketing resources into valuable outputs (Vorhies and Morgan, 2005; Ngo and O'Cass, 2012). They are viewed in line with an outside-in approach (more details on that in section 0), yet incorporating the collective knowledge, skills and resources of the firm into the market-related needs of business (Ngo and O'Cass, 2009). Marketing capabilities support the firm's strategic objectives and they help companies to achieve their strategic goals (Day, 1994), while they give the organisation the means to adapt to market changes (Day, 2011).

Within the higher-level capabilities' classification, the study will focus on two specific sets: *capabilities of market-driven organisations* and *adaptive marketing capabilities*. The reason is that both have an outside-in orientation (a discussion of this concept will follow), essentially meaning that companies see everything from the customer's/ market's eye, which is one of the pillars of marketing. Capabilities of market-driven organisations are exploitative while adaptive marketing capabilities are explorative. Section 0 will focus on explaining the concepts of outside-in versus inside-out, while section and 2.2.1 will discuss the notions of exploration versus exploitation that were mentioned just before.

2.2.1 Competence exploitation versus competence exploration

Exploitation refers to the development of new knowledge about the firm's existing markets, products, technologies and skill, while exploration refers to the development

of new knowledge that goes beyond what is currently known about markets, products, technologies and skills (March, 1991; Vorhies *et al.*, 2011). Similarly, marketing exploration is the extent to which the firm challenges and changes existing ideas about targeting, segmentation, positioning, product differentiation, product distribution, product design, quality, pricing, and promotion (Kyriakopoulos and Moorman, 2004).

The resource-based view of the firm and the dynamic capabilities both have an inside-out direction, with the first one (i.e. resource-based view) serving an exploitative function while the latter (i.e. dynamic capabilities) serving an explorative function. Contrary to these two approaches the marketing capabilities, specifically the capabilities of market-driven organisations and adaptive marketing capabilities, have an outside-in orientation, with the first one (capabilities of market-driven organisations) serving an exploitative function, while the second (i.e. adaptive marketing capabilities) having an explorative function (Day, 2011).

In this vein, exploration has a dynamic perspective (by definition). The dynamic capabilities theory indicates that maintenance of superior performance is dependent on the firm's ability to successfully redeploy resources and capabilities, not just within the firm, but also from one business environment to another, thus enabling a firm to expand into new product markets (Vorhies *et al.*, 2011). Capabilities are dynamic when they enable a company to implement new strategies that are adapted to the changing market conditions (Morgan *et al.*, 2009b), and in this vein a dynamic capability is the *'...capacity of a firm to renew, augment and adapt its core competence over time'* (Teece *et al.*, 1997, p. 515).

In contrast to the exploration's focus on challenging existing ideas with innovative concepts, exploitation concentrates on refining and extending existing skills and capabilities. It represents a capability to refine existing competencies and resources to improve operational efficiency: a path of knowledge development and generation closely related to a company's existing organisational knowledge and routines (March, 1991; Lisboa *et al.*, 2011; Vorhies *et al.*, 2011) .

Consequently, the focus of an exploitative approach is on performing similar activities more efficiently, rather than investing in different activities that will completely shake the established procedures and rules. However, excessive exploration at the expense

of exploitation could drain resources and create a '*failure trap*' (March, 1991). Therefore, companies should have, up to an extent, both an exploitative and an explorative set of capabilities, that will serve different purposes. In other words, they need to balance both activities to maximise their development (March, 1991; Gupta *et al.*, 2006; Strobl *et al.*, 2018). Although, the role of exploitation and exploration has been investigated, there is a lack of research regarding customer and market related capabilities (Aspara *et al.*, 2011) and their effect on the firm's customers and markets (Lisboa *et al.*, 2011).

2.2.1.1 Exploitation and exploration as strategic choices

Before proceeding it is important to note that according to the capability view, the development of specific capabilities is a matter of internal selection (Winter, 2003) and as such, exploration and exploitation should be seen under the prism of strategic choice. Strategic choice-making focuses on the relationships between an organisation's internal and external environment. Therefore, organisations will base their decision on which capabilities to develop based on factors like industry structure, customer needs and the trends in the environment among others (Day, 1994). Explorative capabilities are based on the company's motivation to discover something new while, on the contrary, exploitative capabilities are based on businesses' drive to build on existing skills, assets and knowledge (Yalcinkaya *et al.,* 2007). Therefore, companies search and choose among different types of capabilities (Pisano, 2017). Eventually those choices will be between deepening their existing capabilities (or in other words exploitation) (March, 1991) and broadening their range to include new (or in other words exploration) (Pisano, 2017). However, considering that the notions 'new' and 'existing' are relative and depend on the what the company already has, it could be the case that for some companies one marketing capability could be classified as explorative, while for other companies the same marketing capability could be exploitative and vice versa.

2.2.2 Inside-out versus outside-in capabilities

An outside-in (or a market-in) direction, means to view everything through customer's eyes (Day and Moorman, 2010) in order to identify current and latent needs. Contrary to that, an *inside-out approach*, which is rooted in economics and strategic management literature, focuses primarily on the company's strengths and subsequently on the market, as the firm uses its internal resource base to find opportunities or to neutralise threats that arise in the external environment (Paladino, 2009). These resources are often idiosyncratic and embodied in the form of tacit knowledge within the firm (Auh and Menguc, 2009). Companies with an inside-out focus will try to sell to whoever will buy, and what matters to them is expanding the customer base. Their profits are gained through efficiency and quantity, while quality is conformant to internal standards. Customer data are used as a control mechanism and channels are just conduits. Their ideas come from competitors as those firms believe that customers do not know what they really want or need.

The present study aims at exploring the role of those capabilities having an outside-in direction as from a marketing point of view, companies should first look at the market, and then create a product offering that will serve a particular segment. An inside-out approach would drive the firm to look at the microenvironment first, and the product offering would be the result of organisational efficiency. The marketing paradigm proposes an outside-in orientation to explain sustainable competitive advantage, contrary to the resource-based view and dynamic capabilities theories, which explain this advantage through *'…the rent earning capability of internally scarce resources'* (Hooley *et al.*, 1998, p. 97). In other words, resource-based view and dynamic capabilities focus on an inside-out approach to explain organisational success or failure (Dickson, 1996), while the key to organisational survival and success is the ability to create distinct outside-in capabilities which will enable a firm to effectively compete in the market.

Outside-in capabilities are responsible for connecting other organisational (ordinary) capabilities to the external environment and enable companies to compete by anticipating market requirements ahead of competitors. Such companies step outside the narrow organisational borders and look first at the market in which they compete.

Assets arise from the interaction of the firm with entities in its external environment (Srivastava *et al.*, 1998), while a close relationship with customers and other channel members means that the firm can gain access to resources that it does not have (Lukas and Ferrell, 2000).

These firms achieve their competitive advantage by anticipating market requirements ahead of competitors, and make all decisions by looking at the market and screening for the opportunities that might be there (Day and Moorman, 2010). The source of profitability is customer loyalty, while the profits are gained through building a superior value proposition, and by leveraging the brand and customer assets. This type of companies has a deeper and better knowledge of the market, and their best ideas come from 'living' with customers. A lack of such marketing capabilities will prevent companies from keeping in touch with their markets, and from reacting or innovating (Berghman *et al.*, 2006).

Capabilities must be difficult to imitate, difficult to transfer, and must also be sustainable over time; these conditions can be found in marketing capabilities as they are mostly intangible and reside in internal management processes (Greenley *et al.*, 2005). They are immobile (Moorman and Roland, 1999), inimitable (Bharadwaj *et al.*, 1993) and non-substitutable mechanisms of creating value (Moorman and Roland, 1999; Morgan *et al.*, 2009a).

There is a growing stream of research regarding the relationship between marketing capabilities and firm performance (Morgan *et al.*, 2009a; Vorhies *et al.*, 2011). Numerous studies (e.g. Day, 1994; Morgan *et al.*, 2009a; Smirnova *et al.*, 2011) confirm that marketing capabilities affect positively business performance, and contribute the effective implementation of strategy (Morgan *et al.*, 2009b). According to Srivastava *et al.* (2001) marketing specific capabilities show how well a firm performs each key customer-connecting process (Day, 1994). Moreover they show how well a company designs and manages customer relationship processes (Srivastava *et al.*, 1998). Finally, to further illustrate the concepts Table 2.2 as has been developed by Day (2011), provides an overview of how capabilities are positioned based on their function and orientation

Table 2.2: Positioning the different sets of capabilities

Function / **Orientation**	**Exploiting** (development of new knowledge about the firm's existing markets, products, technologies and skill)	**Exploring** (development of new knowledge that goes beyond what is currently known about markets, products, technologies and skills)
Inside-out	Resource based view	Dynamic capabilities
Outside-in	Capabilities of market-driven organisations (market sensing capabilities, customer linking capabilities)	Adaptive marketing capabilities

2.3 Marketing Capabilities

2.3.1 Exploitative marketing capabilities

The initial conceptualisation of marketing capabilities included mid-level marketing processes like market research (Vorhies, 1998). However, that approach had the limitation of precluding any assessment of higher-level capabilities like innovation, customer linking, etc. (Vorhies and Morgan, 2005). The capabilities of market-driven organisations were conceptualised over twenty years ago (Day, 1994), and have been the focus of research ever since. Market-driven organisations have those outside-in exploitative competencies which enable them to understand their customers, and create linkages with them (Hooley *et al.*, 1998): specifically, market sensing and customer linking capabilities (Day, 2011).

Market sensing capabilities are *'…understanding of what is happening in the external environment with respect to demand, customers, competitors and wider macro-environmental change…*' (Hooley *et al.*, 1998, p. 103). It is the process of gathering and interpreting knowledge from the markets, present and prospective customers and competitors. It enables firms to formulate, test, revise, update and refine their market views, which are simplified representations of the market and how it works (Anderson and Narus, 2007). Organisations with market sensing capabilities can act on information in a timely, coherent manner because the assumptions about the market are broadly shared. These proactive capabilities are achieved through open-minded inquiry, synergistic information distribution and mutually informed interpretations about the market. Companies, and in particular their members/staff, use this knowledge as a guide to their decision-making processes. Therefore, it greatly contributes to the market knowledge by providing a way to test assumptions about customers, competitors and the firm's own resources and capabilities that often are largely implicit. In other words, it is an organisation's ability to learn about its market environment and use this information appropriately to guide its actions, which is a key driver of business performance (Vorhies and Morgan, 2005). However, there is no universal support of these arguments, as it has been showed that market sensing

capabilities has no significant effect on organisational performance (Olavarrieta and Friedmann, 2008).

These capabilities enable the firm to store all its knowledge in an accessible organisational memory (Olavarrieta and Friedmann, 2008), and this might be the reason why many authors consider it to be important and probably the most critical source of sustainable competitive advantage (Sinkula, 1994; Narver *et al.*, 2004). Substantive elements in market sensing capabilities include (1) defining the market; (2) monitoring competition; (3) assessing customer value and (4) gaining customer feedback. To achieve a distinctive capability in market sensing, the firm should be superior to its competitors in each of these parts (Anderson and Narus, 2007).

Companies with *customer linking capabilities* identify customer wants, needs and requirements while creating, building and maintaining relationships with them. These relationships are maintained by having high levels of customer service and support. This notion is somehow similar to the one that Webster (1992) used to describe the importance of focusing on long-term customer relationships. Customer linking capabilities take time to develop, are based on implicit knowledge and interpersonal skills, and are difficult for competitors to imitate. Although customer relationships are viewed as an intangible market-based resource, the successful way of developing and maintaining them, can be treated as marketing specific capabilities, and, thus as customer linking (Srivastava *et al.*, 1998). Therefore, it can create a sustainable competitive advantage for firms that develop it by increasing customer satisfaction and loyalty, ultimately increasing sales and profits (Hooley *et al.*, 2005). Nevertheless, despite the high importance of customer linking capabilities, especially in a time when customers demand even more, only a few empirical studies have examined their antecedents or outcomes (Rapp *et al.*, 2010).

2.3.2 Adaptive marketing capabilities

Adaptability is a capability by itself, related to responding and changing to face a particular situation or to solve a specific problem (Lukas, 1999). In this vein, in order for a firm to address the changes in the market place, it is necessary to coordinate and allocate resources (Lu *et al.*, 2010). Adaptive capabilities represent a firm's ability to

identify and capitalise on emerging market opportunities (Hooley *et al.*, 2017). Considering that adaptation is about doing things differently in order to adjust to something new, adaptive capabilities are able to reshape those resources which are necessary for a firm's success in the modern era (Akgün *et al.*, 2012). Technological advances, the internet and social media have changed the way that companies operate, and have offered the tools that can be used to implement the marketing strategy (Rust and Espinoza, 2006; Day, 2011).

Organisations should be adaptive to the changes in the external environment by capturing even weak signals from consumers to predict market and consumer trends in an effort to predict the future (Day, 2011; Day, 2014). Adaptive marketing capabilities originate not from a specific change in the organisational structure, but from the overall ability to capture consumer activities and extract hidden insights (Erevelles *et al.*, 2016). In his influential work Day (2011) introduced the concept of adaptive marketing capabilities as those capabilities with an outside-in orientation and an explorative function. These types of capabilities are: vigilant market learning, adaptive market experimentation and open marketing, where each of them is considered in more details below.

Vigilant market learning

It is suggested that companies must have a proactive approach rather than a reactive one (Day, 2011) in today's complex environment that changes rapidly. That means that ideally, they must develop those capabilities that allow them to act (or at least to be prepared to act) with an open-minded approach even when they receive weak signals from the periphery regarding potential future changes in the market.

The periphery consists of customers and channels, competitors, emerging technologies and scientific developments, influencers and shapers, political, legal, social and economic forces like media, celebrities or experts, cultural icons, trade and tax policy negotiators, lobbyists, legal and political leaders (Day and Schoemaker, 2006). Considering the fact that the space of social networking and social media receives an increasing interest both from customers and competitors, firms must observe how past, current and prospective customers interact with this space. This ability to see sooner is picked up in the literature of organisational vigilance (Day and Schoemaker, 2006).

The peripheral vision is more related to anticipation and alertness rather than prediction. Although the future is unknowable, the peripheral vision enables two kinds of anticipation: preparing and acting before anyone else can, in the situation where the problem is caused not by the lack of data, but by the lack of right questions. What emerges at the periphery is difficult to see, and therefore requires different strategies and capabilities than focal vision, which implies knowing where to look, how to look, what the signals mean, when to look in a new direction, and how to act on these ambiguous signals (Day and Schoemaker, 2006).

Vigilance is a state of awareness and alertness, combined with a sense of curiosity and willingness to act even on partial information. Vigilant organisations have an external focus and stay open to diverse perspectives. They are concentrated both on the periphery and the core, while their actions of sharing knowledge are focused on gathering and sharing weak signals. Their configuration is to look out, while the culture is flexible and curious, rather than rigid and conformist (Day and Schoemaker, 2006). They apply strategic foresight and investigate deeply to identify second-order effects, at the same time encouraging their members to explore widely through creating a culture of discovery (Day and Schoemaker, 2009) by asking the right questions.

These questions are different from those related to the focal business, which can be precise, targeted and often become a routine. Therefore, focal questions will be answered by data that are gathered in a constructed and automatic process, whereas in the periphery the best questions are much more open-ended (Day and Schoemaker, 2006). An active scanning comes often as a response to a specific question and reflects intense curiosity about the periphery. Active scanning can be undirected which involves a more open exploration. However, companies often fail to ask for or receive the data that they need in order to see the full market image, since they over-rely on already established sources of information. Specifically, although market-driven organisations have an openness to accept new trends, the activities and routines that develop an inquiry are often hampered by a closed-minded approach that prevents the management to see emerging opportunities and threats. Therefore, they may actively scan the periphery to look out for new opportunities, but because most of the information they receive come from familiar sources these companies tend to reinforce existing frameworks (Day, 2002).

Adaptive market experimentation

According to the American Marketing Association dictionary '*adaptive experimentation*' can be seen as an approach for continuous experimentation to establish empirically the market response functions (*AMA.org*). An adaptive experimentation would allow the members of a firm to create and implement continuous experiments with the aim to improve the marketing strategy over time. The stimulation of breakthrough ideas, the creation and encouragement of the culture of innovation, and the permission for some fails are all the elements of this concept. Investing in small (marketing) experiments can generate new insights. Yet, this investment needs to be accompanied by the presence of a team within the company that are able to interpret and share the learning.

Adaptive market experimentation includes the ability to challenge existing beliefs regarding consumer decision processes, to share information about successful and unsuccessful initiatives in the market within the organisation, and eventually to learn from the experience of other peer companies, precursors and network partners. Nevertheless for all the three conditions to be met, an experimental mind-set that allows errors during experimentations must be set up, admitting the possibility of learning from failures, although attempting to avoid failures in general (Day, 2011). Moreover, top management must strongly support experimental learning, as an active and on-going experimentation is where original insights into the market are developed (Day and Schoemaker, 2006).

Open marketing

An open marketing is routed on the fact that companies are moving from supply chains to supply networks. It allows information to flow among and within companies. It is very difficult to be efficient in all procedures, therefore firms (in particular small and medium enterprises) should extend their resources beyond their boundaries by gaining access to the resources of the partners (Day, 2011). This marketing knowledge which is held both within the company, and externally within the network of partners, can be utilised only by adopting an open marketing approach. This will enable the organisation to complement its own resources with those of its partners. Few companies will invest to become experts in coordinating, controlling and sharing skills

required to act based on the insights from their partners (Day and Moorman, 2010). Nevertheless, the profits from these investments will be an access to a deeper, more complex and specialised set of resources.

2.4 Organisational orientations

The role of organisational culture in the relationship between marketing capabilities and the effectiveness of marketing strategy implementation should be examined (Morgan *et al.*, 2012). Organisational orientation affects all decisions that are made both at the strategic, and the tactical levels of any company (Liu *et al.*, 2004), while there is an increased focus on the relationship between a firm's orientation and its performance (Madsen, 2007). To understand how and why different companies develop different capabilities, it is necessary to understand the company's orientation, as specific organisational orientations have been found to influence specific sets of capabilities (e.g. Morgan *et al.*, 1998; Morgan *et al.*, 2009b; Zhou and Li, 2010; Smirnova *et al.*, 2011; Theodosiou *et al.*, 2012). The orientation of each firm shapes the broad outlines of the strategy without going into detail of the strategy contents and the strategy implementation (Slater *et al.*, 2006). Strategic orientation as a strategic choice drives the way that companies acquire, allocate, and deploy resources to create capabilities (Zhou and Li, 2010).

The term orientation refers to a '*…firm's proclivity to adopt specific values, agree with specific norms, and act or operate in specific ways'* (Cadogan, 2012, p. 340). Business orientations are the foundations of all strategic decisions, and they act as the underlying philosophies of a company (Miles *et al.*, 1995) by shaping the way that all business members process information and then make decisions (Li *et al.*, 2006). They underlie the way that an organisation pursues its mission and sets its objectives (Lynch *et al.*, 2012), acting as the guiding viewpoints of how to conduct business, and being deeply rooted into the values and beliefs (Noble *et al.*, 2002; Zhou *et al.*, 2005). These values and beliefs guide the firm internally when responding to changes within the business environment (Miles *et al.*, 1995). Organisational orientations align management's strategic objectives with operational activities in two ways: first, they define how the members of an organisation process information, and, second, react to the environment. Moreover, they also create internal environments in which desired behaviours are encouraged and supported (Atuahene-Gima and Ko, 2001).

Culture is frequently associated with orientation, and many authors refer to these two concepts interchangeably (Pearson, 1993). As such a consecutive relationship between

culture, strategy and performance is suggested (Deal and Kenneth, 1982), while an alignment among organisational orientation, strategy and business environment is beneficial for the companies (Miles *et al.*, 1995).

Three approaches of orientations

There are three schools of thought regarding the notion of organisational orientation: orientations as sequences, orientations as complementary patterns, and orientations as alternatives (Hakala, 2011).

- *Orientations as sequences in development:* According to this view business orientation is the result of an evolving process. Therefore, companies will usually start with an orientation focused on production, then move to a selling orientation to end up implementing another orientation as the last part of this process. This approach suggests that one orientation is better than another, and runs across all organisations, industries and countries.
- *Orientations as complementary patterns:* According to this proposition, orientations are mutually complementary. In other words, different orientations can either support or correlate with each other. One orientation may precede another, it can be a mediator or even a moderator in the relationship between another orientation and a dependent variable.
- *Orientations as alternatives:* Contrary to the previous approaches, this school of thought suggests that one orientation is not necessarily better than another, but it can be more suitable under certain conditions and situations. This relationship between an organisational orientation and a dependent variable (e.g. performance) is determined by another contingency variable (e.g. environmental conditions). In this sense, this approach is viewed as the most appropriate to be adopted by the present study, as it incorporates other elements (like competencies and the environment as it will be discussed later) as factors of business performance.

2.5 Entrepreneurship and entrepreneurial orientation

Entrepreneurship refers to the disruption of equilibrium in a firm which is caused by the creation and application of new resources (Hult *et al.*, 2003). It is an important recent research application for the resource-based theory (Alvarez and Busenitz, 2001), and is considered to be an antecedent to market-driven competitive strategy (e.g. Miles and Arnold, 1991; Hult and Ketchen, 2001). It is also crucial to economic development (Hult *et al.*, 2003) and although it was treated in the past as a one-time event of starting a new business, today it is viewed more broadly as being rooted in an organisation's culture (Hult *et al.*, 2003). The growing interest for this field is a result of the belief that entrepreneurial activity within an existing organisation will have a positive economic outcome for the local economy, and will also improve the performance in established companies (Covin and Slevin, 1991). Innovative companies have been characterised as the engines of the economic growth (Wiklund and Shepherd, 2003). Conservative firms contrary to entrepreneurial ones are *'... wait and see'* (Barringer and Bluedorn, 1999, p. 422). Companies with an entrepreneurial mindset tend to be successful at least in the long-term, while the opposite is suggested for firms having a more conservative orientation (Madsen, 2007).

Nevertheless, the notion of entrepreneurship has many different aspects and levels. For instance while Mintzberg (1973) examines the role of the entrepreneur at the individual level, Miller (1983) studies the entrepreneurial style of the top management teams in terms of risk-taking, innovativeness and proactiveness. Accordingly, corporate entrepreneurship represents a strategic approach to the organisation's environment, especially under conditions of turbulence.

Entrepreneurial orientation is the tendency to accept that entrepreneurship is part of the broader organisational culture (Matsuno *et al.*, 2002). Entrepreneurial orientation is conceptualised as *'...the methods, practices and decision-making styles managers use to act entrepreneurial. These include experimentations with promising new technologies, a will to seize new product-market opportunities, and a predisposition to undertake risky ventures'* (Lumpkin and Dess, 1996, p. 136). It aims at maximising long run effectiveness by reinventing the firm's structure and its transactions with the world in an unstable or dynamic environment (Murray, 1981), where business and

product cycles are being shortened. It is a *'...firm's decision-making practices, managerial philosophies and strategic behaviours that are entrepreneurial in nature'* (Wales, 2016, p. 4).

From a marketing perspective, entrepreneurial orientation is the *'... propensity of a company's top management to take calculated risks, to be innovative, and to demonstrate proactiveness'* (Morris and Paul, 1987, p. 251). It is likely to have a positive effect on organisational performance since firms will keep seeking for new opportunities (Wiklund and Shepherd, 2003). Such orientation enables companies to take advantage of the environmental uncertainty (Hitt *et al.*, 2001), and in this vein it is an opportunistic culture (Baker and Sinkula, 2009). It consists of three elements (Miller, 1987), namely: innovativeness, risk taking and proactiveness. Specifically:

Innovativeness refers to the willingness of a company to encourage creativity and experimentation both in new product development as well as in internal processes, and to adopt quickly new technological breakthroughs (Menguc and Auh, 2006; Baker and Sinkula, 2009). In other words, it is a predisposition to support new ideas and change (Lumpkin and Dess, 1996; Rauch *et al.*, 2009).

Risk taking is about the eagerness of a company to act by venturing into the unknown (Rauch *et al.*, 2009), and to commit a large percentage of its resources to new projects, although some of them might fail (Miller, 1983; Lumpkin and Dess, 1996; Baker and Sinkula, 2009).

Proactiveness is related to the concept of first mover advantage (Lieberman and Montgomery, 1988). It is a forward-looking concept, and refers to the ability of a firm to grasp the initiative in the chase of marketplace opportunities and to act in anticipation of future changes in the market by introducing new processes and products (Baker and Sinkula, 2009; Li *et al.*, 2010).

Companies with an entrepreneurial orientation focus their attention on creating value from the opportunities that will be discovered outside the firm's boundaries (Storey and Hughes, 2013). In this way, someone can identify how such a culture/philosophy will cater for the development of relevant competencies (i.e. outside-in/marketing capabilities). It has been examined extensively in the strategy literature, although this literature has mainly focused on US companies (Rauch *et al.*, 2009), while in the UK

it has not received equal attention up until recently. According to Zahra and Covin (1995) entrepreneurial orientation is a key source of profitability , and there are numerous studies suggesting that companies that incorporate an entrepreneurial orientation should enjoy a better performance (e.g. Covin and Slevin, 1991; Zahra, 1993; Zahra and Covin, 1995; Wiklund and Shepherd, 2003; Madsen, 2007; Rauch *et al.*, 2009). However, in other studies like Soininen *et al.* (2012) where entrepreneurial orientation is not linked to profitability in small firms, there is evidence to support a weak relationship between entrepreneurial orientation and performance. Therefore, the empirical findings of the entrepreneurship-performance link appear to be inconclusive (Zahra and Covin, 1995; Dess *et al.*, 1997), and as Hughes and Morgan (2007) state researchers should identify the reasons for the inconsistency of the results.

One explanation comes from the complexity of the entrepreneurial orientation-performance relationship, and the fact that the performance implications of entrepreneurial orientation are context specific (Lumpkin and Dess, 1996). Therefore, these implications can be resolved by contingency models that incorporate the two-way interaction between entrepreneurial orientation and either the external or the internal (i.e. firm characteristics) environment. Research in entrepreneurial orientation has been focused to on how organisations are trying to adapt themselves to their environment, however, there is very little empirical data regarding mediating or moderating relationships between entrepreneurial orientation and organisational performance (Rosenbusch *et al.*, 2011b). To further support this argument, the literature reveals that still the gaps exist that are being ignored (Martin and Javalgi, 2016). Nevertheless, despite of the attention in the literature about the theoretical connection between entrepreneurial orientation and capabilities, there is still a debate about the empirical implementation in specific firms (Martin and Javalgi, 2016). Dess *et al.* (1997) calls for further integrating entrepreneurial orientation and the resource-based view of the firm. From the resource-based point of view it is seen as an important strategic resource: it reflects the firm's philosophy of how to conduct business and align with the environment (Gatignon and Xuereb, 1997; Murray *et al.*, 2011). Although entrepreneurial orientation is necessary, it is not a sufficient condition to deliver value to customers. Rather than having heterogeneity in its resources, a firm needs to take appropriate strategic actions to capitalise on entrepreneurial orientation in order to gain

a competitive advantage and obtain desirable performance (Lisboa *et al.*, 2011; Murray *et al.*, 2011). These actions are related to the capabilities by which firms' resources are deployed (Eisenhardt and Martin, 2000), and consequently, entrepreneurial orientation requires the development of such capabilities in order for the firms to fully take advantage of it.

In other words, to answer the question of this inconsistency scholars suggested that either internal or external (or in some cased both) factors moderate or mediate this relationship (Dess *et al.*, 1997; Wiklund and Shepherd, 2003) and the relationship between entrepreneurial orientation and performance is complex (Moreno and Casillas, 2008). Moreover, different studies have found that the effect of entrepreneurial orientation on performance varies depending on the different types of external environments (Wiklund and Shepherd, 2005). As such firms might benefit from environmental munificence and complexity when implementing a high level of entrepreneurial orientation (Rosenbusch *et al.*, 2011b). While many studies propose that both external (i.e. environment) and internal variables determine the entrepreneurial orientation of a company (Miller, 1983; Covin and Slevin, 1991; Lyon *et al.*, 2000), most of them tested the direct effect of entrepreneurial orientation on performance, and its contingent relationship with its external environment, having ignored the internal environment that can mediate or moderate the entrepreneurial orientation - performance relationship (Wiklund and Shepherd, 2003). A major limitation of the majority of the studies researching organisational orientations and business performance is that they fail to capture the effect of competitive positioning (Ketchen *et al.*, 2007). For example, only recently Hernández-Perlines *et al.* (2016) tested the indirect effect of entrepreneurial orientation on business performance through Porter's competitive positioning. In this vein, the mechanisms under which organisational orientations affect performance remain unclear.

2.6 Competitive positioning

Competitive positioning defines how a company will compete (Hooley *et al.,* 2017) and it has differentiation and cost aspects. However, its role is not fully understood. Few previous studies in the entrepreneurship area like Borch *et al.* (1999), tested the effect of entrepreneurial orientation on performance through capabilities and competitive positioning, while others like Hernández-Perlines *et al.* (2016) examined the mediating role of competitive positioning between entrepreneurial orientation and performance.

A firm can create a competitive advantage and as such improve its performance only by successfully deploying its capabilities (Day, 1994; Ketchen *et al.*, 2007). Therefore, the utilisation of skills and resources will lead to competitive position of either having: (1) a lower relative cost position, or (2) a superior customer value/ brand position (differentiation) (Murray *et al.*, 2011), which then will lead to a positional advantage that will be translated into a better performance. As such, performance concentrates on capturing the created values (Tan and Sousa, 2015) that a successful competitive positioning has created. In this vein, the competitive position can play a mediating role in the marketing capabilities–performance relationship (Murray *et al.*, 2011).

Apart from the two aforementioned fundamental approaches that were suggested regarding the competitive positioning of the firm (i.e. cost leadership and differentiation) (Porter, 1985), other alternative typologies have also been proposed. For example, based on the influential work of Mintzberg (1973), there is the entrepreneurial, the adaptive and the planning mode (or strategy), while according to Miles *et al.* (1978) businesses can be divided into the defenders, analysers, reactors, and prospectors. Nevertheless, the strategy types proposed by Porter (1980) are still among the most widely used, and have received considerable amount of empirical support (Frambach *et al.*, 2003).

Differentiation

The differentiation strategy puts the focus of the company on producing and marketing superior product value to relatively price-insensitive buyers (Vorhies, 1998). Such companies position their products successfully on these target markets, where customers are willing to pay a premium for superior need satisfaction (Day and Wensley, 1988). Differentiators are similar to prospectors, and are characterised by having a risk taking, and proactive external orientation. However, differentiation can be further analysed in terms of marketing and innovation differentiation (Covin and Slevin, 1991; Dess *et al.*, 1997; Spanos and Lioukas, 2001).

A marketing differentiation strategy is focused more on intense marketing communication activities, and on offering attractive features, convenience, and guarantees (Dess *et al.*, 1997). It relates to the concept of service advantage (Kaleka and Morgan, 2017), which concentrates on specific activities, processes, and initiatives developed around physical goods, and related to their acquisition, delivery, and use. An innovation differentiation strategy addresses product development, original applications, new technologies, up-to-date innovations and quality design (Dess *et al.*, 1997). Similarly, it relates to product advantage (Kaleka and Morgan, 2017), which is reflected through the relative superiority of the offering in terms of the key observable.

Cost-Leadership

By definition, only one firm in any market can truly claim to have achieved cost leadership (Hooley *et al.*, 1998). A cost leadership strategy implies achieving the lowest cost position within an industry, and by default its effectiveness lies in introducing the product to the target markets who are price sensitive. This strategy requires a high degree of internal focus for the companies to achieve efficiency rather than being effective. Scholars argue that it creates short-term financial advantage, but it does not secure long-term market advantage. Only differentiation adds value for the customer by giving them a reason to buy. However, its success depends on the existence or development of the underlying competencies and assets required to implement the chosen form of differentiation.

Although at first glance these two strategies appear to be mutually exclusive (otherwise companies are considered to be ‘stuck in the middle’), there is research

supporting that organisations can pursue the elements of both strategies simultaneously (Vorhies, 1998). As a result, the combination of both cost-leadership (in other words, low cost) and differentiation strategies is claimed to be extremely beneficial for the company's performance (Slater and Narver, 1996).

2.7 The role of external environment

Organisational theory explains performance differences among firms based on the contingency view that performance depends on the fit between a company and the environment in which it operates (Yarbrough *et al.*, 2011). According to the contingency theory there is no single best way to design organisational structures. Organisational configurations, like structures and processes, define why some companies are better suited to the external environment than others (e.g. Ketchen *et al.*, 1993; Slater *et al.*, 2006; Gammeltoft *et al.*, 2012). The environment consists of sources of inputs in the form of individuals, groups, and organisations, as well as external environmental forces (Fredericks, 2005). Considering the various forms of environmental influences, contingency scholars argue that there is no best overall strategy. Eventually performance is a function of the fit between an organisation, its environment and strategy (Chandler, 1962; Miles *et al.*, 1978; Venkatraman, 1989). This fit (or alignment) is the degree to which an organisation matches its resources with the opportunities (or threats) of the external environment (Hofer, 1975). The concept of fit has received an increasing interest among the scholars (Hofer, 1975; Gupta and Govindarajan, 1984; Miles and Snow, 1984; Venkatraman, 1989; Miller, 1991; Zajac *et al.*, 2000). This alignment can be the result of natural selection (survival of the best performing organisations), organisational inertia or managerial action. The strategic fit concept is related to the resource-based theory since value creation is based on the fit between the firm's resources, and the external environment allowing them to be mobilised in response to opportunities and threats (Gammeltoft *et al.*, 2012). Related to the contingency theory, and drawing on the resource-based view of the firm, value creation depends on the extent to which the resources of the company fit with the external environment (Gammeltoft *et al.*, 2012). As such the importance of different capabilities (or indicators) under various contingencies should be examined (Barney *et al.*, 2001).

The external environment is considered as one of the critical contingencies in organisational theory (Lumpkin and Dess, 2001). Meanwhile its conditions have been proposed to influence the relationship between capabilities and performance. This effect has been proposed to either be direct or indirect under moderating mechanisms (Kaleka and Morgan, 2019). It can hide threats, challenges and opportunities, and

although there is a plethora of research testing its effect on firms' performance, the results are not coherent (Rosenbusch *et al.*, 2011b). It is *'... virtually everything outside the organisation -its 'technology', the nature of its products, customers and competitors, its geographic setting, the economic, political and even meteorological climate in which it must operate and so on'* (Mintzberg, 1979, p. 267).

Previous configurational research tends to emphasise the environment–structure–strategy relationships at the expense of examining how firms can use their strategy to align organisational resources with the opportunities and threats of the environment (Zajac *et al.*, 2000). This may be a shortcoming since matching internal resources with the external environment is a fundamental issue in strategic management (Wiklund and Shepherd, 2005). The present study will focus on environmental munificence and environmental complexity as those two aspects are more likely to affect the role of marketing capabilities, considering that they are relevant to the number and quality of available resources (as mentioned in section 2.2).

Environmental munificence portrays the extent to which business environment can support sustained growth (Dess and Beard, 1984), and reflects the number of opportunities for venturing and renewal accommodating the industry's and the firm's dependence on environmental resources (Lumpkin and Dess, 2001). It is asserted that the opposite concept to munificence is hostility (according to the hostility-munificence continuum of Mintzberg (1979), which reflects scarce resources and opportunities (Miller, 1983; Covin and Slevin, 1989), in the situation where companies are struggling to acquire resources, competition is intense and market opportunities are rare. Munificence has also been investigated under the label of capacity (Dess and Beard, 1984), as it also encapsulates dynamism (the condition of uncertainty and unpredictability of future market changes and developments, and lack of information about future events (Rosenbusch *et al.*, 2011b), industry growth, and demand for new products in the environment (Zahra, 1993). In this vein it encompasses both opportunities and the availability of resources in one measurement (Rosenbusch *et al.*, 2011b).

Emery and Trist (1965) identified the environmental complexity-simplicity dimension as one of the characteristics of environments that companies should focus one, and

since then it has been identified as one of the important characteristics of environments (Cannon and John, 2007). It is defined as the number and heterogeneity of factors and components with which managers must contend (Tung, 1979). It refers to the amount and diversity of information, knowledge, resources and capabilities needed to successfully operate in an environment (Mintzberg, 1979). It is reflected by the number of environmental elements and the level of interdependence among them (Boyd and Fulk, 1996). It is *'... the extent that it requires the organisation to have a great deal of sophisticated knowledge about products, customers, or whatever'* (Mintzberg, 1979, p. 268). Less complex environments have few elements that are similar to each other and are well understood (Ashill and Jobber, 2014). A high level of environmental complexity means that there is a high number of elements with which interaction is required, and therefore managers are uncertain regarding their decisions (Gibbs, 1994). In such environment, firms may be prevented from growing (Ashill and Jobber, 2014), as they are forced to deal with competitive and resource complexity (Keats and Hitt, 1988).

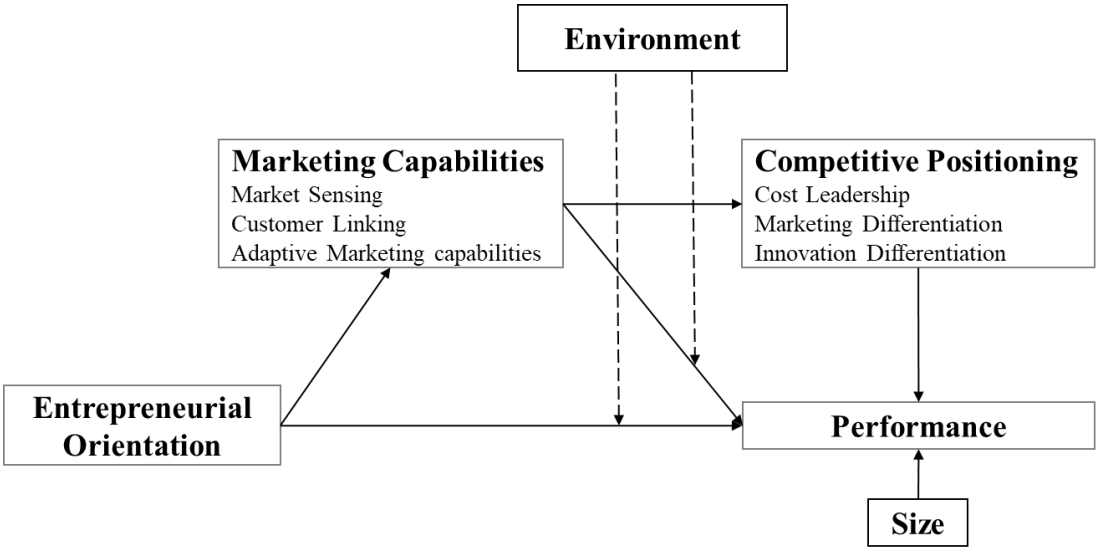
2.8 Conclusion

This chapter discussed the most influential literature related to the theories that form the basis of the present study: namely structure conduct performance and resource-based view of the firm. Having them as a starting point, the chapter then highlighted the importance of marketing capabilities while illustrating the crucial role of entrepreneurial orientation. Moreover, it covered the concept of competitive positioning, and it also described the different dimensions of external environment, advocating the focus on environmental complexity and environmental munificence. Although the relationships between the aforementioned concepts have been somehow reflected, it is the next chapter that will provide a justification of the exact nature of these relationships, and a presentation of the conceptual model.

Chapter 3 Model Development

As explained in the previous chapter the study builds on the sequence: orientation-capabilities-positioning-performance which has been adoped in the literature quite recently (Murray *et al.*, 2011) to understand the factors affecting performance of UK manufacturing SMes as depicted in Figure 3.1. The aim of this chapter is to investigate explicit relationships between various factors (entrepreneurial orientation, marketing capabilities, competitive positioning, and environmental munificence and complexity) and organisational performance. Therefore, the chapter starts with the discussion of the concept of performance, and an explanation choosing specific performance indicators to measure marketing outcomes.

Figure 3.1: Conceptual model of the study



3.1 Defining organisational performance

The present study will use different types of indicators to evaluate the performance of the marketing activities of a firm. Meanwhile the employment of different performance indicators might also provide the reasons behind non-consistent results in the previous research. It is appropriate to employ different performance indicators (Morgan and Strong, 2003; Dimitratos *et al.*, 2004), both financial and non-financial, in an effort to comprehend the predictors of organisational performance. Moreover, linking particular performance indicators with specific organisational characteristics will provide a wide range of options to managers as to which strategy they want to follow based on their objectives.

The most popular measures of marketing performance indicators are accounting indicators of profit and sales revenue (Katsikeas *et al.*, 2016). Such indicators are an essential criteria of businesses; as such, the selection of ROA is indispensable since it reflects its important aspects (Kumar *et al.*, 1998). It is a well-defined measure of profitability, which is commonly used to set marketing-specific objectives and evaluate marketing performance (Katsikeas *et al.*, 2016). Although, it refers to the corporate level, it can be assumed that in SMEs it can be linked directly to the marketing function performance. Meanwhile other aspects of profitability like gross profits and net profit margin will also be employed. Moreover, market performance will be measured in terms of the turnover of the company.

In addition to that, another final measurement of performance will be customer performance. Such measures show how effective the company is at attracting and retaining customers (Hughes and Morgan, 2007). It is one of the closest, and more distinct measures of marketing actions (Katsikeas *et al.*, 2016). Considering the fact that this knowledge lies within the marketing department, the respondents are the most knowledgeable in answering such questions; therefore, for measuring customer performance self-reported indicators will be used. Besides, it is extremely difficult, if not impossible, for someone outside of the company to gain access to secondary data depicting such information.

3.2 Entrepreneurial orientation and performance

As it was mentioned before, although there is a tendency to consider that entrepreneurial orientation has a positive effect on performance (Lisboa *et al.*, 2011), the results from previous studies trying to link entrepreneurial orientation with performance directly are conflicting (Rauch *et al.*, 2009). While some studies showed a strong positive relationship (e.g. Lumpkin and Dess, 2001; Wiklund and Shepherd, 2003; Soininen *et al.*, 2012; Boso *et al.*, 2013a), some demonstrated weak positive relationship (e.g. Zahra, 1991), and others - a not significant one (e.g. Slater and Narver, 2000). This inconsistency requires researchers to understand the reasons behind it, and especially identify those, which could be related to the measurements of performance or other internal and external contingent factors.

Specifically, Wiklund (1999) suggests a positive relationship between entrepreneurial orientation and performance (by using a self-reported indicator consisting of financial and non-financial data). In addition to that, Wiklund and Shepherd (2003) ascertain a positive relationship between entrepreneurial orientation and a self-reported performance indicator consisting of sales growth, revenue growth, growth in the number of employees, net profit margin, product/service innovation, process innovation, adoption of new technology, product/service quality, product/service variety, and customer satisfaction. Meanwhile Anderson *et al.* (2015) determine a positive relationship between entrepreneurial orientation and performance, when using a five-component subjective indicator.

González-Benito *et al.* (2009) state that the higher the degree of entrepreneurial orientation the better the performance of a firm when measured subjectively in terms of market share and sales. Whereas according to Soininen *et al.* (2012) entrepreneurial orientation is positively linked to the sales growth of small firms. Similarly, García-Villaverde *et al.* (2013) suggest that entrepreneurial orientation is positively related to sales growth, also supported by Covin *et al.* (2006). In addition to that Altinay *et al.* (2016) found that entrepreneurial orientation affects positively sales growth (self-reported) in SMEs.

Companies with an entrepreneurial culture embedded in the way of doing business, actively try to innovate, not only in terms of product development, but also in terms of

marketing strategies, and this keeps them ahead of competition. They are ready to undertake risky ventures even if they know that some will fail. They monitor market changes, respond to them rapidly, while at the same time they are proactive, and therefore they capitalise on emerging opportunities (Wiklund, 1999). This innovativeness along with the proactiveness will lead to the development of new products and solutions that will satisfy the unexpressed needs, wants and requirements of customers, giving a competitive advantage to these companies, and an opportunity to increase their sales. In other words, an entrepreneurial orientation is essentially a growth orientation (Lumpkin and Dess, 1996).

Slater and Narver (2000) failed to relate entrepreneurial orientation and business profitability (measured subjectively), and in line with them, Soininen *et al.* (2012) do not find evidence to support that entrepreneurial orientation is positively linked to the profitability of small firms (they utilised objective measures of performance). Contrary to that, González-Benito *et al.* (2009) suggest that the higher the degree of entrepreneurial orientation is, the better the performance of a firm is when measured subjectively in terms of profitability.

An entrepreneurial orientation would require companies to experience increased expenditures in order for them to accommodate the culture of risk taking, innovativeness and proactiveness. However, the fact that entrepreneurial orientation culture targets premium market segments, and charge more by skimming the markets ahead of competitors (Zahra and Covin, 1995). Entrepreneurially orientated firms will try to improve efficiency and cost advantages (Morgan and Strong, 2003), that should affect the profitability in a positive way. Moreover, the fact that they will develop new products and solutions (or processes) that will satisfy the unexpressed needs, wants and requirements of customers, should help them to increase sales (Soininen *et al.*, 2012) and to improve customer performance (satisfaction, loyalty etc.). Therefore, it is expected that:

Hypothesis 1: Entrepreneurial orientation will have a positive relationship with a firm's performance.

3.2.1 The role of the external environment in the entrepreneurial orientation – performance relationship

According to Lumpkin and Dess (1996), other factors may moderate the relationship between entrepreneurial orientation and performance, while most scholars who empirically tested this suggestion agree with it (Moreno and Casillas, 2008). Therefore, the effect of entrepreneurial orientation on performance may be dependent on the environment (Wiklund and Shepherd, 2005). In general, the literature has focused on examining the role of dynamism and hostility (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2005) however, the role of munificence and complexity has been under investigation, revealing mixed results.

'*Environmental munificence is the scarcity or abundance of critical resources needed by firms operating within an environment'* (Castrogiovanni, 1991, p. 542). As such in the environments of high munificence there will be an abundance of resources. Its role in the entrepreneurial orientation-performance relationship has been examined, yet the results are either positive (Kreiser and Davis, 2010) or negative (Covin and Slevin, 1989; Zahra and Covin, 1995). The assumption of this research is that entrepreneurial orientated companies could use these available, critical resources, which are in surplus (and therefore of a lower cost), in order to experiment more in terms of innovativeness, to take more risks and to become even more proactive. They will not simply see this abundance as a chance to continue operating at a lower cost, they will perceive this as an opportunity to do even more things. In such environments, resources are not in deficit, and therefore they should be cheaper to acquire, minimising the cost of failure. When there is an abundance of resources, firms enjoy easier access to them and a wider variety of choice (Pearce *et al.*, 2010). Therefore, entrepreneurial orientated companies operating in such environments will be able to benefit more than their competitors (i.e. non-entrepreneurial orientated companies), as it is in their culture to innovate and take risks. Therefore, the following hypothesis is formulated:

Hypothesis 2: Environmental munificence will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental munificence is high.

Environmental complexity is associated with the number of environmental elements and the level of interdependence among them (Boyd and Fulk, 1996). High level of environmental complexity indicate low homogeneity, while less complex environments have fewer elements and those elements are similar to each other and well understood (Ashill and Jobber, 2014). However, entrepreneurial orientated companies should demonstrate better performance under such conditions, considering that their open-minded approach, experimentation and their involvement in the new projects should allow them to understand this complexity better than competitors, while being ready to create and grasp opportunities in new product market niches (Lumpkin and Dess, 2001). Complex environments require a company to monitor for diverse information (Child, 1972) about customer needs and market segments. However, being entrepreneurial oriented will be beneficial for companies under such environmental conditions. Such a mindset will allow companies to be proactive in seeking new combinations of resources that can be applied to different contexts in order to transform the opportunities associated with complex environments, while they will be able to support organisational learning and the application of newly acquired knowledge to different contexts through innovativeness (Rosenbusch *et al.*, 2011a). In addition to that, the diversity of customer needs, as well as the number of different market segments served by firms, creates new opportunities for innovations and in this vein, entrepreneurial oriented companies, should be better equipped to explore and exploit these opportunities (Rosenbusch *et al.*, 2011a). This sets the ground for the following hypothesis:

Hypothesis 3: Environmental complexity will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental complexity is high.

3.3 Marketing capabilities and performance

Marketing capabilities have been suggested to be important predictors of organisational performance. A number of studies found positive links between specific set of marketing capabilities and specific performance indicators. The collective marketing knowledge that these capabilities contain allow companies to understand customers' needs and wants, as well as competitors' strategies and tactics, and therefore provide better offerings than their rivals (Ripollés and Blesa, 2012). As outlined in Chapter 2, the present study focuses on two sets of marketing capabilities: customer linking and market sensing capabilities on one hand (capabilities of market-driven organisations, which are exploitative), and adaptive marketing capabilities on the other hand (which are explorative).

3.3.1 Market sensing capabilities

The ability of a company to sense the market means that it will be better prepared to satisfy customer expressed needs and wants, and also to identify the latent ones. This competence of sensing the market through continuous monitoring of changes and threats determines a sustainable competitive advantage (Day, 1994; Day, 2011). As such, the gathering of valuable knowledge about customers, competitors, channel members and the macro environment (Morgan *et al.*, 2009a) can help an organisation to improve its performance. When a company senses changes in the market and foresees market trends, it can provide products and services that have more value for its customers (Fang *et al.*, 2014). However, Olavarrieta and Friedmann (2008) found no effect of market sensing capabilities on overall firm performance, while Fang *et al.* (2014) identified an effect on profitability, but not on market performance. Contrary to that, Morgan *et al.* (2009a) suggest that market sensing capabilities have no effect on net profit margin growth rate. Nevertheless, the growth rate was measured for a 2-year period (and therefore the central tendency was not fully captured), while the sample consisted of only 114 US companies across different industries.

We argue that companies with superior market sensing capabilities will be able to identify underserved or unsatisfied segments of the market, and therefore to increase their customer base and turnover. Moreover, the knowledge gained by the successful

employment of such capabilities will allow firms to exploit the segments that currently serve them in a better way, ultimately improving their customer performance. Meanwhile, such companies can use their competences to identify the least price sensitive current and future customers, and change their offering while being able to charge more (Slater and Narver, 2000), leading to the increased profitability. Therefore:

Hypothesis 4: Market sensing capabilities will have a positive relationship with a firm's performance.

3.3.2 Customer linking capabilities

As mentioned in the previous chapter the competence of an organisation to successfully establish, develop and maintain relationships with its customers (Grönroos, 1996) is recognised as customer linking capabilities. It is based on the development of strong customer service and on interpersonal relationships between the company and its customers. Moreover, tacit knowledge development, which is the result of connecting with customers (Fang *et al.*, 2014), helps companies to better understand their needs and wants. This supports them in building strong and long-term relationships with them. Such capabilities can help firms build and maintain competitive advantage (Hooley *et al.*, 2005), and therefore it is expected that they will outperform their rivals in terms of customer and market performance.

Successful, strong and long-lasting customer relationships will lead to customer satisfaction and loyalty, as companies will develop a deep understanding of customer needs and wants. Therefore, they will be able to improve their products in order to meet these needs (Lin *et al.*, 2016). Moreover, by having good customer service a company can mitigate the risk of having unsatisfied customers due to unsolved complaints. Satisfied current customers will maintain their relationship with the company, whereas creating new relationships with target customers will give the option to extend the company's customer base, and to generate new sources of income (Nambisan, 2002) improving the company's market performance.

According to Rapp *et al.* (2010) customer linking capabilities positively affect customer satisfaction, loyalty and acquisition, but at the same time they do not affect

profitability (measured subjectively). Similarly, Hooley *et al.* (2005) suggest that they impact customer and market performance. Nevertheless Srivastava *et al.* (1998) in their study of 215 US companies across different industries argue that successful relationships with the customers can generate value for the company by lowering costs and improving the competitive position of the firm. Therefore, it can be assumed that costs reduction and improvement of competitive position, will result in better profitability. This is supported by Lin *et al.* (2016) who found that customer linking capabilities are positively associated with subjective profitability in their research in two transitional countries (China and Hungary) using a sample of 349 and 465 companies respectively. Based on that the following hypothesis is formulated:

Hypothesis 5: Customer linking capabilities will have a positive relationship with a firm's performance.

3.3.3 Adaptive marketing capabilities

The deployment of adaptive marketing capabilities leads to a competitive advantage resulting in better performance outcomes (Day, 2011). It is sensible to expect that this set of outside-in capabilities will improve organisational performance in many ways. Adaptive capabilities represent a firm's ability to identify and capitalise on emerging market opportunities (Hooley *et al.*, 2017). They originate from the overall ability to capture consumer activities and extract hidden insights. Companies that develop those capabilities will be able to be prepared to act even when they receive weak signals from the periphery regarding potential future changes in the market. This ability to see sooner is picked up in the literature of organisational vigilance (Day and Schoemaker, 2006) and is defined as the state of awareness and alertness, combined with a sense of curiosity and willingness to act even on partial information. Such actions should be related to improved performance against their more conformist competitors. Companies with the competence of anticipating and identifying weak signals from the periphery about new developments will have the first mover advantage.

Investing in small experiments (either regarding marketing activities or new products/services/processes) can generate new insights. Adaptive market experimentation includes a willingness to challenge existing beliefs regarding

consumer decision processes, to share information within the organisation about successful and unsuccessful initiatives in the market, and eventually to learn from the experience of other peer companies, precursors and network partners. Therefore, such companies are expected to expand their customer base (which will lead to better market performance) by satisfying new and underdeveloped wants, needs and requirements of current or potential customers (which will lead to better customer performance).

In addition to this, the fact that such companies will be the first to satisfy the needs and wants of niche markets, means that they will be able to benefit from higher net profit margins. Moreover, the combination of an open marketing approach, where these companies share resources and knowledge with other parts of the channel, will decrease their costs, improve the effectiveness and efficiency of their actions. This leads to the following hypotheses:

Hypothesis 6: Adaptive marketing capabilities will have a positive relationship with a firm's performance.

3.3.4 The role of external environment in the marketing capabilities-performance relationship

The role of external environment in the relationship between marketing capabilities and performance was investigated in the past. For example, in their study Olavarrieta and Friedmann (2008) found that one aspect of the external environment – market turbulence - has a moderating effect on the relationship between market sensing capabilities and overall firm performance. Moreover, Rapp *et al.* (2010) reveal that environmental dynamism has a positive moderating effect on the relationship between customer linking capabilities and customer performance, and on the relationship between customer linking capabilities and organisational performance.

Accordingly, environmental munificence could moderate the relationship between market sensing, customer linking, adaptive marketing capabilities and performance in the following way. As stated previously, munificence refers to the extent to which the environment can support sustained growth. In that sense, within an environment of low munificence the effect of market sensing capabilities on performance should be

stronger since being able to sense market needs, wants and trends comes out as even more important competitive advantage. Grasping customer needs, discovering a firm's major competitors' strategies and tactics, and learning about the macro environment can also prevent the company from making avoidable expenses, and therefore reduce the costs and increase profitability. In a similar way munificence could also moderate the relationship between customer linking capabilities and organisational performance. In an environment of low munificence having superior level of customer service and support, while at the same time investing in creating and maintaining relationships with current and potential customers could become a competitive advantage. Oppositely, in an environment of high munificence, this could be a potential expense that would still positively affect customer and market performance, while decreasing profitability of an organisation. Based on that it is believed that the nature of the relationship will change.

In a similar way companies with adaptive marketing capabilities will be able to utilise better and more efficiently the scarce opportunities that an environment of low munificence offers. Due to experience, networking and knowledge, they will be able to acquire more resources than competitors and transform them into valuable outputs. Therefore, the following hypothesis is formulated:

Hypothesis 7: Environmental munificence will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental munificence is low.

As mentioned before, high levels of environmental complexity reflect a high number of factors that are related to competition and customers' preferences and buying habits. In that sense, it is expected that during such conditions the relationship between marketing capabilities and performance will be stronger.

Specifically, within an environment of high complexity the effect of market sensing capabilities on performance should be stronger. Such companies will be able to sense and identify the customer needs and requirements, the competitors' tactics and strategies, and the trends of the macro environment. Therefore, they will be able to better position themselves, and align their offering to meet the complex customer

buying habits, tastes and defend themselves against the complex nature of competition. Eventually, this complexity and its potential negative results on customer performance can be overcome, by having a deep understanding about their needs. Whereas discovering major competitors' strategies and tactics will mean that companies can better predict their moves, and maintain, if not improve, their market position. Eventually, the knowledge about the macro environment will assist the firm to align its resources with future trends. Overall, this knowledge can lower the expenses for market research activities as well as help companies target valuable segments.

Complexity should also moderate the relationship between customer linking capabilities and organisational performance. In an environment of high complexity having superior level of customer service and support, while at the same time investing in creating and maintaining relationships with current and potential customers could be a competitive advantage that will enhance a firm's performance. Accordingly, in an environment of low complexity, where customer preferences and buying habits are not complex, and can be satisfied relatively easy by the current market offering, investing in building and maintaining relationships could be an expense that would decrease profits.

In this vein, it is suggested that environmental complexity will have a positive influence on the relationship between adaptive marketing capabilities and market performance. Complex environments can lead to an inertia which will negatively affect market performance. Moreover, being rigid and conformist could prevent companies from taking advantage of this complexity, as they will not be able to attract new market segments with complex needs, leaving them dissatisfied with the current offerings. In addition to that, sharing resources with channel members will advance the understanding of customer needs, and will also improve the anticipation of competitors' moves, enabling the company to act.

Although in such environments excessive experimentation and innovation would require investments, which could potentially harm profitability, this effect could be counterbalanced by the positive effect of open marketing. Sharing resources and knowledge with other companies, could result in cost savings which, accompanied by the improved market performance, would improve the profitability as well.

In addition to that, the acquired prior knowledge would encourage the company to perform only investments that have a high probability of being successful. As such, the following hypothesis is developed:

Hypothesis 8: Environmental complexity will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental complexity is high.

3.4 Entrepreneurial orientation and marketing capabilities

Entrepreneurial firms create opportunities, but to take advantage of them they need to reconfigure their resources (Covin and Lumpkin, 2011). As such entrepreneurial orientation has a potential value, as it is a sufficient but not necessary condition for value delivery (Barney, 1991). In order for the reconfiguration of resources to be enabled, the existence of certain capabilities is necessary. Although the connection between entrepreneurial orientation and organisational capabilities has been examined theoretically in many studies, there results remain contradictory when it comes to specific capabilities and/or specific firms (Martin and Javalgi, 2016).

Entrepreneurial orientated companies exploit, discover and create opportunities (or in other words explore opportunities) ahead of their rivals (Martin and Javalgi, 2016). They emphasize innovativeness and pro-activity and the exploration and exploitation of new products and processes (Lumpkin and Dess, 1996; Rosenbusch *et al.*, 2011a). Entrepreneurial orientation consists of '*a predisposition to engage in creativity and experimentation through the introduction of new products/services…*' (i.e. innovativeness), '*taking bold actions by venturing into the unknown'* (i.e. risk taking) and '*opportunity seeking, forward looking perspective characterised by the introduction of new products/services ahead of the competition and acting in anticipation of future demand*' (i.e. proactiveness) (Rauch *et al.*, 2009, pp. 6-7). Hence, entrepreneurial orientation can lead to both exploitative and explorative competences.

Innovativeness is explicitly portrayed by the generation of new ideas that will result in new products or services. Although it facilitates the development of new major products and services (i.e. exploration), it also triggers relatively minor changes that improve one of the activities in a company's value chain (Kollmann and Stöckmann, 2014). These changes might also involve new, innovative and creative ways of linking with the firm's customers or selling existing products. In this vein, innovativeness enables the firm to identify any type of a new opportunity even in existing markets and businesses (Cho and Pucik, 2005), which is related to exploitation.

Meanwhile, having a proactive mindset does not mean that companies just wait for a change - they are part of the change (Kollmann and Stöckmann, 2014). Anticipating and acting on future needs and demands directs the company to take initiatives, act on

opportunities, and shape future demand (Lumpkin and Dess, 1996). Such an orientation should lead to the development of explorative capabilities. Moreover, a proactive mindset can also foster exploitative capabilities, as a proactive company will also be willing to implement changes in the current competitive environment (Hughes and Morgan, 2007).

Firms with high levels of entrepreneurial orientation undertake uncertain and risky projects (Wales, 2016). Marketing capabilities and in particular market sensing and customer linking capabilities can help a firm counterbalance the potential negative effects of undertaking such projects (i.e. failure), by focusing on market-relevant innovations and by driving customer acceptance of these innovations (Arunachalam *et al.*, 2018).

Market sensing capabilities are about understanding what is happening regarding demand, customers, competitors and wider macro-environment (Hooley *et al.*, 1998). They are anticipatory capabilities (Foley and Fahy, 2009) with an intrinsically open approach to market information insights, development and interpretation (Day, 1994). In this vein, their essence is represented by the behavioural definition of market orientation (Day, 1994), which according to Kohli and Jaworski (1990) is defined as the generation of market intelligence, its dissemination among the organisational units, and responsiveness to it. Substantive elements in market sensing capabilities include understanding the market (competitors, channel members, customers), and identifying and understanding market trends. To achieve a distinctive capability in market sensing, the firm should be superior to its competitors in each of these parts (Anderson and Narus, 2007). Drawing evidence from the extant literature, market sensing capabilities will enable companies to formulate, test, revise, update and refine their views about the market (Anderson and Narus, 2007). It is exploitative as it allows the firm to outperform its competitors but without having to compete in a completely unknown and new environment. An entrepreneurial mindset/culture would lead to enhanced market sensing capabilities as entrepreneurial firms tend to engage more in information scanning activities (Matsuno *et al.*, 2002). Companies with customer linking capabilities identify what customers want, what they need and their requirements while creating, building and maintaining relationships with them (Day, 1994). These relationships are maintained and enhanced by having high levels of

customer service and support, and by using new and innovative ways of connecting, which are different from the competitors. As such an entrepreneurial mindset will serve this cause better.

The concept of adaptive marketing capabilities (see section 2.3.2) is something relatively new. These outside-in and explorative capabilities were introduced quite recently, and therefore no empirical research has been conducted to examine their role in organisational performance or to identify their potential antecedents. The characteristics of companies that develop such capabilities encompass vigilance and experimentation. Such companies have a flexible configuration of being curious, rather than rigid and conformist (Day and Schoemaker, 2006), encouraging their members to exploration through creating a culture of discovery (Day and Schoemaker, 2009). Moreover, they motivate them to create and implement continuous experiments with the aim to improve the marketing strategy over time. The stimulation of breakthrough ideas, the creation and encouragement of innovativeness and the permission for some fails, are all the elements of this concept. Eventually, these companies are willing to challenge existing beliefs regarding consumer decision making processes, to share information about successful and unsuccessful initiatives in the market within the organisation, and eventually to learn from the experience of other peer companies, precursors and network partners. Both concepts (i.e. entrepreneurial orientation and adaptive marketing capabilities) focus on creativity and experimentation, discovering new opportunities and new ways of doing business. Overall, it is suggested that an entrepreneurial orientated culture is the most suitable to accommodate the development of such marketing capabilities, and therefore the following hypothesis is developed:

Hypothesis 9: Entrepreneurial orientation will have a positive effect on marketing capabilities.

3.4.1 Entrepreneurial orientation and performance through marketing capabilities

Past findings that simply examine the direct relationship between entrepreneurial orientation and performance, provide an incomplete picture (Wang, 2008). A few

reasons were identified in the literature, trying to explain part of the inconsistency in relation to the effect of entrepreneurial orientation on organisational performance. Apart from the external factors that can moderate this relationship, researchers should consider how internal factors affect this relationship (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003). One of these is related to the mediating effect of the marketing capabilities. Business orientations have a strategic implication for the deployment of its resources (Liu *et al.*, 2004), and therefore this can have an effect on performance. Organisational culture should, up to an extent, affect organisational performance directly, but also it should be responsible for the development of certain competences, and therefore affect performance indirectly as well. On these grounds, it is suggested that:

Hypothesis 10: Marketing capabilities will mediate the relationship between entrepreneurial orientation and performance.

3.5 The role of competitive positioning

There are numerous studies trying to investigate the relationship between competitive positioning and performance (Hernández-Perlines *et al.*, 2016). Meanwhile, including it in this study will also serve the purpose of completion of the model, considering it as the materialisation of the entrepreneurial orientation and marketing capabilities. The study of Murray *et al.* (2011) exhibited a positive relationship between differentiation strategies and financial performance and between low cost strategies and financial performance, (financial performance was measured by 3 subjective items: profit level, sales volume and growth rate). However, Zhou et al. (2008) found no relationship between a differentiation strategy and financial performance (measured by 3 subjective items of occupancy, gross operating profit and market share).

Considering that a differentiation strategy focuses on producing and marketing superior product value to relatively price-insensitive buyers (Vorhies, 1998), it will have a positive effect on profitability of the firm, considering that they will position their products in the target markets where customers are willing to pay a premium for superior need satisfaction (Day and Wensley, 1988). Both aspects of differentiation (i.e. marketing and innovation differentiation) (Covin and Slevin, 1991; Dess *et al.*, 1997; Spanos and Lioukas, 2001) can be considered to affect performance in a positive way.

A marketing differentiation strategy, which is focused more on intense marketing communication activities, and on offering attractive features, convenience, and guarantees (Dess *et al.*, 1997), will benefit performance both in terms of profitability indicators, including turnover, as well as customer loyalty and satisfaction. Adding attractive features, convenience, and guarantees into its products/services, a company can improve its offering and appeal to more customers (which will ultimately affect its turnover), charge more (something that will enhance both turnover and profits), and satisfy customer needs better (something that will also improve customer performance among other things).

Meanwhile, an innovation differentiation strategy, which focuses more on product development, original applications, new technologies, up-to-date innovations and quality design (Dess *et al.*, 1997), will also enable companies to advance their offering

and experience improved performance. New products will serve previously unserved or underserved markets and will increase the turnover of the company. Although there is an associated cost of R&D, such innovations are more likely to have a high net profit margin, thus increasing the profitability of the firm at least in the mid-to-long term, while the elements of customer performance (like gaining new customers) will also be positively affected.

Therefore, in principle, a differentiation strategy is expected to improve the market and profitability of a company (Hurley and Hult, 1998). Such strategies will allow the firms to innovate and introduce differentiated products into the market ahead of competitors. Those differentiated products usually follow a skimming or premium price strategy (Lisboa *et al.*, 2011), which will raise the net profit margins and lower customer acquisition costs (Morgan *et al.*, 2004). Therefore, differentiated products will increase market share and revenues (Lisboa *et al.*, 2011).

A cost-leadership positioning will allow a firm to take advantage of the price-conscious market segments. Considering that a cost leadership strategy aims at achieving the lowest cost position within an industry, by default its effectiveness lies on positioning the product in price sensitive target markets. It is aspires to achieve above-average return on investment, either by "*…high relative market share or other advantages such as favourable access to raw materials*" (Porter, 1980, p. 36). Therefore, it is expected that such positioning will have a positive effect on profitability either by increasing ROA or boosting gross profits. However, it is not anticipated to have a positive effect on net profit margins, considering that such firms are more likely to reduce their price once production cost is lower, rather than maintain their prices to increase net profit margin. Moreover, by definition, cost-leaders take advantage of economies of scale to reduce their relative costs. These economies of scale can be achieved by the large number of customers that they serve. A cost-leadership strategy will allow a firm to charge lower price for the same product which is likely to increase its market share (Tan and Sousa, 2015), and consequently its turnover. In this vein, the following hypothesis is formulated:

Hypothesis 11: Competitive positioning will have a positive relationship with a firm's performance.

According to Day and Wensley (1988) capabilities are the drivers of competitive positioning (Zou *et al.*, 2003) or, in other words, critical determinants as they have the potential to enable a firm to reduce costs and/or respond to environmental opportunities and threats (Barney, 1991). The resources and capabilities of a firm are central in formulating its strategy (Grant, 1991), while the Porterian view of strategy is industry driven, the resource-based view approach suggests that strategy should be defined by the firm's unique resources and capabilities (Rumelt, 1984; Spanos and Lioukas, 2001). A firm's assets are important predictors of its competitive positioning in terms of marketing differentiation, innovation differentiation and cost leadership (Spanos and Lioukas, 2001). However, usually its operationalisation refers to a higher order construct, consisting of both cost leadership and differentiation, making it difficult if not impossible for the conclusion to be drawn with regard to linking particular assets (i.e. resources and capabilities) with specific competitive positions. Therefore, a more deconstructive approach of competitive positioning is needed, where the three aspects of competitive advantage are examined separately. Considering that cost leadership requires a high degree of internal focus, where companies are efficient rather than effective, it is expected that marketing capabilities (which are outward looking) to have a stronger effect on differentiation than on cost leadership:

Hypothesis 12: Marketing capabilities (namely adaptive marketing, market sensing and customer linking) will have a positive effect on competitive positioning, with a stronger effect on differentiation advantage.

3.5.1 Marketing capabilities and performance through competitive positioning

Marketing capabilities are the predictors of competitive positioning (Day and Wensley, 1988; Barney, 1991). However, apart from the direct capabilities–competitive positioning linkages, it is also proposed that the competitive positioning will mediate the relationship between capabilities and performance. This will provide a clearer image of the mechanisms through which marketing capabilities affect performance (either directly, or indirectly), one of which has been suggested to be the competitive positioning (e.g. Tan and Sousa, 2015). Marketing capabilities are the

predictors of competitive positioning and performance (Fang and Zou, 2009), as they allow firms to adapt, integrate and reconfigure internal and external skills and competencies in order for them to address environmental changes (Tan and Sousa, 2015). Although marketing capabilities have a direct effect on performance, their presence might also foster the development/presence of specific actions that will lead companies to gain a competitive positioning. In this vein, competitive advantages can play a mediating role in the marketing capabilities–performance relationship (Murray *et al.*, 2011). Following Morgan *et al.* (2004), it is anticipated that competitive positioning mediates the relationship between marketing capabilities and performance, leading to the following hypothesis:

Hypothesis 13: Competitive positioning will mediate the relationship between marketing capabilities and a firm's performance.

3.6 Control Variables

The present study will also include a control variable in an effort to better understand the relationship between the independent and dependent variables. The control variable is related to the size of the firm, and following the past research practice this will be measured by the number of employees (e.g. Murray *et al.*, 2011). Especially for manufacturing companies, the number of employees is considered to be a good indicator of its size. Meanwhile, considering that turnover is one of the performance indicators that is used in the present study, methodologically it would not have been possible to control for it as well. The way that the control variable is incorporated into the analysis is similar to the models of Slater and Narver (1994), Morgan *et al.* (2012) and Murray *et al.* (2011), where it is directly related to the outcome. However, to prevent skewness of the results, the natural logarithm was used (Atuahene-Gima, 2005). Table 3.1 provides a summary of the hypotheses that will be tested in the present study.

Table 3.1: Summary of the hypotheses to be tested

Hypothesis 1: Entrepreneurial orientation will have a positive relationship with a firm's performance.
Hypothesis 2: Environmental munificence will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental munificence is high.
Hypothesis 3: Environmental complexity will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental complexity is high.
Hypothesis 4: Market sensing capabilities will have a positive relationship with a firm's performance.
Hypothesis 5: Customer linking capabilities will have a positive relationship with a firm's performance.
Hypothesis 6: Adaptive marketing capabilities will have a positive relationship with a firm's performance.
Hypothesis 7: Environmental munificence will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental munificence is low.
Hypothesis 8: Environmental complexity will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental complexity is high.
Hypothesis 9: Entrepreneurial orientation will have a positive effect on marketing capabilities.
Hypothesis 10: Marketing capabilities will mediate the relationship between entrepreneurial orientation and performance.
Hypothesis 11: Competitive positioning will have a positive relationship with a firm's performance.
Hypothesis 12: Marketing capabilities (namely adaptive marketing, market sensing and customer linking) will have a positive effect on competitive positioning, with a stronger effect on differentiation advantage**.**
Hypothesis 13: Competitive positioning will mediate the relationship between marketing capabilities and a firm's performance.

Chapter 4 Methodology

Following the development of the conceptual framework, the following chapter will be devoted to the discussion of the methodological approaches of the present study. Social sciences have many disciplines, while marketing in particular consists of different aspects; consumer behaviour, new product development, strategic marketing to name a few. Marketing scholars, like Kotler (1997) suggest that there is a universal applicability regarding the strategic marketing, and that the decision making process is linear which can be applied to any situation (Luck *et al.*, 1989; McDonald, 1999). Therefore, it can be suggested that strategic marketing is linked with the systems theory, in the way they both see organisations as strategic marketing scholars view businesses as impersonal closed systems which work towards a common goal, rather than systems which are subject to the view of their members. According to this theory, the organisation can be studied by scientific laws, in which the shape taken by the company is determined by material factors (e.g. size) (Donaldson, 1996). Such laws apply across organisations of all types and national cultures, and the organisation adopts a structure that fits with the contingencies (Donaldson, 1996).

Although, this approach might not fully capture the fact that the members of each organisation have their own beliefs, their own thoughts, and sometimes different objectives, the systems theory is the dominant mode which is used by the majority of scholars and researchers of strategic marketing in order to represent theoretically the marketing planning process. In this vein, organisational members make choices, however, these choices need to be justified. As it is explained by Donaldson (2005, p. 111) "…*rationalist recognition that managers make choices does not mean that these choices are unconstrained. One option may lead to higher organisational performance than another option. Therefore, managers who value organisational performance, or are under pressure to give it priority, will choose the first option".* Therefore, the option which may lead to higher performance, will be chosen, because it fits the situation of the organisation, and in this sense, the situation constrains the manager to choose that option, meaning that eventually the situation determines the organisation (Donaldson, 2005).

The present study adopts a realist approach which will enable the researcher to make generalisations and identify causal relationships between organisational phenomena within a value-free framework. In this vein, organisations are viewed as systems, whose members work together towards achieving common objectives which are related to performance. Therefore, positivist organisation theory, which is determinist (i.e. managers are seen as having to adopt the organisational structure that is required by the contingency factors), generalising and functionalist, lies in the contingency research of organisational structure (Donaldson, 1996). The researcher and the reality are separate (ontology), and objective reality exists (epistemology) which can be discovered through robust research methods that will produce valid and reliable results.

4.1 Research Design

There are three major types of research: exploratory, explanatory and descriptive (Hair *et al.*, 2006; Iacobucci and Churchill, 2010). Exploratory study is undertaken when not much is known about the situation at hand, or no information is available on how similar problems or research issues have been solved in the past (Malhotra and Dash, 2011). The imperative of this type of research is to reach a better understanding of the research problem, and to gather preliminary information through informal personal interviews, and/or focus group interviews with stakeholders. Gathering such information will help to define the problems and suggest research propositions; in this vein exploratory research is more associated with qualitative methods (Aaker *et al.*, 2000), as when there is little understanding of the topic it is impossible to formulate hypotheses without some exploratory research.

Explanatory study aims at testing hypotheses about cause-and-effect relationships between variables either through laboratories or through experiments (Malhotra and Dash, 2011). Like descriptive research, it is quantitative in nature, pre-planned and structured, however, as opposed to the observational style of descriptive research, it attempts to interpret whether a relationship is causal through experimentation.

The theoretical framework underpinning this study is well grounded in the literature, while almost all main constructs are well defined (apart from the one of adaptive marketing capabilities). Considering that descriptive studies are undertaken in order to determine and describe the characteristics of the variables of interest in a situation, the present research can be described as such, aiming at investigating the hypotheses developed in the previous chapter. It is more inflexible, rigid and pre-planned than exploratory research (Hair *et al.*, 2006; Iacobucci and Churchill, 2010; Malhotra and Dash, 2011), and seeks to define the questions, the people surveyed, and the method(s) of analysis, prior to beginning data collection. The current study tests for a novel model, seeking to explain different aspects of organisational performance, based on the firm capabilities, and answer the question what type of business orientation drives the development of these capabilities, while investigating some relevant moderators.

4.2 Research Method

The method used for the present study depends on the research philosophy; as such, a nomothetic method seeking lawfulness by testing hypotheses which will permit generalisations (Salvatore and Valsiner, 2010) was followed. Quantitative methods deal with statistical data aiming at developing knowledge by means of establishing appropriate measurements and testing hypotheses (Creswell, 2009). Quantitative data are drawn from empirical observations, by means of systematic data collection procedures.

Validity and reliability are considered as the key attributes with the goal of examining the relationships among those variables. Ultimately, the aim is to achieve an accurate and unbiased interpretation of the data. Table 4.1 depicts the four quantitative research methods along with the advantages and limitations of each one, with relation to the present study.

Table 4.1: Overview of Quantitative Research Methods

Methods	General Focus	Advantages	Limitations
Experimental Study	Investigation of the relationship, where the independent variable is deliberately manipulated in a predefined context (Davidsson, 2006)	Control of variables Clear conclusions	Difficult to design the artificial settings needed Difficulty in separating the effects
Survey	Collecting data from the sample in order to generalise results to the population (Davidsson, 2006)	Used both to describe the phenomenon and analyse relationships Generalisability Practicality	Self-reporting might lead to biases The intrinsic nature of some phenomena might result in low responses Difficult to define the boundaries of the population for the sampling procedures
Cross-Sectional Study	Investigation of the phenomenon across different contexts over the same period of time (Collis and Hussey, 2014)	Provides a snapshot of the phenomenon Comparing and controlling different settings of interest Generalisability	Sampling issues Difficult to separate confounding effects Does not explain the background and reasons for the identified differences
Longitudinal Study	Investigation of the phenomenon over the long period of time (Adams and Schvaneveldt, 1985)	Dynamic perspective Testing of change processes Generalisability	Comparability of the data across years Availability of the longitudinal data Difficult to be conducted at the individual level

Surveys can be divided into two categories: descriptive and analytical. Descriptive survey aims at providing a representation of phenomena, whereas an analytical survey aims at determining whether there is a relationship among variables (Lambe *et al.*, 2002). The data collected for the purposes of the current research, refer to both primary and secondary sources. Primary data were collected by the use of a structured questionnaire, and their main purpose was to measure elements like culture and behaviours. Secondary data were gathered by accessing companies' financial information, in order to measure organisational performance and to define the number of employees (which was the control variable).

The empirical operationalisation was performed through an analytical survey aiming at giving answers to the research questions. Survey research is the most common method in social sciences and particularly in descriptive studies (Sekaran and Bougie, 2013). It is practical, and it can be used to describe phenomena and analyse relationships, while the results can be generalised. It refers to the selection of a relatively large sample from the population of interest (i.e. sampling frame), followed by the collection of a relatively small amount of data (primary or secondary) from this population (Hair *et al.*, 2006; Iacobucci and Churchill, 2010; Malhotra and Dash, 2011). It involves self-reported information, collected in a structured and consistent way, from the sample, which is representative of the population of interest (Rea and Parker, 2012). Finally, its limitations (e.g. self-report bias) can be overcome by an appropriate research design.

4.3 Assessing performance

The reasons for selecting the performance indicators were highlighted in section 0. In this section the focus will be on explaining how data are collected and used. In terms of profitability, secondary data will be used. Considering the fact that the participants of the research are those managers at that highest level who decide about marketing strategies and activities, it might be the case that they are not fully aware of specific profitability indicators like ROA. Therefore, subjective profitability indicators might be less accurate.

A meta-analysis from Ellis (2006) shows that studies based on subjective performance indicators return stronger effects than studies on objective performance data, although there is a relationship between objective and subjective measures. This could be attributed to a number of factors, one of which could be the inability of some marketing managers to accurately provide specific performance indicators like financial ones.

The time frame of measuring organisational performance could also partly explain the inconsistency of previous results. Decisions at the strategic level have longer time horizon than decisions at the tactical level, and they capture the central tendency of business performance (Szymanski *et al.*, 1993). This is why performance is measured as a multiyear average, where it is proposed to use three separate indicators: a 3-year average for the years 2011, 2012 and 2013 of ROA, net profit margin (before taxes) and gross profits. However, aiming at capturing not only the static but also the dynamic effect of performance, the average growth rate of these indices between years 2010 and 2013 will also be measured.

This proposition is also in line with the real business environment, since a three-year period for strategic planning has become common, compared to the five-year planning periods in the past (McDonald and Wilson, 2000). Hence, considering that respondents will be asked to assess their current philosophies and practices, a 5-year time frame for measuring performance might capture the results of older practices, while asking respondents to reflect on practices in the past involves the risk of them not providing an accurate answer due to the time lag. Finally, assessing performance based on one year only might include results which would be attributed to some one-off factors, like market or other environmental conditions.

Customer performance is measured by an indicator consisting of customer satisfaction, loyalty and gaining more new customers than competitors while the research will cover market performance as well. This will be measured for the years 2011, 2012 and 2013, but also it will be measured in terms of change in turnover between 2010-2013. and the average turnover for the same period. Sales growth is a measure of the firm's ability to support an increase in operating and other expenditures (Kumar *et al.*, 1998).

4.4 Sampling Unit

The present study focuses on small and medium manufacturing companies. Small and medium sized enterprises (hereinafter SMEs) have an increasingly important role in the economic development (Karpak and Topcu, 2010). Their role is even more important during economic downturns, while they face strong expectations regarding their role as key players when those economies will be recovering (Soininen *et al.*, 2012). This is something which is relevant considering the recession that the UK economy faced in 2008 and 2009 (-0.8% and -5.2% Gross Domestic Product growth rate respectively) followed by a recovery the years after (Office of National Statistics, 2014). Moreover, as Soininen *et al.* (2012) state more research is needed in order to identify the fundamental strategic characteristics which affect SMEs growth and profitability.

In terms of categorising one company as SME, although the UK definition is solely based on the number of employees (i.e. no more than 249), an additional criterion based on the European Union definition (*Recommendation 2003/361/EC*, 2005) has been adopted. Based on the latter, SMEs are those companies with no more than 249 employees, and either a turnover of no more than €50 million or a balance sheet total of no more than €43 million. Based on the Sterling exchange rate in December 2013 (when the sampling frame was being drawn) SMEs were defined as those companies with no more than 249 employees, and either a turnover of no more than £41 million or a balance sheet total of no more than £35.2 million. The reason why the EU definition was adopted, was based on the fact that companies who require access to financial resources or to funds through European Programmes (which have been established to help companies renewing their equipment for example) are selected based on this above definition.

In 2016, there were 5.5 million businesses registered in the UK. Over 99% of them are considered to be small and medium enterprises (SMEs) employing 0-249 people. These figures include also what are called micro businesses, which employ 0-9 people. These represent 96% of the businesses, and account for 32% of the employment and 19% of the overall turnover. The rest of the SMEs (i.e. small and medium) represent 5% of the businesses, but 27% of employment and 39% of turnover (Rhodes, 2016).

As such, one can understand the added value that they have in terms of affecting the overall economy.

Although the services sector undoubtedly plays an important role in the UK economy (and in this vein, it has been the main focus of research in the past), the role of the secondary sector is important as well (although it has received less attention). It is responsible for 10% of the gross value added – a figure that cannot be underestimated- while in 2014 it accounted for 44% of all exports that the UK performed (Rhodes, 2015). However, the manufacturing sector, which represents 5% of business, is responsible for 10% of employment and 15% of turnover (Rhodes, 2016). As such, its relative contribution to the economy is much greater.

4.5 Sampling Frame

The sampling frame for this study was drawn from the FAME database which provides data of all UK and Irish companies with a turnover of over £1 million. It contains descriptive data of over 9 million companies and has been used successfully in the past (Harris, 2001). Overall, a total 5,529 small and medium manufacturing companies with 20 or more employees were identified. The criterion of the number of employees being 20 or more was set in order to minimise the risk of including in the sample companies with non-adequate organisational structures. Also, the sampling frame consists of companies from multiple industries for greater generalisability (Soininen *et al.*, 2012). Specifically, these companies lie in one of the following industries, which is based on the UK Standard Industrial Classification (SIC) of the UK's Office of National Statistics (O.N.S., 2007; O.N.S., 2012, 2013, 2014, 2015).

- Food, beverages, tobacco
- Textiles, wearing apparel, leather
- Wood, paper
- Chemicals, rubber, plastics, non-metallic products
- Metals and metal products
- Machinery, equipment, furniture, recycling

A systematic random sample of 553 firms was drawn. The 5529 companies received a random number by using the function of Microsoft Excel software, which served to classify them in an ascending order. One in every tenth company was then chosen to participate in the sample.

In addition to this, data from the Blue Book of the Office of National Statistics were collected with regard to the performance of the aforementioned industries (O.N.S., 2012, 2013, 2014, 2015). Gaining access to such data, which are presented in Table 4.2, is used to classify the sample into two groups; those companies that performed better than their respective industry, and those companies that performed worse. This classification, will allow for further analysis to be conducted, aiming at gaining a better understanding of drivers of organisational performance.

Table 4.2: Annual sales per industry

Year	Food, Beverages, Tobacco (£ m)	Chemicals, Rubber, Plastic, Non-metallic products (£ m)	Machinery, Equipment, Furniture (£ m)	Metals, Metal products (£ m)	Textiles, wearing apparel, leather (£ m)	Wood, Paper (£ m)
2010	22,672	20,412	25,519	14,979	4,670	11,048
2011	22,938	19,043	28,413	16,049	4,794	10,995
2012	24,264	20,745	28,125	17,171	4,981	11,360
2013	26,795	22,341	28,811	19,510	6,116	11,397

Source: O.N.S. (2015)

4.6 Data Collection

The following section will describe the process of how the data were collected. After developing the sampling frame, an introductory email was sent to 553 companies explaining the background, purpose and importance of the research. It was asking the recipient (which in most cases was the secretarial support), to forward it to the most senior marketing executive or, in the absence of such a position, to the person ultimately responsible for the marketing activities of the company (e.g. sales director). Moreover, it contained elements to assure the participants about confidentiality matters, as well as about the way that the data will be analysed and presented. During the process of data collection, this confidentiality was being highlighted to the participants. In particular, participants were reassured that no raw data would be shared, and that their anonymity will be protected. It was important to establish the element of trust between the researcher and the participants, in order to maximise the reliability of their answers. The content of the emails can be found in Appendix A.

The emails were sent from the official university of Strathclyde email address, along with a link to the profile of the researcher. In addition to that, they contained a unique internet link giving access to the questionnaire (created by Qualtrics). This had the advantage of making possible in the stage of data analysis to link particular responses with specific objective performance indicators that were acquired earlier. Three reminders were sent (one every four weeks), to those companies who did not reply (either positive or negative) to the initial request.

The respondents within the organisations were approached according to the key informant technique. Such sample units can make generalisations "…*about patterns of behaviour after, after summarising either observed or expected organisational relations*" (Seidler, 1974, p. 817). The selection of key informants, was based on their knowledge about the issues under investigation while it included those members who were willing and able to participate (Kumar *et al.*, 1993). In this vein, the key informants were those company members who were ultimately responsible for the marketing functions of the organisation (e.g. marketing director). Undoubtedly, this technique has some drawback, like the subconscious attempts to maintain self-esteem (Kumar *et al.*, 1993), and therefore an effort to present events in a more favourable

way. Nevertheless, it is considered the most appropriate way of collecting organisational information, and has been used successfully many studies (e.g. Morgan *et al.*, 2004). Moreover, in order to address the latter issue, a measurement of socially desirable behaviour was included in the questionnaire which will serve as a means of testing for common method bias.

Out of 553 companies, and over a 7-month period (April 2014-September 2014), 221 completed questionnaires were returned yielding a response rate of almost 40%. Missing data were not a problem for the present study, since the online questionnaire was developed in such a way were respondents could not proceed unless they had filled in all the necessary questions. The sample size exceeds the minimum thresholds as specified by (Kline, 2011) where a N:q ratio of 10:1 is considered sufficient (N=number of cases and q=number of parameters in the model).

4.7 Research Instrument

The research instrument was developed on the basis of collecting information with regard to the concepts under investigation, as well as some characteristics of the respondents. In an effort to increase the response rate, while maintaining content validity, the questionnaire was developed in a way that, simple and short items were used, as exceptionally lengthy items usually can increase complexity and diminishes clarity (DeVellis, 2012).

Moreover, the occasional use of reverse items, ensured that the responses are consistent. The questionnaire consisted of 60 items (questions), and it was divided into 5 sections. The first section was related to entrepreneurial orientation, the second to marketing capabilities, the third to competitive positioning, the fourth to environmental characteristics and the fifth to some demographic and personal elements of the respondents.

All items, apart from demographics and personal characteristics of the respondents, were measured by using a 7-point Likert scale, ranging from 1 to 7, where respondents were asked to state whether they agree or disagree with the provided statements. Although a number of studies suggest that there is no difference in terms of validity and reliability between the use of five or seven point scales, the majority of the studies suggest that a seven-point scale is the optimum scale (e.g. Preston and Colman, 2000). Moreover, the use of odd rather than even points ensured that a neutral option was available.

The following section will present the measurement scales that were employed for the current research. In order for the construct of adaptive marketing capabilities to be measured, a new scale was developed. For the rest of the constructs already established scales were used (or adopted), due to their high reliability and validity (Iacobucci and Churchill, 2010).

4.7.1 Variables measurement

Entrepreneurial orientation

The measurement of entrepreneurial orientation consisted of 9 items, and it relied on the 7-item scale of Matsuno *et al.* (2002). Moreover, an additional item which was adopted from Hurley and Hult (1998) regarding innovativeness, and another item regarding risk taking from (Hurley and Hult, 1998) were added. It is a second order construct comprising of 3 first order factors namely innovativeness (2+1 items), proactiveness (3 items) and risk taking (2+1 items). The questions asked the respondents to indicate the degree of their agreement, of whether or not some particular organisational phenomena were present in their company.

Market sensing capabilities

With regard to the construct of market sensing capabilities, the operationalisation was based on the 5-item scale that was developed by Morgan *et al.* (2009a). The questions asked the respondents to indicate the degree of their agreement (7-point scale), of whether or not their company was good in particular processes. Questions included: learning about customer needs and requirements, discovering major competitors' strategies and tactics, gaining insights about the channel, identifying and understanding market trends, learning about the broad market environment.

Customer linking capabilities

In order for customer linking capabilities to be measured, the 4-item scale developed by Hooley *et al.* (2005) was used. In a similar way, like with the market sensing capabilities, the respondents were asked to indicate the degree of their agreement (7-point scale), of whether or not their company was good in certain procedures. Questions included: high levels of customer service and support, understanding of the needs and requirements of target customers, creating, maintaining and enhancing relationships with target customers.

Competitive positioning

The competitive positioning of each company was specified by the scale of Spanos and Lioukas (2001). As discussed in the chapter for the literature review three different competitive positioning aspects were incorporated in the present research; cost

leadership, marketing differentiation and innovation differentiation. Each of the scales measuring differentiation used 4-item, while the cost leadership scale consisted of 3 items.

The questions asked the respondents to compare their companies against the competitive methods of their major competitors, and indicate the extent to which they employ more, less or the same levels of a number of competitive methods with regard to their major product/product line (7-point scale).

Questions for innovation differentiation were related to research and development expenditures for product development and process innovations, and to having a high rate of product innovations. Questions concerning marketing differentiation were looking at measuring the levels of using innovative marketing techniques, advertising expenditures and strong sales force. Finally, the questions about cost leadership were focused on the efficiency of the production processes, the achievement of economies of scale and the utilisation of the company's capacity.

In line with the extant literature, the two variables measuring specific aspects of environmental conditions (i.e. environmental complexity and environmental munificence), were measured with multi-item indicators which assessed managerial perceptions of the external environment conditions (Boso *et al.*, 2013a).

Environmental complexity

In order for the concept of environmental complexity to be measured a 3-item scale was adopted from Jaworski and Kohli (1993). Respondents were asked to state the degree of their agreement (7-point scale) with regard to some market and economic indicators. The questions tried to capture the managers' perception, as to whether their customers had different product preferences and buying habits among them, as well as whether the nature of competition in that particular industry varies depending on the product/ product line.

Environmental munificence

Environmental munificence (i.e. the abundance of critical resources needed by companies) was measured by a 3-item scale adapted by Boso *et al.* (2013a). The questions were related to the trend of demand for industry products as well as to the

pace that products become obsolete, since, as mentioned in Chapter 2 this concept it is related to the extent to which the business environment supports growth (Dess and Beard, 1984), by having opportunities for venturing and renewal within the industry. However, considering that a 2-item scale might result in problematic data analysis, 1 additional item was added (negative item).

Social Desirability Bias

A 10-item scale adopted from Strahan and Gerbasi (1972) was also included in the survey, measuring the element of how socially desirable the respondent wanted to be. The items were related to the personality of the respondent and some indicative questions were: *there have been occasions when I took advantage of someone, I am always willing to admit it when I make a mistake, there have been occasions when I felt like smashing things.* The responses were used for testing common method bias, in a process that will be discussed in a following section. A summary of the scales that were adopted from earlier studies is provided in Table 4.3, along with the number of items.

Table 4.3: Summary of the Scales Employed

Scale	Source	Number of items
Entrepreneurial Orientation	Matsuno, Mentzer and Özsomer, (2002), Covin and Slevin, (1989), Hurley and Hult (1998)	9
Market Sensing Capabilities	Morgan, Slotegraaf and Vorhies (2009)	5
Customer Linking Capabilities	Hooley, Greenley, Cadogan and Fahy, (2005)	4
Innovation Differentiation	Spanos and Lioukas (2001)	4
Marketing Differentiation	Spanos and Lioukas (2001)	4
Cost Leadership	Spanos and Lioukas (2001)	3
Environmental Complexity	Jaworski and Kohli (1993)	3
Environmental Munificence	Adapted from Boso, Story and Cadogan (2013)	3
Social Desirability	Strahan and Gerbasi, 1972	10

Customer performance

Although, where possible, objective performance indicators were used (specifically for market performance and profitability), subjective data were also collected from the managers with regard to performance related to customers (i.e. customer satisfaction, customer loyalty, gaining new customers). Such indicators are very useful since they show how effective the company is at attracting and retaining customers (Hughes and Morgan, 2007).

However, it is difficult, if not impossible, for someone outside of the company to gain access to secondary data with such information. Respondents were asked to evaluate the performance of their company against their major competitors, for a 3-year period (2011-2013) in terms of customer loyalty, customer satisfaction and gaining new customers. These single item measures were used to create a composite indicator named customer performance.

As, mentioned in the previous chapter, with regard to financial and market performance objective performance indicators were used, in an effort to understand how marketing phenomena are linked to particular aspects of performance, as in general the conceptualisation of performance as a global latent construct should be avoided (Katsikeas *et al.*, 2016). However, in an effort to prevent skewness, the values of the average turnover and average gross profits were transformed into their logarithms (Atuahene-Gima, 2005; Kollmann and Stöckmann, 2014).

4.7.2 Adaptive marketing capabilities scale development

The next section outlines in detail all the analysis to assess the psychometric properties of the adaptive marketing capabilities scale. The concept of adaptive marketing capabilities is recent, and therefore there was no measurement scale for it. Consequently, the following multi-step process based on Churchill (1979) and DeVellis (2012) was followed, which resulted in the development of a reliable and valid scale.

After the influential article of Day (2011) a further study of relevant literature related to vigilance, open marketing and marketing experimentation (Day, 1994; Day and Schoemaker, 2006; Day and Schoemaker, 2009; Day and Moorman, 2010), helps us

to create a pool of several measurement items. The initial pool of items was then refined, before arriving at a preliminary 15 measurement items. Particular focus was paid in the clarity of the statements (content validity) that would affect the construct validity. These items were real, measurable, and correlations among them can be calculated, contrary to latent variables which are hypothetical, and unmeasurable. Each of them gave an indication of the strength of the latent variable (DeVellis, 2012).

The initial items pool was created based on the literature and the researcher's understanding of the concept of adaptive marketing capabilities. The wording was unambiguous, while the questions were kept as short as possible without sacrificing meaning, since lengthy items can increase complexity and diminish clarity (DeVellis, 2012).

The next step was for the measurement items to be reviewed by experts. The purpose of this process, is to evaluate the items' clarity and conciseness, to rate the relevance of each item, and eventually to potentially indicate other items that could better capture the phenomenon (DeVellis, 2012). As such, 6 senior academics were approached, whose research domain includes strategic marketing, regarding the face validity of the items. They suggested some minor changes to ensure the clarity and the removal of one item that might create validity issues with other constructs. All the points raised were captured, and a pool of 11 items was created (Table 4.4).

Table 4.4: Second pool of items related to adaptive marketing capabilities

We keep a systematic track of how customers act to the social media space
We keep a systematic track of how customers react to the social media space
We have a mind receptive to new arguments about latent customer needs
We have a mind receptive to new ideas about latent customer needs
We are open to challenge even our own beliefs of how customers buy
We invest in resources to understand the behaviour of customers through experiments, pilot products etc.
Within the company we share insights of successful and unsuccessful initiatives in the market
We believe that we can achieve our goals by using only our own means

We forge the relationships with companies involved in social networking technologies
We invest in building relationships with companies that have complementary resources to us

Next, 12 semi-structured interviews were conducted, with marketing executives. The purpose was to corroborate whether our interpretation of the measurement, reflected business practices, and they were approached using a convenience sample. Based on these interviews the number of items was reduced to 9, by combining some questions together; specifically, items 1 and 2, 3 and 4. According to the practitioners, having these extra questions would make the questionnaire unnecessarily lengthy and confusing, while the benefit would be minimal since the questions had very similar meaning. The final pool of 8 items is presented in Table 4.5, while the overall questionnaire that was used for the present study can be found in Appendix B.

Table 4.5: Proposed items measuring adaptive marketing capabilities

We keep a systematic track of how customers act and react to the social media space
We have a mind receptive to new ideas and arguments about latent customer needs
We are open to challenge even our own beliefs of how customers buy
We invest in resources to understand the behaviour of customers through experiments, pilot products etc.
Within the company we share insights of successful and unsuccessful initiatives in the market
We believe that we can achieve our goals by using only our own means
We forge the relationships with companies involved in social networking technologies
We invest in building relationships with companies that have complementary resources to us

4.8 Non-Response Bias

Before proceeding with the data analysis, a t-test was conducted to assess whether or not non-response bias was a problem in the present this study. Controlling for non-response bias is of great importance, as its presence could produce misleading conclusion in terms of generalisations (Armstrong and Overton, 1977). Non-response bias was assessed two times; one time for early-respondents versus late respondents, and one for non-respondents versus those who responded.

The most common way of testing for differences between early and late respondents, is to categorise them based on whether or not they responded before the reminder email. The most common type of extrapolation is carried over successive waves of a questionnaire, and by waves it is meant the response generated by a stimulus, e.g. reminder (Armstrong and Overton, 1977). Since the first reminder was sent four weeks after the original invitation, the respondents were divided based on this cut-off time. The estimate of the nonresponse bias was based the concept of entrepreneurial orientations under investigation. The reason is that certain cultures within companies could affect the willingness of the managers to respond earlier or later. On this basis, an analysis of mean scores was conducted (Armstrong and Overton, 1977).

Table 4.6 shows the group statistics, while Table 4.7 the independent sample test, according to which no statistically significant differences were found between the two groups (i.e. early respondents and late respondents), indicating that non-response bias is not a problem for the present study. All analyses in this chapter were conducted by using IBM SPSS 25.0.

Table 4.6: t-test Group Statistics for entrepreneurial orientation

	Early Respondents	N	Mean	Std. Deviation	Std. Error Mean
Entrepreneurial Orientation	1	33	2.1612	.45062	.07844
	0	188	2.278	.50395	.03675

Table 4.7: Independent Samples Test for entrepreneurial orientation

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Entrepreneurial Orientation	Equal variances assumed	0.914	.34	-1.246	219	.214	-.1168	.09371	-.3015	.06789
	Equal variances not assumed			-1.348	47.203	.184	-.1168	.08663	-.29106	.05745

Apart from testing for non-response bias between early and late respondents, a test was also performed between respondents and non-respondents. It was impossible to follow the same procedure with subjective indicators, as such indicators were not obtained by non-respondents. Nevertheless, having data regarding the turnover of those companies whose managers did not respond, an analysis of mean scores of average turnovers (3-year mean), revealed that there is no statistically significant difference between respondents and non-respondents in terms of company size.

In particular Table 4.8 and Table 4.9, present the results with regard to the natural logarithm of the average turnover.

Table 4.8: t-test Group Statistics for average turnover

	Group	N	Mean	Std. Deviation	Std. Error Mean
Average Turnover (Ln)	1	221	9.5180	0.70473	0.04741
	0	332	9.4846	0.62022	0.03404

Table 4.9: Independent Samples Test for Ln Average Turnover

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Average Turnover (Ln)	Equal variances assumed	1.251	.264	0.587	551	0.557	0.3340	0.05689	-0.07835	0.14514
	Equal variances not assumed			0.572	429.459	0.567	0.3340	0.05836	-0.08131	0.14810

4.9 Common Method Bias

One of the long-lasting difficulties that organisational researchers face, is related to the use of self-reported scales from employees with regard to some organisational phenomena. These could be affected by shared variance associated with a particular method of measurement, and therefore common method bias might be present, which then the researchers need to control for it (Podsakoff *et al.*, 2003). With an aim at testing this shared variance, the present study is using a Confirmatory Factor Analysis Marker Technique (Richardson *et al.*, 2009). The process involved creating 3 models (namely the CFA model, the baseline model, and method c model), and the use of the questions regarding social desirability.

The "baseline model", constraint the correlations between the Marker Construct (in our case the Social Desirability) and all other constructs to zero, while fixing the marker construct to the unstandardised value obtained from the "CFA model" (Williams *et al.*, 2010). The "method-C" model, is almost the same with the "baseline" model, with the only difference that additional factor loadings were created from the marker construct to each other construct's item. Additionally, these loadings were constrained to be equal. Then, the process involves a comparison between the two Chi-square values of the two models, and a comparison between the two values of their degrees of freedom. If the difference of their chi-squares (in this case 68.6) is higher than the chi-square critical value (in this case 75.6) for the associated degrees of freedom (in this case 57) then there is evidence of common method variance. As depicted in Table 4.10, the chi-square difference is lower than the chi-square critical value for 57 df, and therefore the null hypothesis is accepted, indicating no evidence of common method bias in the model.

Table 4.10: Chi-Square test for common method bias

	Chi-Square	dF	**Critical value of the chi-Square distribution; 0.05**
Baseline model	2216.6	1460	
Method C -model	2285.2	1517	
Difference	68.6	57	75.6237

Chapter 5 Data Analysis

The following chapter will be devoted in describing the statistical analyses that were performed following the data collection, aiming at answering the research questions. In this vein, the chapter initially presents some aggregated data focusing on describing the characteristics of the sample, while it also provides descriptive statistics of the constructs. Next, the chapter focuses on assessing the quality of the collected data, before proceeding with the process of structural equation modelling aiming at finding evidence to support the hypotheses, including mediation and moderation effects. The analyses were conducted by using IBM SPSS 25 and IBM SPSS AMOS 25.

5.1 Descriptive Statistics of the Sample

Before proceeding in the presentation of the results of the data analysis, it is important to provide some information regarding the characteristics of the sample. In this respect, some personal aspects of the respondents, as well as characteristics of the firms, will be first presented, aiming at summarising elements of the sample. Moreover, descriptive statistics will be then presented, related to the constructs that have been employed by this study.

5.1.1 Demographic Characteristics of Respondents

Out of 221 respondents 64.7% of them were identified as males, while 35.3% were identified as females (Table 5.1). Moreover, in terms of the level of their education the vast majority of the sample (88.2%) had at least one university degree (Table 5.2).

Table 5.1: Gender of respondents

Gender	N	Percent
Male	143	64.7
Female	78	35.3
Valid N (listwise)	221	100

Table 5.2: Educational background of the respondents

Education	Frequency	Percent	Cumulative Percent
Secondary	26	11.8	11.8
Higher Education	108	48.9	60.6
Master	60	27.1	87.8
MBA	22	10.0	97.7
Doctorate	5	2.3	100.0
Total	221	100.0	

Another piece of information with regard to the profile of the respondents is related to the experience that they had for working in that particular role (e.g. Chief Marketing Office), and for working in that particular sector. The results, presented in Table 5.3, reveal that the 84.6% of the respondents had a working experience of 7 or more years, while more than 60% had a working experience of more than 15 years. This information, accompanied with information about the education of the respondents, provides an indication of the level of knowledge that the respondents had, regarding the issues investigated from the current research. Finally, Appendix C presents the descriptive statistics (i.e. mean, standard deviation, kurtosis, skewness) of the individual items.

Table 5.3: Years of experience in their position

	Frequency	Percent	Valid Percent	Cumulative Percent
Years in this Position				
1-3	51	23.1	23.1	23.1
4-6	34	15.4	15.4	38.5
7-10	42	19.0	19.0	57.5
11-15	29	13.1	13.1	70.6
15+	65	29.4	29.4	100.0
Total	221	100.0	100.0	
Years of Working for this Sector				
1-3	17	7.7	7.7	7.7
4-6	17	7.7	7.7	15.4
7-10	23	10.4	10.4	25.8
11-15	31	14.0	14.0	39.8
15+	133	60.2	60.2	100.0
Total	221	100.0	100.0	

5.1.2 Organisational descriptive characteristics

Additional information, with regard to the characteristics of the companies that are included in the sample, can be found in Table 5.4 and Table 5.5. These statistics are associated with the size of the companies. Specifically, Table 5.4 provides an indication of the mean score of employees, and the mean score of turnovers for all 221 companies in the 3-year period before the survey, as well as the minimum and maximum scores.

In this respect, companies had a mean score of 101.77 employees during the 3 years before the survey, and a mean turnover of approximately £16.5 million. The minimum number of employees that a company had was 20, and the maximum 248. Considering the fact that these scores refer to the mean value of a 3-year period, there can be expected to be found some small variation around the figure. However, the overall score is indicative of the sample.

Table 5.4: Descriptive statistics for number of employees and level of turnover

	N	Minimum	Maximum	Mean	Std. Deviation
3-year average number of employees	221	20	248	101.77	57.380
3-year average turnover (,000 £)	221	1,463	40,848	16,404.52	9,276.307
Valid N (listwise)	221				

With regard to the sector that each company operated in, information was collected and presented in Table 5.5 According to that, around 50% of the companies under investigation were classified as belonging to the sector ‘Machinery, Equipment, Furniture, Recycling’ while around 2% were identified as companies working with ‘Textiles, wearing apparel, leather’. The ‘Food, Beverages and Tobacco’ sector, represented 16% of the companies, while ‘Wood, Cork, Paper’ 18%. The other 2 categories, namely ‘Metals, Metal products’ and ‘Chemicals, Rubber, Plastic, Non-metallic products’ were represented by 13.6% and 16.7% of the sample respectively.

Table 5.5: Sectors of the sample

Sector	Frequency	Percent
Food, Beverages, Tobacco	16	7.2
Chemicals, Rubber, Plastic, Non-metallic products	37	16.7
Machinery, Equipment, Furniture, Recycling	116	52.5
Metals, Metal products	30	13.6
Textiles, wearing apparel, leather	4	1.8
Wood, Cork, Paper	18	8.1
Total	221	100.0

5.2 Creating the construct of customer performance

A Principal Components Analysis (hereinafter PCA) was performed with the use of IBM SPSS software for the construct of customer performance. This method is concerned with calculating the number of factors which are necessary to explain the relations among a set of indicators, while at the same time it estimates the factor loadings as well (Field, 2009). As such, it aims at verifying that the 3 items (questions) related to customer performance can indeed be combined into one construct. As Table 5.6 depicts, the communalities after extraction were all above the 0.5 threshold that is considered to be the lower limit for keeping an item (Field, 2009). The standardised factor loadings of each item are presented in Table 5.7 while as shown in Table 5.8 this factor (i.e. customer performance) explains 70.128% of the variance.

Table 5.6: Communalities of items related to customer performance

	Initial	**Extraction**
Customer Loyalty	1.000	.762
Customer Satisfaction	1.000	.808
Gaining new customers	1.000	.534

Extraction Method: Principal Component Analysis.

Table 5.7: Component matrix of the customer performance construct

	Component
	1
Customer Loyalty	.873
Customer Satisfaction	.899
Gaining new customers	.731

Extraction Method: Principal Component Analysis.

Table 5.8: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Customer Loyalty	2.104	70.128	70.128	2.104	70.128	70.128
Customer Satisfaction	.629	20.978	91.106			
Gaining new customers	.267	8.894	100.000			

Extraction Method: Principal Component Analysis.

5.3 Creating the construct of adaptive marketing capabilities

In a similar way, a PCA was conducted for the construct of adaptive marketing capabilities. In terms of rotation method, orthogonal rotations (e.g. Varimax) will yield factors that are uncorrelated in an effort to minimise multicollinearity, while oblique rotations (e.g. Promax) will allow for such correlations to be present. Therefore, oblique rotations are preferred in social sciences research, due to the behavioural nature of it, when measuring human participants (Iacobucci, 2001). Nevertheless, due to the fact that only one factor was extracted, as it will be shown later, rotation was not possible to be conducted, and therefore the initial choice of either oblique or orthogonal, will not affect the results.

The PCA was conducted stepwise 2 times, which resulted in the removal of 1 item due to it having communalities lower than the threshold of 0.5 after the factor extraction. The results from the first stage are presented in Table 5.9, where all 8 items from the final item pool were included in the analysis. Due to a low communality of 0.106, which is lower than 0.5 (Field, 2009) after the factor extraction, item number 6 was removed, and the same analysis was performed again.

Table 5.9: Communalities of the initial 8 items of adaptive marketing capabilities

Item Number	Initial	Extraction
1	1.000	.529
2	1.000	.544
3	1.000	.516
4	1.000	.617
5	1.000	.586
6	1.000	.106
7	1.000	.622
8	1.000	.550

Extraction Method: Principal Component Analysis.

After the previous analysis, as it can be seen in Table 5.10, all the remaining 7 items have communalities above the 0.5 threshold. Moreover, in Table 5.11, the standardised

factor loadings of each item are presented. In this table, the number of each item has been replaced with the actual question.

Table 5.10: Communalities of the final 7 items of adaptive marketing capabilities

Item Number	Initial	Extraction
1	1.000	.520
2	1.000	.533
3	1.000	.522
4	1.000	.622
5	1.000	.588
7	1.000	.628
8	1.000	.556

Extraction Method: Principal Component Analysis.

Table 5.11: Component Matrix with the factor loadings of the 7-item scale of adaptive marketing capabilities

Item	**Component**
	1
We keep a systematic track of how customers act and react to the social media space	.721
We have a mind receptive to new ideas and arguments about latent customer needs	.744
We are open to challenge even our own beliefs of how customers buy	.723
We invest in resources to understand the behaviour of customers through experiments, pilot products etc.	.789
Within the company we share insights of successful and unsuccessful initiatives in the market	.767
We forge the relationships with companies involved in social networking technologies	.793
We invest in building relationships with companies that have complementary resources to us	.746

Extraction Method: Principal Component Analysis.

Eventually, after the aforementioned procedure, a 7-item single factor was produced. This factor explains 56.981% of the variance (Table 5.12), and has a KMO index (Kaiser-Meyer-Olkin Measure of sampling adequacy) of 0.870 (Table 5.13) which is well above the recommended threshold of 0.5 (Field, 2009), indicating that data are factoring well.

Table 5.12: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.989	56.981	56.981	3.989	56.981	56.981
2	.708	10.112	67.092			
3	.622	8.881	75.974			
4	.572	8.172	84.146			
5	.444	6.350	90.495			
6	.376	5.367	95.863			
7	.290	4.137	100.000			

Extraction Method: Principal Component Analysis.

Table 5.13: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.870
Bartlett's Test of Sphericity	Approx. Chi-Square	655.917
	df	21
	Sig.	.000

At this point and considering that for someone 2 constructs of the present study that relate to capabilities (i.e. market sensing and customer linking), might be conceptually close with the one of adaptive marketing capabilities, one further exploratory factor analysis was conducted among the 3 marketing capabilities constructs. The results depicted in Table 5.14 reveal that one of the items of the construct of market sensing capabilities (specifically the question: *We are good at learning about customer needs and requirements*) was loading heavily on 2 factors at the same time, and as such it was removed. At reading the table someone should note that for purposes of clarity all values below 0.3 have been removed.

Table 5.14: Structure matrix

Structure Matrix			
	Component		
	1	2	3
We keep a systematic track of how customers act and react to the social media space (adaptive marketing capabilities 1)	**.738**		
We have a mind receptive to new ideas and arguments about latent customer needs (adaptive marketing capabilities 2)	**.744**		
We are open to challenge even our own beliefs of how customers buy (adaptive marketing capabilities 3)	**.712**	.352	.321
We invest in resources to understand the behaviour of customers through experiments, pilot products etc. (adaptive marketing capabilities 4)	**.788**		
Within the company we share insights of successful and unsuccessful initiatives in the market (adaptive marketing capabilities 5)	**.756**	.396	
We forge the relationships with companies involved in social networking technologies (adaptive marketing capabilities 6)	**.801**		
We invest in building relationships with companies that have complementary resources to us (adaptive marketing capabilities 7)	**.738**	.343	
We have superior levels of customer service and support (customer linking capabilities 1)		.319	**.699**
We have a good understanding of the needs and requirements of our target customers (customer linking capabilities 2)		.463	**.870**
We are good at creating relationships with target customers (customer linking capabilities 3)		.525	**.853**
We are good at maintaining and enhancing relationships with target customers (customer linking capabilities 4)		.563	**.849**
We are good at learning about customer needs and requirements (market sensing capabilities 1)		.771	.688
We are good at discovering our major competitors' strategies and tactics (market sensing capabilities 2)		**.805**	.353
We are good at gaining insights about the channel (market sensing capabilities 3)	.349	**.864**	.427
We are good at identifying and understanding market trends (market sensing capabilities 4)		**.896**	.583
We are good at learning about the broad market environment (market sensing capabilities 5)		**.826**	.569

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Eventually the exploratory factor analysis among all questions regarding capabilities, produced Table 5.15, Table 5.16, Table 5.17, Table 5.18 and Table 5.19 all of which demonstrate that the 3 constructs are distinct.

Table 5.15: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.849
Bartlett's Test of Sphericity	Approx. Chi-Square	1784.721
	df	91
	Sig.	.000

Table 5.16: Communalities among items

Communalities		
	Initial	Extract.
We keep a systematic track of how customers act and react to the social media space	1.000	.575
We have a mind receptive to new ideas and arguments about latent customer needs	1.000	.561
We are open to challenge even our own beliefs of how customers buy	1.000	.561
We invest in resources to understand the behaviour of customers through experiments, pilot products etc.	1.000	.624
Within the company we share insights of successful and unsuccessful initiatives in the market	1.000	.600
We forge the relationships with companies involved in social networking technologies	1.000	.670
We invest in building relationships with companies that have complementary resources to us	1.000	.556
We have a good understanding of the needs and requirements of our target customers	1.000	.657
We are good at creating relationships with target customers	1.000	.848
We are good at maintaining and enhancing relationships with target customers	1.000	.837
We are good at discovering our major competitors' strategies and tactics	1.000	.705
We are good at gaining insights about the channel	1.000	.755
We are good at identifying and understanding market trends	1.000	.824
We are good at learning about the broad market environment	1.000	.711

Extraction Method: Principal Component Analysis.

Table 5.17: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.413	38.665	38.665	5.413	38.665	38.665
2	2.904	20.741	59.405	2.904	20.741	59.405
3	1.165	8.325	67.730	1.165	8.325	67.730
4	.669	4.780	72.510			
5	.654	4.669	77.179			
6	.581	4.148	81.327			
7	.558	3.983	85.310			
8	.450	3.217	88.527			
9	.408	2.911	91.438			
10	.364	2.600	94.038			
11	.298	2.131	96.169			
12	.273	1.949	98.118			
13	.142	1.012	99.130			
14	.122	.870	100.000			

Table 5.18: Component Matrix

Component Matrix[a]			
	Component		
	1	2	1
We keep a systematic track of how customers act and react to the social media space	.461	.588	
We have a mind receptive to new ideas and arguments about latent customer needs	.601	.425	
We are open to challenge even our own beliefs of how customers buy	.659		
We invest in resources to understand the behaviour of customers through experiments, pilot products etc.	.597	.516	
Within the company we share insights of successful and unsuccessful initiatives in the market	.659	.402	
We forge the relationships with companies involved in social networking technologies	.533	.620	
We invest in building relationships with companies that have complementary resources to us	.632	.391	
We have a good understanding of the needs and requirements of our target customers	.528	-.483	.381
We are good at creating relationships with target customers	.592	-.542	.452
We are good at maintaining and enhancing relationships with target customers	.617	-.536	.410
We are good at discovering our major competitors' strategies and tactics	.615		-.509
We are good at gaining insights about the channel	.716		-.410
We are good at identifying and understanding market trends	.733	-.439	-.305
We are good at learning about the broad market environment	.701	-.417	

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Table 5.19: Pattern Matrix

Pattern Matrix[a]			
	Component		
	1	2	3
We keep a systematic track of how customers act and react to the social media space	.800		
We have a mind receptive to new ideas and arguments about latent customer needs	.743		
We are open to challenge even our own beliefs of how customers buy	.684		
We invest in resources to understand the behaviour of customers through experiments, pilot products etc.	.785		
Within the company we share insights of successful and unsuccessful initiatives in the market	.699		
We forge the relationships with companies involved in social networking technologies	.827		
We invest in building relationships with companies that have complementary resources to us	.709		
We have a good understanding of the needs and requirements of our target customers			.814
We are good at creating relationships with target customers			.937
We are good at maintaining and enhancing relationships with target customers			.901
We are good at discovering our major competitors' strategies and tactics		.926	
We are good at gaining insights about the channel		.865	
We are good at identifying and understanding market trends		.822	
We are good at learning about the broad market environment		.702	

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Having described the steps of developing a scale for measuring adaptive marketing capabilities in the previous chapter, and the procedure for creating the constructs of customer performance and adaptive marketing capabilities in the present chapter, the next section will be devoted in the assessment of the validity and reliability of all constructs employed in the present research.

5.4 Assessing the quality of the research instrument

Scale reliability is the proportion of variance attributable to the true score of the latent variable (DeVellis, 2012), and although the linkage between items and the latent variables cannot be directly observed, the intercorrelation among items can be determined, and therefore high intercorrelation shows internal consistency (i.e. measuring the same concept). Validity shows whether the variable is the underlying cause of item covariation. Based on DeVellis (2012), there are three types of validity: content, criterion and construct validity (with the latter one consisting of convergent and discriminant).

The first type of validity, content validity, is related to the extent to which a specific set of items reflects a content domain, and in this vein it is bounded by its theoretical definition (Bollen, 1989). Therefore, it is a qualitative type of validity, and in the present study it was achieved by two means. The second type of validity, criterion-based validity, provides evidence that the answers from an instrument are related to, or predict, external measures that are conceptually related to the measured construct (Field, 2009). However, in reality, it is often impractical to perform such a measurement for newly developed scales, since someone would need to compare the new scale, with other (older) measures or outcomes that are already believed to be valid. Finally, convergent validity and divergent validity are ways to assess the construct validity of a measurement procedure (Campbell and Fiske, 1959).

5.4.1 Estimating Reliability

The reliability of any measurement refers to the extent to which it is a consistent measure of a concept (internal consistency), in an effort to minimise random error and bias (Field, 2009). There are two ways of assessing it; one is to calculate Cronbach's Alpha index, and the other one is to retest it. In the present study, along with the extant literature, the first method was employed. Cronbachs's Alpha varies from 0 to 1, and values higher than 0.7 are considered to be very good (Hair *et al.*, 2006), although, it has been argued that even values above 0.6. are acceptable. As shown in Table 5.20, all scales have a Cronbach's Alpha index well above 0.7, which is considered to be the accepted threshold (Hair *et al.*, 2006).

Table 5.20: Reliability of measurement scales

Construct	Cronbach's α
Entrepreneurial Orientation	0.814
Customer Linking Capabilities	0.822
Market Sensing Capabilities	0.889
Adaptive Marketing Capabilities	0.851
Marketing Differentiation	0.816
Innovation Differentiation	0.900
Cost leadership	0.871
Customer Performance	0.774
Environmental Complexity	0.799
Environmental Munificence	0.726

5.4.2 Estimating Validity

Convergent validity is established by showing that measures that should be related are in the reality related. Therefore, someone could expect that the correlation among the items will be high. Estimating the average variance extracted (hereinafter AVE), is a means of checking whether or not the construct has convergent validity (Malhotra and Dash, 2011). An AVE of 0.5 or more (Hair *et al.*, 2006) means that the latent construct accounts for 50% or more of the variance in the observed variables, and therefore convergent validity is established (Malhotra and Dash, 2011).

To establish discriminant validity, one needs to show that measures that should not be related are, in reality, not related. In a way similar to checking for convergent validity, someone should expect items to have little intercorrelation. Discriminant validity can be established when the maximum shared variance (MSV) is smaller than the AVE, and when the average shared variance (ASV) is smaller than the AVE (Hair *et al.*, 2006), and by comparing the square root of the AVE of a construct with its correlations with all other constructs (Fornell-Lacker criterion). Finally, Table 5.24 shows the minimum and maximum values of the variables as well as their mean scores and standard deviation.

Table 5.21 presents the aforementioned indices for the constructs employed in the present study, while Table 5.22 and Table 5.23 present the inter-construct correlations, the mean score and the standard deviation of each construct, while the diagonal depicts the square root of AVE, which has a higher value than every inter-construct correlation, indicating that there is discriminant validity. Finally, Table 5.24 shows the minimum and maximum values of the variables as well as their mean scores and standard deviation.

Table 5.21: AVE, MSV, and AVS of measurement scales

Construct	AVE	MSV	AVS
Entrepreneurial Orientation	0.716	0.346	0.166
Customer Linking Capabilities	0.720	0.370	0.109
Market Sensing Capabilities	0.652	0.370	0.166
Adaptive Marketing Capabilities	0.508	0.281	0.098
Marketing Differentiation	0.548	0.442	0.172
Innovation Differentiation	0.696	0.442	0.192
Cost leadership	0.705	0.425	0.170
Customer Performance	0.587	0.261	0.134
Environmental Complexity	0.596	0.010	0.003
Environmental Munificence	0.528	0.127	0.038

Table 5.22: Inter-construct correlations and square root of AVE in the diagonal

	Construct	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	Entrepreneurial Orientation	**0.8462**									
(2)	Customer Linking Capabilities	.326**	**0.8485**								
(3)	Market Sensing Capabilities	.489**	.543**	**0.8075**							
(4)	Adaptive Marketing Capabilities	.419**	.169*	.341**	**0.7127**						
(5)	Cost Leadership	.312**	.338**	.333**	.238**	**0.8396**					
(6)	Innovation Differentiation	.382**	.332**	.464**	.342**	.611**	**0.8343**				
(7)	Marketing Differentiation	.325**	.287**	.436**	.381**	.521**	.600**	**0.7403**			
(8)	Environmental Complexity	0.1073	0.0073	-0.0591	0.1255	0.0323	0.0247	0.0135	**0.7720**		
(9)	Environmental Munificence	.193**	.198**	.201**	0.1082	.248**	.200**	.239**	-0.0049	**0.7266**	
(10)	Customer Performance	.254**	.467**	.389**	.229**	.464**	.445**	.388**	0.0730	.342**	**0.7662**
(11)	Average Turnover (Ln)	-0.0933	-0.0419	-0.0799	0.0499	-0.0519	-0.0264	-0.0667	-0.0482	-0.0815	0.0067
(12)	Average Gross Profits (Ln)	-0.0312	-0.0349	-0.0472	0.0137	0.0340	0.0241	0.0340	-.137*	-0.0054	-0.0188
(13)	Size (Ln)	-.172*	-0.0704	-0.1255	0.0062	-0.0088	-0.0356	-0.0355	-0.0355	-0.0346	0.0072
(14)	Turnover Growth	0.1104	-.218**	-0.1096	.193**	0.0096	0.0264	-0.0885	-0.0008	0.0626	-0.0589
(15)	Gross Profits Growth	0.0490	-.164*	-0.0698	.172*	-0.0266	0.0481	-0.0671	0.0600	0.0668	-0.0540
(16)	Net Profit Margin Growth	-0.0095	.152*	0.0867	-0.1161	0.0114	-0.0015	-0.0178	0.0442	0.0680	0.0140
(17)	Average Net Profit Margin	0.0468	0.1031	0.1315	0.0030	0.1179	0.1167	.135*	-0.0731	0.0411	0.0977
(18)	ROA Growth	-0.0105	0.0670	0.0898	-0.1035	-0.0067	-0.0539	-0.0147	0.0146	-0.0011	-0.0093
(19)	Average ROA	0.0505	.136*	.166*	0.0443	0.1256	.149*	.139*	-0.0456	-0.0133	0.1290

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

Table 5.23: Inter-construct correlations and square root of AVE in the diagonal

	Construct	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1)	Entrepreneurial Orientation									
(2)	Customer Linking Capabilities									
(3)	Market Sensing Capabilities									
(4)	Adaptive Marketing Capabilities									
(5)	Cost Leadership									
(6)	Innovation Differentiation									
(7)	Marketing Differentiation									
(8)	Environmental Complexity									
(9)	Environmental Munificence									
(10)	Customer Performance									
(11)	Average Turnover (Ln)	-								
(12)	Average Gross Profits (Ln)	.726**	-							
(13)	Size (Ln)	.654**	.571**	-						
(14)	Turnover Growth	0.0684	-0.0061	-0.0004	-					
(15)	Gross Profits Growth	0.0468	-0.0195	0.0160	.726**	-				
(16)	Net Profit Margin Growth	-0.0862	0.0000	0.0207	-0.1308	0.0771	-			
(17)	Average Net Profit Margin	.233**	.343**	.166*	0.0011	-0.0026	0.1040	-		
(18)	ROA Growth	-0.1203	-0.0470	0.0163	-0.0839	0.0340	.681**	0.0902	-	
(19)	Average ROA	.236**	.217**	.132*	0.0281	0.0232	0.1062	.879**	0.0949	-

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

Table 5.24: Basic descriptive statistics of the variables

	N	Minimum	Maximum	Mean	Std. Deviation
Entrepreneurial Orientation	221	1.75	6.75	4.466	.955
Customer Linking Capabilities	221	2.00	7.00	5.746	.906
Market Sensing Capabilities	221	1.00	7.00	4.966	1.079
Adaptive Marketing Capabilities	221	1.43	7.00	4.402	1.192
Environmental Munificence	221	2.00	7.00	4.916	.919
Environmental Complexity	221	1.00	7.00	4.601	1.406
Cost Leadership	221	1.00	7.00	4.558	1.277
Innovation Differentiation	221	1.00	7.00	4.434	1.401
Marketing Differentiation	221	1.00	6.75	3.837	1.213
Customer Performance	221	1.67	7.00	4.918	.961
Turnover Growth %	221	-1.00	2.94	.1168	.398
Average Turnover (,000)	221	1,463	82,626	17,629.10	11,341.975
Gross Profits Growth %	221	-2.79	4.88	.1258	.638
Average Gross Profits (,000)	221	-79	25,561	5,319.25	4,113.472
Net Profit Margin Growth %	221	-207	18.78	-.8190	14.909
Average Net Profit Margin	221	-58.94	44.45	6.0187	10.726
ROA Growth %	221	-416	27.35	-3.0388	34.180
Average ROA	221	-144.67	56.11	8.5887	17.192
Ln Average Turnover	221	7.29	11.32	9.5577	.720
Average Number of Employees	221	9	338	101.97	63.551
Ln Average Gross Profits	221	5.63	10.15	8.2784	.944
Ln Size (Number of Employees)	221	2.20	5.82	4.4001	.722

5.4.3 The measurement model: Confirmatory factor analysis

The present study will employ Structural Equation Modelling (hereinafter SEM) to analyse the hypothesised relationships. SEM is a statistical method employing a confirmatory approach (Byrne, 2010). The hypothesised model is tested simultaneously with the entire system of variables. The model that specifies how the observed variables depend on the latent ones, is called measurement model. In other words, it defines the relationship among the observed and latent (i.e. unobserved) variables. SEM can provide answers in a set of research question in one single, systematic and comprehensive analysis by modelling all constructs at the same time.

Measuring the fit of this model is the first step in SEM followed by the Structural Model which defines the relationships among the latent variables. Confirmatory factor analysis (hereinafter CFA) offers a framework for verifying previous notions about the structure of a scale where the researcher specifies a model, indicating which variables load on which factors. Moreover, it is used for data purification. Essentially CFA allows for testing of each of the factor loadings, and the overall fit of the model (Iacobucci, 2009). The following section will provide evidence regarding the fit of the measurement model.

The two most commonly used estimation techniques are Maximum Likelihood Estimators (MLE) and Generalised Least Squares (GLS). Both are appropriate for large samples, continuous data, and they assume multivariate normality. CFA was performed by the Maximum Likelihood Estimators (MLE) which is the default option for AMOS, and is suggested by the majority of researchers (Iacobucci, 2010). Also it is the most commonly method for estimated model parameters (Flora and Curran, 2004), while it provides consistent, efficient and unbiased estimates when there is adequate sample size, proper model specifications and continuous variables (Browne, 1984).

5.4.3.1 Fit Indices

There are four types of fit indices for the process of SEM (Blunch, 2016), and literature suggests looking at least at one index from each category (Hu and Bentler, 1999) since they have different measurement properties:

- Relative (or comparative) fit indices: CFI, IFI, TLI, NFI, RFI
- Non-central Chi-Square distribution indices: RMSEA, MFI
- Absolute fit indices: SRMR, RMR, AGFI, GFI
- Parsimonious fit indices: CMIN/dF

For the purposes of testing the overall fit of the model the following goodness-of-fit indices have been checked as per Kline (2011): Comparative fit index (hereinafter CFI), Root mean square error of approximation (hereinafter RMSEA), Standardised root mean square residual (hereinafter SRMSR) and Relative Chi-square (hereinafter CMIN/df).

The extant literature takes into account different indices and sets some cut-off values, but some of them like the Goodness of Fit Index should be discouraged from being used, due to being affected by the interaction of the sample size and the total number of indicators (Sharma *et al.*, 2005). Moreover, these criteria are indicative of the model fit and should not be used without sound judgement (Iacobucci, 2010). When the sample size is large relative to degrees off freedom, the bias is positive, and so the fit looks better whereas in the opposite situation the bias is negative, and the fit looks worse. Based on that, it has been supported that among others the Normed Fit Index (NFI) and the Goodness of Fit index should not be used to evaluate the model (Hu and Bentler, 1999).

Comparative fit index (CFI)

It compares the model of interest with an alternative one (i.e. independent), whose variables are assumed to be uncorrelated. Therefore, the fit is the difference between the observed and predicted covariance matrices, as represented by the chi-square index. The CFI varies from 0 to 1 and values close to 1 are indicative of an excellent model fit, with values above 0.90 to be acceptable (Bentler, 1990; Byrne, 2010) (when taking into account the complexity of the models).

Standardised root mean square residual (SRMR)

The second index that has been suggested as one to look at, is the SRMR, which is an absolute measure of fit. It is defined as the standardised difference between the observed correlation and the predicted correlation. Since, it is an absolute measure of fit, a value of zero indicates perfect fit while literature suggests values lower than 0.08 show a good fit (Hu and Bentler, 1999).

Root mean square error of approximation (RMSEA)

The third index represents the square root of the mean of the covariance residuals, and the index should be closer to the value of 0. Although there is no universally accepted cut-off point, recommended values of less than 0.05 have been suggested (Browne and Cudeck, 1993), while values between 0.05 and 0.08 would show a fair fit (Hu and Bentler, 1999). Nevertheless, there is consensus that values of 0.10 are indicative of a poor fit.

Relative Chi-square (χ^2/dF)

Another index that has been used extensively to calculate the fit of the model, is the relative chi-square. Chi-square is sensitive to sample size, and it will almost always be significant even with only modest sample sizes (Iacobucci, 2010). Therefore, the relative chi-square (i.e. CMIN/dF) is a better index as it is not affected by the sample size. The suggested value of this index is more than 1 and less than 2 (Byrne, 1989) or less than 3 (Iacobucci, 2010; Kline, 2011). However, others have suggested that values above 1 and no more than 5 show an adequate fit (Schumacker and Lomax, 2010).

Having specified the cut-off criteria for the measurement model, the next step is to perform a CFA for all the latent variables that will be included in the model. However, the initial measurement model with all items, revealed some issues in terms of factor loadings. In particular and one item from the adaptive marketing capabilities construct (question: we are open to challenge even our own beliefs of how customers buy) and one item from the entrepreneurial orientation construct (question: In dealing with our competitors we typically respond to actions that they initiate, instead of taking initiatives ourselves) were dropped due to having factor loadings less than 0.5, something implying validity issues (Hair *et al.*, 2006).

The results from the measurement model indicate that the model has a good fit with CFI=0.914, RMSEA=0.047, SRMR=0.0578 and CMIN/dF=1409 (Chi-square=1504.854 and dF=1010) with all p values less than 0.001. The standardised regression weights (i.e. factor loadings) of each item on each latent variable along with the original item (the sign of – in brackets in some of the items is an indication that the particular item was a reverse one, and the process of reverse coding was followed), can be found in Appendix D.

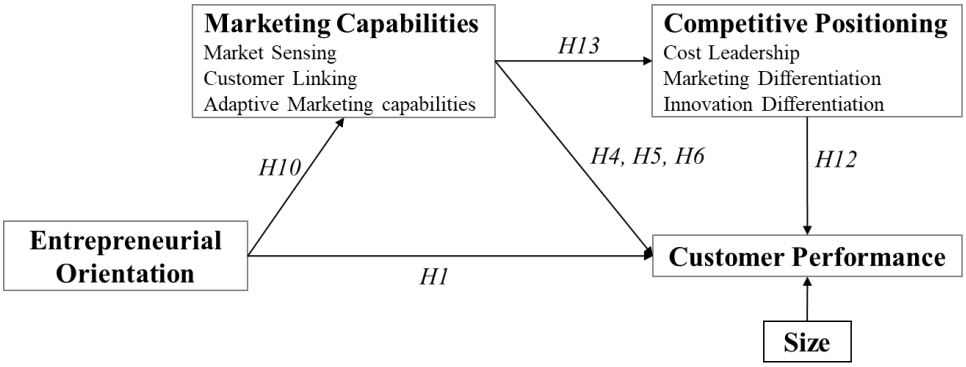
5.5 Path analysis

After presenting the descriptive statistics, the next step is to explore the structural models and investigate the proposed relationships. The analysis was conducted multiple times, each time for a separate performance indicator.

5.5.1 Customer Performance

The structural model that is presented in Figure 5.1 tests customer performance (a composite indicator consisting of customer satisfaction, customer loyalty and gaining more new customers than competitors), while controlling for the average number of employees that an organisation has.

Figure 5.1: Model testing customer performance



After running the analysis, the fit indices indicate that the model is acceptable. A breakdown of the different indices that have been used to determine whether or not the model is acceptable, can be seen in Table 5.25. In particular, the CFI is 0.931 (which is higher than 0.90 as suggested by Byrne (2010)), the CMIN/df 1.535 (which is between the range of 1 to 2 suggested by Byrne (1989), the RMSEA is 0.049 (less than the threshold of 0.05 suggested by Browne and Cudeck (1993), while the SRMR is 0.0697 (which is lower than the threshold of 0.08 which is suggested by Hu and Bentler (1999). Also, the squared multiple correlation of customer performance is 0.357 indicating that the model explains 35.7% of the variance. The full structural model, along with the standardised estimates can be found in Appendix F.

Table 5.25: Fit indices and statistics of the customer performance model

CFI	0.931
CMIN/df	1.535
RMSEA	0.049
SRMR	0.0697
Chi Square	861.162
df	561
Squared Multiple Correlation	0.357

Furthermore, Table 5.26 presents the path analysis of the model, with the significance levels and standardised estimates. It can be concluded that there is a positive relationship between entrepreneurial orientation and all set of marketing capabilities; with market sensing capabilities the relationship is the strongest (st. estimate 0.645, $p<0.001$), followed by adaptive marketing capabilities (st. estimate 0.531, $p<0.001$) and customer linking capabilities (st. estimate 0.391, $p<0.001$). Moreover, market sensing capabilities appear to have a positive effect on all aspects of competitive positioning; to innovation differentiation the st. estimate is 0.471 ($p<0.001$), to marketing differentiation the st. estimate is 0.428 ($p<0.001$) and to cost leadership the relationship is the weakest with st. estimate 0.253 ($p=0.029$). Meanwhile adaptive marketing capabilities appear to have a positive effect on marketing and innovation differentiation (st. estimate 0.277, $p<0.001$ and st. estimate 0.165, $p=0.029$ respectively), while customer linking capabilities do not appear to have any effect on any aspects of competitive positioning -at least within 95% confidence interval.

Eventually, in terms of predictors of customer performance, it appears that only customer linking capabilities, cost leadership and innovation differentiation have a direct positive effect (customer linking capabilities st. estimate 0.257, $p=0.009$, cost leadership st. estimate 0.276, $p=0.006$ and innovation differentiation st. estimate 0.226, $p=0.023$ respectively). According to the results there is evidence to partly support **Hypothesis 5**, **Hypothesis 9**, **Hypothesis 11** and **Hypothesis 12**.

Table 5.26: Paths of the model predicting customer performance

Construct	Path	Construct	St. Est.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.531**	**0.15**	**4.946**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.102**	**4.11**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.645**	**0.205**	**5.446**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.141	0.119	1.699	0.089
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.165**	**0.102**	**2.184**	**0.029**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.277**	**0.127**	**3.297**	***
Marketing Differentiation	←	Market Sensing Capabilities	**0.428**	**0.142**	**3.69**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.078	0.19	-0.802	0.423
Innovation Differentiation	←	Market Sensing Capabilities	**0.471**	**0.122**	**4.226**	***
Cost Leadership	←	Market Sensing Capabilities	**0.253**	**0.135**	**2.19**	**0.029**
Cost Leadership	←	Customer Linking Capabilities	0.124	0.187	1.246	0.213
Innovation Differentiation	←	Customer Linking Capabilities	-0.041	0.157	-0.462	0.644
Customer Performance	←	Customer Linking Capabilities	**0.257**	**0.107**	**2.609**	**0.009**
Customer Performance	←	Market Sensing Capabilities	0.021	0.095	0.152	0.879
Customer Performance	←	Ln Size	0.047	0.06	0.768	0.443
Customer Performance	←	Adaptive Marketing Capabilities	0.044	0.074	0.496	0.62
Customer Performance	←	Entrepreneurial Orientation	-0.016	0.142	-0.129	0.898
Customer Performance	←	Cost Leadership	**0.276**	**0.058**	**2.772**	**0.006**
Customer Performance	←	Innovation Differentiation	**0.226**	**0.062**	**2.273**	**0.023**
Customer Performance	←	Marketing Differentiation	-0.022	0.058	-0.207	0.836

Notes: ***<0.001

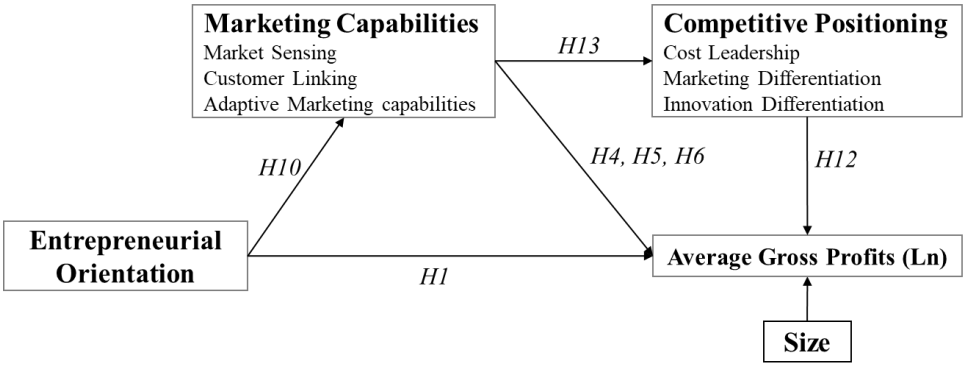
5.5.2 Profitability

The next models that will be presented, predict the profitability of an organisation. Six different models were developed, each dealing with one specific profitability indicator at a time; average gross profits (the natural logarithm of it), gross profits growth, average net profit margin, net profit margin growth, average ROA and ROA growth. The reasons for selecting these indicators were discussed in Chapter 3.

5.5.2.1 Average gross profits

Figure 5.2 presents the model testing the average gross profits, while controlling for the average number of employees for reasons explained in Chapter 3.

Figure 5.2: Model testing average gross profits



After running the model, Table 5.27 presents the fit indices indicating an acceptable, with values very similar to the previous model. The squared multiple correlation of average gross profits is 0.314 suggesting that 31.4% of the variance is explained by the model. In addition to that, Table 5.28 presents the path analysis of the model, along with the significance levels and the standardised estimates.

Table 5.27: Fit indices and statistics of the average gross profits model

CFI	0.936
CMIN/df	1527
RMSEA	0.049
SRMR	0.0673
Chi Square	755.909
df	495
Squared Multiple Correlation	0.314

Table 5.28: Path analysis of the average gross profits model

Construct	Path	Construct	St. Est.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.531**	**0.15**	**4.951**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.102**	**4.114**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.645**	**0.205**	**5.443**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.137	0.119	1.656	0.098
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.164**	**0.101**	**2.168**	**0.03**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.277**	**0.127**	**3.302**	***
Marketing Differentiation	←	Market Sensing Capabilities	**0.428**	**0.142**	**3.692**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.078	0.191	-0.807	0.42
Innovation Differentiation	←	Market Sensing Capabilities	**0.469**	**0.121**	**4.213**	***
Cost Leadership	←	Market Sensing Capabilities	**0.253**	**0.134**	**2.191**	**0.028**
Cost Leadership	←	Customer Linking Capabilities	0.123	0.187	1.239	0.215
Innovation Differentiation	←	Customer Linking Capabilities	-0.04	0.157	-0.449	0.653
Average Gross Profits (Ln)	←	Entrepreneurial Orientation	0.073	0.177	0.657	0.511
Average Gross Profits (Ln)	←	Customer Linking Capabilities	-0.005	0.127	-0.058	0.954
Average Gross Profits (Ln)	←	Market Sensing Capabilities	-0.015	0.117	-0.116	0.908
Average Gross Profits (Ln)	←	Adaptive Marketing Capabilities	0.038	0.092	0.467	0.641
Average Gross Profits (Ln)	←	Cost Leadership	0.065	0.067	0.768	0.442
Average Gross Profits (Ln)	←	Innovation Differentiation	-0.063	0.074	-0.712	0.477
Average Gross Profits (Ln)	←	Marketing Differentiation	0.008	0.072	0.081	0.935
Average Gross Profits (Ln)	←	LnSize	**0.55**	**0.075**	**9.653**	***

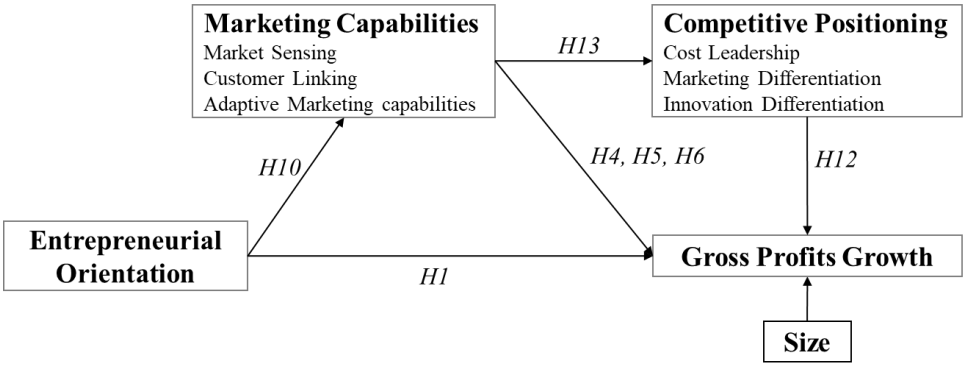
Notes: ***<0.001

From Table 5.28 it can be concluded that there is evidence to partly support **Hypothesis 9** and **Hypothesis 12** (as before), but it fails to identify any relationship between any of the variables, and one aspect of profitability; the average gross profits. The full structural model along with the standardised estimates can be found in Appendix G.

5.5.2.2 Gross profits growth

Figure 5.3 presents the model testing the gross profits growth, while at the same time controlling for the average number of employees, exactly like the previous model.

Figure 5.3: Model testing gross profits growth



After performing the analysis, the fit indices of the model, which are very similar to the previous models, are presented in Table 5.29; indicating that the model is acceptable. The squared multiple correlation of the variable gross profits' growth is 0.112 suggesting that 11.2% of the variance is explained by the model. In addition to that Table 5.30, presents the path analysis of the model, with the significance levels and the standardised estimates. The full structural model, along with the standardised estimates can be found in Appendix H.

Table 5.29: Fit indices and statistics of the gross profits' growth model

CFI	0.936
CMIN/df	1.521
RMSEA	0.049
SRMR	0.0667
Chi Square	752.693
df	495
Squared Multiple Correlation	0.112

Table 5.30: Path analysis of the gross profits' growth model

Construct	Path	Construct	St. Estim.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.53**	**0.15**	**4.964**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.101**	**4.124**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.646**	**0.203**	**5.465**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.135	0.118	1.635	0.102
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.161**	**0.101**	**2.132**	**0.033**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.277**	**0.126**	**3.296**	***
Marketing Differentiation	←	Market Sensing Capabilities	**0.428**	**0.142**	**3.693**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.077	0.19	-0.801	0.423
Innovation Differentiation	←	Market Sensing Capabilities	**0.47**	**0.122**	**4.219**	***
Cost Leadership	←	Market Sensing Capabilities	**0.253**	**0.134**	**2.191**	**0.028**
Cost Leadership	←	Customer Linking Capabilities	0.123	0.186	1.237	0.216
Innovation Differentiation	←	Customer Linking Capabilities	-0.04	0.156	-0.447	0.655
Gross Profits Growth	←	Entrepreneurial Orientation	0.15	0.138	1.163	0.245
Gross Profits Growth	←	Customer Linking Capabilities	-0.125	0.099	-1.262	0.207
Gross Profits Growth	←	Market Sensing Capabilities	-0.166	0.091	-1.128	0.259
Gross Profits Growth	←	Adaptive Marketing Capabilities	**0.213**	**0.072**	**2.236**	**0.025**
Gross Profits Growth	←	Cost Leadership	-0.082	0.052	-0.838	0.402
Gross Profits Growth	←	Innovation Differentiation	0.194	0.058	1.907	0.057
Gross Profits Growth	←	Marketing Differentiation	-0.173	0.057	-1.554	0.12
Gross Profits Growth	←	LnSize	0.019	0.058	0.292	0.77

Notes: ***<0.001

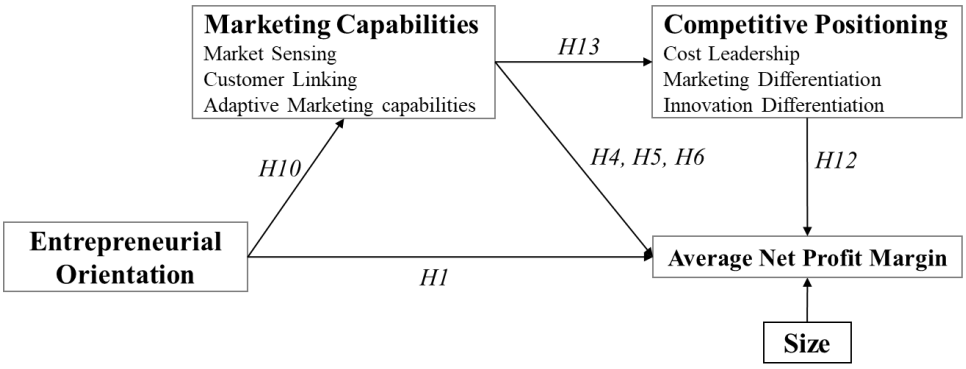
As it can be seen in Table 5.30, some of the relationships that refer to the exogenous variables (i.e. entrepreneurial orientation) and to the capabilities remain significant, like in the previous models, with their standardised estimates either the same or slightly different. These differences, as before, are related to the change of the model, by incorporating a different dependent variable and are expected; hence it is not surprising.

With regard to predicting the growth of gross profits, the model identified that adaptive marketing capabilities with a standardised estimate of 0.213 and p value of 0.025 is a significant predictor of this type of organisational performance. Moreover, although within 90% confidence interval, innovation differentiation has a positive association with the growth of gross profits (st. est. 0.194, p=0.057). In this vein, there is evidence to partly support **Hypothesis 9** and **Hypothesis 12** (as before), and **Hypothesis 6**; that is that adaptive marketing capabilities have a positive effect on the performance of the firm (in this case profitability-gross profits growth).

5.5.2.3 Average net profit margin

Figure 5.4 presents the model testing the average net profit margin, while controlling again for the average number of employees, like the previous models. The full structural model along with the standardised estimates can be found in Appendix I.

Figure 5.4: Model testing average net profit margin



After performing the analysis, the results in Table 5.31 show the fit indices of the model, indicating that the model is acceptable. The squared multiple correlation is 0.080, suggesting that the model explains only 8% of the variance of average net profit margin. In addition to that, Table 5.32 presents the path analysis of the model, with the significance levels and the standardised estimates. The results indicate that none of the suggested variables is associated with the average net profit margin, while the relationships that are found to be significant, have been discussed before and refer to the relationships among the exogenous variable (i.e. entrepreneurial orientation), marketing capabilities and some elements of the competitive positioning, leading us to find evidence to partly support **Hypothesis 9** and **Hypothesis 12**.

Table 5.31: Fit indices and statistics of the average net profit margin model

CFI	0.936
CMIN/df	1.522
RMSEA	0.049
SRMR	0.0668
Chi Square	753.602
df	495
Squared Multiple Correlation	0.080

Table 5.32: Path analysis of the average net profit margin model

Construct	Path	Construct	St. Estim.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.531**	**0.15**	**4.949**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.101**	**4.111**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.645**	**0.205**	**5.454**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.136	0.119	1.643	0.1
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.163**	**0.101**	**2.157**	**0.031**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.276**	**0.127**	**3.293**	***
Marketing Differentiation	←	Market Sensing Capabilities	**0.429**	**0.142**	**3.698**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.078	0.191	-0.807	0.42
Innovation Differentiation	←	Market Sensing Capabilities	**0.47**	**0.121**	**4.222**	***
Cost Leadership	←	Market Sensing Capabilities	**0.253**	**0.134**	**2.196**	**0.028**
Cost Leadership	←	Customer Linking Capabilities	0.123	0.187	1.237	0.216
Innovation Differentiation	←	Customer Linking Capabilities	-0.041	0.157	-0.457	0.648
Average Net Profit Margin	←	Entrepreneurial Orientation	-0.009	2.32	-0.068	0.946
Average Net Profit Margin	←	Customer Linking Capabilities	0.128	1.677	1.29	0.197
Average Net Profit Margin	←	Market Sensing Capabilities	0.046	1.524	0.315	0.753
Average Net Profit Margin	←	Adaptive Marketing Capabilities	-0.075	1.214	-0.798	0.425
Average Net Profit Margin	←	Cost Leadership	0.053	0.88	0.543	0.587
Average Net Profit Margin	←	Innovation Differentiation	-0.03	0.973	-0.297	0.766
Average Net Profit Margin	←	Marketing Differentiation	0.115	0.951	1.029	0.303
Average Net Profit Margin	←	LnSize	**0.176**	**0.983**	**2.67**	**0.008**

Notes: ***<0.001

5.5.2.4 Net profit margin growth

The model in Figure 5.5, is identical to the model before apart from the indicator with regard to the profitability of the organisation. The present model tests the growth in the net profit margin over the 3-year period, while Table 5.33 provides a summary of the fit indices, indicating a good fit. With regard to the squared multiple correlation, the index has a score of 0.043, suggesting that the model explains only 4.3% of the variance of net profit margin growth.

Figure 5.5: Model testing net profit margin growth

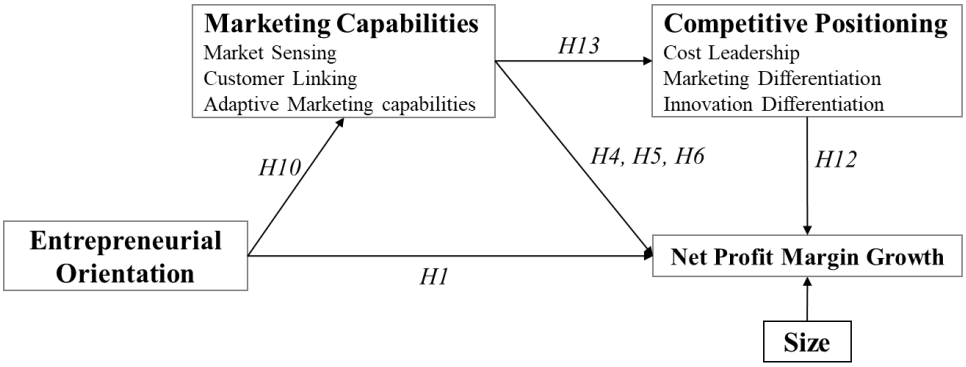


Table 5.33: Fit indices and statistics of the net profit margin growth model

CFI	0.935
CMIN/df	1.525
RMSEA	0.049
SRMR	0.0665
Chi Square	754.726
df	495
Squared Multiple Correlation	0.043

The results of the path analysis, as presented in Table 5.34 are very similar to those of the previous model. However, it should be noted that there is one exception; the impact that adaptive marketing capabilities have on net profit margin growth. Although, within 90% confidence interval, the model suggests that there is a negative relationship between this set of capabilities and the net profit margin growth (st. est. -0.075, p=0.073). The findings partly support **Hypothesis 9** and **Hypothesis 12** (as before). The full structural model, along with the standardised estimates can be found in Appendix J.

Table 5.34: Path analysis of the net profit margin growth model

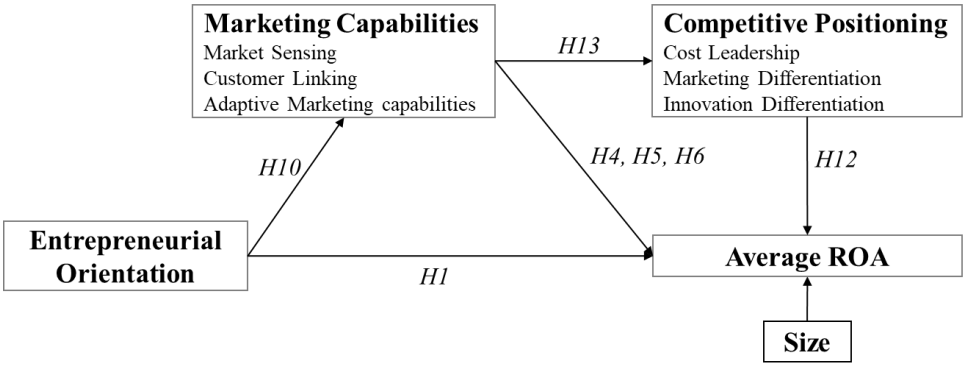
Construct	Path	Construct	St. Estim.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.531**	**0.15**	**4.952**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.102**	**4.115**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.645**	**0.204**	**5.457**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.136	0.119	1.643	0.1
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.163**	**0.101**	**2.152**	**0.031**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.276**	**0.126**	**3.289**	**0.001**
Marketing Differentiation	←	Market Sensing Capabilities	**0.429**	**0.142**	**3.701**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.078	0.191	-0.819	0.413
Innovation Differentiation	←	Market Sensing Capabilities	**0.47**	**0.121**	**4.217**	***
Cost Leadership	←	Market Sensing Capabilities	**0.253**	**0.134**	**2.199**	**0.028**
Cost Leadership	←	Customer Linking Capabilities	0.123	0.186	1.228	0.219
Innovation Differentiation	←	Customer Linking Capabilities	-0.041	0.157	-0.454	0.65
Net profit margin growth	←	Entrepreneurial Orientation	-0.009	3.281	-0.027	0.978
Net profit margin growth	←	Customer Linking	0.128	2.37	0.571	0.568
Net profit margin growth	←	Market Sensing	0.046	2.178	0.908	0.364
Net profit margin growth	←	Adaptive Marketing Capabilities	-0.075	1.728	-1.79	0.073
Net profit margin growth	←	Cost Leadership	0.053	1.251	0.272	0.786
Net profit margin growth	←	Innovation Differentiation	-0.03	1.385	-0.111	0.911
Net profit margin growth	←	Marketing Differentiation	0.115	1.35	-0.258	0.796
Net profit margin growth	←	LnSize	0.176	1.393	0.503	0.615

Notes: ***<0.001

5.5.2.5 Average ROA

The penultimate profitability indicator that will be investigated is the one of the average ROA as presented in the model of Figure 5.6.

Figure 5.6: Model testing average ROA



With regard to the indices of goodness of fit, they are summarised in Table 5.35, indicating- again- a good fit. However, the squared multiple correlation of 0.0802 suggests that the model explains 8.2% of the variance.

Table 5.35: Fit indices and statistics of the average ROA model

CFI	0.935
CMIN/df	1.530
RMSEA	0.049
SRMR	0.0670
Chi Square	757.376
df	495
Squared Multiple Correlation	0.082

Based on Table 5.36, the results indicate that none of the suggested variables is related to the 3-year average ROA while the only relationships that are found to be significant, have been discussed in the previous models and refer to the relationships among the exogenous variable, marketing capabilities and some elements of the competitive positioning leading us to findings partly support **Hypothesis 9** and **Hypothesis 12**. As before, the full structural model along with the standardised estimates can be found in Appendix K.

Table 5.36: Path analysis of the average ROA model

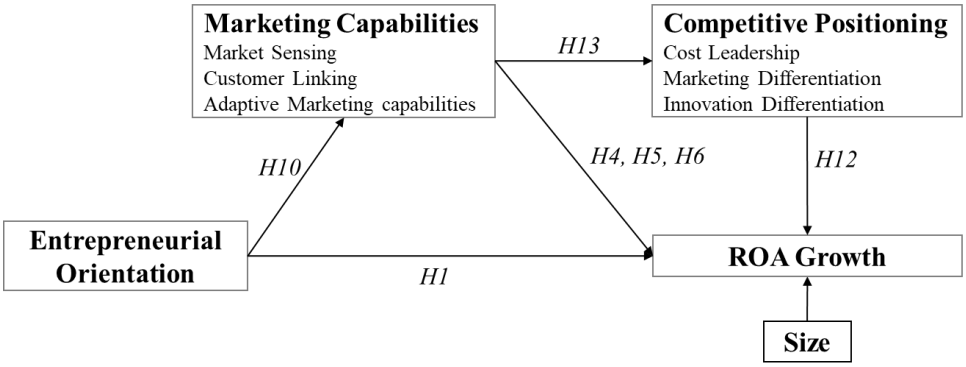
Construct	Path	Construct	St. Estim.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.531**	**0.15**	**4.956**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.101**	**4.11**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.645**	**0.204**	**5.461**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.136	0.118	1.645	0.1
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.163**	**0.101**	**2.159**	**0.031**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.277**	**0.127**	**3.296**	***
Marketing Differentiation	←	Market Sensing Capabilities	**0.428**	**0.141**	**3.696**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.078	0.191	-0.805	0.421
Innovation Differentiation	←	Market Sensing Capabilities	**0.47**	**0.121**	**4.224**	***
Cost Leadership	←	Market Sensing Capabilities	**0.253**	**0.134**	**2.196**	**0.028**
Cost Leadership	←	Customer Linking Capabilities	0.123	0.187	1.236	0.216
Innovation Differentiation	←	Customer Linking	-0.041	0.157	-0.458	0.647
Average ROA	←	Entrepreneurial Orientation	-0.058	3.704	-0.453	0.65
Average ROA	←	Customer Linking	0.156	2.698	1.561	0.118
Average ROA	←	Market Sensing	0.089	2.44	0.606	0.545
Average ROA	←	Adaptive Marketing Capabilities	-0.013	1.94	-0.139	0.89
Average ROA	←	Cost Leadership	0.049	1.41	0.496	0.62
Average ROA	←	Innovation Differentiation	0.026	1.558	0.254	0.799
Average ROA	←	Marketing Differentiation	0.04	1.52	0.356	0.722
Average ROA	←	LnSize	**0.144**	**1.574**	**2.176**	**0.03**

Notes: ***<0.001

5.5.2.6 ROA Growth

The last profitability indicator which is being investigated is the one of ROA growth. The model is presented in Figure 5.7, however, like with the previous model, no statistical significant relationships can be found between the suggested independent variables and ROA growth as it can be seen in Table 5.38.

Figure 5.7: Model testing ROA growth



With regard to the fit indices, according to Table 5.37: Fit indices and statistics of the ROA growth model, they indicate that the model has a good fit. The squared multiple correlation index of 0.047, suggests that only 4.7% of the variance of ROA growth is explained by the model.

It is a common finding, that the models incorporating the profitability indicators of average net profit margin, net profit margin growth, average ROA and ROA growth, explain very little of the variance. This suggests that for those indices, other factors (not present in the current study), affect them stronger.

As before, and based on Table 5.38, the results indicate that none of the suggested variables is related to the ROA growth model, while the only relationships that are found to be significant, have been discussed in the previous models and refer to the relationships among the exogenous variable, marketing capabilities and some elements of the competitive positioning partly supporting partly support **Hypothesis 9** and **Hypothesis 12**. However, within 90% confidence interval there is a positive relationship between market sensing capabilities and the growth of ROA (st. estimate 0.263, p=0.089). The full structural model along with the standardised estimates can be found in Appendix L. Overall, it can be said that within 95% confidence interval,

with the exception of average gross profits, the other models, do not explain much of the variance, regarding the profitability of the companies.

Table 5.37: Fit indices and statistics of the ROA growth model

CFI	0.933
CMIN/df	1.539
RMSEA	0.049
SRMR	0.0664
Chi Square	762.004
df	495
Squared Multiple Correlation	0.047

Table 5.38: Path analysis of the ROA growth model

Construct	Path	Construct	St. Estim.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.531**	**0.15**	**4.951**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.102**	**4.113**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.647**	**0.205**	**5.479**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.134	0.119	1.619	0.105
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.159**	**0.102**	**2.11**	**0.035**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.275**	**0.127**	**3.274**	**0.001**
Marketing Differentiation	←	Market Sensing Capabilities	**0.431**	**0.142**	**3.703**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.08	0.191	-0.823	0.411
Innovation Differentiation	←	Market Sensing Capabilities	**0.478**	**0.122**	**4.249**	***
Cost Leadership	←	Market Sensing Capabilities	**0.256**	**0.134**	**2.206**	**0.027**
Cost Leadership	←	Customer Linking Capabilities	0.121	0.187	1.22	0.222
Innovation Differentiation	←	Customer Linking Capabilities	-0.046	0.158	-0.51	0.61
ROA Growth	←	Entrepreneurial Orientation	-0.033	7.581	-0.251	0.802
ROA Growth	←	Customer Linking Capabilities	-0.078	5.499	-0.758	0.448
ROA Growth	←	Market Sensing Capabilities	0.263	5.105	1.698	0.089
ROA Growth	←	Adaptive Marketing Capabilities	-0.156	3.979	-1.604	0.109
ROA Growth	←	Cost Leadership	0.077	2.891	0.762	0.446
ROA Growth	←	Innovation Differentiation	-0.123	3.23	-1.158	0.247
ROA Growth	←	Marketing Differentiation	-0.009	3.114	-0.076	0.939
ROA Growth	←	LnSize	0.03	3.198	0.439	0.66

Notes: ***<0.001

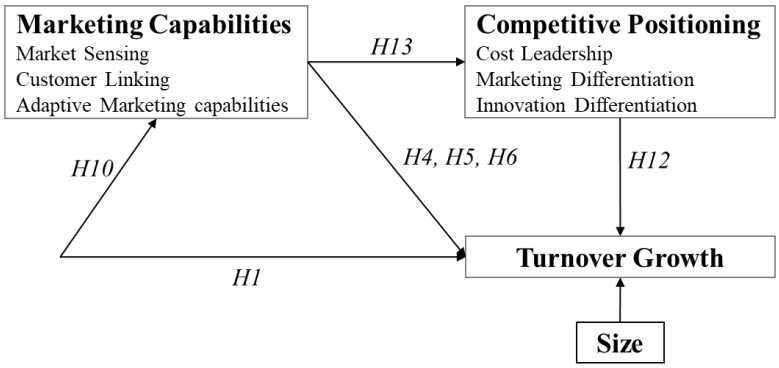
5.5.3 Market performance (turnover)

Reiterating elements of the model development chapter, another point that the current research aims at investigating, is the drivers of market performance. Market performance has been measured by the turnover growth during the 3-year period and additionally as the average 3-year turnover. In this vein, two models will be examined.

5.5.3.1 Turnover growth

The first model that investigates one aspect of market performance, is the one presented in Figure 5.8, which aims at identifying the drivers of turnover growth.

Figure 5.8: Model testing turnover growth



After running the analysis, the fit indices presented in Table 5.39 indicate that the model is acceptable. Also, the squared multiple correlation is 0.180 suggesting that the model explains 18% of the variance of the turnover growth. Furthermore, Table 5.40 presents the path analysis of the model, with the significance levels and standardised estimates. Moreover, the full structural model, along with the standardised estimates can be found in Appendix M.

Table 5.39: Fit indices and statistics of the turnover growth model

CFI	0.960
CMIN/df	1.420
RMSEA	0.044
SRMR	0.0665
Chi Square	750.175
df	495
Squared Multiple Correlation	0.180

Table 5.40: Path analysis of the turnover growth model

Construct	Path	Construct	St. Estim.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.53**	**0.149**	**4.969**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.101**	**4.13**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.645**	**0.203**	**5.488**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.136	0.118	1.638	0.101
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.16**	**0.101**	**2.123**	**0.034**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.277**	**0.126**	**3.299**	***
Marketing Differentiation	←	Market Sensing Capabilities	**0.429**	**0.142**	**3.699**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.078	0.19	-0.808	0.419
Innovation Differentiation	←	Market Sensing Capabilities	**0.471**	**0.121**	**4.226**	***
Cost Leadership	←	Market Sensing Capabilities	**0.254**	**0.134**	**2.2**	**0.028**
Cost Leadership	←	Customer Linking Capabilities	0.122	0.186	1.227	0.22
Innovation Differentiation	←	Customer Linking Capabilities	-0.04	0.156	-0.451	0.652
Turnover Growth	←	Entrepreneurial Orientation	**0.295**	**0.087**	**2.268**	**0.023**
Turnover Growth	←	Customer Linking Capabilities	-0.151	0.061	-1.545	0.122
Turnover Growth	←	Market Sensing Capabilities	-0.27	0.056	-1.843	0.065
Turnover Growth	←	Adaptive Marketing Capabilities	**0.216**	**0.044**	**2.304**	**0.021**
Turnover Growth	←	Cost Leadership	-0.004	0.032	-0.04	0.968
Turnover Growth	←	Innovation Differentiation	0.193	0.035	1.936	0.053
Turnover Growth	←	Marketing Differentiation	**-0.255**	**0.035**	**-2.32**	**0.02**
Turnover Growth	←	LnSize	0.006	0.035	0.098	0.922

Notes: ***<0.001

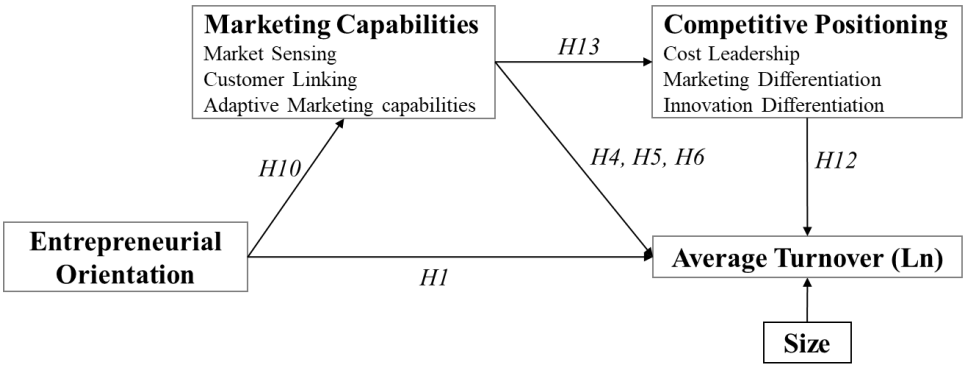
The results of the path analysis are very similar to those of the previous model when examining the relationships among entrepreneurial orientation, marketing capabilities and competitive positioning. However, with regard to the predictors of turnover growth, one should note the following. Entrepreneurial orientation has a direct positive effect on the growth of turnover (st. estimate 0.295, p=0.023) followed by adaptive marketing capabilities (positive relationship to turnover growth with a st. estim. 0.216, p=0.021). Nevertheless, marketing differentiation has a negative relationship with turnover growth (st. est. -0.255, p=0.02), while within 90% confidence interval innovation differentiation has a positive effect (st. est. 0.193, p=0.053) and market sensing capabilities a negative effect (st. est. -0.27, p=0.065).

In this vein, there is evidence to partly support **Hypothesis 9** and **Hypothesis 12** (as before), **Hypothesis 1** and **Hypothesis 6**. A discussion at the following chapter, will try to unveil the reasons for that contradiction.

5.5.3.2 Average turnover

The final model investigates the predictors of high average turnover over the 3-year period as presented in Figure 5.9, while the full structural model along with the standardised estimates can be found in Appendix N.

Figure 5.9: Model testing average turnover



As before, Table 5.41 suggests that the model has a good fit, while the squared multiple correlation indicates that is explains 44.4% of the variance of the average turnover.

Table 5.41: Fit indices and statistics of the average turnover model

CFI	0.937
CMIN/df	1.528
RMSEA	0.049
SRMR	0.0678
Chi Square	756.564
df	495
Squared Multiple Correlation	0.444

The model does not support a relationship between the suggested variables and average turnover, and in this respect, the only relationships that identifies are those that had been already discusses and are referring to the elements of market and entrepreneurial orientation, capabilities and competitive positioning leading us again to support only **Hypothesis 9** and **Hypothesis 12** (as before). Table 5.42 summarises the results of the path analysis with regard to the aforementioned model.

Table 5.42: Path analysis of the average turnover model

Construct	Path	Construct	St. Estim.	S.E.	C.R.	P
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	**0.531**	**0.151**	**4.947**	***
Customer Linking Capabilities	←	Entrepreneurial Orientation	**0.391**	**0.102**	**4.111**	***
Market Sensing Capabilities	←	Entrepreneurial Orientation	**0.645**	**0.205**	**5.449**	***
Cost Leadership	←	Adaptive Marketing Capabilities	0.136	0.118	1.639	0.101
Innovation Differentiation	←	Adaptive Marketing Capabilities	**0.164**	**0.101**	**2.17**	**0.03**
Marketing Differentiation	←	Adaptive Marketing Capabilities	**0.277**	**0.126**	**3.301**	***
Marketing Differentiation	←	Market Sensing Capabilities	**0.428**	**0.142**	**3.692**	***
Marketing Differentiation	←	Customer Linking Capabilities	-0.077	0.191	-0.8	0.424
Innovation Differentiation	←	Market Sensing Capabilities	**0.469**	**0.121**	**4.212**	***
Cost Leadership	←	Market Sensing Capabilities	**0.252**	**0.134**	**2.189**	**0.029**
Cost Leadership	←	Customer Linking Capabilities	0.123	0.187	1.243	0.214
Innovation Differentiation	←	Customer Linking Capabilities	-0.04	0.157	-0.448	0.654
Turnover Growth	←	Entrepreneurial Orientation	0.052	0.122	0.521	0.602
Average Turnover (Ln)	←	Customer Linking Capabilities	0.071	0.088	0.918	0.359
Average Turnover (Ln)	←	Market Sensing Capabilities	-0.071	0.08	-0.615	0.539
Average Turnover (Ln)	←	Adaptive Marketing Capabilities	0.074	0.063	1.009	0.313
Average Turnover (Ln)	←	Cost Leadership	-0.067	0.046	-0.874	0.382
Average Turnover (Ln)	←	Innovation Differentiation	0.018	0.051	0.227	0.82
Average Turnover (Ln)	←	Marketing Differentiation	-0.056	0.05	-0.638	0.523
Average Turnover (Ln)	←	LnSize	**0.655**	**0.051**	**12.73**	***

Notes: ***<0.001

5.6 Hypotheses checklist

The following table (Table 5.43) provides a summary of all the hypotheses that were tested before and the corresponding results (whether or not there is evidence to support them).

Table 5.43: Hypotheses checklist regarding direct relationships

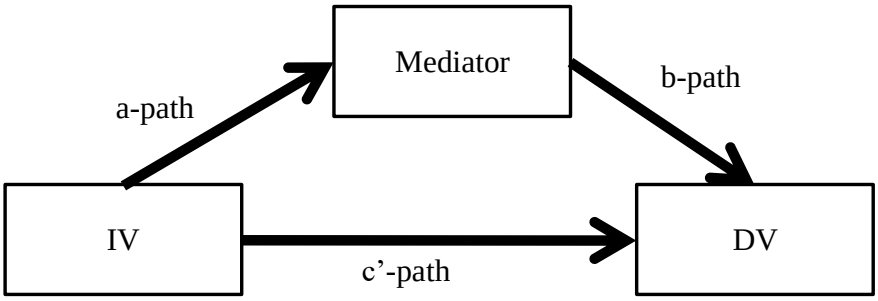
Hypothesis 1: Entrepreneurial orientation will have a positive relationship with a firm's performance.	Supported for turnover growth
Hypothesis 4: Market sensing capabilities will have a positive relationship with a firm's performance.	Only within 90% confidence interval there is a positive relationship with ROA growth, while within 90% confidence interval there is a negative association with turnover growth
Hypothesis 5: Customer linking capabilities will have a positive relationship with a firm's performance.	Supported for customer performance
Hypothesis 6: Adaptive marketing capabilities will have a positive relationship with a firm's performance.	Supported for gross profits growth and turnover growth. However, within 90% confidence interval there is negative relationship with net profit margin growth
Hypothesis 9: Entrepreneurial orientation will have a positive effect on marketing capabilities.	Supported of all three marketing capabilities types
Hypothesis 11: Competitive positioning will have a positive relationship with a firm's performance.	Supported only for the positive effect of cost leadership and innovation differentiation on customer performance. Meanwhile marketing differentiation has a negative effect at with turnover growth. Also, within 90% confidence interval innovation differentiation on turnover growth and on gross profits growth.
Hypothesis 12: Marketing capabilities (namely adaptive marketing, market sensing and customer linking) will have a positive effect on competitive positioning, with a stronger effect on differentiation advantage	Market sensing capabilities have a positive effect on all aspects of competitive positioning, adaptive marketing capabilities on marketing and innovation differentiation, while customer linking capabilities are not associated with competitive positioning.

5.7 Mediation Effects

Having examined the direct relationships between the variables, the next step is to investigate whether the hypothesised mediations are significant (**Hypothesis 10:** Marketing capabilities will mediate the relationship between entrepreneurial orientation and performance. and **Hypothesis 13:** Competitive positioning will mediate the relationship between marketing capabilities and a firm's performance.) However, based on the results of the previous analysis in section 5.5 there is no evidence within 95% confidence interval to support the effect that any variable has on the following performance indicators: ROA growth, average ROA, average net profit margin, net profit margin growth, average turnover and average gross profits. As such, mediation tests will focus on the effect of some variables on customer performance, turnover growth and gross profits growth.

The principle of mediation is the following; Figure 5.10 presents one simple model trying to predict the relationship between an independent and a dependent variable with the presence of a potential mediator.

Figure 5.10: Relationships while testing mediation adopted from Baron and Kenny (1986)



In order for a mediation test to be performance, both the a-path and the b-path should be significant. Therefore, before proceeding in testing the hypotheses, there is a need to revisit the results from the path analyses. Then, mediation analysis can be conducted , only for those relationships where both a and b paths are significant. For example, one of the hypotheses is that adaptive marketing capabilities mediate the relationship between entrepreneurial orientation and performance. Indeed, the relationship between

entrepreneurial orientation and adaptive marketing capabilities is significant (the a-path from the figure above). However, based on the results from the path analysis, adaptive marketing capabilities have only been found to affect gross profits growth and turnover growth (within 95% confidence interval). As such these are the only dependent variable that can be examined. The analysis was performed by using the bootstrapping function of AMOS SPSS (Byrne, 2010), which provides values for the direct and indirect effects. Considering that the software provides a total indirect effect (it does not differentiate among the different mediators), some user defined estimands had to be created which allowed to check the individual indirect effect of each suggested mediator. The results from these analyses are summarised in Table 5.44 and contain only those relationships that could lead to mediation (based on revisiting the path analyses tables). Please note that the effects are expressed in unstandardised values, while the p. values are within the brackets.

Table 5.44: Significance of the mediation effects

Relationship (Independent Variable→Mediator→Dependent Variable	**Unstandardised Direct Effect (p. value)**	**Unstandardised Indirect Effect (p. value)**
Entrepreneurial orientation → Customer linking capabilities → Customer performance	n.s.	-0.009 (0.767)/ n.s.
Entrepreneurial orientation → Adaptive marketing capabilities → Turnover growth	**0.197 (0.023)**	**0.076 (0.011)**
Entrepreneurial orientation → Market sensing capabilities→ Turnover growth	0.197 (0.023)	-0.116 (0.147) / n.s.
Entrepreneurial orientation → Adaptive marketing capabilities → Gross profits growth	n.s.	**0.120 (0.041)**
Adaptive marketing capabilities → Cost leadership → Customer performance	n.s.	0.042 (0.094)
Adaptive marketing capabilities → Innovation differentiation → Customer performance	n.s.	0.041 (0.059)
Adaptive marketing capabilities → Marketing differentiation → Turnover growth	**0.103 (0.021)**	**-0.034 (0.011)**
Adaptive marketing capabilities → Innovation differentiation → Turnover growth	0.103 (0.021)	0.015 (0.074)
Adaptive marketing capabilities → Innovation differentiation → Gross profits growth	0.162 (0.025)	0.024 (0.082)
Market sensing capabilities→ Cost leadership → Customer performance	n.s.	**0.062 (0.020)**
Market sensing capabilities → Innovation differentiation → Customer performance	n.s.	**0.095 (0.013)**

Notes: n.s.: not significant

According to the results of the analysis, adaptive marketing capabilities partially mediate the positive relationship between entrepreneurial orientation and turnover growth and fully mediate the positive relationship between entrepreneurial orientation and gross profits growth. Marketing differentiation partially mediates the relationship between adaptive marketing capabilities and turnover growth, however, the indirect effect is negative something that is called inconsistent mediation and it will be discussed in the next chapter. Moreover, cost leadership and innovation differentiation

both fully mediate the positive relationship between market sensing capabilities and customer performance. Meanwhile within 90% confidence interval, there are four more mediation effects taking place. Cost leadership and innovation differentiation both fully mediate the positive relationship between adaptive marketing capabilities and customer performance, while innovation differentiation partially mediates the relationships between adaptive marketing capabilities and turnover growth and between adaptive marketing capabilities and gross profits growth. The following table (Table 5.45) provides a summary of all the hypotheses that were tested before and the corresponding results (whether or not there is evidence to support them).

Table 5.45: Hypotheses checklist regarding mediation effects

Hypothesis 10: Marketing capabilities will mediate the relationship between entrepreneurial orientation and performance.	Supported only for adaptive marketing capabilities where they partially mediate the positive relationship between entrepreneurial orientation and turnover growth and fully mediate the relationship between entrepreneurial orientation and gross profits growth.
Hypothesis 13: Competitive positioning will mediate the relationship between marketing capabilities and a firm's performance.	Market sensing→**Cost leadership**→Customer performance (full mediation) Market sensing capabilities→**Innovation differentiation**→customer performance (full mediation) Adaptive marketing capabilities→**Marketing differentiation**→Turnover growth (inconsistent mediation) Adaptive marketing capabilities→**Cost leadership**→customer performance (full mediation within 90% confidence interval) Adaptive marketing capabilities→**Innovation differentiation**→customer performance (full mediation within 90% confidence interval) Adaptive marketing capabilities→**Innovation differentiation**→turnover growth (partial mediation within 90% confidence interval) Adaptive marketing capabilities→**Innovation differentiation**→gross profits growth (partial mediation within 90% confidence interval)

5.8 Moderations

Having tested the direct and indirect relationships between the variables under investigation, the next part of the analysis will focus on exploring the effect of environmental complexity and environmental munificence on the strength of the relationships between the aforementioned variables. This will be done by a multiple group analysis, between groups that had low and high levels of environmental munificence and complexity. Then the chi-square differences will be calculated between a constrained model, in which the beta coefficient between the high and low groups is set to be equal, and an unconstrained model, where the beta coefficient between the high and low groups is unconstrained (Kaleka and Morgan, 2019). If the $\Delta\chi 2$ value is over 3.84 (for 95% confidence interval) or over 2.71 (for 90% confidence interval), then the environment is considered to be a moderator for the path under investigation. The results of the analysis are presented below.

5.8.1 Environmental Munificence

Overall, there are two hypotheses to be tested with regard the moderating role of environmental munificence as presented in Figure 5.11 and Table 5.46.

Figure 5.11: Role of the Environmental Munificence

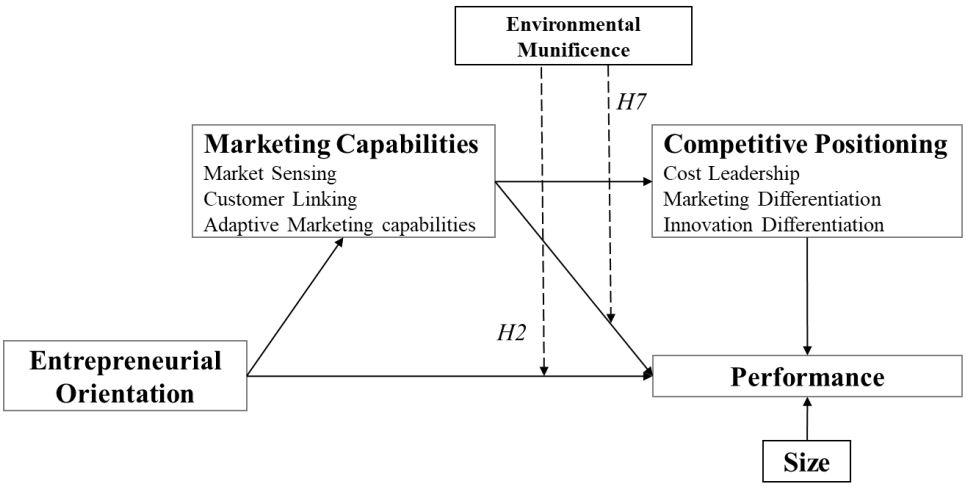


Table 5.46: Hypotheses regarding the moderating role of environmental munificence

Hypothesis 2: Environmental munificence will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental munificence is high.
Hypothesis 7: Environmental munificence will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental munificence is low.

The following table (Table 5.47) presents the results from the different analysis that were conducted in order to investigate the effect that environmental munificence has on different relationships. Overall, the analysis ran 36 times, depending on the performance outcome under investigation, and depending on the direct relationship that was examined each time. The only relationship that was found to be significant was the one where environmental munificence had on the relationship between adaptive marketing capabilities and turnover growth. In low munificent environments, the relationship between adaptive marketing capabilities and turnover growth, becomes significant and positive (Chi-square difference between high and low models=5.3238), with a t-value of 3.462 and a standardised estimate of 0.578.

Table 5.47: Moderating role of environmental munificence

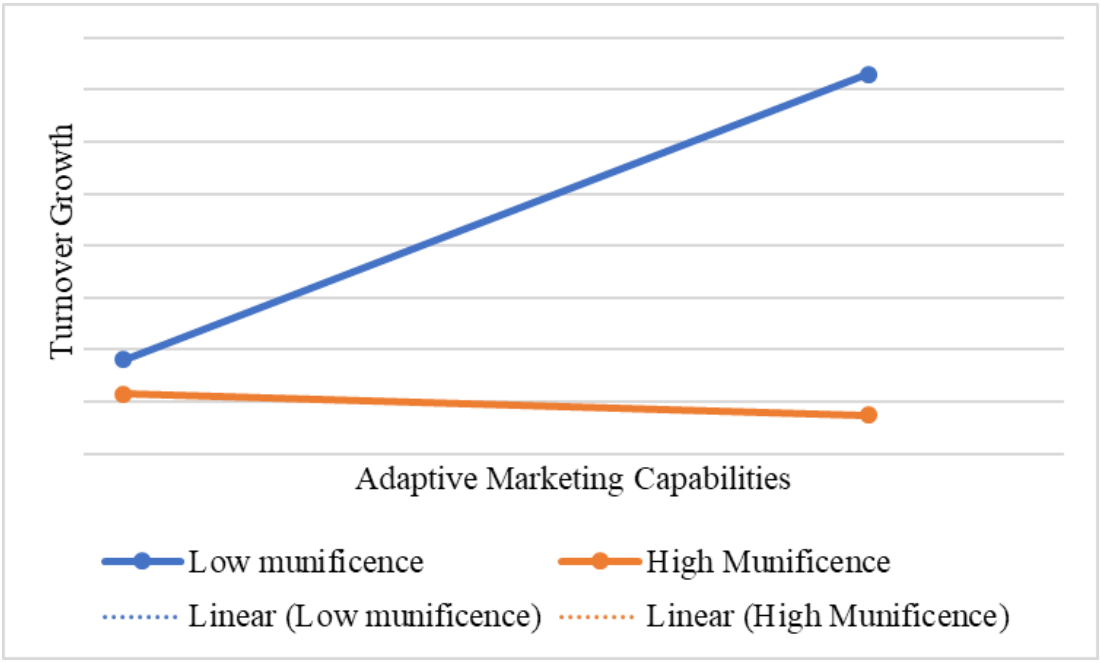
Path	Hypothesis	Estimate High[a] (t-value)	Estimate Low[a] (t-value)	$\Delta\chi^2$
Entrepreneurial Orientation → Turnover Growth	H2	0.017 (0.223)	-0.128 (-0.652)	2.028
Customer Linking Capabilities → Turnover Growth	H7	-0.086 (1.349)	-0.097 (-1.704)	0.010
Marketing Sensing Capabilities → Turnover Growth	H7	0.014 (0.225)	-0.057 (-0.967)	0.491
Adaptive Marketing Capabilities → Turnover Growth	H7	-0.012 (-0.225)	**0.183 (3.462)**	**5.328**
Entrepreneurial Orientation → Average Turnover	H2	-0.074 (-0.817)	-0.128 (-0.652)	0.061
Customer Linking Capabilities → Average Turnover	H7	-0.177 (-2.341)	-0.051 (-0.401)	0.515
Marketing Sensing Capabilities → Average Turnover	H7	0.149 (2.067)	-0.045 (-0.336)	1.354
Adaptive Marketing Capabilities → Average Turnover	H7	0.093 (1.422)	0.174 (1.466)	0.297
Entrepreneurial Orientation → Gross Profits Growth	H2	0.082 (0.964)	-0.099 (-0.965)	1.822
Customer Linking → Gross Profits Growth	H7	-0.111 (-1.566)	-0.025 (-0.375)	0.509
Marketing Sensing → Gross Profits Growth	H7	-0.015 (-0.217)	-0.009 (-0.133)	0.002
Adaptive Marketing Capabilities → Gross Profits Growth	H7	-0.032 (-0.524)	0.117 (1.873)	2.409
Entrepreneurial Orientation → Average Gross Profits	H2	-0.045 (-0.380)	-0.184 (-0.883)	0.339
Customer Linking Capabilities → Average Gross Profits	H7	-0.007 (-0.075)	-0.161 (-1.187)	0.594
Marketing Sensing Capabilities → Average Gross Profits	H7	-0.045 (-0.482)	0.043 (0.303)	0.214
Adaptive Marketing Capabilities → Average Gross Profits	H7	0.047 (0.572)	0.230 (1.817)	1.184
Entrepreneurial Orientation → Customer Performance	H2	0.027 (0.149)	-0.216 (-0.642)	0.403
Customer Linking Capabilities → Customer Performance	H7	0.266 (1.782)	0.367 (1.670)	0.101

Path	Hypothesis	Estimate High[a] (t-value)	Estimate Low[a] (t-value)	$\Delta\chi^2$
Marketing Sensing Capabilities → Customer Performance	H7	0.307 (2.152)	-0.041 (-0.180)	1.334
Adaptive Marketing Capabilities → Customer Performance	H7	0.157 (1.222)	0.277 (1.354)	0.201
Entrepreneurial Orientation → Net Profit Margin Growth	H2	0.136 (0.269)	0.199 (0.345)	0.007
Customer Linking Capabilities → Net Profit Margin Growth	H7	0.739 (1.760)	0.735 (1.955)	0.001
Marketing Sensing Capabilities → Net Profit Margin Growth	H7	-0.843 (-2.102)	-0.364 (-0.928)	0.516
Adaptive Marketing Capabilities → Net Profit Margin Growth	H7	0.352 (0.972)	-0.180 (-0.515)	0.941
Entrepreneurial Orientation → Average Net Profit Margin	H2	-0.672 (-0.227)	-1.196 (-0.369)	0.014
Customer Linking Capabilities → Average Net Profit Margin	H7	2.376 (0.970)	-0.201 (0.924)	0.409
Marketing Sensing Capabilities → Average Net Profit Margin	H7	0.999 (0.427)	-1.767 (-0.802)	0.518
Adaptive Marketing Capabilities → Average Net Profit Margin	H7	2.768 (1.310)	2.763 (1.404)	0.001
Entrepreneurial Orientation → Average ROA	H2	-1.155 (-0.215)	-2.413 (0.627)	0.036
Customer Linking Capabilities → Average ROA	H7	2.550 (0.572)	1.248 (0.497)	0.040
Marketing Sensing Capabilities → Average ROA	H7	4.412 (1.037)	-1.868 (-0.714)	0.997
Adaptive Marketing Capabilities → Average ROA	H7	6.114 (1.591)	1.823 (0.781)	0.787
Entrepreneurial Orientation → ROA Growth	H2	-0.162 (-0.264)	0.033 (0.057)	0.053
Customer Linking Capabilities → ROA Growth	H7	0.746 (1.467)	0.683 (1.789)	0.006
Marketing Sensing Capabilities → ROA Growth	H7	-0.138 (-0.285)	-0.320 (-0.804)	0.057
Adaptive Marketing Capabilities →ROA	H7	0.600 (1.369)	0.034 (0.096)	0.857

$\Delta\chi 2$ values over 3.84 are significant at p=0.05, over 2.71 are significant at p=0.10.
a Paths with t-values over 1.96 significant (p b 0.05), over 1.66 significant (p b 0.10), (two-tailed test).

As such, although in environments of high environmental munificence, the relationship is not significant, under conditions of low environmental munificence, where the demand for industry products is declining and products become obsolete fast, then adaptive marketing capabilities have a strong positive effect on turnover growth. In this vein there is evidence to partly support **Hypothesis 7**. A graphical representation of the relationship can be seen in Figure 5.12.

Figure 5.12: Effect of environmental munificence on the relationship between adaptive marketing capabilities and turnover growth



Note: in environments of high munificence, the relationship is not significant

5.8.2 Environmental Complexity

Overall, there are two hypotheses to be tested regarding the moderating role of environmental complexity as presented in Figure 5.13 and Table 5.48.

Figure 5.13: Role of the Environmental Complexity

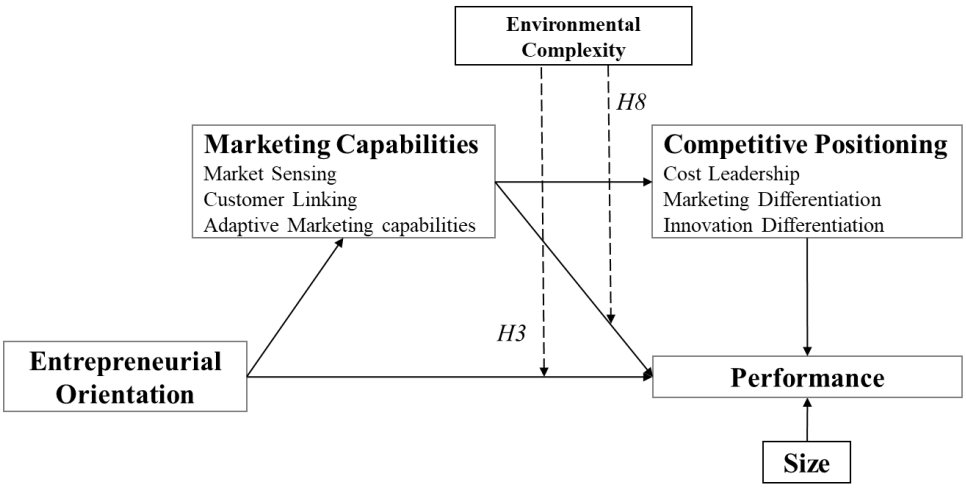


Table 5.48: Hypotheses regarding the moderating role of environmental complexity

Hypothesis 3: Environmental complexity will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental complexity is high.
Hypothesis 8: Environmental complexity will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental complexity is high.

The following table (Table 5.49) presents the results from the different analysis that were conducted in order to investigate the effect that environmental complexity has on different relationships.

Table 5.49: Moderating role of environmental complexity

Path	Hypothesis	Estimate High[a] (t-value)	Estimate Low[a] (t-value)	Δχ2
Entrepreneurial Orientation → Turnover Growth	H2	0.075 (0.231)	0.053 (0.368)	0.067
Customer Linking Capabilities → Turnover Growth	H7	-0.047 (-0.816)	-0.042 (-0.674)	0.003
Marketing Sensing Capabilities → Turnover Growth	H7	**0.107 (2.056)**	-0.007 (-0.113)	**3.283**
Adaptive Marketing Capabilities → Turnover Growth	H7	0.006 (0.903)	0.035 (0.516)	0.123
Entrepreneurial Orientation → Average Turnover	H2	-0.016 (-0.162)	0.153 (1.546)	1.482
Customer Linking Capabilities → Average Turnover	H7	-0.140 (-1.567)	0.119 (0.260)	0.390
Marketing Sensing Capabilities → Average Turnover	H7	0.017 (0.215)	**-0.269 (-2.469)**	**2.915**
Adaptive Marketing Capabilities → Average Turnover	H7	**0.213 (2.355)**	-0.022 (-0.308)	**2.913**
Entrepreneurial Orientation → Gross Profits Growth	H2	0.058 (0.986)	0.014 (0.176)	0.214
Customer Linking Capabilities → Gross Profits Growth	H7	-0.030 (-0.549)	-0.115 (-1.385)	0.621
Marketing Sensing Capabilities → Gross Profits Growth	H7	0.098 (1.975)	0.004 (0.051)	0.598
Adaptive Marketing Capabilities → Gross Profits Growth	H7	0.004 (0.100)	0.026 (0.372)	0.051
Entrepreneurial Orientation → Average Gross Profits	H2	-0.008 (-0.071)	0.095 (0.404)	0.161
Customer Linking Capabilities → Average Gross Profits	H7	-0.121 (-1.136)	-0.071 (-0.283)	0.029
Marketing Sensing Capabilities → Average Gross Profits	H7	-0.031 (-0.321)	0.143 (0.551)	0.266
Adaptive Marketing Capabilities → Average Gross Profits	H7	0.065 (0.773)	0.171 (0.793)	0.152
Entrepreneurial Orientation → Customer Performance	H2	-0.102 (-0.710)	-0.174 (-1.081)	0.115
Customer Linking Capabilities → Customer Performance	H7	0.749 (5.675)	0.635 (3.695)	0.234
Marketing Sensing Capabilities → Customer Performance	H7	-0.015 (-0.126)	0.082 (0.459)	0.136

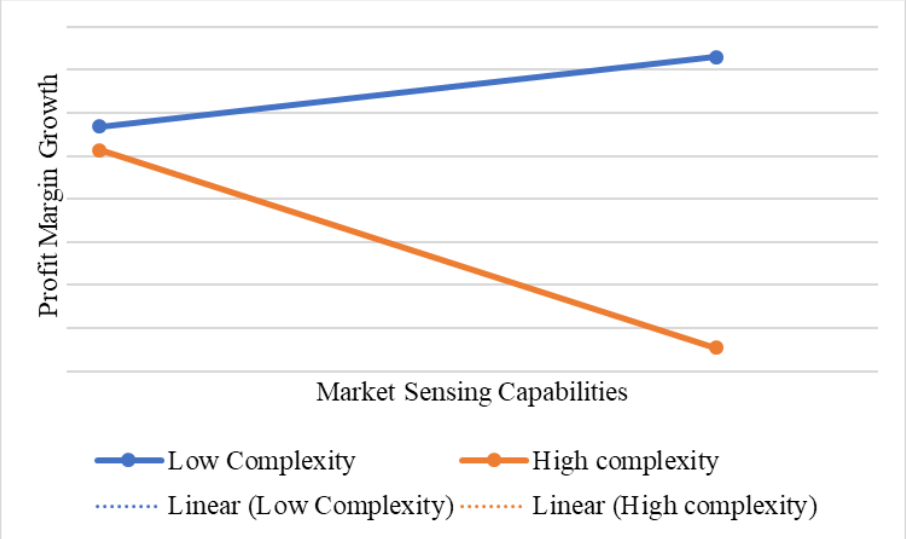
Path	Hypothesis	Estimate High[a] (t-value)	Estimate Low[a] (t-value)	$\Delta\chi^2$
Adaptive Marketing Capabilities → Customer Performance	H7	0.222 (2.130)	0.205 (1.389)	0.007
Entrepreneurial Orientation → Net Profit Margin Growth	H2	-0.511 (-0.789)	-0.017 (-0.049)	0.439
Customer Linking Capabilities → Net Profit Margin Growth	H7	0.461 (0.773)	**-1.051 (-2.771)**	**3.581**
Marketing Sensing Capabilities → Net Profit Margin Growth	H7	**-1.428 (-2.643)**	0.444 (1.132)	**4.909**
Adaptive Marketing Capabilities → Net Profit Margin Growth	H7	0.382 (0.809)	-0.228 (-0.700)	0.778
Entrepreneurial Orientation → Average Net Profit Margin	H2	2.356 (1.575)	0.738 (0.343)	0.390
Customer Linking Capabilities → Average Net Profit Margin	H7	0.028 (0.020)	-0.406 (-0.177)	0.023
Marketing Sensing Capabilities → Average Net Profit Margin	H7	-0.708 (-0.567)	1.448 (0.612)	0.436
Adaptive Marketing Capabilities → Average Net Profit Margin	H7	0.193 (0.177)	-2.822 (-1.437)	1.286
Entrepreneurial Orientation → Average ROA	H2	**5.133 (2.550)**	-0.793 (-0.271)	**2.792**
Customer Linking Capabilities → Average ROA	H7	-0.251 (-0.135)	0.548 (0.176)	0.042
Marketing Sensing Capabilities → Average ROA	H7	-0.024 (-0.014)	1.836 (0.570)	0.177
Adaptive Marketing Capabilities → Average ROA	H7	-0.053 (-0.036)	-3.655 (-1.368)	0.999
Entrepreneurial Orientation → ROA Growth	H2	-0.665 (-1.157)	0.137 (0.454)	1.477
Customer Linking Capabilities → ROA Growth	H7	0.181 (0.342)	-0.958 (-2.984)	2.676
Marketing Sensing Capabilities → ROA Growth	H7	-0.909 (-1.895)	0.044 (0.134)	1.730
Adaptive Marketing Capabilities → ROA Growth	H7	0.375 (0.895)	-0.177 (-0.642)	0.832

$\Delta\chi 2$ values over 3.84 are significant at p=0.05, over 2.71 are significant at p=0.10.
a Paths with t-values over 1.96 significant (p b 0.05), over 1.66 significant (p b 0.10), (two-tailed test).

Market sensing capabilities→net profit margin growth

The only relationship that was found to be significant within 95% confidence interval was the one that environmental complexity has on the relationship between market sensing capabilities and net profit margin growth, with a Chi-square difference between high and low models=4.909, a t-value of -2.643 and a standardised estimate of -0.464. As it can also been seen in Figure 5.14, in highly complex environments this relationship becomes negative, whereas in environments of low complexity it is not significant.

Figure 5.14: Effect of environmental complexity on the relationship between market sensing capabilities and net profit margin growth



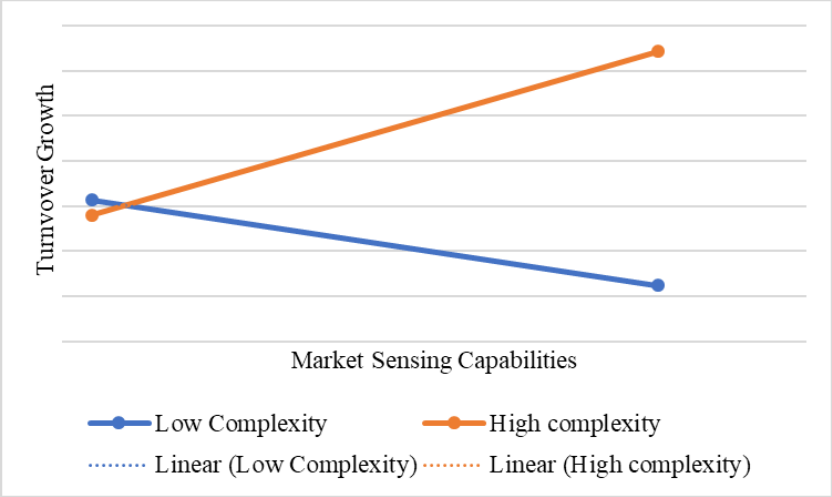
Note: in environments of low complexity, the relationship is not significant

Moreover, there are five more significant relationships regarding environmental complexity although within 90% confidence interval; it is worth looking at them as well.

Market sensing capabilities → Turnover growth

In highly complex environments, the relationship between market sensing capabilities and turnover growth, becomes significant (Chi-square difference between high and low models=3.283), with a t-value of 2.056 and a standardised estimate of 0.382. Figure 5.15 depicts the relationship.

Figure 5.15: Effect of environmental complexity on the relationship between market sensing capabilities and turnover growth

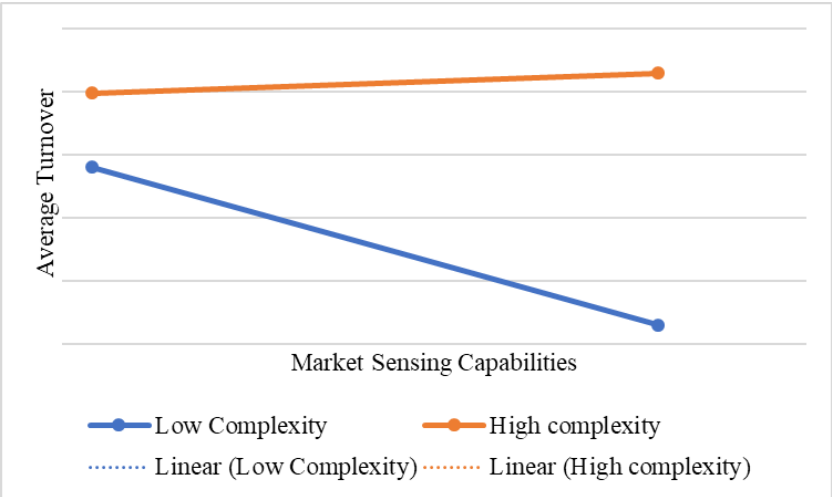


Note: in environments of low complexity, the relationship is not significant

Market sensing capabilities → Average turnover

In low complexity environments, the relationship between market sensing capabilities and average turnover, becomes significant and negative (Chi-square difference between high and low models=2.915), with a t-value of -2.469 and a standardised estimate of -0.264. Figure 5.16 depicts the relationship.

Figure 5.16: Effect of environmental complexity on the relationship between market sensing capabilities and average turnover

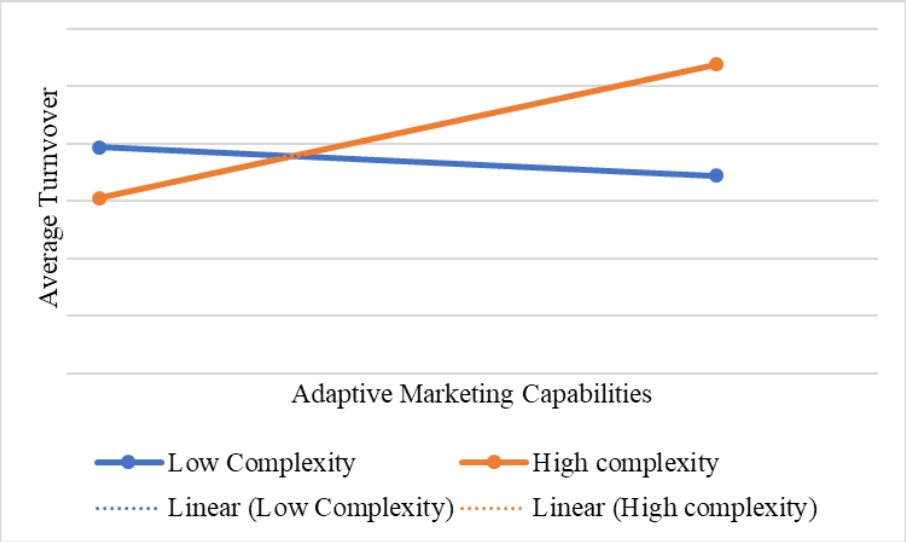


Note: in environments of high complexity, the relationship is not significant

Adaptive marketing capabilities → Average Turnover

In high complexity environments, the relationship between adaptive marketing capabilities and average turnover, becomes significant and positive (Chi-square difference between high and low models=2.913), with a t-value of 2.355 and a standardised estimate of 0.245. Figure 5.17 show the relationship.

Figure 5.17: Effect of environmental complexity on the relationship between adaptive marketing capabilities and average turnover

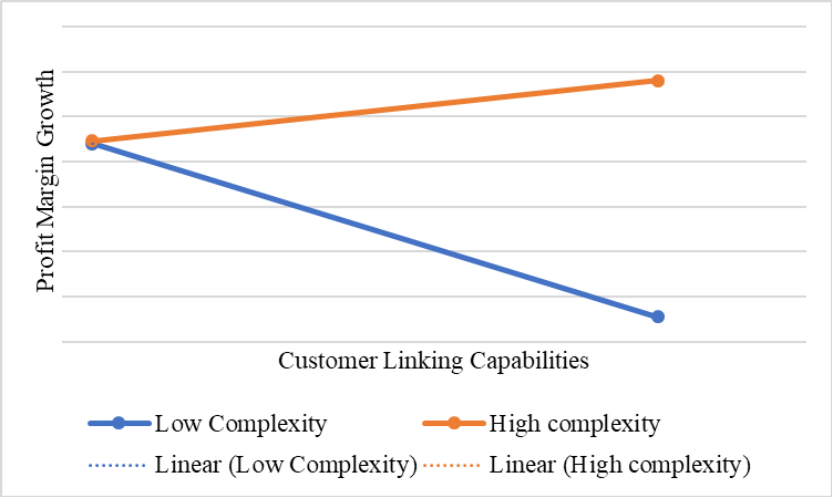


Note: in environments of low complexity, the relationship is not significant

Customer linking capabilities → Net Profit margin growth

In low complexity environments, the relationship between adaptive marketing capabilities and average turnover, becomes significant and negative (Chi-square difference between high and low models=3.581), with a t-value of -2.771 and a standardised estimate of -0.404. Figure 5.18 shows the relationship.

Figure 5.18: Effect of environmental complexity on the relationship between customer linking capabilities and net profit margin growth

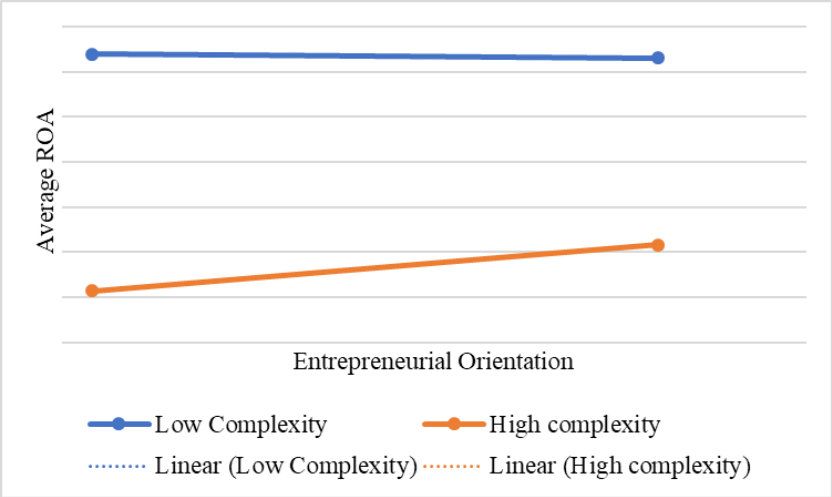


Note: in environments of high complexity, the relationship is not significant

Entrepreneurial Orientation → Average ROA

In highly complex environments, the relationship between entrepreneurial orientation and average ROA, becomes significant and positive (Chi-square difference between high and low models=2.792), with a t-value of 2.550 and a standardised estimate of -0.535. Figure 5.19 depicts the relationship.

Figure 5.19: Effect of environmental complexity on the relationship between entrepreneurial orientation and average ROA



Note: in environments of low complexity, the relationship is not significant

5.8.3 Hypotheses checklist

The following table (Table 5.50) provides an overview of the hypotheses pertaining to moderation effects along with the results of the analyses.

Table 5.50: Hypotheses checklist regarding moderation (interaction) effects

Hypothesis 2: Environmental munificence will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental munificence is high.	Not supported
Hypothesis 7: Environmental munificence will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental munificence is low.	Supported only for the relationship between adaptive marketing capabilities and turnover growth.
Hypothesis 3: Environmental complexity will moderate the relationship between entrepreneurial orientation and firm's performance: a firm's entrepreneurial orientation will be more strongly associated with high performance when environmental complexity is high.	Supported only within 90% confidence interval for the relationship between entrepreneurial orientation and average ROA.

Hypothesis 8: Environmental complexity will moderate the relationship between marketing capabilities and firm's performance: a firm's marketing capabilities will be more strongly associated with high performance when environmental complexity is high.	Not supported within 95% confidence interval, but it is supported within 90% confidence interval for the relationship between market sensing capabilities and turnover growth The relationship between market sensing capabilities and net profit margin growth is negative in highly complex environments (95% confidence interval) In high complexity environments, the relationship between adaptive marketing capabilities and average turnover is positive (90% confidence interval). In less complex environments the relationship between market sensing capabilities and average turnover is negative (90% confidence interval) In less complex environments the relationship between customer linking capabilities and net profit margin growth is negative (both within 90% confidence interval)

5.9 Multiple group analysis

In the previous chapter, it was mentioned that a multiple group analysis will also be performed, allowing us to see whether or not there are differences between those companies that performed better than their sector, and those that performed worse.

Table 5.51, part of which was shown in section 4.5 as well, presents the change in the sales of each industry between years 2011 and 2013. The food, beverages and tobacco grew by 14.39%, the chemicals, rubber, plastic and non-metallic products grew by 14.76%, the machinery, equipment and furniture grew slightly at 1.38%, the textiles, wearing apparel and leather grew by 21.62%, while the wood and paper grew by 3.53%.

In this vein, the companies of the sample were divided into two categories; those which turnover growth excided the growth of their respective industry, and those which turnover growth was lower than the industry.

Table 5.51: Annual sales per industry

Year	Food, Beverages, Tobacco (£ m)	Chemicals, Rubber, Plastic, Non-metallic products (£ m)	Machinery, Equipment, Furniture (£ m)	Metals, Metal products (£ m)	Textiles, wearing apparel, leather (£ m)	Wood, Paper (£ m)
2011	22,938	19,043	28,413	16,049	4,794	10,995
2012	24,264	20,745	28,125	17,171	4,981	11,360
2013	26,795	22,341	28,811	19,510	6,116	11,397
% change	**14.39%**	**14.76%**	**1.38%**	**17.74%**	**21.62%**	**3.53%**

A multiple group analysis was performed in AMOS SPSS, where the method of critical ratios was used to check which differences exist between the two groups (Prebensen *et al.*, 2015). The results are presented in Table 5.52 below.

Table 5.52: Results of multiple group analysis

			Better		Worse		
			Estimate	**P**	**Estimate**	**P**	**z-score**
Adaptive Marketing Capabilities	←	Entrepreneurial Orientation	0.693	0.003	0.765	0.000	0.240
Customer Linking Capabilities	←	Entrepreneurial Orientation	0.538	0.009	0.363	0.000	-0.762
Market Sensing Capabilities	←	Entrepreneurial Orientation	1.031	0.001	1.230	0.000	0.479
Cost Leadership	←	Adaptive Marketing Capabilities	0.326	0.079	0.179	0.281	-0.592
Innovation Differentiation	←	Adaptive Marketing Capabilities	0.517	0.006	0.103	0.363	-1.899*
Marketing Differentiation	←	Adaptive Marketing Capabilities	0.672	0.000	0.357	0.035	-1.202
Marketing Differentiation	**←**	**Market Sensing Capabilities**	**1.179**	**0.000**	**0.303**	**0.054**	**-2.356****
Marketing Differentiation	←	Customer Linking Capabilities	-0.594	0.064	-0.289	0.350	0.686
Innovation Differentiation	**←**	**Market Sensing Capabilities**	**1.144**	**0.000**	**0.278**	**0.015**	**-2.507****
Cost Leadership	←	Market Sensing Capabilities	0.769	0.015	0.127	0.426	-1.817*
Cost Leadership	←	Customer Linking Capabilities	-0.115	0.712	0.153	0.626	0.605
Innovation Differentiation	←	Customer Linking	-0.557	0.076	0.049	0.813	1.611
Turnover Growth	←	Entrepreneurial Orientation	0.246	0.092	-0.045	0.500	-1.814*
Turnover Growth	←	Customer Linking	0.054	0.664	0.012	0.810	-0.310
Turnover Growth	←	Market Sensing Capabilities	-0.221	0.152	0.035	0.319	1.617
Turnover Growth	**←**	**Adaptive Marketing Capabilities**	**0.200**	**0.021**	**-0.013**	**0.655**	**-2.336****
Turnover Growth	←	Cost Leadership	-0.019	0.747	0.023	0.211	0.687
Turnover Growth	←	Innovation Differentiation	0.053	0.301	0.003	0.914	-0.857
Turnover Growth	←	Marketing Differentiation	-0.110	0.127	0.002	0.922	1.489
Notes: ** p-value < 0.05; * p-value < 0.10							

According to those results and within 95% confidence interval, in companies that experienced a better performance compared to their respective industry in terms of turnover growth, the effect of market sensing capabilities on differentiation (both innovation and marketing) is stronger, while the same can be said for the effect of adaptive marketing capabilities on turnover growth. Meanwhile, within 90% confidence interval, in companies that experienced a better performance compared to their respective industry in terms of turnover growth, the effect of adaptive marketing capabilities on innovation differentiation and of market sensing capabilities on cost leadership was stronger. Finally, again within 90% confidence interval, the effect of entrepreneurial orientation on turnover growth was stronger on the companies that performed worse than their competitor.

5.10 Conclusion

In this chapter, several data analyses took place. After presenting some descriptive statistics regarding characteristics of the sample, the quality of the data collected was assessed, and in this vein of the variables. Having verified that the variables are reliable and valid, the next step was to analyse the relationships of the proposed models. Not all hypotheses were supported, but most of them were supported partly, depending on the performance indicator that was assessed each time. The results are summarised below.

A high level of entrepreneurial orientation will be associated with higher levels of marketing capabilities and also higher level of turnover growth. The effect of entrepreneurial orientation on turnover growth is partially mediated by adaptive marketing capabilities. A high level of customer linking capabilities will be associated with higher level of customer performance, while adaptive marketing capabilities will result in higher levels of turnover growth and gross profits growth, partially mediated by innovation differentiation within 90% confidence interval. In this vein, they will also fully mediate the relationship between entrepreneurial orientation and gross profits growth. Nevertheless, and within 90% confidence interval those adaptive marketing capabilities were found to be associated negatively with net profit margin growth. Moreover, market sensing capabilities were found to be associated with all aspects of competitive positioning while, adaptive marketing capabilities only with differentiation. Meanwhile, cost leadership and innovation differentiation have a positive effect on customer performance, both of them fully mediating both the relationship between market sensing capabilities and customer performance and between adaptive marketing capabilities and customer performance. Finally, the results revealed an inconsistent mediation effect. Adaptive marketing capabilities have a positive direct effect on turnover growth, but when this effect is mediated by marketing differentiation it becomes negative.

Regarding the moderating effect of a munificent environment, in conditions of low munificent the role of adaptive marketing capabilities in positively affecting turnover growth becomes significant. As for the role of environmental complexity, it will enhance the relationship between entrepreneurial orientation and average ROA (90%

confidence interval), and between market sensing capabilities and turnover growth (90% confidence interval). Furthermore, in less complex environments, the relationships between market sensing capabilities and average turnover, and between customer linking capabilities and net profit margin growth become negative (both within 90% confidence interval). Meanwhile, in highly complex environments and within 95% confidence interval the relationship between market sensing capabilities and net profit margin growth is negative in highly complex environments, while the relationship between adaptive marketing capabilities and average turnover becomes positive (90% confidence interval). Finally, the relationship between market sensing capabilities and net profit margin growth is negative in highly complex environments (95% confidence interval), while in high complexity environments, the relationship between adaptive marketing capabilities and average turnover is positive (90% confidence interval).

In addition to that, the multiple group analysis between companies which performed better than their competitors and those which performed worse, revealed that the effect of market sensing capabilities on differentiation (both innovation and marketing) and of adaptive marketing capabilities on turnover growth. Moreover, but within 90% confidence interval, the effect of adaptive marketing capabilities on innovation differentiation and of market sensing capabilities on cost leadership was stronger, while effect of entrepreneurial orientation on turnover growth was stronger on the companies that performed worse than their competitor (within 90% confidence interval).

The next chapter will elaborate on the findings and will investigate the potential reasons behind failing to support all aspects of the developed hypotheses.

Chapter 6 Discussion

The following chapter provides a detailed discussion of the findings. Those findings will also form the basis for the contribution of the present study, as well as the managerial implications, which will be presented in the next and final chapters.

6.1 The role of marketing capabilities

As it was highlighted in section 2.2, capabilities were suggested to be valuable (Hoopes *et al.*, 2003), and many scholars put an emphasis on them regarding their impact on performance (Newbert, 2007; Liao *et al.*, 2009; Merrilees *et al.*, 2011). They combine, develop and transform resources to create valuable offerings for customers (Grant, 1991; Day, 1994; Morgan *et al.*, 2009b). Although, many studies found a positive relationship between marketing capabilities and performance, the present study was not able to confirm the same results across all performance indicators. The only positive relationships that were found within 95% confidence interval were the ones between *customer linking capabilities and customer performance*, and between *adaptive marketing capabilities* and two objective performance indicators: *turnover growth and gross profits growth*. Other relationships, however, were identified within 90% confidence interval and will be discussed further as well.

Adaptive marketing capabilities are explorative (Day, 2011) as opposed to capabilities of market-driven organisations which are considered to be exploitative (Day, 2011). By comparing these two distinct sets of capabilities, the following results have emerged. The deployment of adaptive marketing capabilities appears to be more beneficial than either market sensing or customer linking for the organisations whose objectives are related to increasing their turnover or their gross profits. However, should organisations want to improve their customer performance, then the deployment of customer linking capabilities is recommended. Meanwhile, it appears that some capabilities operate as mediators in different relationships.

6.1.1 The role of adaptive marketing capabilities

Adaptive marketing capabilities were found to positively affect both gross profits growth (st. estimate=0.213) and turnover growth (st. estimate=0.216). Moreover, they also improve the customer performance of a company, but only through the mediating effect of competitive positioning and within 90% confidence interval (this will be discussed in the relevant section 6.3 about the role of competitive positioning later). This specific set of capabilities assists companies to increase their turnover. In other words, it is not only about making small incremental steps in altering or simply adjusting their offering, but eventually performing more radical actions, and using an active market experimentation that will result in having a diversified offering. Also, an open marketing approach, where these companies share resources and knowledge with other parts of the channel, will help them to improve the value that they offer to their customers. However, looking closely at these results and considering that the standardised estimates of both financial indicators are very similar, it can be concluded that the effect on gross profits growth is attributed mainly to the increase in the turnover, and not a decrease in the cost of goods sold (considering that gross profits equals turnover minus cost of goods sold). Therefore, adaptive marketing capabilities are related to an increase in the turnover due to the fact that such companies can offer products to customers that are considered by them to be of a higher value.

One of the important roles that they play is that they fully mediate the relationship between entrepreneurial orientation and gross profits growth, and partially mediate the relationship between entrepreneurial orientation and turnover growth. In this vein, adaptive marketing capabilities are the missing link explaining the effect of entrepreneurial orientation on some aspects of organisational performance. Therefore there is evidence to support that internal factors (in this case adaptive marketing capabilities) affect the relationship between entrepreneurial orientation and performance as suggested in the literature (e.g. Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003).

The results show that adaptive marketing capabilities are strongly associated with marketing differentiation (st. estimate= 0.277) and with innovation differentiation (st. estimate=0.164), while there is no significant relationship with cost leadership. As

such, it appears that these capabilities will lead to higher levels of differentiation. This might be explained by the fact that such capabilities, which are explorative and essentially represent a firm's ability to identify and capitalise on emerging market opportunities (Hooley *et al.*, 2017), will result in companies focusing on product innovations, marketing innovations, having strong sales force, rather than being cost leaders (something which is associated with efficiency).

Surprisingly, within 90% confidence interval, it was also found that there is a negative relationship between adaptive marketing capabilities and net profit margin growth. Before proceeding, the fact that the model explained only 4.3% of the variance of net profit margin growth must be highlighted. One of the possible explanations arises from the following: net profit margin is a financial indicator where other operational costs (not just cost of goods sold) are taken into account, like salaries, rent, R&D and depreciation of equipment. Considering that within 95% confidence interval, the results demonstrated a positive relationship between adaptive marketing capabilities and both turnover growth and gross profits growth, one can conclude that the negative relationship that such capabilities have with net profit margin growth, can only be attributed to higher operational expenditures. Therefore, companies with adaptive marketing capabilities tend to increase their expenditures in order to capitalise on emerging market opportunities. For example, they might increase their research and development expenses or hire more staff. However, the increase in those expenditures (which are not reflected in the cost of sales) will be higher than the associated increase in turnover (at least in the short-term).

According to the results of the moderation analysis, a low level of environmental munificence has a positive effect on the relationship between adaptive marketing capabilities and turnover growth. The results are in line with the relevant hypothesis (hypothesis 7). In environments where demand is growing and products become obsolete in a slow pace, the role of adaptive marketing capabilities is not significant, and therefore trying to expand by creating new products and/or testing new methods of conducting business is eventually unnecessary. However, when resources are scarce, companies with adaptive marketing capabilities will be able to take advantage of them, due to their knowledge, expertise, experience and networking abilities with other members of the channel, and subsequently increase their turnover. Considering

that capabilities are not only important by themselves, but also because they transform resources under conditions of scarcity their role becomes even more crucial.

Meanwhile, and only within 90% confidence interval, results demonstrate a positive relationship between adaptive marketing capabilities and average turnover under conditions of high environmental complexity. This can be explained by the fact that such capabilities can help companies understand the complex situations and capitalise on complex market opportunities better than other companies, which will result in a higher average turnover.

6.1.2 The role of customer linking capabilities

Results demonstrate that customer linking capabilities positively affect customer performance (st. estimate 0.257). Nevertheless, the results do not support the hypotheses that customer linking capabilities will influence competitive positioning or that their effect on performance is dependent upon environmental conditions. Furthermore, no evidence was found to support that customer linking capabilities will improve the profitability of a company, something that mirrors the results of studies like Rapp *et al.* (2010) and Hooley *et al.* (2005), but contradicts other research like Lin *et al.* (2016), whose findings revealed a positive effect. Also, no evidence was found to support an improvement in market performance as opposed to Hooley *et al.* (2005).

Notably, those studies used subjective profitability indicators, by asking respondents to evaluate how their performance was relative to the past. Moreover, market performance was measured again subjectively by two items, namely sales volume compared to competitors and market share compared to competitors. Therefore, a direct comparison with those studies might not be possible, especially given the results from various studies indicating that subjective performance indicators present stronger relationships, as opposed to the objective ones (e.g. Kirca *et al.*, 2005; Ellis, 2006). In this vein, there might be a 'demand effect' if respondents assume that marketing capabilities are related to organisational performance, and therefore provide 'correct' or 'desired' answers (Morgan *et al.*, 2009b) regarding profitability indicators. (although common method bias tests should be able to identify such issues).

Another possible explanation for the findings not being able to support the part of the hypotheses regarding market performance and profitability, other than the subjective performance indicators used in previous research, is related to the context of the present study which focuses on small and medium enterprises. Customers of small and medium companies have an expectation to receive a more personalised service/product offering: a product offering and customer services that will be based around the relationship that they have with the firm. As such, linking with customers, i.e. understanding customers' needs, creating and maintaining relationships with them is not seen by such companies as an extraordinary activity, but as something that is expected and considered to be fundamental/prerequisite in order for them to continue doing business. As opposed to big organisations where due to various organisational constraints and limitations related to the size of the company, customers expect to receive a less personalised and more generic service. For them having such capabilities might result in an increase in sales and profitability as it can be seen as a competitive advantage or a differentiation point among companies. The latter is also related to the fact that in the current study customer linking capabilities were not found to be related with any competitive positioning. Therefore, in SMEs having such capabilities might be a necessary but not a sufficient condition for improving profitability and market performance. They will improve customer performance, which only by itself is not enough to affect other aspects of organisational performance.

Meanwhile, it also should be noted that another reason for not being able to support the hypotheses, might be related to the model of the study itself. Indeed, if the model under investigation did not have the other two sets of capabilities incorporated in it (i.e. market sensing and adaptive marketing capabilities), the results might have been different, demonstrating a significant direct effect on some of the performance indicators. As such, the benefit of including all three marketing capabilities in one model is that one can evaluate and assess them at the same time. According to Day (1994) and Hooley *et al.* (2005), customer linking capabilities are considered to be one of the most valuable capabilities. However, the results demonstrate that when examined among others, they are the most valuable for enhancing customer performance, but not for improving other aspects of organisational performance,

where other capabilities (i.e. adaptive marketing) are more valuable, at least in the context of SMEs.

Regarding their effect under different environmental conditions, the results did not demonstrate any significant effect within 95% confidence interval. However, within 90% confidence interval and in less complex environments the relationship between customer linking capabilities and net profit margin growth is negative contrary to hypothesis 7 (although again the model only explains 4.3% of the variance). This is a surprising result; however, one possible explanation might arise from the context. In less complex environments (where low levels of complexity reflect a small number of factors that are related to competition, customers' preferences, and buying habits) it might be unnecessary to increase expenditures, for instance, in the areas of customer relationship management, to try and connect with a customer in a better and stronger way, as this will not improve turnover and gross profits, and therefore, will negatively affect net profit margin growth. However, considering that capabilities take time to develop, not investing in them in the situation of low complexity, can inflict negative consequences in the future (when environment changes, and they are needed).

6.1.3 The role of market sensing capabilities

With regard to market sensing capabilities, the results did not demonstrate a direct effect on any of the performance indicators contrary to hypothesis 4 (within 95% confidence interval). However, there is a positive effect on customer performance, but only through certain aspects of competitive positioning (something that will be discussed in the relevant section 6.3 of the role of competitive positioning). Although this result contradicts findings from earlier research (e.g. Fang *et al.*, 2014), most previous studies measured performance subjectively. As explained before, the way that performance indicators are measured might explain the reasons for those discrepancies. In this vein, the results are partly in line with other studies like Morgan *et al.* (2009a), whose research in a number of U.S. companies among different sectors and industries found that market sensing capabilities have no effect on profit margin growth rate (measured objectively).

Someone would expect market sensing capabilities to have a direct influence on some aspects of organisational performance, for instance turnover growth. Collecting valuable knowledge about customers, competitors, channel members and the macroeconomic environment (Morgan *et al.*, 2009a) should help an organisation to improve its sales. When companies sense changes in the market or sense changes in the trends, they can adjust their product/service offering to something that has more value for the target markets (Fang *et al.*, 2014). However, as before, the received outcome might be explained by the fact that the effect of market sensing capabilities vanishes once they are included in a wider model that incorporates other capabilities.

Alternatively, as in case of customer linking capabilities, another reason might arise from these capabilities being important and necessary, but not sufficient to improve organisational performance. Companies are expected to know about competition and to be able to identify and understand market trends (elements of market research). As such, in order to compete in the modern business environment, companies should have such capabilities. However, it does not mean that they will improve their performance, although not having them, might result in the failure. Both customer linking and market sensing capabilities were conceptualised 25 years ago by Day (1994), where the business environment (e.g. customers, competitors) was significantly different. In this sense, having such capabilities could have been a source of competitive advantage back at the time. But nowadays they might be not enough to lead to improved organisational performance: all companies are expected to have them in order to operate in the modern world.

Moreover, the results demonstrated that market sensing capabilities are more strongly associated with innovation differentiation (st. estimate 0.47) than with marketing differentiation (st. estimate 0.428), and with cost leadership (st. estimate 0.252). Consequently, it is concluded the ability to sense the market (i.e. gaining insights about the channel, identifying and understanding market trends, learning about the broad market environment) has a direct effect on the formation of a competitive strategy. The context of the study that is focused on small and medium manufacturing companies, might explain the stronger effect on innovation differentiation, and the weakest effect on cost leadership. In manufacturing companies, having high rate of product innovation and R&D expenditures is considered to be of paramount

importance. In this vein, innovation differentiation and cost leadership fully mediate the positive effect of market sensing capabilities on customer performance. As such, market sensing capabilities can improve performance, but only if they are translated to specific competitive positions.

Furthermore, it appears, surprisingly, that in the environments of high complexity market sensing capabilities have a negative effect on net profit margin growth. As previously, this could be attributed to the way the indicator is calculated. Therefore, under conditions of high complexity, investing in the areas that will help companies to discover competitors' strategies and tactics, to gain insights about the channel, to identify market trends and to develop knowledge about the broad market environment, eventually will be associated with higher costs, which will not result in higher revenues at least in the short-term, leading to the negative effect on net profit margin growth. Nevertheless, as before, maintaining the gross profits and turnover under conditions of environmental complexity might be considered to be a positive outcome.

Notably, the results within 90% confidence interval depict some interesting tendencies. As such, marketing sensing capabilities have a positive relationship with ROA growth, but a negative relationship with turnover growth. By looking at both results, one can conclude that this result is only possible if the total value of assets of a company was reduced more (in terms of percentage) than the decrease in the turnover. Therefore, from a marketing point of view, valid conclusions regarding the positive relationship between market sensing capabilities and ROA growth, cannot be reached (especially considering the confidence interval and the fact that the model explains only 4.7% of ROA growth). However, the negative relationship with turnover growth (contrary to hypothesis 4), is surprising and in order to understand it better, one needs to go back to the conceptualisation of market sensing capabilities. Such capabilities allow a company to learn about its market environment and use this information appropriately to guide its actions (Vorhies and Morgan, 2005). They have an exploitative nature, which refers to the development of new knowledge, but only about the firm's existing markets, products, technologies (March, 1991; Vorhies *et al.*, 2011). Hence, companies with such capabilities might be myopic and be overlooking current markets, thus missing other opportunities that require a more explorative approach in which they challenge and change existing ideas about their marketing

activities (e.g. targeting, segmentation, positioning, product design etc.) (Kyriakopoulos and Moorman, 2004). In this vein, the fact that in less complex environments the relationship between market sensing capabilities and average turnover is negative (although again within 90% confidence interval), might be a further indication that an exploitative approach might not be the appropriate one. However, the fact that in complex environments such capabilities affect turnover growth in a positive way should be considered as well. Meanwhile, as mentioned before, those results are within 90% confidence interval and therefore, generalisations should be done with cautiousness.

6.2 The role of entrepreneurial orientation

The notion of entrepreneurial orientation has been at the forefront of business studies for a number of years. The present study investigates the notions of entrepreneurial orientation, its embeddedness in organisational culture, and its effect on the way that companies conduct business. An orientation, as the name suggests, is the direction that an organisation has. As such, it is something much deeper than just a behaviour or an action, it is rooted into the organisational culture and it can affect organisational behaviours and actions without being one of them. Inconsistencies in the findings of different studies regarding its effect on performance can be attributed to external or internal factors (Shan *et al.*, 2016).

In line with the literature (Martin and Javalgi, 2016) entrepreneurial orientation was found to positively influence the presence of marketing capabilities. The strongest effect was on market sensing capabilities (st. estimate=0.645), followed by adaptive marketing capabilities (st. estimate=0.531), and customer linking capabilities (st. estimate=0.391). Therefore, from a theoretical point of view, entrepreneurial orientation is a predictor (or in other words an antecedent) of marketing capabilities. An entrepreneurial culture will lead to market sensing capabilities as entrepreneurial firms tend to engage more in information scanning activities (Matsuno *et al.*, 2002). Meanwhile, creativity and experimentation which are found in entrepreneurial companies (Wiklund, 1999) are closely related to adaptive marketing capabilities. Finally, companies with customer linking capabilities identify what customers' wants

and needs are while creating, building and maintaining relationships with them (Day, 1994). Such relationships are maintained by having high levels of customer service and support, some of which are based on new and innovative ways. In this vein an entrepreneurial culture helps them pioneer in those aspects.

With regard to entrepreneurial orientation and its relationship to organisational performance, the research found evidence to support that it is associated with high levels of turnover growth (st. estimate=0.295). Moreover, this effect is partially mediated by adaptive marketing capabilities. Given the lack of change in gross profits growth, the presence of an effect on cost of goods sold can be concluded, which is further counterbalanced by the increase in the turnover, resulting in no impact on gross profits growth. As such, the outcome of turnover growth is attributed to selling more products. However, there is eventually an effect on gross profits growth, but only through adaptive marketing capabilities (full mediation). Therefore, entrepreneurial companies can increase their profitability by developing the aforementioned set of capabilities, that will help them offer products of higher value and of higher price. This finding echoes previous arguments that entrepreneurial orientation has a potential value, as it is a sufficient but not necessary condition for value delivery (Barney, 1991).

Meanwhile, within 90% confidence interval, under conditions of high environmental complexity the relationship between entrepreneurial orientation and average ROA becomes positive and significant. Considering that there is a positive effect of entrepreneurial orientation on turnover growth, this result might be an indication that under such conditions entrepreneurial companies appear to be more efficient in utilising their assets. However, again the very small r squared of the model needs to be highlighted (8.2% of average ROA variance)

6.3 The role of competitive positioning

The competitive positioning has been argued to play a role in the performance of the companies, and, therefore, it was included in the present study to complete the model. Based on the literature, it was expected that a differentiation strategy (either marketing or innovation), should improve organisational performance (Hurley and Hult, 1998; Lisboa *et al.*, 2011), and the same was expected from a cost leadership strategy (Tan

and Sousa, 2015). However, the present research did not manage to find evidence to support all of the hypotheses regarding the relationship between competitive positioning and performance, although the results regarding their mediating effect are in favour of the argument that their inclusion in the model improves the understanding of the role of capabilities on organisational performance.

Innovation differentiation

Innovation differentiation was found to have a positive effect on customer performance (st. estimate=0.226), while no other effect was observed neither on profitability nor market performance. It turned out that eventually it is due to the mediating role of the innovation differentiation in the relationship between marketing sensing capabilities and customer performance. Therefore, market sensing capabilities have an effect on customer performance, but this effect is fully mediated by innovation differentiation. Moreover, within 90% confidence interval, innovation differentiation mediates the relationship between adaptive marketing capabilities and the same performance indicator (i.e. customer performance).

Moreover, within 90% confidence interval innovation differentiation has a positive effect on turnover growth (st. estimate=0.193) and on gross profits growth (st. estimate=0.191) although the latter is partly due to its mediating effect in the relationship between adaptive marketing capabilities and gross profits growth. As such, innovation differentiation plays an important role in helping better understand the complex relationships between marketing capabilities and performance.

Cost leadership

The results indicate that there is a positive effect of cost leadership on customer performance (st. estimate=0.276), however this is due to the fact that cost leadership fully mediates the relationship between market sensing capabilities and customer performance. Meanwhile, within 90% confidence interval it also mediates the relationship between adaptive marketing capabilities and customer performance. As such, one can evaluate better the role of capabilities on performance, but also the role of competitive positioning in explaining those relationships. Those organisational competences are eventually translated into competitive positioning, that lead to better performance.

Marketing differentiation

Notably marketing differentiation was found to have a negative effect with turnover growth (st. estimate=-0.255). Meanwhile, marketing differentiation has a partial mediating effect on the relationship between adaptive marketing capabilities and turnover growth. The direct effect is positive, but the indirect is negative. Such mediation is called inconsistent (MacKinnon *et al.*, 2007). In this case, marketing differentiation acts as a suppressor value. Marketing differentiation is about innovations in marketing techniques, an emphasis on strong sales force, and a focus on advertising expenditures. It is surprising to find that such elements have a negative effect on turnover growth; someone might argue that depending on the context they might not matter, but the presence of a negative effect is still unexpected. Therefore, it is suggested that the reason is related to an 'opportunity cost'. Putting an emphasis on elements related to marketing differentiation, might not matter directly for organisational performance. However, by using organisational resources (e.g. budget, staff, time) to develop a position that does not matter (e.g. marketing differentiation), will result in using less resources for things that might be more important at that point. Eventually, focusing on the wrong elements indirectly leads to lower turnover growth.

6.4 Conclusion

The present chapter provided a discussion of the data analysis results. Some key points are related to the role of marketing capabilities that were found to affect some performance indicators, while also their role in mediating the relationship between entrepreneurial orientation and performance is equally important. Overall, it is argued that adaptive marketing capabilities are the most valuable as they are the only ones affecting market and profitability of the firm, while they also mediate the relationship between entrepreneurial orientation and performance. This is further supported by a multigroup analysis between better and worse performers, in which better performing companies (in terms of turnover growth) have a stronger relationship between this set of capabilities and turnover growth. Meanwhile, customer linking capabilities affect customer performance, and market sensing capabilities have no direct effect on performance. Also, some unexpected results were reviewed and potential explanations were provided. The next and final chapter will address the contributions of the present study, relating them to the research objectives, followed by the discussion of managerial implications, limitations and suggestions for future research.

Chapter 7 Conclusion and implications

The following and final chapter of the thesis will conclude the research. In particular, the chapter will link the results of the study with the research aim and objectives, while discussing the theoretical contributions. Moreover, the managerial implications will be elaborated on, concluding by an outline of the study's limitations, and recommendations for future research.

7.1 Results and research objectives

As mentioned in section 1.2, the current study aimed at investigating the effect of both explorative and exploitative marketing capabilities on organisational performance of small and medium enterprises.

The first research objective was to create appropriate means for measuring those marketing capabilities with explorative function (i.e. adaptive marketing capabilities). In this vein, and by drawing on the evidence from the literature, the exploitative marketing capabilities of market sensing and customer linking, along with the explorative adaptive marketing capabilities were explained and analysed. By using appropriate statistical methods, and with the help of academics and practitioners, the current study is the first to create a reliable and valid scale for the measurement of adaptive marketing capabilities, meeting the first objective. Although earlier studies focused on the role of market sensing and customer linking capabilities, the other concept, namely adaptive marketing capabilities, remained underexplored. Adaptive marketing capabilities, have failed to draw the attention of scholars, other than Day (2011) and Moorman and Day (2016). However, considering the dynamic nature of the business environment, where innovation and disruptive technologies assist the creation of new (and successful) companies, or cause the failure of the old and established ones, it is surprising that as of today, the marketing literature did not consider those capabilities of relevance and did not explore their effects.

The second research objective was to examine the relationship between entrepreneurial orientation and specific marketing capabilities. The present research adopted a cultural stance with regard to the foundations of orientations. As opposed to

the school of thought that considers orientations as behaviours, this study argued about the cultural element. As such, orientations can be related to specific processes (i.e. capabilities). Drawing evidence from the literature, this thesis linked entrepreneurial orientation with market sensing capabilities, customer linking capabilities and adaptive marketing capabilities meeting the second objective. Meanwhile, although past research has provided mixed results regarding the effect of entrepreneurial orientation on performance (c.f. Zahra, 1991; Slater and Narver, 2000; Lumpkin and Dess, 2001; Wiklund and Shepherd, 2003; Soininen *et al.*, 2012; Boso *et al.*, 2013a), the present study found evidence to support that entrepreneurial oriented companies experience a better performance in terms of turnover growth and gross profits growth, with this effect is mainly mediated by adaptive marketing capabilities. As such, the study supports the arguments of several scholars (e.g. Lumpkin and Dess, 1996; Wiklund and Shepherd, 2003) who have suggested that internal organisational factors might be responsible for the lack of consistency in the previous results.

The third objective was to investigate the relationship between marketing capabilities and certain aspects of performance. The relevant literature was found, presenting inconsistent results at least for those capabilities that had been tested in the past (i.e. market sensing and customer linking). Potential reasons for these inconsistencies were identified, and to create a better image of their effect multiple outcome performance indicators were examined. As such customer linking capabilities were found to enhance customer performance (i.e. customer loyalty, customer satisfaction and gaining new customers), while market sensing capabilities were not found not to have any direct effect on any of the performance indicators. However, it appears that market sensing capabilities affect performance and specifically customer performance, but only through innovation differentiation or cost leadership. In this vein, the true nature of the relationship was unfolded. Meanwhile, adaptive marketing capabilities were found to affect both gross profits growth and to turnover growth in a positive way. Nonetheless, they were also found to affect negatively net profit margin growth, although within 90% confidence interval). The potential reasons for the latter outcome were elaborated earlier. Therefore, the results revealed that the concept of adaptive marketing capabilities was the only one related to the improvement of profitability and

market performance directly, although they were also found to affect customer performance but only through innovation differentiation or cost leadership.

The fourth and final objective was to examine the role of the environmental conditions in affecting the relationships between entrepreneurial orientation and performance, and between different marketing capabilities and performance. Regarding the role of environmental complexity and munificence, it was found that it moderates the strength and significance of certain relationships. In particular, a low munificent environment will strengthen the positive relationship between adaptive marketing capabilities and turnover growth. At the same time, a complex environmental will create a negative relationship between market sensing capabilities and net profit margin growth. Nevertheless (but only within 90% confidence interval), it will create a positive relationship between entrepreneurial orientation and average ROA, market sensing capabilities and turnover growth, and between adaptive marketing capabilities and average turnover. Meanwhile in less complex environmental conditions (again within 90% confidence interval) the relationships between market sensing capabilities and average turnover, and between customer linking capabilities and net profit margin growth are negative. The potential reasons for those results were also discussed earlier.

7.2 Theoretical Contributions

The present study contributes to the marketing discipline in the following ways. By analysing and investigating the concepts of marketing capabilities and explicating their explorative and exploitative nature, the present study contributes to the capabilities' literature. Arguments for whether or not marketing strategy should be directed by the factors that lie outside or inside the firm are well documented, while there is a lack of agreement on those factors (Hunt and Madhavaram, 2019). Therefore, the first theoretical contribution is that a better understanding of outside-in capabilities and their role is achieved. Meanwhile the similarities and the differences that they have were depicted, as well as the important role that they play in organisational performance. The similarities arise from the fact that companies in both cases use information and knowledge about the markets, customers, competitors etc. from the sources that are outside of the company. However, exploitative marketing capabilities (i.e. market sensing and customer linking) concentrate on existing skills and resources. They represent an ability to refine existing competencies and resources through knowledge development and generation closely related to the company's existing organisational knowledge and routines (March, 1991; Lisboa *et al.*, 2011; Vorhies *et al.*, 2011). In contrast, explorative marketing capabilities (i.e. adaptive marketing capabilities) focus on challenging existing ideas and beliefs with innovative concepts, building relationships with companies that have complementary resources to them, and a mind receptive to new ideas (Day, 2011; Day, 2014; Moorman and Day, 2016). In the meantime, their presence is also important, not only because they transform resources and other low-level (or ordinary) capabilities (Lambe *et al.*, 2002; Zahra *et al.*, 2006), but also because they help explain other organisational relationships.

This brings us to the second contribution, as this study found evidence to support that an entrepreneurial orientation creates an environment for the development of marketing capabilities. The results contribute to the growing body of literature that tries to understand and explain the ways that organisational culture affects performance either directly or indirectly. Orientations affect all organisational decisions (Liu *et al.*, 2004), and they shape the broad outlines of the strategy (Slater *et al.*, 2006). Therefore, orientation as a strategic choice that drives the way companies acquire, allocate, and deploy resources to create capabilities (Zhou and Li, 2010). For

such outside-in capabilities to be developed, a philosophy of focusing on creating value from the opportunities and changes that are discovered outside the firm's boundaries (i.e. entrepreneurial orientation) (Storey and Hughes, 2013) is needed. As such, entrepreneurial orientation is positively related to market sensing, customer linking and adaptive marketing capabilities.

Out of the three marketing capabilities included in the study, the emerging concept of adaptive marketing capabilities can be considered to be the most important one, indicating the third contribution. Although some researchers have recognised the value of adaptive marketing capabilities (Day and Schoemaker, 2006; Day and Schoemaker, 2009; Day, 2011; Day, 2014), there is a lack of empirical studies. In this study, they were found to positively affect organisational performance in terms of profitability and turnover growth (the rest had no significant relationship with those outcomes), and in terms of customer performance through cost leadership or innovation differentiation. Moreover, their role is even more important as they were also found to mediate the relationship between entrepreneurial orientation and profitability and turnover growth which is the fourth contribution. That said, customer linking capabilities were also related to improved customer performance, but without any further effects. These findings close the gap (Day, 2011; Day, 2014) in the understanding of how different capabilities affect organisational performance. In the current competitive business environment, and with the more prominent approaches to strategy being exploitative (or static) (Hunt and Madhavaram, 2019), the evidence is provided about the necessity to adopt a more explorative/dynamic approach.

The fifth contribution to knowledge is related to the development of a new construct to measure adaptive marketing capabilities. By developing a new validated scale, a specific tool to other researchers is provided, who want to further investigate the concept, possibly, under different contexts and settings.

By examining the role of the external environment through moderating effects on the relationships between entrepreneurial orientation and performance, and between marketing capabilities and performance, the findings contribute to the literature that supports contingency approaches, while also extending the theoretical framework of Day (2011). Although the role of the external environment has been acknowledged in

the past (e.g. Olavarrieta and Friedmann, 2008; Rapp *et al.*, 2010), the conditions of munificence and complexity had received less interest. As such, it was demonstrated under which specific environmental conditions the direction and the strength of the different relationships change. Moreover, further evidence was found to support the important role of adaptive marketing capabilities, considering that they were revealed to improve turnover growth under conditions of low munificence.

The seventh and final contribution of the present study is related to utilising different performance indicators for assessing marketing functions. Previous studies in the past provided mixed results regarding the effect of either entrepreneurial orientation or marketing capabilities on performance (c.f. Zahra, 1991; Slater and Narver, 2000; Lumpkin and Dess, 2001; Wiklund and Shepherd, 2003; Olavarrieta and Friedmann, 2008; Morgan *et al.*, 2009a; Soininen *et al.*, 2012; Boso *et al.*, 2013a; Fang *et al.*, 2014). The performance indicators used each time (e.g. profitability), and the way that data were collected (e.g. objective vs subjective), might have been responsible for those discrepancies. Therefore, by utilising multiple different performance indicators a better and a clearer picture about the effect of entrepreneurial orientation and marketing capabilities on performance is provided. Additionally, due to utilising several indicators, a better understanding of the results became possible. For instance, the fact that some concepts were related to low net profit margin growth but did not have any effect on gross profits growth was linked to higher operational costs.

7.3 Managerial Implications

The study's results have also certain implications for managers and organisations and can form the basis of relevant recommendations. The research developed a model that predicts the factors affecting the organisational performance of small and medium enterprises. It showed that organisational performance should not be seen as an isolated result of one or two factors; rather than it is the result of many different elements that work together towards the achievement of a common goal. From a managerial point of view, the fact that the current study employed different performance indicators is very useful, as depending on the different objectives that each company might have, managers can now identify which organisational elements have an effect on specific performance outcomes.

In principle, an entrepreneurial mindset is needed for the development of specific marketing capabilities. A culture that will promote innovativeness (not only in product development, but also in developing different procedures), risk taking, and proactiveness. An entrepreneurial proclivity should not only be found in new companies, but it is needed in established ones as it affects the way that companies conduct business.

Specifically, if a company's objective is to increase its turnover, then it should aim at creating an environment of entrepreneurial proclivity, which will be favourable in supporting adaptive marketing capabilities. Having a risk taking, proactive, and innovative stance, might be seen as creating expenses. However, such companies will eventually excel in being vigilant, they will become good in actively experimenting with new products and new processes (some of which will succeed), while by sharing and using resources of other companies they might gain access to previously closed or underexplored markets. In the end they will see an increase in their turnover.

Consequently, if a firm is to increase its gross profits, then the recipe would be again the same. The creation of an environment that promotes risk taking, innovativeness and being proactive (i.e. entrepreneurial oriented), will lead the company to being good at adaptive market experimentation, having an open marketing approach and being vigilant. This will result in them being able to increase their turnover more than the cost of sales, resulting in an increase in gross profits growth.

Eventually, if a company seeks to have a better customer performance, more loyal and satisfied customers, and gain more new customers than its competitors, then it should focus on enhancing its customer linking capabilities. Consequently, it should invest in creating and maintaining relationships with customers, and in creating mechanism that would allow to know and anticipate their needs and requirements.

In addition to that, considering the role that the environment plays in determining organisational performance, the study provides some further recommendations. In environmental conditions of high munificence, with a growing demand for the sector's products and with products that have a long-life cycle, it appears that none of the relationships are affected. Therefore, under such conditions the effect of marketing capabilities on organisational performance is not significant. However, in an environment of low munificence, where products become obsolete quickly, and the demand is declining, then the role of adaptive marketing capabilities in affecting turnover growth becomes significant and positive. Therefore, under those conditions, companies that have invested in the past in developing those capabilities (considering that capabilities take time to develop), will be better equipped not only to face the challenges, but also to improve some aspects of their performance.

Moreover, under conditions of environmental complexity, where customers' buying habits, preferences and the nature of competition depend on the products, having the ability to sense the market will affect negatively net profit margin growth. Although this result might prevent managers from investing in developing market sensing capabilities, it is argued that under conditions of high complexity this might be myopic. Investing in the areas that will help companies discover competitors' strategies and tactics, gain insights about the channel, identify market trends, and develop knowledge about the broad market environment is associated with higher costs, which will not result in higher revenues at least in the short-term, although leaving turnover and gross profits unaffected, which might be considered as a positive outcome.

At the same time (although with less certainty due to the narrower confidence interval of 90%), having an entrepreneurial mindset has a positive effect on the average ROA of the companies, which is an important profitability indicator. Moreover, having the ability to sense the market improves turnover growth under such conditions. In

addition to that, having adaptive marketing capabilities, i.e. being vigilant, open and experimenting with the market, also has a positive effect on average turnover.

However, under conditions of low environmental complexity, market sensing capabilities and customer linking capabilities have a negative effect on average turnover and net profit margin growth respectively. Despite the negative effect of market sensing capabilities on average turnover, when observed in complex environments, the growth of turnover is positively affected, which should be taken into account as well. For companies with an objective to grow, market sensing capabilities offer a competitive advantage to achieve that. Meanwhile, considering the effect of customer linking capabilities on net profit margin growth, as discussed earlier, not investing in them would be myopic and a short-term approach. In less complex environments (where low levels of complexity reflect a small number of factors that are related to competition, customers' preferences and their buying habits), increasing expenditures, for instance, in areas of customer relationship management is an expense that will not improve turnover and gross profits, and therefore, it will affect net profit margin growth negatively. However, considering that capabilities take time to develop, not investing in them during the times of low complexity, might result in negative consequences in the future (when they are needed).

Overall, it is suggested that having a more risk-taking and proactive culture, with a spirit of innovativeness will positively affect the presence and development of certain marketing capabilities, which will, in its turn, have an effect (either direct or indirect), on certain aspects of performance. Having an outward looking mindset (as depicted by entrepreneurial orientation), accompanied by adaptive marketing capabilities which are outward looking as well, is the recipe for improved turnover and gross profits.

7.4 Limitations

The present study does not come without limitations, which should be taken into account when drawing conclusions. Those limitations are related to the methodological approach that was adopted, like the sample and the context of the research. Therefore, future research should consider alternative methods of investigating those phenomena. The study's population of interest was UK manufacturing SMEs, and this by default is related to three limitations: sector-specific, country-specific and size-specific.

Focusing on the manufacturing sector, allowed differences among sectors to be controlled for, simultaneously restricting the generalisability of the results. Services and manufacturing companies share certain similarities, but they have a number of differences: from the role of the customer-facing employees to the value of the product/service itself. Therefore, especially when it comes to the role of competitive positioning, different results might appear should the same study is replicated with a focus on services. Moreover, some of the results regarding indices of organisational performance (i.e. ROA, gross profits, net profit margin) can be attributed to industry specific characteristics. For example, a manufacturing company has more assets than a services company of similar turnover, while the cost of sales compared to the level of sales (proportionally) might differ between such firms, which will have an effect on gross profits and net profit margin as well.

With regard to country specific limitations, all companies that participated in the study were based in the UK. Therefore, one can assume that a replication of the study in another country might have different results, especially as far as some elements of organisational behaviour are concerned. For example, the UK society is characterised by an individualistic behaviour, where people care for themselves and their families, as opposed to other countries (e.g. Japan) where collectivism is more common and therefore people belong into 'groups' that they look after in exchange for their loyalty (Hofsted, 2019). Considering that adaptive marketing capabilities incorporate the element of open marketing by which companies acknowledge the importance of building relationships with other companies in order to achieve their goals, or the fact that such companies share insights of successful and unsuccessful initiatives in the

market, one can expect that, a more collectivist society like Japan would score higher in such an index. Moreover, Japan scores higher than the UK in terms of 'masculinity', which implies that the society is driven by competition, achievement and success, with success being defined by the winner/best in field rather than the one that is 'liked' the most (Hofsted, 2019). Therefore, someone would expect that profitability might be more important than customer satisfaction. Finally, considering the index of 'uncertainty avoidance', the UK scores much lower than Japan (Hofsted, 2019) , and as such risk taking, one of the elements of entrepreneurial orientation, might be more prevalent in the UK. The same can be said about adaptive marketing capabilities which incorporate an element of 'experimentation'. Therefore, based on the information above, it is clear that especially for the concepts of entrepreneurial orientation and marketing capabilities, country specific cultures might affect their pertinency, and their relationship with certain performance indicators or process.

With regard to size-specific limitations, the fact that the study was focused on small and medium companies should be taken under consideration when interpreting the results. Small and medium enterprises, due to their size, are more likely to need a more open marketing approach (an element of adaptive marketing capabilities), where they could use complementary resources from other members of the channel. Moreover, the firms were not divided into B2C and B2B. It is possible that some of them in the sample were only focused on B2B, while others were focused on both markets. As such, for those companies solely focusing on B2B markets certain capabilities (e.g. customer linking capabilities) could be found to play a greater role in organisational performance than others.

Finally, another limitation comes from the time scale of the survey. As it was mentioned in the methodology, the survey was conducted in 2014, and the respondents were asked to provide answers about current practices. However, the objective performance indicators included the years 2010, 2011, 2012 and 2013. Although organisational cultures and processes (especially when it comes to philosophies and capabilities that take years to be developed) are not likely to change on a year by year basis, it might be the case that the objective results capture previous, and not current behaviours.

7.5 Suggestions for further research

The current study presents a range of opportunities for future research. In line with the limitations that were presented earlier, an alternative investigation in the services sector will provide additional answers as to how strong the relationship between culture, capabilities, positioning and performance is, thus helping better capture the effect of those organisational phenomena. Should the results remain the same, then one can make wider generalisations, whereas potential discrepancies will open a door to another enquiry. Besides it would be useful to see whether there is a difference in the way that capabilities are developed, in particular either between B2B and B2C companies, or between SMEs and large corporations within the same sector. Moreover, a replication of the study into different countries would allow researchers to test the assumed cultural effect on orientations and determine its significance.

Furthermore, as the scale of measuring adaptive marketing capabilities is new, its incorporation into future studies will provide further support for its validity. In this vein, it might also be useful to be used simultaneously with other higher-level marketing capabilities in order to better understand their effect on organisational performance. Eventually, considering that there is an increasing need for the marketing departments to justify their expenses and their contribution, more research employing objective performance indicators is required, especially the ones like customer performance, which in the present study was measured subjectively.

7.6 Conclusion

The aim of the present student was to investigate the effect of both explorative and exploitative marketing capabilities on organisational performance in conjunction with other factors (i.e. entrepreneurial orientation, competitive positioning, and environmental conditions) in small and medium enterprises, as well as the relationships among them. Accordingly, organisational performance cannot be attributed to one or two factors, but it is the result of a number of different phenomena that work together. Moreover, depending on the performance indicators, the use of different variables will have different results.

Although entrepreneurial orientation might affect organisational performance directly, it is more likely to do so indirectly through marketing capabilities. The presence of adaptive marketing capabilities is linked with higher market performance and profitability. Finally, environmental conditions of complexity and munificence affect some of the aforementioned relationships either in a positive or in negative way.

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Appendices

Appendix A: Email to the companies

Dear _____,

My name is Anastasios Siampos and I am a Doctoral Researcher in University of Strathclyde-Glasgow (Strathclyde Business School, Department of Marketing). I am writing to enquire about your willingness to participate in a research study that I am conducting by answering an online questionnaire which should not take more than 15 minutes of your time. As part of my PhD studies I need to collect data from companies that meet certain criteria in terms of size, industry type etc. There are a very small selected number of such businesses, and your company is a good fit. That is why your participation is crucial.

Scientific research in this area requires an in-depth exploration and analysis of the underlying concepts and in order to achieve this I have developed a questionnaire which covers the areas that I think are crucial for organisational performance. Your position as a key decision maker of the company is unique and this is why I would be extremely grateful if you agree to take part in this survey. As mentioned before, the questionnaire is designed in a format that means that it will not require more than 15 minutes to complete.

Agreeing to complete the questionnaire will give you the chance to use your experience as the foundation on which new knowledge regarding the discipline of marketing will be created. Failure to collect the data, apart from the fact that will result a fail in my PhD, will also deter the realisation of this benefit.

Contextually, the idea for the research surfaced by considering the recent economic recession experienced in the UK and its effect on consumer spending. During the last few years, the UK economy experienced turbulence which impacted on the disposable income of individuals. This therefore affected the majority of companies by lowering their profits. However, some companies identified several opportunities within this recessionary period and, by exploiting key resources and capabilities, managed to improve their performance. In the Department of Marketing we strongly believe that the role of marketing within the company is of critical importance. It is this

organisational function that can embody all of the necessary skills and resources that will lead to a rise in business turnover, and eventually to increase profitability.

I appreciate that in agreeing to participate you would be giving up some valuable time; but I do hope the results will contribute to our knowledge and understanding of the subject in a practical manner. Furthermore, by way of thanks, upon completion of the research I will send you a three-page summary detailing the key findings of the project, including suggestions on how the marketing strategy of your company can be optimised. These key findings will be at an early stage, and therefore your competitors will not have access to them. It is hoped that the findings will prove useful in building and maintaining sustainable competitive advantage for your organisation.

Be assured that this investigation is bound by the strict requirements of confidentiality set by the University of Strathclyde Ethics Committee. On top of this, I will anonymise your organisation, your name, and your responses so as not to jeopardise any relationships you may have. As always, you would be in control of the use of the data collected as per University policy and discretion is assured as a matter of course.

I would be extremely grateful if you can find the time to participate in this research and look forward to hearing your response. If you are interested in participating in the research project or require further clarification please do get in touch either at anastasios.siampos@strath.ac.uk or at my office's telephone number 0141 553 6198.

Yours sincerely,

Appendix B: Questionnaire of the study

	Strongly disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Strongly agree
Entrepreneurial Orientation							
Innovativeness							
When it comes to problem solving, we value creative new solutions more than the solutions of conventional wisdom	1	2	3	4	5	6	7
Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail	1	2	3	4	5	6	7
Innovation is readily accepted in project/program management	1	2	3	4	5	6	7
Risk taking							
We value the orderly and risk-reducing management process much more highly than leadership initiatives for change (-)	1	2	3	4	5	6	7
Top managers in this company like to "play it safe" (-)	1	2	3	4	5	6	7
Top managers around here like to implement plans only if they are very certain that they will work (-)	1	2	3	4	5	6	7
Proactiveness							
We strongly believe that a change in the market creates a positive opportunity for us	1	2	3	4	5	6	7
Members of this company tend to talk more about opportunities rather than problems	1	2	3	4	5	6	7
In dealing with our competitors we typically respond to actions that they initiate, instead of taking initiatives ourselves (-)	1	2	3	4	5	6	7

Marketing Capabilities						
Customer linking capability						
We have superior levels of customer service and support	1	2	3	4	5	6	7
We have a good understanding of the needs and requirements of our target customers	1	2	3	4	5	6	7
We are good at creating relationships with target customers	1	2	3	4	5	6	7
We are good at maintaining and enhancing relationships with target customers	1	2	3	4	5	6	7
Market sensing capabilities						
We are good at learning about customer needs and requirements	1	2	3	4	5	6	7
We are good at discovering our major competitors' strategies and tactics	1	2	3	4	5	6	7
We are good at gaining insights about the channel	1	2	3	4	5	6	7
We are good at identifying and understanding market trends	1	2	3	4	5	6	7
We are good at learning about the broad market environment	1	2	3	4	5	6	7
Adaptive Marketing Capabilities						
Vigilant Market Learning						
We keep a systematic track of how customers act and react to the social media space	1	2	3	4	5	6	7
We have a mind receptive to new ideas and arguments about latent customer needs	1	2	3	4	5	6	7
Adaptive Market Experimentation						
We are open to challenge even our own beliefs of how customers buy	1	2	3	4	5	6	7
We invest in resources to understand the behaviour of customers through experiments, pilot products etc.	1	2	3	4	5	6	7
Within the company we share insights of successful and unsuccessful initiatives in the market	1	2	3	4	5	6	7

Open Marketing							
We believe that we can achieve our goals by using only our own means (-)	1	2	3	4	5	6	7
We forge the relationships with companies involved in social networking technologies	1	2	3	4	5	6	7
We invest in building relationships with companies that have complementary resources to us	1	2	3	4	5	6	7

Competitive positioning

	Much less	Less	Slightly less	Same level with competitors	Slightly more	More	Much more
Innovative Differentiation							
R&D expenditures for product development	1	2	3	4	5	6	7
R&D expenditures for process innovations	1	2	3	4	5	6	7
Emphasis on being ahead of competition	1	2	3	4	5	6	7
High rate of product innovations	1	2	3	4	5	6	7
Marketing Differentiation							
Innovations in marketing techniques	1	2	3	4	5	6	7
Emphasis on marketing department organisation	1	2	3	4	5	6	7
Advertising expenditures	1	2	3	4	5	6	7
Emphasis on strong sales force	1	2	3	4	5	6	7
Cost Leadership							
Modernisation and automation of production processes	1	2	3	4	5	6	7
Efforts to achieve economies of scale	1	2	3	4	5	6	7
Capacity utilisation	1	2	3	4	5	6	7

	Strongly disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Strongly agree
Environment							
Environment munificence							
The demand for industry products is declining (-)	1	2	3	4	5	6	7
The products become obsolete quickly in target markets (-)	1	2	3	4	5	6	7
The demand for industry products is growing	1	2	3	4	5	6	7
Environment complexity							
Our customers have very different product preferences between them	1	2	3	4	5	6	7
Our customers' buying habits are different for all our product lines	1	2	3	4	5	6	7
The nature of the competition in our target markets varies from one product line to another	1	2	3	4	5	6	7
Customer Performance							
We achieved bigger customer satisfaction than our major competitors	1	2	3	4	5	6	7
We achieved better customer loyalty than our major competitors	1	2	3	4	5	6	7
We gained more new customers than our major competitors	1	2	3	4	5	6	7

Which of the following better describes the sector of your company?	Food, Beverages, Tobacco	Chemicals, Rubber, Plastic, Non-metallic products	Machinery, Equipment, Furniture, Recycling	Metals, Metal products	Textiles, wearing apparel, leather	Wood, Cork, Paper	Other (please define)

What is your educational background?	Secondary education	Higher education	Master's degree	MBA	Doctorate degree
How many years of experience do you have in your current position?	1-3	4-6	7-10	11-15	15+
How many years of industry experience do you have?	1-3	4-6	7-10	11-15	15+

Social Desirability		
Please indicate if the next statements are TRUE or FALSE		
I like to gossip at times	TRUE	FALSE
There have been occasions when I took advantage of someone	TRUE	FALSE
I am always willing to admit it when I make a mistake (-)	TRUE	FALSE
I always try to practice what I preach (-)	TRUE	FALSE
I sometimes try to get even rather than forgive and forget	TRUE	FALSE
At times, I have really insisted on having things my own way	TRUE	FALSE
There have been occasions when I felt like smashing things	TRUE	FALSE
I never resent being asked to return a favour (-)	TRUE	FALSE
I have never been irked when people expressed ideas very different from my own (-)	TRUE	FALSE

* where (-) indicates reverse item

Appendix C: Descriptive statistics of individual items

	N	Mean	Std. Dev.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Entrepreneurial Orientation							
Innovativeness							
When it comes to problem solving, we value creative new solutions more than the solutions of conventional wisdom	221	4.81	1.333	-0.301	0.164	-0.539	0.326
Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail	221	4.38	1.601	-0.263	0.164	-0.924	0.326
Innovation is readily accepted in project/program management	221	5.12	1.439	-0.798	0.164	0.002	0.326
Risk Taking							
We value the orderly and risk-reducing management process much more highly than leadership initiatives for change	221	4.02	1.335	0.048	0.164	-0.578	0.326
Top managers in this company like to "play it safe"	221	4.02	1.601	0.004	0.164	-1.012	0.326
Top managers around here like to implement plans only if they are very certain that they will work	221	3.92	1.578	0.002	0.164	-1.141	0.326
Proactiveness							
We strongly believe that a change in the market creates a positive opportunity for us	221	5.33	1.105	-0.592	0.164	0.223	0.326
Members of this company tend to talk more about opportunities rather than problems	221	4.14	1.564	-0.105	0.164	-0.855	0.326
In dealing with our competitors we typically respond to actions that they initiate, instead of taking initiatives ourselves	221	4.6	1.56	-0.295	0.164	-0.816	0.326

	N	Mean	Std. Dev.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Marketing Capabilities							
Customer Linking Capabilities							
We have superior levels of customer service and support	221	5.34	1.414	-0.861	0.164	0.063	0.326
We have a good understanding of the needs and requirements of our target customers	221	5.87	0.959	-1.489	0.164	3.54	0.326
We are good at creating relationships with target customers	221	5.93	1.024	-1.518	0.164	3.024	0.326
We are good at maintaining and enhancing relationships with target customers	221	5.84	1.035	-1.468	0.164	3.047	0.326
Market Sensing Capabilities							
We are good at learning about customer needs and requirements	221	5.46	1.177	-1.012	0.164	0.822	0.326
We are good at discovering our major competitors' strategies and tactics	221	4.57	1.499	-0.414	0.164	-0.834	0.326
We are good at gaining insights about the channel	221	4.72	1.24	-0.371	0.164	-0.304	0.326
We are good at identifying and understanding market trends	221	5.19	1.177	-1.127	0.164	1.351	0.326
We are good at learning about the broad market environment	221	5.38	1.144	-1.272	0.164	2.096	0.326
Adaptive Marketing Capabilities							
Vigilant Market Learning							
We keep a systematic track of how customers act and react to the social media space	221	3.71	1.748	0.128	0.164	-1.172	0.326
We have a mind receptive to new ideas and arguments about latent customer needs	221	4.95	1.26	-0.433	0.164	-0.191	0.326
Adaptive Market Experimentation							
We are open to challenge even our own beliefs of how customers buy	221	5.03	1.305	-0.74	0.164	-0.07	0.326
We invest in resources to understand the behaviour of	221	4.06	1.792	-0.027	0.164	-1.217	0.326

	N	Mean	Std. Dev.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
customers through experiments, pilot products etc.							
Within the company we share insights of successful and unsuccessful initiatives in the market	221	4.57	1.643	-0.499	0.164	-0.735	0.326
Open Marketing							
We believe that we can achieve our goals by using only our own means	221	4.2	1.594	0.003	0.164	-0.967	0.326
We forge the relationships with companies involved in social networking technologies	221	3.62	1.779	0.244	0.164	-0.987	0.326
We invest in building relationships with companies that have complementary resources to us	221	4.89	1.493	-0.682	0.164	-0.023	0.326
Competitive positioning							
Innovation Differentiation							
R&D expenditures for product development	221	4.29	1.683	-0.243	0.164	-0.84	0.326
R&D expenditures for process innovations	221	4.18	1.588	-0.253	0.164	-0.767	0.326
Emphasis on being ahead of competition	221	4.72	1.529	-0.55	0.164	-0.351	0.326
High rate of product innovations	221	4.55	1.588	-0.452	0.164	-0.67	0.326
Marketing Differentiation							
Innovations in marketing techniques	221	4.03	1.515	-0.133	0.164	-0.647	0.326
Emphasis on marketing department organisation	221	3.7	1.527	0.028	0.164	-0.679	0.326
Advertising expenditures	221	3.07	1.559	0.351	0.164	-0.734	0.326
Emphasis on strong sales force	221	4.55	1.444	-0.443	0.164	-0.187	0.326
Cost Leadership							
Modernisation and automation of production processes	221	4.53	1.539	-0.302	0.164	-0.576	0.326
Efforts to achieve economies of scale	221	4.48	1.4	-0.339	0.164	-0.181	0.326
Capacity utilisation	221	4.66	1.354	-0.25	0.164	-0.16	0.326

	N	Mean	Std. Dev.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Environment							
Environmental Munificence							
The demand for industry products is declining	221	5	1.347	-0.606	0.164	-0.268	0.326
The products become obsolete quickly in target markets	221	5.33	1.252	-0.778	0.164	0.206	0.326
The demand for industry products is growing	221	4.8	1.196	-0.427	0.164	-0.203	0.326
Environmental Complexity							
Our customers have very different product preferences between them	221	4.51	1.715	-0.287	0.164	-1.049	0.326
Our customers' buying habits are different for all our product lines	221	4.27	1.689	-0.221	0.164	-1.14	0.326
The nature of the competition in our target markets varies from one product line to another	221	5.03	1.592	-0.87	0.164	-0.232	0.326
Customer Performance							
We achieved bigger customer satisfaction than our major competitors	221	5	1.158	-0.452	0.164	0.257	0.326
We achieved better customer loyalty than our major competitors	221	5.26	1.049	-0.39	0.164	-0.004	0.326
We gained more new customers than our major competitors	221	4.49	1.26	0.132	0.164	-0.449	0.326

Appendix D: Standardised regression weights

			Estimate
Risk Taking	←	Entrepreneurial Orientation	.666
Innovativeness	←	Entrepreneurial Orientation	.901
Proactiveness	←	Entrepreneurial Orientation	.946
EO_5_RT	←	Risk Taking	.965
EO_4_RT	←	Risk Taking	.505
EO_3_Inn	←	Innovativeness	.772
EO_2_Inn	←	Innovativeness	.723
CMDO_2_CL	←	Customer Linking Capabilities	.670
CMDO_3_CL	←	Customer Linking Capabilities	.923
CMDO_10_MS	←	Market Sensing Capabilities	.648
CMDO_11_MS	←	Market Sensing Capabilities	.726
CMDO_12_MS	←	Market Sensing Capabilities	.945
CP_5_MarDif	←	Marketing Differentiation	.842
CP_7_MarDif	←	Marketing Differentiation	.727
CP_1_InnDif	←	Innovation Differentiation	.888
CP_2_InnDif	←	Innovation Differentiation	.908
CP_3_InnDif	←	Innovation Differentiation	.787
CP_4_InnDif	←	Innovation Differentiation	.742
CP_6_MarDif	←	Marketing Differentiation	.835
EO_7_Pro	←	Proactiveness	.580
EO_6_RT	←	Risk Taking	.794
EO_8_Pro	←	Proactiveness	.555
CMDO_4_CL	←	Customer Linking Capabilities	.927
CMDO_13_MS	←	Market Sensing Capabilities	.875
CP_8_MarDif	←	Marketing Differentiation	.506
Loyalty	←	Customer Performance	.900
Satisfaction	←	Customer Performance	.796
More New Customers	←	Customer Performance	.564
CP_9_Cost	←	Cost Leadership	.811
CP_11_Cost	←	Cost Leadership	.820
CP_10_Cost	←	Cost Leadership	.886
AMC_1	←	Adaptive Marketing Capabilities	.668
AMC_2	←	Adaptive Marketing Capabilities	.664
AMC_4	←	Adaptive Marketing Capabilities	.764
AMC_5	←	Adaptive Marketing Capabilities	.735
AMC_7	←	Adaptive Marketing Capabilities	.760
Environ_7_Complexity	←	Environmental Complexity	.637
Environ_6_Complexity	←	Environmental Complexity	.944
Environ_5_Complexity	←	Environmental Complexity	.700
AMC_8	←	Adaptive Marketing Capabilities	.679
Environ_1_Munificence	←	Environmental Munificence	.866
Environ_2_Munificence	←	Environmental Munificence	.427
EO_1_Inn	←	Innovativeness	.499
Environ_3_Munificence	←	Environmental Munificence	.805

Appendix E: Individual items frequencies

When it comes to problem solving, we value creative new solutions more than the solutions of conventional wisdom	Frequency	Percent	Cumulative Percent
Strongly Disagree	14	6.3	6.3
Disagree	0	0	6.3
Slightly Disagree	21	9.5	15.8
Neither agree/Nor disagree	54	24.4	40.3
Slightly Agree	57	25.8	66.1
Agree	55	24.9	91
Strongly Agree	20	9	100
Total	221	100	

Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail	Frequency	Percent	Cumulative Percent
Strongly Disagree	6	2.7	2.7
Disagree	31	14	16.7
Slightly Disagree	32	14.5	31.2
Neither agree/Nor disagree	35	15.8	47.1
Slightly Agree	54	24.4	71.5
Agree	47	21.3	92.8
Strongly Agree	16	7.2	100
Total	221	100	

Innovation is readily accepted in project/program management	Frequency	Percent	Cumulative Percent
Strongly Disagree	3	1.4	1.4
Disagree	10	4.5	5.9
Slightly Disagree	25	11.3	17.2
Neither agree/Nor disagree	19	8.6	25.8
Slightly Agree	58	26.2	52
Agree	74	33.5	85.5
Strongly Agree	32	14.5	100
Total	221	100	

We value the orderly and risk-reducing management process much more highly than leadership initiatives for change	Frequency	Percent	Cumulative Percent
Strongly Disagree	3	1.4	1.4
Disagree	30	13.6	14.9
Slightly Disagree	42	19	33.9
Neither agree/Nor disagree	70	31.7	65.6
Slightly Agree	42	19	84.6
Agree	29	13.1	97.7
Strongly Agree	5	2.3	100
Total	221	100	

Top managers in this company like to "play it safe"	Frequency	Percent	Cumulative Percent
Strongly Disagree	11	5	5
Disagree	29	13.1	18.1
Slightly Disagree	58	26.2	44.3
Neither agree/Nor disagree	30	13.6	57.9
Slightly Agree	42	19	76.9
Agree	42	19	95.9
Strongly Agree	9	4.1	100
Total	221	100	

Top managers around here like to implement plans only if they are very certain that they will work	Frequency	Percent	Cumulative Percent
Strongly Disagree	8	3.6	3.6
Disagree	46	20.8	24.4
Slightly Disagree	43	19.5	43.9
Neither agree/Nor disagree	30	13.6	57.5
Slightly Agree	52	23.5	81
Agree	36	16.3	97.3
Strongly Agree	6	2.7	100
Total	221	100	

We strongly believe that a change in the market creates a positive opportunity for us	Frequency	Percent	Cumulative Percent
Strongly Disagree	4	1.8	1.8
Disagree	0	0	1.8
Slightly Disagree	7	3.2	5
Neither agree/Nor disagree	38	17.2	22.2
Slightly Agree	63	28.5	50.7
Agree	82	37.1	87.8
Strongly Agree	27	12.2	100
Total	221	100	

Members of this company tend to talk more about opportunities rather than problems	Frequency	Percent	Cumulative Percent
Strongly Disagree	10	4.5	4.5
Disagree	26	11.8	16.3
Slightly Disagree	45	20.4	36.7
Neither agree/Nor disagree	46	20.8	57.5
Slightly Agree	41	18.6	76
Agree	43	19.5	95.5
Strongly Agree	10	4.5	100
Total	221	100	

In dealing with our competitors we typically respond to actions that they initiate, instead of taking initiatives ourselves	Frequency	Percent	Cumulative Percent
Strongly Disagree	4	1.8	1.8
Disagree	21	9.5	11.3
Slightly Disagree	35	15.8	27.1
Neither agree/Nor disagree	36	16.3	43.4
Slightly Agree	52	23.5	67
Agree	50	22.6	89.6
Strongly Agree	23	10.4	100
Total	221	100	

We have superior levels of customer service and support	Frequency	Percent	Cumulative Percent
Strongly Disagree	15	6.8	6.8
Disagree	0	0	6.8
Slightly Disagree	11	5	11.8
Neither agree/Nor disagree	25	11.3	23.1
Slightly Agree	49	22.2	45.2
Agree	74	33.5	78.7
Strongly Agree	47	21.3	100
Total	221	100	

We have a good understanding of the needs and requirements of our target customers	Frequency	Percent	Cumulative Percent
Strongly Disagree	3	1.4	1.4
Disagree	0	0	1.4
Slightly Disagree	5	2.3	3.6
Neither agree/Nor disagree	6	2.7	6.3
Slightly Agree	39	17.6	24
Agree	118	53.4	77.4
Strongly Agree	50	22.6	100
Total	221	100	

We are good at creating relationships with target customers	Frequency	Percent	Cumulative Percent
Strongly Disagree	3	1.4	1.4
Disagree	0	0	1.4
Slightly Disagree	7	3.2	4.5
Neither agree/Nor disagree	7	3.2	7.7
Slightly Agree	31	14	21.7
Agree	111	50.2	71.9
Strongly Agree	62	28.1	100
Total	221	100	

We are good at maintaining and enhancing relationships with target customers	Frequency	Percent	Cumulative Percent
Strongly Disagree	4	1.8	1.8
Disagree	0	0	1.8
Slightly Disagree	7	3.2	5
Neither agree/Nor disagree	4	1.8	6.8
Slightly Agree	44	19.9	26.7
Agree	108	48.9	75.6
Strongly Agree	54	24.4	100
Total	221	100	

We are good at learning about customer needs and requirements	Frequency	Percent	Cumulative Percent
Strongly Disagree	5	2.3	2.3
Disagree	0	0	2.3
Slightly Disagree	17	7.7	10
Neither agree/Nor disagree	10	4.5	14.5
Slightly Agree	62	28.1	42.5
Agree	93	42.1	84.6
Strongly Agree	34	15.4	100
Total	221	100	

We are good at discovering our major competitors' strategies and tactics	Frequency	Percent	Cumulative Percent
Strongly Disagree	3	1.4	1.4
Disagree	23	10.4	11.8
Slightly Disagree	34	15.4	27.1
Neither agree/Nor disagree	33	14.9	42.1
Slightly Agree	53	24	66.1
Agree	63	28.5	94.6
Strongly Agree	12	5.4	100
Total	221	100	

We are good at gaining insights about the channel	Frequency	Percent	Cumulative Percent
Strongly Disagree	1	0.5	0.5
Disagree	11	5	5.4
Slightly Disagree	18	8.1	13.6
Neither agree/Nor disagree	69	31.2	44.8
Slightly Agree	50	22.6	67.4
Agree	63	28.5	95.9
Strongly Agree	9	4.1	100
Total	221	100	

We are good at identifying and understanding market trends	Frequency	Percent	Cumulative Percent
Strongly Disagree	2	0.9	0.9
Disagree	6	2.7	3.6
Slightly Disagree	14	6.3	10
Neither agree/Nor disagree	23	10.4	20.4
Slightly Agree	70	31.7	52
Agree	92	41.6	93.7
Strongly Agree	14	6.3	100
Total	221	100	

We are good at learning about the broad market environment	Frequency	Percent	Cumulative Percent
Strongly Disagree	2	0.9	0.9
Disagree	5	2.3	3.2
Slightly Disagree	8	3.6	6.8
Neither agree/Nor disagree	23	10.4	17.2
Slightly Agree	59	26.7	43.9
Agree	103	46.6	90.5
Strongly Agree	21	9.5	100
Total	221	100	

We keep a systematic track of how customers act and react to the social media space	Frequency	Percent	Cumulative Percent
Strongly Disagree	20	9	9
Disagree	56	25.3	34.4
Slightly Disagree	28	12.7	47.1
Neither agree/Nor disagree	34	15.4	62.4
Slightly Agree	41	18.6	81
Agree	32	14.5	95.5
Strongly Agree	10	4.5	100
Total	221	100	

We have a mind receptive to new ideas and arguments about latent customer needs	Frequency	Percent	Cumulative Percent
Strongly Disagree	1	0.5	0.5
Disagree	7	3.2	3.6
Slightly Disagree	21	9.5	13.1
Neither agree/Nor disagree	46	20.8	33.9
Slightly Agree	65	29.4	63.3
Agree	61	27.6	91
Strongly Agree	20	9	100
Total	221	100	

We are open to challenge even our own beliefs of how customers buy	Frequency	Percent	Cumulative Percent
Strongly Disagree	13	5.9	5.9
Disagree	0	0	5.9
Slightly Disagree	22	10	15.8
Neither agree/Nor disagree	21	9.5	25.3
Slightly Agree	73	33	58.4
Agree	73	33	91.4
Strongly Agree	19	8.6	100
Total	221	100	

We invest in resources to understand the behaviour of customers through experiments, pilot products etc.	Frequency	Percent	Cumulative Percent
Strongly Disagree	15	6.8	6.8
Disagree	40	18.1	24.9
Slightly Disagree	41	18.6	43.4
Neither agree/Nor disagree	25	11.3	54.8
Slightly Agree	38	17.2	71.9
Agree	45	20.4	92.3
Strongly Agree	17	7.7	100
Total	221	100	

Within the company we share insights of successful and unsuccessful initiatives in the market	Frequency	Percent	Cumulative Percent
Strongly Disagree	10	4.5	4.5
Disagree	20	9	13.6
Slightly Disagree	32	14.5	28.1
Neither agree/Nor disagree	30	13.6	41.6
Slightly Agree	47	21.3	62.9
Agree	64	29	91.9
Strongly Agree	18	8.1	100
Total	221	100	

We believe that we can achieve our goals by using only our own means	Frequency	Percent	Cumulative Percent
Strongly Disagree	5	2.3	2.3
Disagree	36	16.3	18.6
Slightly Disagree	35	15.8	34.4
Neither agree/Nor disagree	52	23.5	57.9
Slightly Agree	36	16.3	74.2
Agree	41	18.6	92.8
Strongly Agree	16	7.2	100
Total	221	100	

We forge the relationships with companies involved in social networking technologies	Frequency	Percent	Cumulative Percent
Strongly Disagree	25	11.3	11.3
Disagree	55	24.9	36.2
Slightly Disagree	25	11.3	47.5
Neither agree/Nor disagree	42	19	66.5
Slightly Agree	39	17.6	84.2
Agree	19	8.6	92.8
Strongly Agree	16	7.2	100
Total	221	100	

We invest in building relationships with companies that have complementary resources to us	Frequency	Percent	Cumulative Percent
Strongly Disagree	7	3.2	3.2
Disagree	10	4.5	7.7
Slightly Disagree	22	10	17.6
Neither agree/Nor disagree	37	16.7	34.4
Slightly Agree	57	25.8	60.2
Agree	62	28.1	88.2
Strongly Agree	26	11.8	100
Total	221	100	

R&D expenditures for product development	Frequency	Percent	Cumulative Percent
Much Less	14	6.3	6.3
Less	26	11.8	18.1
Slightly Less	25	11.3	29.4
Same Level	59	26.7	56.1
Slightly More	29	13.1	69.2
More	51	23.1	92.3
Much More	17	7.7	100
Total	221	100	

R&D expenditures for process innovations	Frequency	Percent	Cumulative Percent
Much Less	12	5.4	5.4
Less	30	13.6	19
Slightly Less	24	10.9	29.9
Same Level	60	27.1	57
Slightly More	40	18.1	75.1
More	45	20.4	95.5
Much More	10	4.5	100
Total	221	100	

Emphasis on being ahead of competition	Frequency	Percent	Cumulative Percent
Much Less	7	3.2	3.2
Less	15	6.8	10
Slightly Less	25	11.3	21.3
Same Level	39	17.6	38.9
Slightly More	56	25.3	64.3
More	57	25.8	90
Much More	22	10	100
Total	221	100	

High rate of product innovations	Frequency	Percent	Cumulative Percent
Much Less	7	3.2	3.2
Less	26	11.8	14.9
Slightly Less	22	10	24.9
Same Level	40	18.1	43
Slightly More	54	24.4	67.4
More	54	24.4	91.9
Much More	18	8.1	100
Total	221	100	

Innovations in marketing techniques	Frequency	Percent	Cumulative Percent
Much Less	10	4.5	4.5
Less	36	16.3	20.8
Slightly Less	25	11.3	32.1
Same Level	62	28.1	60.2
Slightly More	52	23.5	83.7
More	26	11.8	95.5
Much More	10	4.5	100
Total	221	100	

Emphasis on marketing department organisation	Frequency	Percent	Cumulative Percent
Much Less	18	8.1	8.1
Less	40	18.1	26.2
Slightly Less	29	13.1	39.4
Same Level	76	34.4	73.8
Slightly More	25	11.3	85.1
More	28	12.7	97.7
Much More	5	2.3	100
Total	221	100	

Advertising expenditures	Frequency	Percent	Cumulative Percent
Much Less	42	19	19
Less	53	24	43
Slightly Less	31	14	57
Same Level	57	25.8	82.8
Slightly More	21	9.5	92.3
More	14	6.3	98.6
Much More	3	1.4	100
Total	221	100	

Emphasis on strong sales force	Frequency	Percent	Cumulative Percent
Much Less	7	3.2	3.2
Less	16	7.2	10.4
Slightly Less	20	9	19.5
Same Level	61	27.6	47.1
Slightly More	55	24.9	71.9
More	47	21.3	93.2
Much More	15	6.8	100
Total	221	100	

Modernisation and automation of production processes	Frequency	Percent	Cumulative Percent
Much Less	6	2.7	2.7
Less	22	10	12.7
Slightly Less	21	9.5	22.2
Same Level	60	27.1	49.3
Slightly More	44	19.9	69.2
More	47	21.3	90.5
Much More	21	9.5	100
Total	221	100	

Efforts to achieve economies of scale	Frequency	Percent	Cumulative Percent
Much Less	6	2.7	2.7
Less	16	7.2	10
Slightly Less	21	9.5	19.5
Same Level	71	32.1	51.6
Slightly More	50	22.6	74.2
More	44	19.9	94.1
Much More	13	5.9	100
Total	221	100	

Capacity utilisation	Frequency	Percent	Cumulative Percent
Much Less	3	1.4	1.4
Less	13	5.9	7.2
Slightly Less	18	8.1	15.4
Same Level	70	31.7	47.1
Slightly More	55	24.9	71.9
More	42	19	91
Much More	20	9	100
Total	221	100	

The demand for industry products is declining	Frequency	Percent	Cumulative Percent
Strongly Disagree	1	0.5	0.5
Disagree	10	4.5	5
Slightly Disagree	26	11.8	16.7
Neither agree/Nor disagree	28	12.7	29.4
Slightly Agree	64	29	58.4
Agree	69	31.2	89.6
Strongly Agree	23	10.4	100
Total	221	100	

The products become obsolete quickly in target markets	Frequency	Percent	Cumulative Percent
Strongly Disagree	1	0.5	0.5
Disagree	4	1.8	2.3
Slightly Disagree	16	7.2	9.5
Neither agree/Nor disagree	34	15.4	24.9
Slightly Agree	51	23.1	48.0
Agree	81	36.7	84.6
Strongly Agree	34	15.4	100
Total	221	100	

The demand for industry products is growing	Frequency	Percent	Cumulative Percent
Strongly Disagree	10	4.5	4.5
Disagree	23	10.4	14.9
Slightly Disagree	42	19	33.9
Neither agree/Nor disagree	20	9	43
Slightly Agree	60	27.1	70.1
Agree	55	24.9	95
Strongly Agree	11	5	100
Total	221	100	

Our customers have very different product preferences between them	Frequency	Percent	Cumulative Percent
Strongly Disagree	7	3.2	3.2
Disagree	31	14	17.2
Slightly Disagree	28	12.7	29.9
Neither agree/Nor disagree	39	17.6	47.5
Slightly Agree	33	14.9	62.4
Agree	58	26.2	88.7
Strongly Agree	25	11.3	100
Total	221	100	

Our customers' buying habits are different for all our product lines	Frequency	Percent	Cumulative Percent
Strongly Disagree	8	3.6	3.6
Disagree	40	18.1	21.7
Slightly Disagree	30	13.6	35.3
Neither agree/Nor disagree	30	13.6	48.9
Slightly Agree	47	21.3	70.1
Agree	52	23.5	93.7
Strongly Agree	14	6.3	100
Total	221	100	

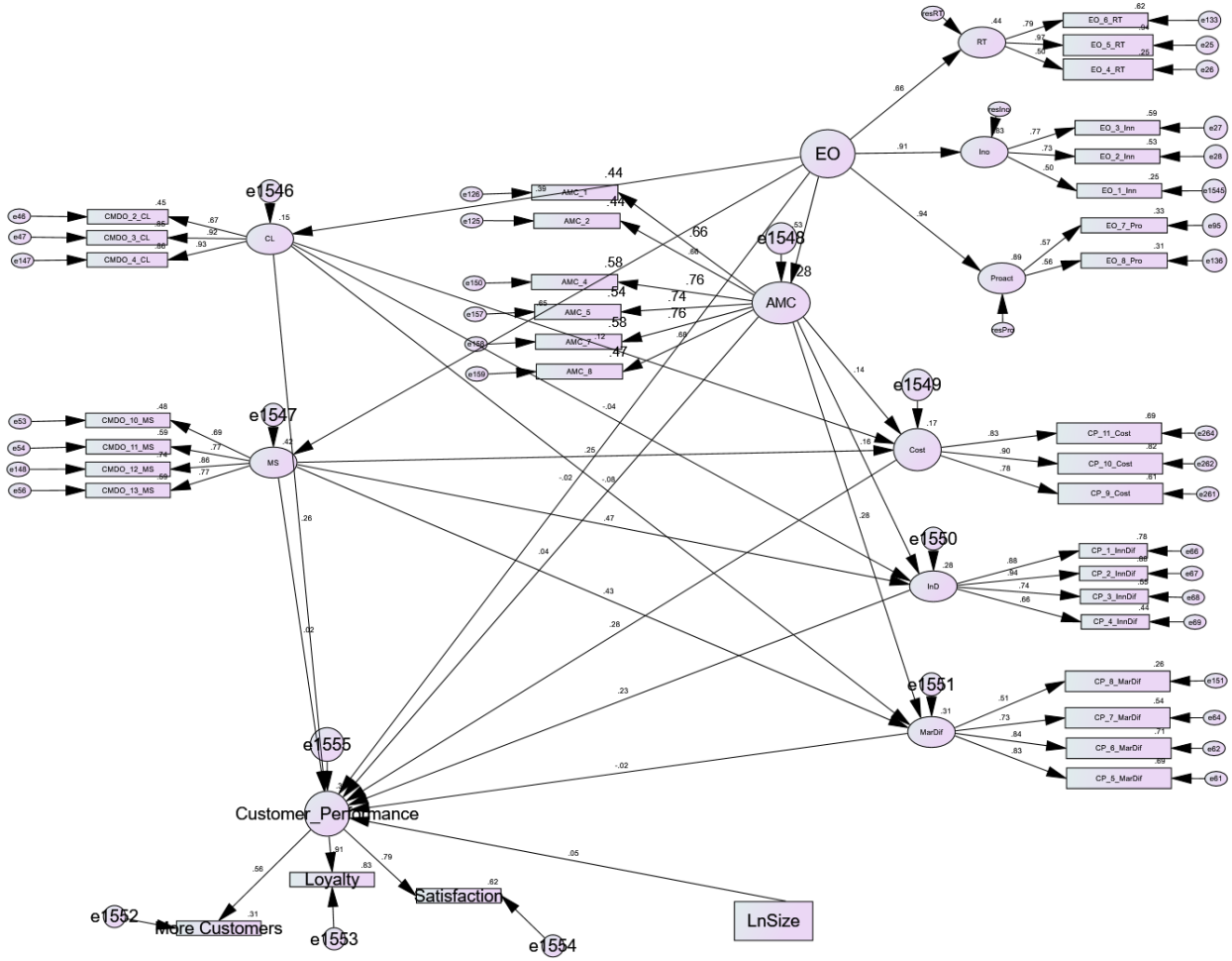
The nature of the competition in our target markets varies from one product line to another	Frequency	Percent	Cumulative Percent
Strongly Disagree	4	1.8	1.8
Disagree	24	10.9	12.7
Slightly Disagree	15	6.8	19.5
Neither agree/Nor disagree	17	7.7	27.1
Slightly Agree	50	22.6	49.8
Agree	81	36.7	86.4
Strongly Agree	30	13.6	100
Total	221	100	

We achieved bigger customer satisfaction than our major competitors	Frequency	Percent	Cumulative Percent
Strongly Disagree	1	0.5	0.5
Disagree	6	2.7	3.2
Slightly Disagree	8	3.6	6.8
Neither agree/Nor disagree	60	27.1	33.9
Slightly Agree	64	29	62.9
Agree	65	29.4	92.3
Strongly Agree	17	7.7	100
Total	221	100	

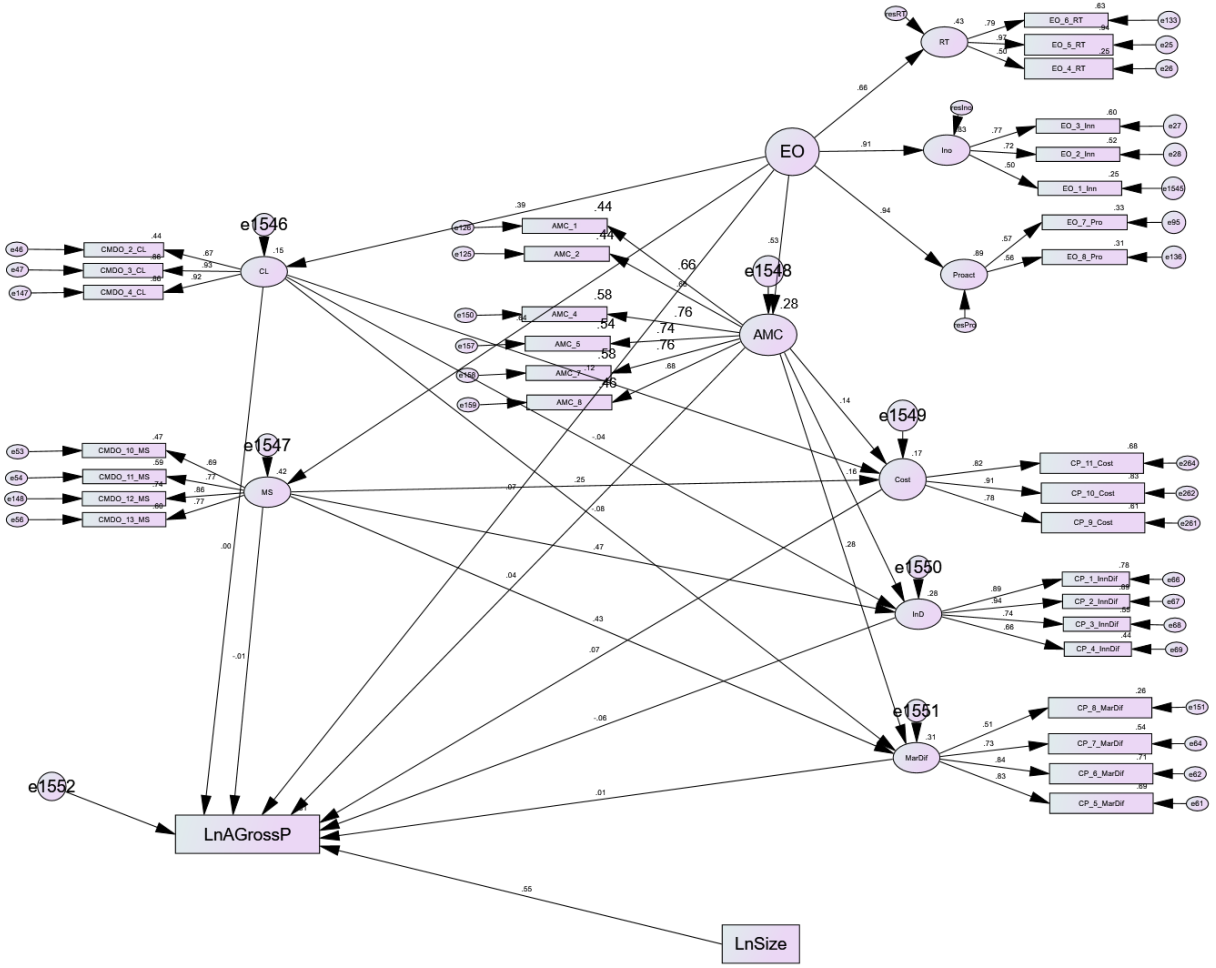
We achieved better customer loyalty than our major competitors	Frequency	Percent	Cumulative Percent
Strongly Disagree	3	1.4	1.4
Disagree	0	0	1.4
Slightly Disagree	4	1.8	3.2
Neither agree/Nor disagree	48	21.7	24.9
Slightly Agree	66	29.9	54.8
Agree	78	35.3	90
Strongly Agree	22	10	100
Total	221	100	

We gained more new customers than our major competitors	Frequency	Percent	Cumulative Percent
Strongly Disagree	13	5.9	5.9
Disagree	0	0	5.9
Slightly Disagree	27	12.2	18.1
Neither agree/Nor disagree	86	38.9	57
Slightly Agree	42	19	76
Agree	39	17.6	93.7
Strongly Agree	14	6.3	100
Total	221	100	

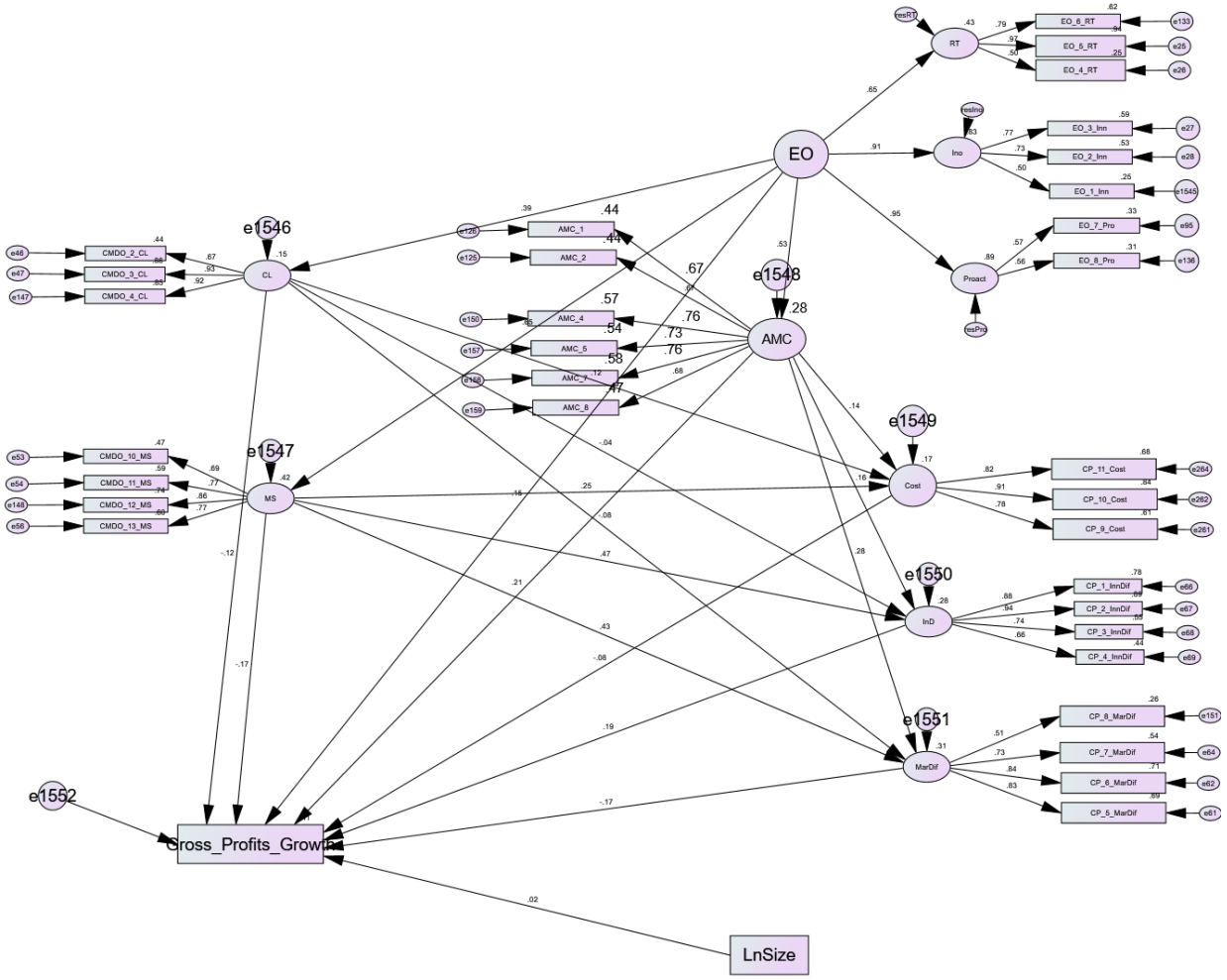
Appendix F: Structural model predicting customer performance



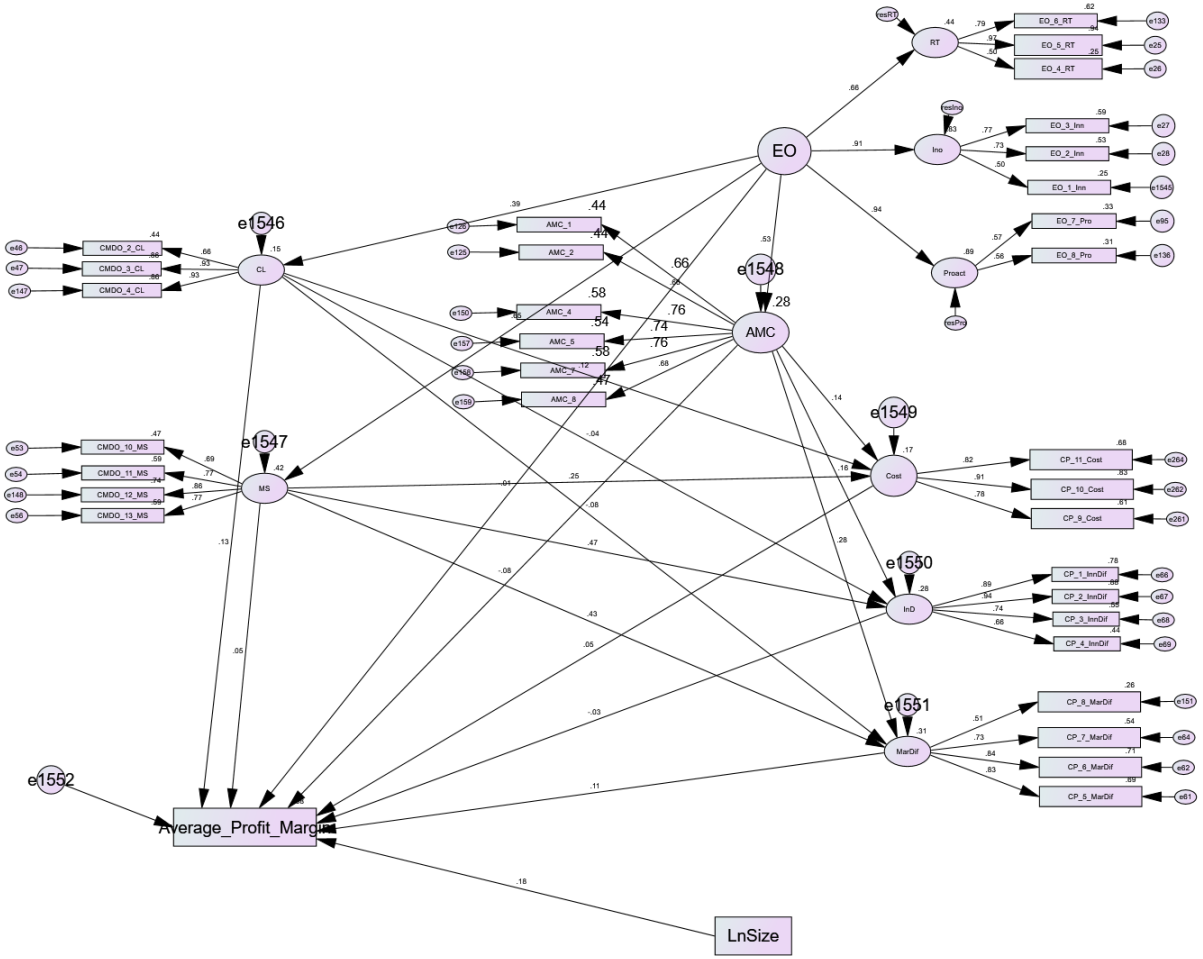
Appendix G: Structural model predicting average gross profits



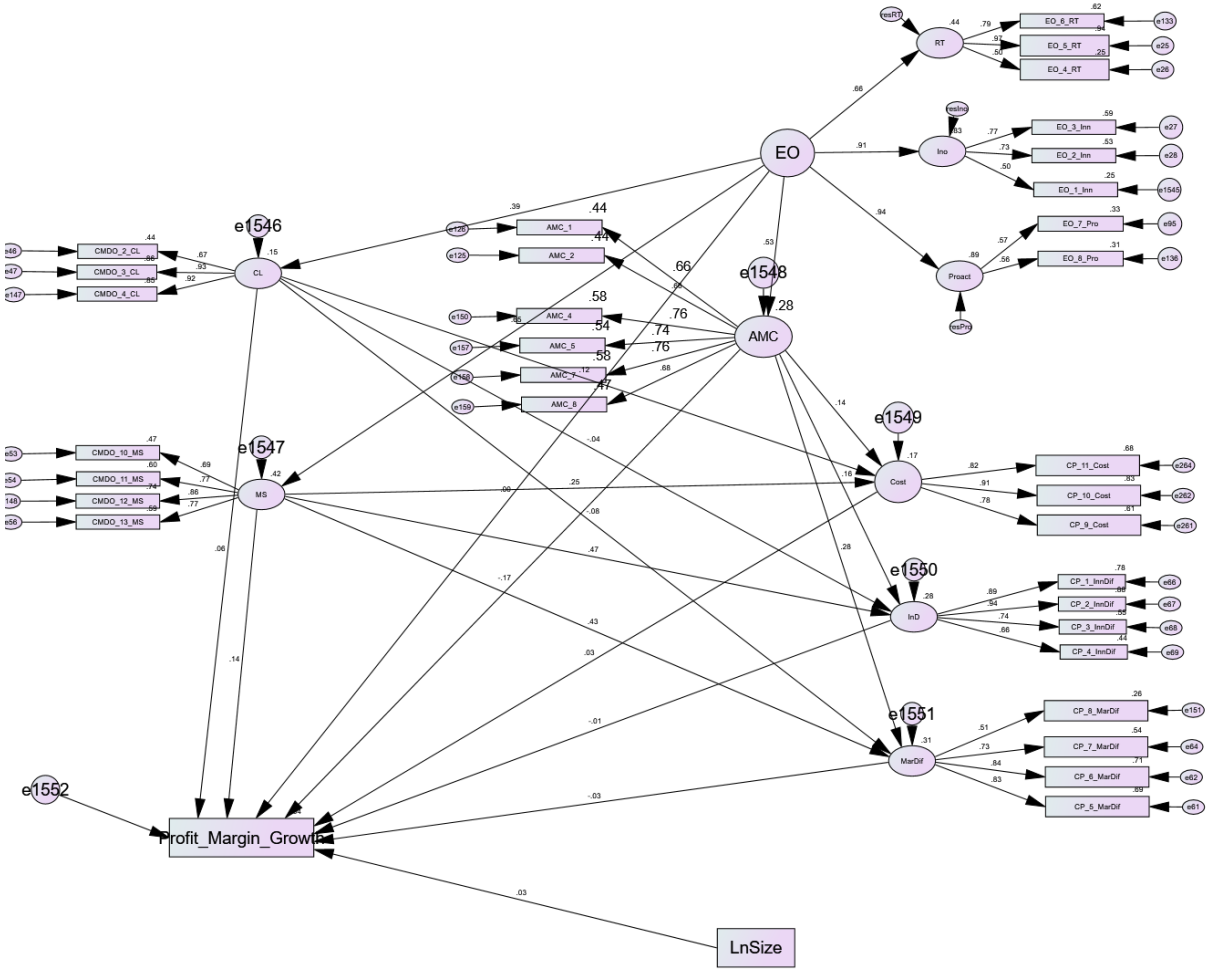
Appendix H: Structural model predicting gross profits growth



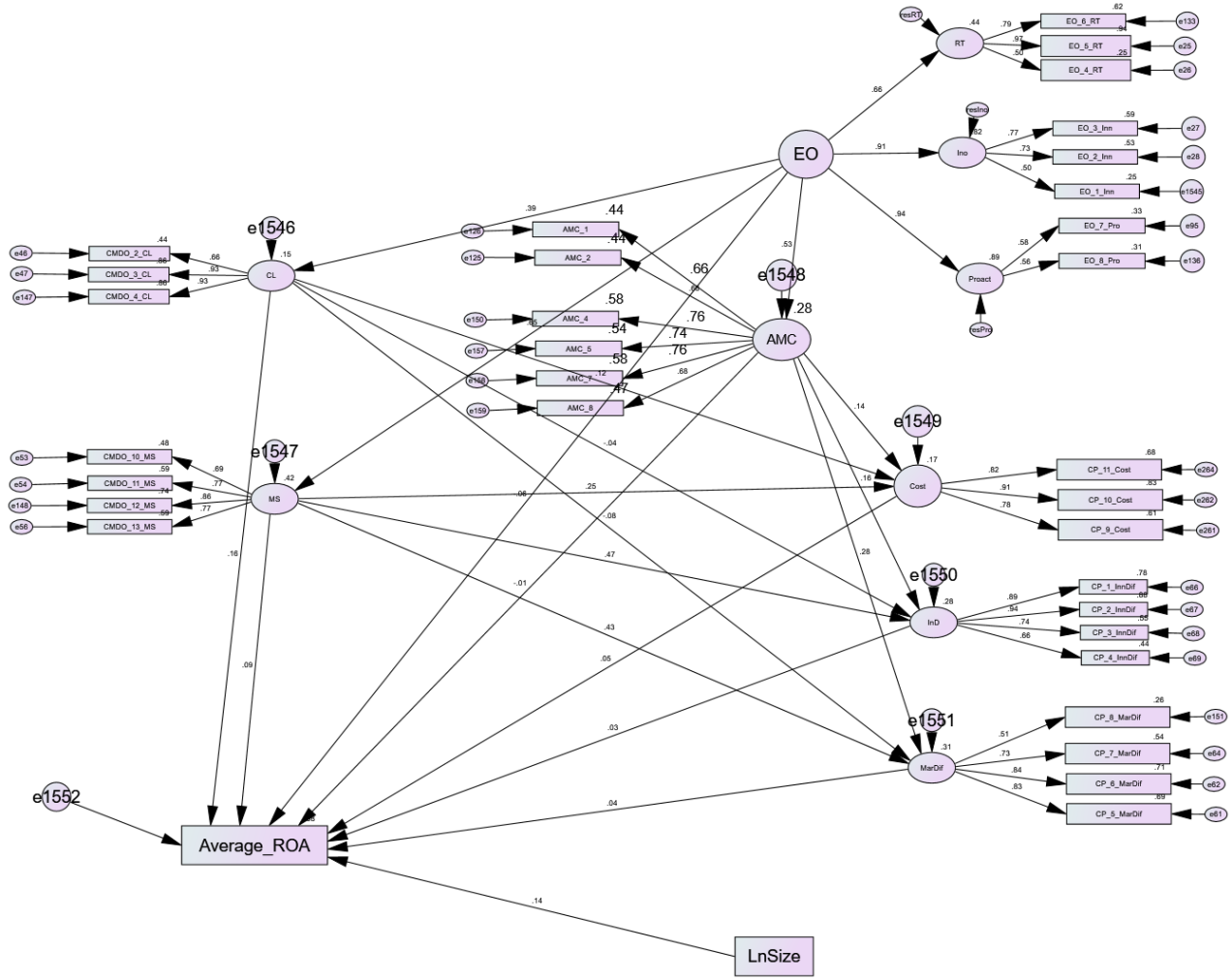
Appendix I: Structural model predicting average net profit margin



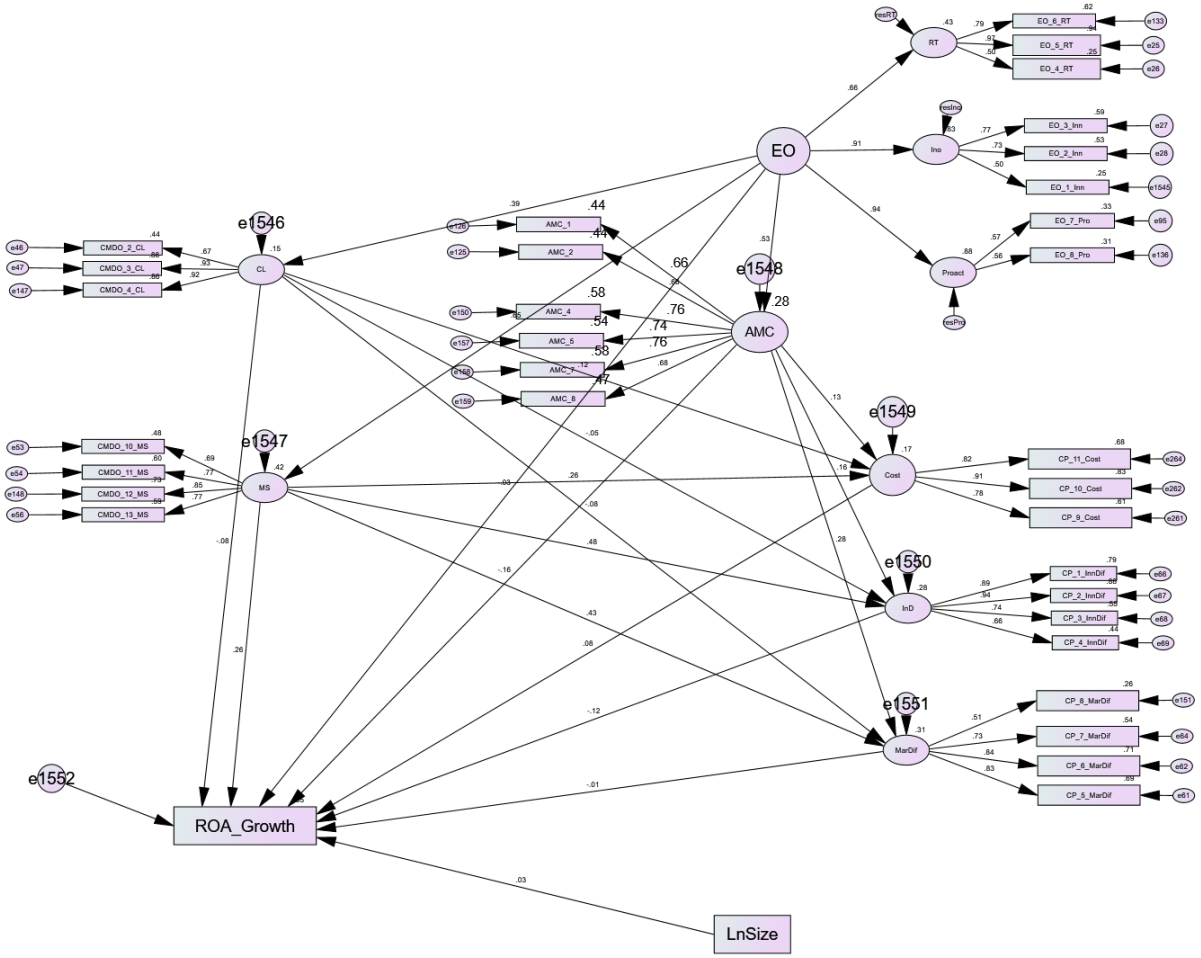
Appendix J: Structural model predicting net profit margin growth



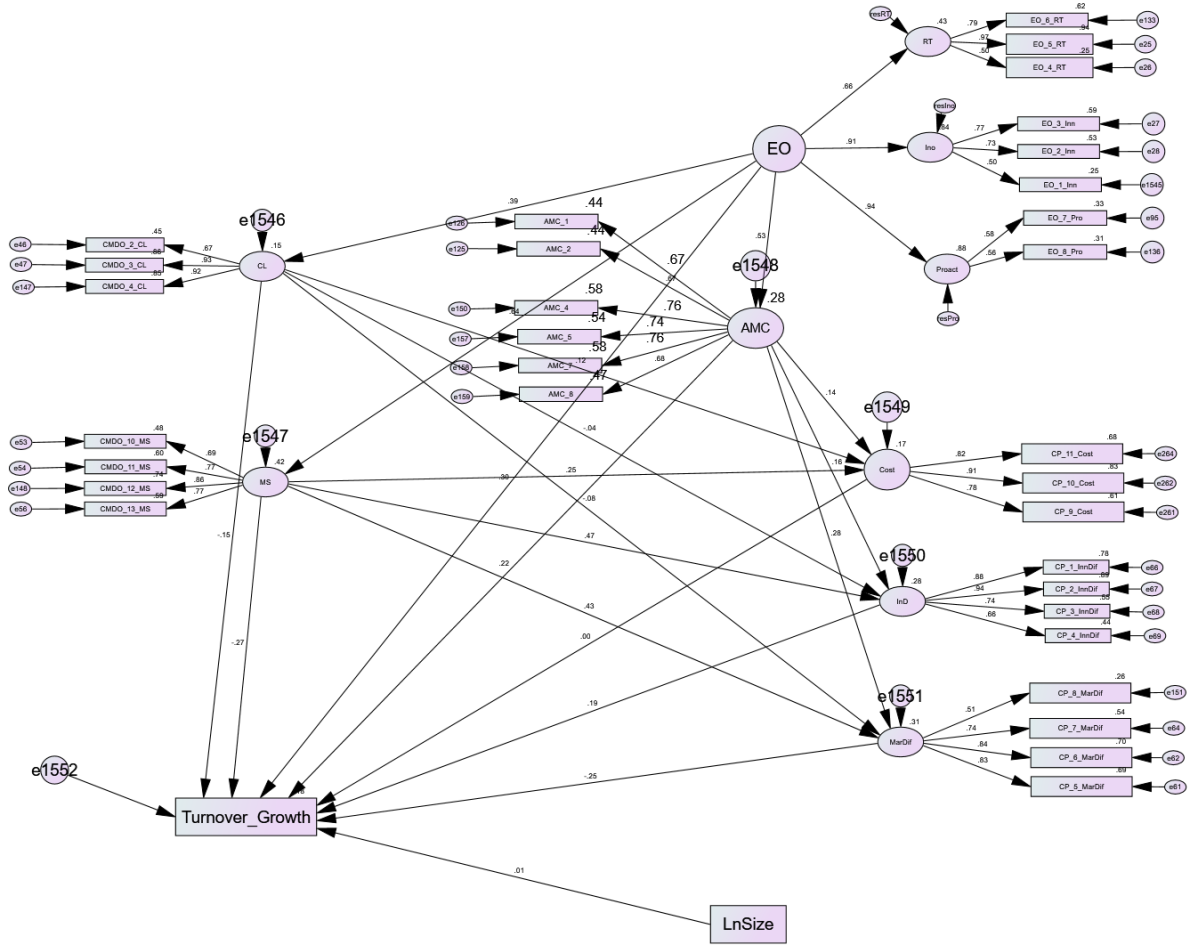
Appendix K: Structural model predicting average ROA



Appendix L: Structural model predicting ROA growth



Appendix M: Structural model predicting turnover growth



Appendix N: Structural model predicting average turnover