



**Nova School of Business and Economics**

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**THREE ESSAYS ON INNOVATION: THE MODERATING ROLES  
OF REPUTATION FOR INNOVATION, CSR PRINCIPLES AND  
MANAGERIAL PERCEPTIONS OF ENVIRONMENTAL  
TURBULENCE**

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Costa, Claudia and Queiroga, Ana Paula GIRA Conference Corporate Governance, Innovation, Social and Environmental Responsibility (conference proceedings) “Performance as a cause and consequence of innovativeness and customer oriented solutions. Which of the two? ” 9<sup>th</sup> - 10<sup>th</sup> September 2010 Lisbon, Portugal.

Costa, Claudia, Lages, Luis and Queiroga, Ana Paula 39 EMAC Conference (conference proceedings) “The determinants and consequences of customer oriented solutions: Analysing the role of financial performance” 1<sup>st</sup> - 4<sup>th</sup> June 2010 Copenhagen, Denmark.

I also served as track chair of corporate social responsibility on 42<sup>nd</sup> EMAC (June 2013).

## **THESIS ABSTRACT**

This dissertation examines three moderating effects on innovation. First, the impact of reputation for innovation on corporate and product evaluations in user design products. Secondly, the effect of corporate social responsibility principles (CSR) on innovation capabilities is analysed. Finally, the role of managerial perceptions of environmental turbulence is investigated to understand the impact on the relationship between innovativeness and performance. Two criteria guided the moderators selected. First, moderators were identified by looking at trends in marketing research and practice in the 21<sup>st</sup> century society. Secondly, by revisiting the work of Peter Drucker along such trends, observing that his ideas are still very much emphasised by today's marketing scholars.

Chapter 1 provides the background for the following chapters. We review Drucker's insights on the moderators and how they relate to this dissertation. This chapter also sets the definitions that will guide the three essays. Chapter 2 introduces the question of open innovation, particularly how a user design label impacts corporate and product evaluations. This framework is tested in firms high and low in reputation for innovation, in the apparel and fashion industries. Insights were gained on how perceptions of innovation can be hampered (or helped) from a user design label. Chapter 3 analyses in a context of high-tech industries how innovation capabilities are developed for firms that pursue CSR principles. The result is a novel finding on how CSR principles and innovation can be synergistic to export performance. Chapter 4 questions whether the effectiveness of new service success is contingent upon managerial perceptions of the environment in the hotel industry. This essay shows that how managers perceive the environment has implications for resource allocation and consequently to innovation.

Chapter 5 provides an overall discussion for managers and theory and leaves suggestions for future research.





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# 1. INTRODUCTION

## 1.1. Marketing and innovation

Drucker, probably the most well known modern philosophers of business, has set the foundation for most areas of business research offering guidance to managers as well as academics (Darroch, Day and Slater, 2009). Drucker seminal work *The Practice of Management* still has considerable relevance today and the underlying principles may well prove timeless offering guidance throughout the 21st century (Zahra, 2003). The following definition is particularly inspiring to guide our work through:

“There is only one valid definition of business purpose: to create a customer. .... Therefore, any business enterprise has two—and only two—basic functions: marketing and innovation.”

—Peter Drucker (1954), *The Practice of Management*, pp. 39–40

Drucker (1954) argued for the importance of marketing and innovation to achieve the purpose of business: to create a satisfied customer. Innovation, the diffusion or acceptance of ideas, processes, products and / or services that are considered new for those adopting them (Garcia and Calantone, 2002) is the process whereby firms address changing environments or drive changes to create markets. Drucker identifies two approaches to new product development: either meet the needs of the market or drive changes in the market (Drucker, 1986). Marketing and innovation go hand in hand because they define the mission (theory of business) by focusing the organization on its course (customers) and are the tools to address them (Marciariello, 2009). While marketing identifies the customer innovation it develops new or modified products to that customer. Satisfied customers allow the firm to be better than other competing firms in the marketplace. Some authors have confirmed that for greater innovation

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effectiveness, the need for marketing-R&D integration increases with the level of innovation desired and the environmental uncertainty experienced (De Luca and Atuahene-Gima, 2007).

An extensive literature has supported the linkage between market orientation concept and innovation as proposed by Drucker (Morgan, Vorhies and Mason, 2009; Noble, Sinha and Kumar, 2002; Homburg and Pflesser, 2000). The positive relationship between market orientation has been established with product performance (Han, Kim, and Srivastava, 1998), new product performance (Baker and Sinkula, 2005) and product/market exploitation and exploration (Atuahene-Gima, 2005). Drucker was among the first to propose that marketing is not selling but about understanding the customer, already foreseeing the shift in the marketing paradigm in the coming future. Marketing evolved from a selling concept, focused on promotional efforts to win the customer, to the marketing concept whereby marketing is responsible to determine consumers' wants and needs and delivering satisfaction among those lines (Mohr and Sarin, 2009). These beliefs later underlie Day's market sensing and customer linking capabilities (Day, 1994). While the paradigm was shifting, the concept of market orientation was maturing (Baker and Sinkula, 2007; Deshpande, Farley, and Webster, 1993; Kohli and Jaworski, 1990; Narver and Slater, 1990).

### **1.1.2 Drucker's perspective on open innovation**

By defining business, not in terms of existing customers, products, or markets, but in terms of what needs (articulated or latent) demand satisfaction, Drucker realized the value of casting a wide net for sources of information in the strategy formulation process when a company's technology/product road map is developed.

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This idea explains why analysing customers insights, namely through co-creation are of business relevance. Drucker's writings long emphasized a strong focus on the customer, meeting existing as well as latent needs of the market, and the concomitant need for information-based strategy development. Over after half a century from writing, firms are increasingly involving customers in the value-creation process through customer co-creation or co-production. Firms that engage in customer co-creation have been shown to experience higher levels of new product success (Nishikawa, Schreier and Ogawa, 2013). Although this idea is not new per se, the degree to which companies are harnessing the collective power of communities of consumers through technological developments (e.g., the Internet), and customers' desires to play an active role in product development (Moreau and Heard, 2010), has intensified this phenomenon in recent years.

Certainly, users as innovators and involving customers in the creation of the firm's breakthrough product/service innovations are consistent with Drucker's writings. A key challenge for marketing and innovation scholars is to identify and articulate the contexts that facilitate the effective use of a co-creation model with customers. We continue this intriguing line of research resulting from the shift of how consumer information is gathered towards the innovation quest. How do discriminating consumers perceive firms and products that are the result of this new model? Should consumers replace firms in their traditional roles as innovators or is this a new shift that companies need to approach with caution and within certain boundaries?

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### 1.1.3 Drucker's legacy on social responsibility

Drucker firmly believed that businesses had a responsibility to serve society's larger needs with economic success linked to social justice. In his writing of *The Practice of Management* he states that "what is most important is that management realize that it must consider the impact of every business policy and business action upon society. It has to consider whether the action is likely to promote the public good, to advance the basic beliefs of our society, to contribute to its stability, strength and harmony". CSR importance is mounting and academics have drawn attention to its implications. Researchers have started to look to CSR implications for a firm's image (Bown and Dacin, 1997), customer related outcomes (Luo and Battacharya, 2006), intangible resources (Surroca, Tribo and Waddock, 2010), firm performance (Branco and Rodrigues, 2006) and innovation (Hull and Rothenberg, 2008). Consistent with Drucker's views, these scholars emphasize that economic and societal goals need not be at odds, and that a business can make decisions in the service of both simultaneously (Smith, 2009). This issue notwithstanding the impacts of globalization and the greater interconnectedness of business and society was brought to a new dimension in an era of consumer scepticism towards organizations (Humphrey and Grayson, 2008; Fung, Fung and Wind, 2007) and where the invisible hand has in most cases gave way to regulation and legislation freeing organizations from their moral duties to law complacency. Drucker argued that the firm is a societal institution, one that serves a societal objective and provides a place in which people lead productive careers, make effective use of their talents and grow (Smith, 2009). We take this debate to a next stage by studying the relationship of these principles with innovation.



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### **1.1.4 Perceptions of the external environment**

In times of constant change how managers perceive the opportunities within the business determines how resources are allocated, which in turn impacts on organizational progress (Atuahene-Gima, 2005). The complex environment demands sophisticated managerial prowess. Companies that have changed our lives such as Google, Apple, Facebook, Skype (Wind, 2009) were born from innovations that challenged the prevailing assumptions of the time. Questioning long held beliefs gives rise to new opportunities and threats. It becomes important to understand the role of managers' perceptions in a climate of change. In 1985 Drucker specifically identified "change in perceptions" as important to the innovation endeavours. Perceptions that change the meaning of facts must be addressed because they contain innovation opportunities. How the world is perceived does not change facts and may even not be subject to economics dynamics but simply to the meaning that people attribute to a situation. Drucker elucidates this point with the transformation on the computer industry where without any further input the view changed from a threat to a business opportunity (Drucker, 1985). Thus, understanding how managers frame the external environment (glass half empty or glass half full) becomes important to understand the best strategy to employ (White, Varadarajan and Dacin, 2003). We join this debate by evaluating how perceptions of change against stability cater for different drivers of innovativeness.

### **1.1.5 Drucker's approach to internal and external factors**

Drucker view of the role of management stresses the importance of employees in the organizational endeavour. The business is created around the customer, and designed to serve the customer. The employees, regardless of their functional expertise, are

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organized to serve the customer as well. The business succeeds because it respects the contributions of both customers and employees. If on one hand, the customer is at the forefront of the business mission at the same time managers are responsible for promoting its human resources namely their entrepreneurial skills (Zahra, 2003).

Academics enlarged this debate by discussing where drivers of innovation are more effective: internal or external innovativeness. Those in favour of internal innovativeness argue that only the firm is able to come up with truly innovative solutions because they benefit from internal competencies, such as employees' entrepreneurial and innovation skills (Hornby, Kuratko, Sheperd, and Bott, 2009) and by its nature, is more protected from imitation (Reed and DeFillippi, 1990). Those in favour of external innovativeness argue that firms should have the customer at the heart of the organization (Baker and Sinkula, 2005; Gatignon and Xuereb, 1997; Deshpande et al., 1993). It is only then that firms will be in a position to satisfy customers and perform better against competitors. For Drucker these views are not irreconcilable. Innovation demands a systematic approach to define the business with internal departments informed by the external view. Managers had the responsibility to develop (internal) competences in entrepreneurship (Drucker, 1986) to be able to continue to find ways to adapt and innovate in the midst of change. As such, marketing plays a central role in sensing internal and external changes that might provide innovative opportunities (Wind, 2009). In this dissertation internal and external factors of innovativeness serve as the backbone to understand drivers of new service success under managerial perceptions of the environmental turbulence.

While these are broad topics this dissertation looks how some of these topics apply to today's organizations and how marketing and innovation are still at the forefront of thriving businesses (Darroch et al., 2009; Wind, 2009).

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### 1.2 Dissertation Overview

Researchers have struggled to arrive at a single concise definition that captures all the dimensions of innovation. A part of the reason for this definitional problem lies in the environmental complexity of the firm. Achieving something new and useful becomes increasingly challenging in a landscape of globalization, higher customer expectations, shorter cycle times and rapid technological change (Mohr and Sarin, 2009). Such challenging conditions bring new competitive rules that push managers to accept increasing levels of risk in their decisions, decreasing managers' ability to forecast and demand new structural forms that blur firm and industry boundaries. These conditions elevate the importance of innovation for firm survival and growth (Hurley and Hult, 1998) as the only response that can bring change in the organization to meet environmental change. At the same time, innovation is being democratized as users of products and services increasingly become part of the innovation process themselves (von Hippel, 2005). For the researcher, the rapidly changing business environment makes it an imperative to broaden the concept of innovation to reflect and accommodate fluid and indeterminate changes in a globalised economic landscape.

As we advance to create new knowledge and offer pragmatic direction for managers within the innovation domain, three shifts in business practice rivetingly draw the attention of innovation scholars: open innovation, corporate social responsibility and perceived environmental turbulence. The three essays in this research set out to track these trends whilst using validated innovation constructs, attempt to understand and shed some new light on the implications of such shifts.

#### 1.2.1 Essay 1

Chapter 2 introduces the first essay of the dissertation. This chapter draws on the open innovation paradigm to understand how products labeled as user designed can help or

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hurt the firm. The benefits of using external knowledge to innovation are well documented in the learning theory literature (March, 1991; Baker and Sinkula, 1999a) and innovation research (Franke, von Hippel and Schreier, 2006; Fuchs and Schreier, 2011) demonstrating benefits for the firm (Schreier, Fuchs and Dahl, 2012), for product (Nishikawa et al., 2013) and for those participating in the process (Fuchs, Prandelli and Schreier, 2010). Namely, consumers bring valuable insights keeping companies aware of trends; reduce costs involved in NPD (Ind, Eglesias and Schultz, 2013), enhance product variety (Al-Zu'bi and Tsinopoulos, 2012) and provide indication where future mass market needs lie (von Hippel, 2005).

Extant research has moved beyond objective challenges on internal structures and systems to deal with the inflow and outflow of knowledge from open innovation approaches. Subjective challenges have been reported for the firm image (Brown and Dacin, 1997), product evaluations (Fuchs et al., 2010) and its impact on consumers' preferences (Schreier et al., 2012; Thompson and Malaviya, 2013) and ultimately product demand (Fuchs and Schreier, 2011).

In spite of the growing interest in this field questions about how ordinary (observing) consumers perceive and evaluate the outcome of products that result from other consumers remain under researched. Particularly two studies point in opposite directions: Schreier and colleagues (2012) demonstrate a positive user effect on firm's innovation ability and consequently on willingness to pay and Thompson and Malaviya (2013) who reported lower product evaluations when consumers learn that an ad was created by other consumers. Essay 1 joins this debate.

To learn about how behavioural attitudes are influenced by such product characteristics is necessary, as they have implications in product and firm evaluations. To make the most of open innovation models managers need to fully understand the implications for

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new product development but also how the evaluations of such products are influenced by awareness that other consumers are the main responsible for creating the new product.

Essay 1 provides hints to questions such as: have R&D departments and budgets been out placed by the open innovation system? How should marketing departments manage the message about those involved in the new product development process?

### 1.2.2 Essay 2

In chapter 3 we present the second essay of this dissertation. We investigate whether innovation and principles of social responsibility have synergetic effects with innovation. We use the definition of exploitation and exploration (March, 1991) to understand how core competencies are pushed towards something new to the firm and result in more innovative offerings.

Innovation capabilities relate to the way the organization learns to come up with new offerings. They have been both recognized as essential for organization survival and growth. While exploitation capabilities are more aligned to short term views of the organization, incremental developments that contribute to improve efficiency (Levinthal and March, 1981) exploratory capabilities deals with the way the organization learns to achieve long term survival. Exploration demands acquiring new competencies, new knowledge, distant search from different fields that allow the organization escaping the incremental improvements (that eventually all competitors catch up with) by coming up with new to the world products (Atuahene-Gima, 2005).

The way innovation capabilities are developed is influenced by the strategic orientation the firm takes. This refers to the elements of a firm's internal intricacies employed to

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guide the interaction with the market (Gatignon and Xuereb, 1997). One of such orientations pertains to the focus a company places on its technology (Zhou, Yim and Tse, 2005). Companies that focus on technological advances are intrinsically linked to innovation. Particularly they develop exploitative capabilities through the commitment to R&D and openness to state of the art technologies that improve product efficiency or by proactively searching new technology paths for new product development (Zhou and Wu, 2010; Chandy and Tellis, 1998). Generally, researchers accept that a technology orientation is important to innovation and new product performance (Zhou et al., 2005; Gatignon and Xuereb, 1997).

An interesting point arises when we look at this framework in a CSR context. Past research demonstrated that environmental concerns can lead to superior new products through their enhanced functionality in terms of environmental performance (Russo and Fouts, 1997) particularly for technology oriented firms (Nidumolu, Prahalad, and Rangaswami, 2009). But it has paid little attention to how innovation capabilities are affected (if at all) by the presence of CSR principles in the course of their new product development. Stakeholder theory has acknowledged that the integration of multiple stakeholders' views in the business brings conflicting views, for example, customers wanting cheaper products while legislation demanding more (costly) environmental friendly inputs. The way the firm learns to address these conflicting views impacts on the development of innovation capabilities.

Understanding such dynamics allows managers to regard CSR principles either as a matter disconnected from new product development or alternatively as an innovation related investment. If CSR principles relate to innovation capabilities to some extent then managers ought to acknowledge a further tool to address performance beyond meeting the legislator requirements and built on firm image.

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Guided by stakeholder theory (Donaldson and Preston, 1995), we predict that the existence of knowledge pertaining to a broader stakeholder base will increase the knowledge available and will make the firm work within tighter boundaries. The new boundaries (conflicting views) demand new or updating existing capabilities that will have to be incorporated when developing new products (Driessen and Hillebrand, 2013).

### 1.2.3 Essay 3

Environmental change (market and technological) are amongst the most common market forces used in the innovation literature. They reflect the rate of change in customers' composition and preferences over time (Kohli and Jaworsky, 1990) and the technological rate of change. Previous research has identified environmental turbulence as among the most important moderators when studying the impact of a customer focus (Han, Kim and Srivastava, 1998). Findings point to different results: while some find a positive effect of environmental turbulence on firm performance (Homburg and Pflesser, 2000; Gatignon and Xuereb, 1997) others identified that the relationship becomes weaker (Han et al., 1998) when changes in the market are constant and fast. Slater and Narver (1995) advise that a learning organization is the root to overcome the limitation posed by a strong customer focus (likely to lead to incremental product changes) and the limitations turbulence might place on the firms' direction towards profitability. The role of managers to encourage learning is needed to fully understand an innovative culture, one that coaxes the best efforts and ideas from people (Slater and Narver, 1995).

Parallel to the debate about objective environmental turbulence, a moderator of the impact of a customer focus on innovation is the role of managerial perceptions about

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the environment in which the firm operates. Managers typically have an important role in organizational responses to the environment through their responsibility to interpret the environment and communicate it among the organization (Atuahene-Gima, 2005). Such interpretation will impact on the magnitude and the resources committed to a particular solution (White, Varadarajan, Dacin, 2003; Thomas, Clark and Gioia, 1993). What research has not yet addressed is the direction of such action.

Understanding how managers who read opportunities in the environment can instill a learning orientation to promote entrepreneurial values is of paramount managerial importance. Not only the entrepreneurial spirit in companies helps to boost their bottom lines, but also send them in profitable new directions by turning employees into in-house entrepreneurs, particularly when perception of environmental change renders consumers unable to express exactly what their needs are. Furthermore the trade-offs between internal versus external innovativeness are important because they require (scarce) resource allocation. So managers need to feel confident they are pursuing a suitable path to performance.

Guided by learning theory - the development of insights and knowledge that facilitates changes in behaviours leading to innovative outcomes (Fiol and Lyles, 1985), Chapter 4 will investigate how a learning orientation strengthens perceived environmental opportunities to support an entrepreneurial culture and achieve higher success.

To summarize, Table 1.1 identifies the three broad fields of innovation and various subfields within each of them.



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**Table 1.1 Summary of the innovation topics under research.**

Innovation Field	Object of Research	Main Author(s) used
Consumer Behaviour	Essay 1 Open innovation: effects of user- design	Schreier, Fuchs and Dahl, 2012 Thompson and Malaviya, 2013 von Hippel, 2005
Organizations	Essay 2 Corporate Social Responsibility	Driessen and Hillebrand, 2013 Luo and Battacharya, 2006 Maignan and Ralston, 2002
	Essay 3 Managerial perceptions of the environment	Atuahene-Gima, 2005 Dutton and Jackson, 1987 White, Varadarajan and Dacin, 2003

### 1.3 Theoretical Background

To address the trends identified above we have looked at several definitions of innovation. Numerous typologies of innovation have been advanced in the relevant literature (Garcia and Calantone, 2002). Among them some are particularly useful for our research: innovation versus innovativeness, the concept of innovation capabilities, product versus service (process), radical versus incremental and consumers versus the manufacturer perspective.

#### 1.3.1 Innovation

Innovation reaches all areas of society from services to products, consumers to businesses, for-profit businesses to NGO's, the private to the public sector. It can be as small with benefits related just to a single person (as a consumer changing a product from what the manufacturer intended it) to major technological advances such as the internet, with worldwide implications. Regardless of the sector and the magnitude of its

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impact, we take the view (marketing perspective) that innovation is the development of new or modified products or services for customer satisfaction and increased revenue (Hauser, Tellis and Griffin, 2006).

The broadness of the concept has called for the distinction of various types of innovation in the scholarly literature. Different types of innovations impact differently on markets and competition (Cooper and Kleinschmidt, 1995) and help to explain different adoption behaviours and to identify drivers of innovation. Garcia and Calantone (2002) review concepts and definitions used in the literature. Their work highlights that the level of analysis and the scope of innovation employed leads to different impacts of innovation on performance. Without contextualizing properly where the study of innovation takes place so that differences are perceived at the outset, results can bring misleading conclusions just because the focus is on a particular aspect of innovation and can jeopardize academic advancements in new product development. As such, we employ different perspectives of innovation according to the subject at study.

### ***Innovation versus innovativeness***

Essay 3 uses innovativeness as the core concept. Although the terms “innovation” and “innovativeness” are often used interchangeably in marketing and management research, there is a key difference between the two concepts. Whereas “innovation” focuses on the outcome of a firm’s activity (i.e., goods and services), “innovativeness” refers to the capability of a firm to be open to new ideas and work on new solutions (Crawford and Di Benedetto, 2003). Hurley and Hult (1998, p. 44) define innovativeness as “the notion of openness to new ideas and an aspect of a firm’s culture... a measure of the organization's orientation toward innovation.”

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Innovativeness refers to an enduring characteristic and not to success at one point in time (Im and Workman, 2004; Hurley and Hult, 1998). Firm innovativeness is the propensity of a firm to develop new products or to adopt innovations. Desphande, Farley and Webster (1993) define innovativeness as the extent to which a firm deviates from its current practices in developing new products and services. Innovativeness can also be measured at the product level. Product innovativeness is seen as the degree of discontinuity in marketing and/or technological factors, measure most frequently as the degree of newness of an innovation (Garcia and Calantone, 2002). Essay 1 briefly touches on the levels of innovativeness perceived in a product.

### ***Innovation Capabilities***

A common classification is to define innovation based on competences. Danneels (2002) distinguishes innovation based on the competences of the firm, either more focused on technology to reach existing markets or to take technology to new markets. This framework draws on the work of March (1991) and Leonard-Barton (1992) of exploration and exploitation, two different capabilities for developing innovations. Exploration is more related to what is new – search for new products, ideas, markets or relations, experimentation, risk taking, discovery. Exploitation is more about using and refining what already exists, adaptation, efficiency and execution (March, 1991). Exploitative innovations draw on firm's existing knowledge and competences (Levinthal and March, 1993). Exploration requires new knowledge or departure from the existing one. Exploratory innovation leads to radical innovations, designed to meet the needs of new customers and representing fundamental changes in the firm's technological trajectory and market activities (Athuahene-Gima, 2005). Exploitative innovation generates incremental innovations, aiming at satisfying existing customers.

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Danneels' framework identifies a continuum from pure exploitation to pure exploration, from technological competences within the firm applied to existing customers to new technical competences on new market segments. The middle quadrants are those where new technology is used for existing customers (leveraging customer competence) and new market segments using the already existing competences. In this study we use this definition to guide our work in essay 2.

### ***Product and Service Innovation***

Product innovations are tangible objects that deliver a new level of performance to adopting users. They deal with outputs, new products introduced for the benefit of the customer. Examples of product innovations include Apple's iPod, mobile phones and Procter & Gamble's Febreze odor eliminator. Service innovations are more intangible, less consistent, less separable in production and consumption and more perishable than goods (Zeithaml, Parasuraman and Berry, 1985). Service innovation reflects the tools, devices and knowledge utilized between an input and an output. They can be new service concepts (iTunes), a new way to interact with customers (Dell Direct online computer stores), or a new way of service delivery (online grocery delivery). Service evaluations are based on different expectations than goods and are grounded in the processes and outcomes (Zeithaml, Berry and Parasuraman, 1993). These differences indicate that studying innovation in services is different from studying innovation in products. Henard and Szymansky (2001) conducted a review of drivers of innovation where (among other factors) they analyzed the moderating role of studying innovation in services or products. They reported higher correlations between innovation and performance in service that used less formalized approaches to innovation and draw on marketing synergies, than products. The non structured approach reflects the nature of

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heterogeneity in services, requiring less formalization in innovation to cater for customization of consumers' needs. The intangible nature of the service (Zeithmal et al., 1985) also indicates that firms derive more from innovation when they associate other knowledge in the new offering such as brand name and other services. Essay 1 and 2 focus on product innovation while essay 3 uses a service setting for its empirical context.

This dynamic of innovation in services versus goods becomes particularly interesting given that recent developments in the business world are pushing for more hybrid structures of products. For example, the iPad or iTunes are a mixture between a product platform that encompasses both product and service. It becomes relevant to understand if innovation in products and services relates to the same framework in order to translate findings to a more common form of hybrid products.

### ***Incremental and radical innovations***

Henderson and Clark (1990) provide another commonly used innovation framework to classify innovation. The authors employ a continuum of innovation from incremental to radical. Incremental innovation “refines and extends an established design. Improvements occur in individual components, but the underlying core design concept and the links between them remain the same” (p.11). This is the most common and proficient type of innovation. We can see them in everyday life when a company extends a product line or adapts an existing product to enter a new market. At the other extreme we will find radical innovation which represents fundamental changes in products or activities of an organization or an industry opening the firm to new potential applications and markets. For example, the introduction of digital cameras allowed Cannon to reach new markets and new applications such as medical imaging.

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### *Perceptions of innovation*

Another important view of innovation is about consumers' perceptions of the innovative offering. It is the end consumer that ultimately determines the degree of success of an innovation. Many innovations fail within the first three years of their introduction into the marketplace (Wilke and Sorvillo, 2005). To ensure that innovations are more successful in the marketplace, the consumer perspective is essential. Purely expert-based views of innovation often fail to provide solutions for consumer needs because experts and consumers may view innovation differently (Gourville, 2006). Marketing researchers have noticed the disconnection between what marketers deem new and innovative versus what consumers actually perceive. In fact manager's perceptions of their products' innovativeness is not always shared by consumers (Calantone, Kwong and Cui, 2006) drawing attention to the importance of looking at the product benefit that are unique to the product as well as if products are perceived as meaningful by the customer. For example, experts may view innovations solely from a technical and functional perspective, whereas consumers may be concerned whether the company's offers fit their lifestyles and create them new experiences (Goode, Dahl, and Moreau, 2013).

Sethi, Smith and Park (2001) define innovation as the extent to which the product offer is different from competing alternatives in a way that is valued by customers. The authors refer to it as the "meaningful uniqueness" echoing definitions from social psychology on creativity (Amabile, 1983) and in marketing namely in mature products (Andrews and Smith, 1996). Novelty refers to the extent to which a concept, idea or object differs from conventional practices within the domain of interest. Appropriateness is the extent to which a given output is viewed as useful or beneficial

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to some audience (Jackson and Messick, 1965). Essay 1 investigates perceptions of innovativeness around the novelty and appropriateness dimensions.

### 1.3.2 Models of innovation

Not only perception of innovation can determine if an innovation becomes at all an innovation (through their market success) but the traditional way companies achieve innovation (e.g. internal R&D labs) is being challenged by the emergence of user innovation. Many consumer goods firms are challenging the traditional paradigm and experimenting with new ways to more actively integrate users into the idea generation process. In extreme cases, firms like Threadless no longer employ designers but rely exclusively on their user communities to generate new products (Ogawa and Piller, 2006).

The traditional model firms (producers or manufacturers) obtain inputs from suppliers to develop and produce goods or services, which they then sell to buyers. The paradigm is shifting towards consumers as sources of innovation particularly with the advent of Web 2.0. This challenges the very concept of the firm by opening the firm's walls to an outside world of potential contributors – from customers and suppliers to competitors and universities. Firms that have embraced this approach have often developed a specific portal for collaborations including Nike's NIKEiD, Lego's Design by Me and Starbucks' My Starbucks Idea. Inhabitat holds an annual design competition asking consumers to offer ideas for new uses of old household items, from which consumers can cast their votes, and a panel of expert judges anonymously selects the winning products (Slotegraaf, 2012).

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Several authors (Borges, Afuah and Bastian, 2010; von Hippel, 2005) argue that this is not a new concept for firms, since firms have long looked beyond their boundaries to develop new products and services. Borges and colleagues (2010), in their review of users as innovators, identify research on users as innovators as dating as far as Adam Smith (1776). Here he describes the story of how a young boy achieved an important innovation by pursuing its own interest of gaining time to play with its fellow mates:

“In the first fire-engines, a boy was constantly employed to open and shut alternately the communication between the boiler and the cylinder, according as the piston either ascended or descended. One of those boys, who loved to play with his companions, observed that, by tying a string from the handle of the valve which opened this communication to another part of the machine, the valve would open and shut without his assistance, and leave him at liberty to divert himself with his play fellows. One of the greatest improvements that has been made upon this machine, since it was first invented, was in this manner the discovery of a boy who wanted to save his own labour.” (pp. 114-115)

Then research grew to identify how intermediaries provided valuable inputs to producers that would allow producers to proceed with innovations that better met customers' needs (Borges et al, 2010). From the 80's onwards a stream of research initiated by von Hippel argues that users themselves can become innovators (instead of producers) and are able of coming up with commercially valuable innovations (von Hippel, 1998; 2005). This sparked a new stream of interest on users as innovators that extended to areas as diverse as industry dynamics, entrepreneurship, firm boundaries,



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innovation communities, measurement, and policy (e.g., Shah and Tripsas, 2007; Baldwin, Hienerth, and von Hippel, 2006). Essay 1 centres on another perspective from this new stream of research, perceptions of innovation in products labeled as user designed. By contrast essays 2 and 3 work in the traditional innovation framework whereby professionals are the responsible for developing the firms' new products.

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## **ESSAY 1 HOW INNOVATIVE ARE THEY? THE MODERATING ROLE OF FIRM REPUTATION FOR INNOVATION AND PRODUCT ASSESSMENT OF A USER DESIGNED LABEL.**

### **2.1 Abstract**

This study looks at how corporate and product characteristics are perceived by consumers across three different product innovation modes: when designed by users, by company's professionals, and jointly designed by users and professionals. This framework is tested in firms with high and low Reputation for Innovation (RFI). When comparing just between users and professionals (study 1) results indicate that in a context of firms low on RFI consumers prefer a professional design over a user label design, while in the case of high RFI, consumers prefer a user design - higher product evaluation and purchase intention. Interestingly, this effect was reverse for product functionality in firms low on RFI (preference for professional-design) confirming the importance of professionals' presence when assessing product form. When joint design mode is included in the comparison (study 2), results show that consumers perceive more ability to innovate in a joint design and this is reflected in higher corporate attitudes , higher purchase intention and enhanced willingness to recommend the company, compared with other design modes.

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## 2.2 Introduction

Innovation, the process of bringing new products and services to market, is one of the most important issues in business research today. It still remains high on many Chief Executive Officers' agenda long after Schumpeter's hallmark of creative destruction was introduced in 1942. The dichotomy called attention to the power effects innovation has in the marketplace (Schumpeter, 1942). By finding new solutions to problems, innovation allows big jumps in the technology path that can destroy existing markets or transform old ones since it disrupts incumbents while propelling new entrants to dominant positions. Without innovation, incumbents slowly lose both sales and profitability while innovative competitors gain consumers' preferences.

Recently companies started to realize that consumers can help in the innovation effort (Prahalad and Ramswamy, 2004). Companies such as Lego, Nike and Procter & Gamble have in the last few years starting to hand part of the innovation process to the consumer (Moreau and Herd, 2010; Humphreys and Grayson, 2008) with information technologies, broadband and social media elevating the importance of consumers in new product development (NPD). Consumers in the new digital world are developing their favourite designs and beat companies in their own game (Nishikawa et al., 2013). The most successful companies are now those capable of exploring customers' experiences while exploiting consumer's creative potential to their own benefit (Prahalad and Ramaswamy, 2004). The new approach to value creation in product design is searching for high quality new ideas coming from the common consumer (Sawhney, Verona and Prandelli, 2005; Vargo and Lusch, 2004; Chesbrough, 2003; von Hippel, 1996). For example, Microsoft realized the open innovation potential when successfully launching its Kinect software (8 million units sold in two months). The software was attacked by hackers given it unintentional new functions. Instead of

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entering long battles to sue the hackers, Microsoft opened its software, changed its UBS portal and invited software development from hackers achieving a competitive advantage in the market (von Hippel, Ogawa, and De Jong, 2011). This example highlights the potential benefits of including consumers in the design and innovation process.

Companies pursuing consumer input in the innovation process need not only to weight aspects of consumer participation such as enhanced product attitudes (Fuchs and Schreier, 2011), and the innovation outcomes, but also how observing consumers regard products that have a strong consumer input. Recently Schreier, Fuchs and Dahl (2012) stressed that observing consumers –those that consume products but do not participate in its design - are more willing to buy user-designed than firm-designed products. Their findings indicate that at the point of purchase consumers have positive attitudes towards user-designed products. On the other hand, other studies (Fuchs, Prandelli, Schreier and Dahl, 2013; Thompson and Malavyia, 2013) focused on the critical thought that arise when consumers learn about a user label, with findings suggesting that a user design on its own may hurt corporate and product evaluation. These views have implications for marketers in general and for our research in particular: the extent that unveiling that a product was designed with the consumers' participation is beneficial or harmful to the firm.

Our study aims to shed light on the impact of learning that a product was designed by consumers on corporate and product evaluation. More specifically, we aim to understand to what extent awareness that a product was co-designed with consumers affects observing consumers' attitudes towards the company. Although previous research has documented benefits of involving users for the firm (Schreier et al., 2012), for product (Nishikawa et al., 2013), as well as for those participant in the process

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(Fuchs et al., 2010), to our knowledge little is known about how observing consumers evaluate such consumer participation (see Schreier et al., 2012, for exceptions). This topic merits attention since models of open innovation are becoming more prevalent (Slotegraaf, 2012) and insights on how to label products are needed as labels can either foster or hinder perceptions of innovation ability, affecting the firm value.

Secondly, this study investigates whether attributes perceived in a user label are influenced by the firm *Reputation for Innovation* (RFI). A user design influences consumers' perceptions of firm ability to innovate (Schreier et al., 2012) whereas firm's RFI influences consumers' responses to marketing strategies (Henard and Dacin, 2010). In a world of excess of supply, where purchasing is often separated from the augmented product experience (e.g. through online shopping, catalogues and billboards), RFI can reduce the uncertainty and cognitive processing efforts associated with innovative offers (Erdem, Wait and Valenzuela, 2006).

In high RFI firms, consumers are more involved and excited about the firm and its offerings displaying favourable attitudes (Henard and Dacin, 2010) than in firms that do not possess a history of innovative offerings. These favourable dispositions will interact with individual interpretations about the quality of a user design against the default design (professionals). Previous research (Fuchs et al., 2013; Thompson and Malavyia, 2013; Schreier et al., 2012) have identified that consumers either feel familiarity with the source of product design (identification) or question the competences of the source (scepticism). Since firms high in RFI have been developing consistently innovative products in the past and are expected to continue to do so, consumers incorporate such expectations in the firm's new initiatives displaying more excitement and tolerance for the new products (Henard and Dacin, 2010). Additionally, consumers are also unlikely to penalize the firm for any deviant behaviour (Barone and Jewell, 2013). In the present

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research we investigate whether consumer responses to design labels differ in firms high and low in RFI. To our knowledge, no previous research has analyzed the boundary condition of RFI on behavioural attitudes toward new product design. This will shed some light whether publicly fostering users' contributions is strategically beneficial accordingly to firm's reputation.

Our hypotheses are tested in two studies. Study 1 analysis user and professional design in firms high and low in RFI for a better understanding of product evaluations. Study 2 tests whether corporate associations differ between three design modes: a professional design, a user design and a joint design, and how they relate to company's behavioural attitudes (purchase intention and willingness to recommend the firm).

### **2.3 Models of innovation**

Traditionally products commercialized by companies have been conceptualized and designed by companies' professionals (Prahalad and Ramaswamy, 2004). A professional design advantage lies in the notion that expertise is the driver of innovation. The more competence and experience "inventors" have, the higher the expected quality of their solutions (Helfat, 1994), assuming professionals try to identify and solve a relevant problem by inventing a creative solution. Professionals have (or are perceived to have) a deeper understanding of concepts familiar to the firm's technology and are able to identify valuable knowledge elements within new ideas, to develop connections among them, and to combine them in many different and significant ways that are not apparent to less experienced users of those concepts (Katila and Ahuja, 2002; Kristensson, Gustafsson and Archer, 2004).

Interestingly, the view that the locus of innovation is on corporate research and R&D departments- embedded in a vertical commercialization structure, was challenged by

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previous studies that demonstrated that external sources of innovation could complement internal assets (Chesbrough, 2003). This view argues that firms can and should use external and internal ideas to advance technological innovations. Extant research has looked at how firms obtained innovation outside the firm, from suppliers (Al-Zu'bi and Tsinopoulos, 2012), universities, competitors or individuals (Lilien, Morrison, Searls, Sonnack, von Hippel, 2002). In some cases, the firm is explicitly organizing or producing the innovation for its own benefit, by integrating individuals in the innovation process, co-creation (Prahalad and Ramaswamy, 2004) or crowdsourcing (Poetz and Schreier, 2012). In other cases the firm is absent from the process, particularly, lead users innovation has been stressed as an important source of new ideas in new product development (NPD) (Lilien et al., 2002; Nishikawa et al., 2013; von Hippel, 2005)<sup>1</sup>. Findings from these authors demonstrated the ability of consumers to take the role of design professionals, helping companies to be more successful in the marketplace. With this field of research, consumers emerge as provider of ideas, who share knowledge or participate in the development of products that can be of value to other customers. When this role occurs jointly, consumers are co-creating value with the firm (Hoyer, Chandy, Dorotic, Krafft and Singh, 2010). Several cases illustrate consumers' ability to innovate by developing higher value propositions. For example, Threadless.com a t-shirt company asks consumers to submit and vote designs for sale. Also Fluevog - a shoes' company- asks for designs, selecting the best and allowing consumers to vote which ones to produce (Humphreys and Grayson, 2008). Other companies like Lego and BMW use its community base to come up with new designs (Schreier et al., 2012). Companies use different levels of consumers' input when

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<sup>1</sup> An important distinction between consumers' input in the value offer of companies and traditional market research needs to be made. Whereas traditional marketing research uses consumer input the creative process is restricted and fully control by the company (the questions asked, the recall of user experience) therefore difficult to tap into future or unspoken customer needs (Franke, Keinz and Slegler, 2009). Co- creation echoes in Prahalad and Ramaswamy's (2000) active customer. When co-creating the user is actively engaged in creative problem-solving, with skills and competences that can be used to the firm's value creation. Consumers are no longer just a source of information but actively participate in early stages of product development.



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involving consumers in the innovation process. Some collaborate with consumers across all the stages of the NPD, i.e., ideation, product development, commercialization, and post launch activities (scope). Others focus within a particular stage of NPD (intensity),, relying exclusively on consumers for activities development in a particular stage. Threadless.com fully empowers consumers, Fluevog retain control by choosing the best design and reworking some of the ideas for more functionality, Lego and BMW allow creativity from the consumer but retain control over the functional side of the product.

Theoretically, the lead user's theory developed by von Hippel (1998, 2005) was the first attempt to demonstrate that many significant innovations were originally developed by users. In a recent survey in the UK, US and Japan, von Hippel and colleagues (2011) found that over 19 million consumers innovated for themselves. Empirical studies have tested the value of consumers' contribution to innovation outcome (Frank, von Hippel and Schreier, 2006). In particular, evidence was found of the ability of consumers to come up with innovative and commercially valid ideas (Ogawa and Piller, 2006; Poetz and Schreier, 2012), greater product variety and product lines (Al-Zu'bi and Tsinopoulos, 2012; Lilien et al., 2002), and market performance (Hienerth, 2006; Nishikawa et al., 2013).

### **2.4 Design Mode**

The integration of external sources in NPD gave rise to products that are designed internally (professionals), externally (users) or jointly (users and professionals). The lead user's perspective emphasizes the prevalence of users in new product development. Users innovate by employing their own knowledge and creativity to achieve higher utility for their own benefit. Higher benefits are then appropriated by the firm or alternatively user-innovators can decide to compete with the firm. This source of design

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has been extensively used in commercial ads (e.g. Unilever, General Motors or PepsiCo) (Thompson and Malavyia, 2013), in brand communities (e.g. Mini Cooper, Lomo and Hega) (Schau, Muñiz and Arnould, 2009), radical sports (e.g. kite surfing) (Franke et al., 2006), furniture (e.g. Muiji) (Nishikawa et al., 2013) and toys (e.g. Lego) (Schreier et al., 2012). Product design suddenly seems to become the responsibility of individuals outside the firm which merely acts as a producer and distributor at large scale of the products developed by individuals (Schreier et al., 2012). We call this a user design mode.

Opening NPD to external sources can also result in a collaborative work between individuals outside the firm and its professionals. Co-creation and crowdsourcing are among the terms used to describe this design mode (Sawhney et al., 2005). The consumer takes an active role in the development of new products, offering firms prototypes or conceptual products that producers can then transform into commercially valid products. This is a hybrid design mode where both consumers and professionals share the responsibility of creating a new product (Prahalad and Ramaswamy, 2004). We refer to this design mode as a joint design equivalent to co-creation.

Finally, companies can continue to develop products internally (e.g., R&D labs), to use traditional market research tools for prototyping testing, needs assessment and other traditional market research input (Moreau and Herd, 2010). We refer to this as a professional design.

## **2. 5 Implications of the different design modes**

The benefits from having consumers at the wheel of product design are well documented (Nishikawa et al., 2013; Poetz and Schreier, 2012; von Hippel, 2005). Consumers not only bring valuable insights and keep companies abreast of trends, reducing NPD costs and bring higher consumer involvement, satisfaction and loyalty towards the firm (Ind, Eglesias and Shultz, 2013). However, the question about how observing consumers see consumers and firms intertwine seems to have more subtle implications. On one hand, observing consumers perceive higher value in firms that foster customer participation (Fuchs and Schreier, 2011; Fuchs et al., 2010), aligned with the trend for more democratic views of the market. Companies are frequently perceived to abuse their power, by seducing consumers instead of actually trying to help them satisfy their needs (Humphreys and Grayson, 2008). From the customer point of view if they are the ones benefiting from using products, it also makes sense to let them co-create new designs or to decide what should ultimately be produced (Sawhney et al., 2005; Prahalad and Ramaswamy, 2004).

On the other hand there is research pointing to a darker side of customer involvement in NPD (Franke, Keinz and Steger, 2009; Thompson and Malaviya, 2013). Consumers may be skeptical about users innovating on the behalf of the firm. Recent work started to address the negative effects of displaying a user design label (Thompson and Malavyia, 20132; Fuchs et al., 2013), with authors focusing on perceptions about the technical skills of users. Consumers compare users with professionals' skills, drawing upward social comparisons as professionals often have a significant advantage, either real or perceived, over consumers, in terms of their knowledge, training, and experience (Moreau and Herd, 2010). Labeling the product as user designed draws attention to the abilities of the creator as a capable agent. However, skepticism may also arise because

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consumers evaluate products based on their beliefs about agents' competencies (Thompson and Malaviya, 2013).

The work by Fuchs and colleagues (2013) focused on how quality perceptions and status are reduced when introducing a user designed label. Their findings suggest that users may be perceived as not possessing enough expertise and know how to come up with superior products, contaminating perceptions of higher capacity and status of professionals. Because a user designed label unbalances social comparisons, product demand is reduced.

### **2.6 Firm Reputation for Innovation**

When evaluating a user design, the consumer will have to make inferences about some missing links: if designed by X then products will be Y, drawing conclusions about the product. Inferences are formed when consumers use specific cues (e.g., their own beliefs) to draw general conclusions about the firm or the product (Kardes, Posavac and Cronley, 2004). Evaluating the outcome of a design mode (in contrast to the traditional model) requires consumers to infer how some linkages will lead to certain outcomes, using past associations to infer specific attributes of those products (Brown and Dacin, 1997; Gurhan-Canli and Batra, 2004). Firm reputation for innovation can be therefore an important cue to assist the inference process (Mishina, Bloch and Mannor, 2012).

A firm reputation is an assessment of the capability of the firm to create value in the future based on its characteristics and quality of its previous actions (Frombrun, 1996; Mishina et al., 2012). These signals are stored in consumer memory and retrieved whenever a product assessment is necessary, representing firm level properties that can influence consumer response to marketing activities (Barone and Jewell, 2013; ; Henard and Dacin, 2010; Brown and Dacin 1997). Firms high on RFI provide extrinsic cues

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about their level of innovation, stimulating vertical comparisons (superior outcomes), because the target of comparisons (the new product) is perceived as standing above other comparable products because of the firm's "track record" of successful and meaningful solutions over time. For example, a company name can be a signal of firm's attributes (reputation) such as quality and innovativeness or as a good corporate citizenship (Luo and Battacharya, 2006).

The importance of reputation (corporate abilities) is well documented in product evaluations in general (Luo and Battacharya, 2006; Bown and Dacin, 1997), high risk products (Gürhan-Canli and Batra, 2004), customer satisfaction (Luo and Battacharya, 2006) and excitement, commitment and loyalty towards the firm (Henard and Dacin, 2010). Reputation reduces the uncertainty contained in product newness (Stock and Zacharias, 2013) and legitimates in consumers' eyes (innovative) deviant behavior from firms (Barone and Jewell, 2013). However, no previous studies have tried to analyse the impact of RFI on evaluation of different design modes.

### **2.7 Hypotheses Development**

According to the cue consistency theory (Miyazak, Grewal and Goodstein, 2005; Maheswaran and Chaiken, 1991) individuals prefer consistency between past and present signals. Multiple sources of information are more useful when they provide corroborating information than when they offer disparate conclusions. When cues are consistent, they are more likely to be used jointly in product evaluations thus resulting in an additive effect of both sources of information (Maheswaran and Chaiken, 1991). Using consumers input in NPD is more likely to be associated with a positive outcome in firms that already have an established track of coming up with innovative offerings (Brown and Dacin, 1997). Consumers will look to corroborate the design mode with the

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firm reputation given that reputation has been built over relatively long periods (reliable) and will weight more the cues that confirm past expectations (Mishina et al., 2012). Moreover, consumers will discount the effect of inconsistent reputation cues relating them to situational factors or lack of firm's motivation or effort (Mishina et al., 2011; Page and Herr, 2002; Maheswaran and Chaiken, 1991). Baron and Jewel (2013) refer to reputation for innovation as a credit to be used when the firm departs from the industry norms (traditional design). Secondly, firms with high RFI have higher consumer involvement and loyalty (Henard and Dacin, 2010), resulting in a larger customer base who provide more dedicated inputs from their customer base that can result in superior designs.

In firms low on RFI, consumers input in product design may be perceived as a low corporate ability. Research has shown that when information is inconsistent with prior expectations consumers will try to resolve the incongruence, engaging in a cognitive effort to understand product characteristics (Lynch and Srull, 1982; Thompson and Malavyia, 2013). If observing consumers cannot infer that the firm has high corporate abilities to integrate, assimilate and exploit such knowledge the firm is placed in a vulnerable position in the consumers' eyes. Labelling a product as user designed (an atypical design mode) heightens consumers' attention to the design source, triggering critical thoughts about the competence of those designing. Low RFI firm's have not yet been perceived to have establish a loyal and committed user base (Henard and Dacin, 2010, Schau, Muñiz and Arnould, 2009). In this instance a user design label draws more attention to the expertise and skills of the user base as no other cues are available for assessing a user design.

*H1a: Firms with high RFI are perceived as having higher ability to innovate in a user design than in professional design mode.*

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*H1b: Firm with low RFI are perceived as having higher ability to innovate in a professional design than in a user design mode.*

On the other hand, products have properties that communicate characteristics to consumers and differentiate them from competitors. For example, product design can communicate easiness of use (e.g., the Apple Mac), newness (e.g., Swatch emergence from the cluttered market of wristwatches) (Bloch, 1995), quality (e.g., Bang & Olufsen audio and video products) or price level (e.g., materials used in the product, aluminium casing in PCs). Labelling a product as user designed also communicates product characteristics to the observing consumer. These characteristics will be assessed according to competences that observing consumers perceive on those innovating. We believe that product evaluation of such labels will be related to whether consumers are observing products from an aesthetic (form) or functional (function) perspective.

Consumers experience product design in terms of its form (aesthetics) and function (capabilities), or as a unique combination of the two (Luchs and Swan, 2011). This distinction is important because intrinsic information about the quality of the outcomes may not be fully observable. Product form (aesthetics) evaluation, in incrementally new products is easier. First, it entails less risk, because it can be visually assessed requiring a minimum of cognitive effort (Goode et al., 2013). Consumers can make an affective judgment just by looking at the product and analyzing to what extent the product provokes sensory pleasure and stimulation or by contrast evokes distaste. Second, affective judgments are more subjective in nature so that the risk of a bad judgment can be attributed to different personalities. Interestingly, even when consumers are not experts, can contribute with new ideas and functionalities based on their personal creativity and experience of using products (von Hippel, 2005). Competences such as creativity, usage experience and divergent thinking are readily recognized in the

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common user (Schreier et al., 2012). Thus, the user design effect should be more salient in product form because assessments about the competences of the creator are easier to make. On the other hand, the function value of a product relates to its utilitarian value to fulfil specific needs (technical competences), i.e., quality, technical capacities and performance (Bloch, 1995). Consumers will activate their knowledge base to compare, contrast, and identify the product's new attributes, functionality and benefits (Moreau and Heard, 2010). Professionals have the knowledge, skill and experience to come up with higher designs and quality due to greater knowledge about how technologies can be used to achieve a satisfactory solution. Technical abilities are perceived as an important input for product performance (Moreau and Dahl, 2005). A professional's input prevents triggering critical thoughts in observing consumers. Without an obvious link between skills and outcome, consumers will engage in extra cognitive processing effort to assess product functionality (quality) in a user design mode. In this instance, critical thoughts are much more likely to develop.

Empirical evidence supports this view. Kristensson and colleagues (2004) found that ordinary consumers were able to produce more original ideas whereas professionals produced more realizable ideas (ideas able to develop into a final product). Since users may not be fully aware of technical limitations as professionals are, they are more likely to generate original ideas that integrate their own needs and requirements in product design (Schreier et al., 2012). Conversely, professionals creativity works within boundaries of expertise (professionals display higher convergent thinking) thus are more likely of identifying how technology can be used to enhance performance (functionality). Extending the external validity of Kristensson and colleagues (2004) study, Poetz and Schreier (2012) empirically tested user design in a business context.



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They found that users ideas scored higher in novelty and professionals in feasibility.

Thus, we expect:

*H2: Product design form (function) evaluation in a user (professional) design mode will be higher than in a professional (user) design mode.*

Reputation for innovation (past successes that have yield value and customer satisfaction) provide consumers with information about (current) product functional competence (Gurhan-Canli and Batra, 2004). In particular a firm RFI enables consumers to infer innovative product quality (Kirmani and Rao, 2000). Reputation acts as a proxy for skills and knowledge that might be absent in a user design mode. The relationship becomes less risky for the consumer i.e., they become less sceptical about the functional aspects while a favourable image is built for firm's outcomes (Henard and Dacin, 2010; Klink and Athaide, 2010). Reputation and opinions about a company within a group of interest reduces the uncertainty and cognitive processing efforts associated with innovative offers (Erdem, et al., 2006). This lowers consumers' perceived risk associated with the product. For example, the functional aspects of the shoes sold through the NIKEiD customization site are fully controlled by Nike; however, the aesthetic aspects of the shoes are primarily under the control of the consumer (Moreau and Dahl, 2005). Conversely, when consumers do not have any peripheral cue (RFI) they will invest more cognitive resources in assessing information. The presence of unexpected information (i.e. user design mode) is likely to carry greater weight (Lynch and Srull, 1982) and heighten considerations about skills and know how involved. In this instance, consumers experience higher uncertainty (Goode et al., 2013). Uncertainty yields negative effects on psychological variables (Petty, Brinol and Tormala, 2002) and consequently product evaluation (Stock and Zacharias, 2013).

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Higher uncertainty and cognitive efforts resources are likely to result in a lower evaluation of a user design. Thus, we expect:

*H3: Consumers evaluate higher product design function on a user design mode, in firms high on RFI than in firms low on innovation.*

Hybrid models of innovation become superior only for those firms that are able to master the benefits of internal and external sources of innovation (Keinz, Hienerth, Lettl, 2012). First, for the firm, any knowledge outside organizational boundaries is important to fill in gaps in product and business portfolios and updating R&D capabilities (Laursen and Slater, 2006; Chesbrough, 2003; Cohen and Levinthal, 1990). The learning literature reinforces this view. Combining internal with external knowledge (March, 1991) avoids rigidities (inertia) and maintenance of sub-optimal solutions by preventing firms from being stuck to their actual knowledge (Atuahene-Gima, 2005). The synergies of combining new with existing knowledge in NPD have been empirically demonstrated in high technology firms (Katila and Ahuja, 2002), low technology products (Lisboa, Sharmeas and Lages, 2011), industrial (Shulze and Hoegl, 2008) and consumer goods (Piller and Walcher, 2006).

Second, for participant consumers, when consumers and firms work together the tacit knowledge that consumers have can be combined with company's operations. When interacting with the company, users gain access to the possibilities and limitations of that company and its resources, combining this information with the sticky information about their own needs and setting of usage (von Hippel, 2005). Users creative thought combines and reorganizes this information and knowledge to advance new understandings and eventually generate new ideas (Mumford, 2000).

Finally, for observing consumers, co-created products can leverage on the benefits of user innovation while attenuating for the negative effects. Observing consumers

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perceive the integration of insights that may not be available or economically feasible for firms to pursue (Morrison, Roberts and von Hippel, 2000). Consumers' knowledge about product usage is often tacit, sticky and difficult to transfer to the producer. This is why users, compared to companies, develop fundamentally different (and functionally novel) innovations because they draw on a different knowledge base (von Hippel 2005). Furthermore, innovative products combine creativity with enhanced functionality. The higher the number of ideas, the different backgrounds from those generating ideas, the intensity of usage experience and the less constraints involved (financial and thinking), the higher the odds of finding a really innovative design (Schreier et al., 2012). Likewise the role of the firm is to integrate and assimilate consumers' inputs and turning them into valuable new products, a professional presence ensures that internal competencies will counterbalance eventual inferior product designs. Thus, feelings of scepticism are attenuated by the presence of a professional guidance. Therefore, we predict that:

*H4: Consumers associate a higher ability to innovate when firms foster a joint design, than when firms foster a) exclusive design by users or b) exclusive design by company's professionals.*

*H5: A firm which pursues a joint design strategy will be perceived as possessing higher expertise and skills than a company which products are being a) exclusive design by users or b) exclusive design by company's professionals.*

The importance of perceptions of ability to innovate comes from work that associates corporate abilities with product evaluations (Luo and Battacharya, 2006; Brown and Dacin, 1997). Corporate abilities are the elements that define the firm ability, competences or expertise to come up with higher quality products or to generate new ones (Gatignon and Xuereb 1997). When these perceptions are positive costumers' are

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likely to strengthen their preferences for the company (Brown and Dacin, 1997). Higher perceived corporate abilities make consumers more willing to purchase, recommend the firm (Fuchs and Schreier, 2011) and become more loyal towards the firm (Hernard and Dacin, 2010) as firms cater for consumers' needs when introducing innovative products (Hernard and Dacin, 2010). Finally, the ability to innovate entails creativity that is expected to create positive feelings, such as excitement towards the offering, and about the consumption experience (Kuntz, Schmitt and Meyer, 2011). Therefore, we expect that firms with higher perceived ability to innovate will have stronger behavioural attitudes. Formally stated:

*H6: Compared with a professional or user design mode the innovation effect of a joint design mode will lead to more favourable attitudes towards the firm.*

## 2.8 Studies

### 2.8.1 Study 1

The purpose of this study was to assess how the design mode influences consumers' evaluation of firm's innovation ability, attitudes towards product design (aesthetics and functionality), and purchase intention (the three dependent variables). Additionally, we assessed the impact of consumers' perceptions of firm reputation for innovation on these relationships. The study was a 2 (design mode: users, professionals) x 2 (firm reputation for innovation: high, low) between-subjects design using Qualtrics interface. One-hundred university students participated in this study (52% female, mean age = 28) in exchange for course credits.

Based on discussions with scholars in marketing and innovation, we selected sneakers as the product category to study. This product category relates to the student population

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and there are already some initiatives regarding user design (and professional design) in the real world (e.g. Nike ID).

### ***Method***

*Design, procedure and stimuli.* First, participants were asked several questions related to their specific and general product category involvement. The design mode and RFI was experimentally manipulated by randomly assigning participants to read information about a new collection. A group read that the new collection was designed by customers while the other group read about a collection exclusively designed by company's professionals. In order to manipulate RFI condition, half of the participants in each group read about Nike while the other half about a company without any mention to a brand or name. Participants on the user design scenario would read that "... a new collection was created with inputs from the company (Nike) user community. Selection of the winning designs was the sole responsibility of users..." while in the professional scenario "...the company (Nike) asked their professionals: designers, marketers and engineers for new designs and features. The company (Nike) selected the best designs for launching the new collection". Participants then completed a questionnaire to capture our dependent variables and manipulation checks, followed by the presentation of the new collection. The collection included four models considered representative of that collection.

The selection of sneakers presented was guided by a pilot study ( $n = 25$ ) in which students were asked to evaluate the design quality of 10 sneakers models picked from real companies. The most attractive products were included in the collection. All participants were exposed to exactly the same set of products (the collection) keeping product quality constant between groups, in order to rule out that results found could be

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due to products' differences. After seeing the pictures, respondents were asked to evaluate the collection in terms of aesthetics, functionality and purchase intention. At the end of the experiment, participants responded to some funnel debriefing queries about what the study purpose was. Finally, participants were thanked and debriefed.

### ***Measures***

Table 2.1 lists all measures and item sources. All items were assessed on 7-point scales. *Product involvement* was assessed through a 4 item scale adapted from Zaichkowsky (1985) (e.g., “How frequently do you buy from this product category?”; “How much do you like this type of product?”,  $\alpha = .93$ ). *Manipulation checks* were measured by asking respondents the level of company and customer involvement in designing the new collection (e.g. Who do you think was the major responsible for designing this collection? 1 = consumers only to 7 = company only). RFI was measured on a three item scale adapted from Henard and Dacin, 2010 (e.g. “[Company name] is a cutting-edge sneakers company”,  $\alpha = .861$ ).

**Table 2. 1 Measures Study 1**

Construct Items	No items	Measurement Items	
Product Involvement	3	How would you rate the following regarding [product category]. How frequently do you buy this tipe of product? How (1) do you like /(2) important is / (3) interesting this type of prodct?" 1 = not at all and 7 "very much" (adapted from Zaichkowsky, 1985)	$\alpha = 0.91$
Reputation for innovation	3	How would you rate the following 1. [Company name] is a cutting edge [product category] company. 2. [Company name] is a new product leader in its industry. 3 [Company name] is a progressive company when it comes to [ product category]. (adapted from Henard and Dacin, 2010)	$\alpha = 0.86$
Ability to innovate	3	What do you think about the firm's innovation ability? I think this company's ability to innovate is (1)"not vey high [1] / very high [7], (2) "not vey strong/very strong", (3) "not excellent / excellent" (adapted from Schreier et al, 2012)	$\alpha = 0.90$
Attitude towards design	2	Overall what is your attitude towards the new design mode of this collection (not at all original [1]/ very original [7]; not at all innovative / very innovative). (adapted from Burroughs et al., 2004).	$r = 0.88$
Attitude towards functionality	2	Overall what is your attitude towards the functionality of the new collection? " not at all useful [1] / very useful [7]; not at all functional / very functional). (adapted from Burroughs et al., 2004).	$r = 0.69$
Purchase intention	1	How much do you agree with the following sentences. " I would seriously consider purchasing products from this company ". 1 = strongly disagree and 7 ="strongly agree" (adapted from Hoeffler, 2003)	n.a.

*Dependent variables. Ability to innovate.* Participants' perception of the company's innovation ability was measured using Schreier and colleagues (2012) scale. Participants were provided with a construct definition (a company's innovation ability refers to its ability to develop new and useful products), followed by the question "What do you think about the firm's innovation ability?" We used a three bipolar item scale (e.g., "I think this company's ability to innovate is [1] not very high/very high, [2] not very strong / very strong, [3] not excellent / excellent",  $\alpha = .91$ ).

*Attitude towards design.* The product aesthetic dimension was measured with items adapted from Burroughs and Micks (2004) ("What is your attitude towards the design of this new collection", 1=not at all original/ very original; 7=not at all innovative / very innovative).

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*Attitude towards functionality.* This construct was measured by asking participants to what extent “I think this collection is [1] not at all useful /very useful and [2] not very functional/very functional”, adapted from Burroughs and Micks (2004) ( $r = .69$ ).

*Purchase intention.* Participants answered to what extent they would seriously consider purchasing products from the company by rating their agreement to the following question: “I would seriously consider purchasing products from this company”.

### **Results**

*Manipulation Checks.* Analysis of our manipulation checks supported adequacy of the conditions used. Participants correctly identified whether design mode was consumers’ responsibility or firm’s professionals oriented ( $M_{Users} = 3.20$ ,  $M_{Prof.} = 5.35$ ,  $F(1, 99) = 31.59$ ,  $p < .001$ ). On average those on the Nike condition reported significantly higher firm reputation for innovation than those in the no name condition ( $M_{Nike} = 6.06$ ;  $M_{Noname} = 4.26$ ,  $t(95) = -8.13$ ;  $p < .05$ ).

*Ability to innovate.* We started by assessing whether design mode influenced perceptions of the firm ability to innovate. A univariate analysis of variance (ANOVA) performed on ability to innovate revealed a main effect of design mode and RFI. Consumers perceived higher ability to innovate when professionals were responsible for the design than when users design new products ( $M_{Users} = 5.11$ ,  $M_{Prof.} = 5.76$ ,  $F(1, 99) = 4.4$ ,  $p < .05$ ). Our analysis showed a significant main effect of RFI on participants’ perceptions of the firm ability to innovate. Firms high on RFI were perceived as more able to innovate than firms without a RFI ( $M_{HighRFI} = 6.03$ ,  $M_{LowRFI} = 4.92$ ,  $F(1, 99) = 25.83$ ,  $p < .001$ ). Interaction effect did not reach significance.



**Table 2.2 The impact of Design Mode on firm innovation ability and product evaluations**

	High RFI			Low RFI			DM M. E.	RFI M. E.	RFI x DM
	User n = 19	Prof. n = 23	tdiff	User n = 38	Prof. n = 20	tdiff			
Ability to innovate	5.95	6.10	n.s	4.69	5.36	- 2. 23**	4.4**	25.83***	1,77
Attitude towards Design	5.05	3.99	2.62**	3.30	3.33	n.s.	2.68*	14.58***	3.06*
Attitude towards Functionality	4.53	4.28	n.s	3.65	4.28	- 1.85*	0.49	2.59	2.50
Purchase intentions	4.58	3.78	n.s.	2.44	3.59	- 2.20**	0.13	11.39***	6.68***

RFI: Reputation for innovation; DM: Design Mode

\*\*\*p&lt;0.01; \*\*p&lt;0.05; \*p&lt;0.10

In order to test for H1, where we suggested that firms with high (low) reputation for innovation would extract more benefits from a user (professional) design, we run an ANOVA. Differences in perceptions of ability to innovate were found in companies low on RFI ( $M_{Users} = 4.69$ ,  $M_{Prof} = 5.36$ ;  $t(58) = -2.23$ ,  $p < .05$ ). These firms show higher perceptions of ability to innovate when products are designed by the firm's professionals. Firms high in RFI showed no significant difference between the design mode used by the firm ( $M_{Users} = 5.95$ ,  $M_{Prof} = 6.10$ ,  $t(42) = -0.703$ , n.s.). Although, a significant effect of a professional design was found for firms low on RFI, our results did not find support for an effect of a user design mode on perceptions of the ability to innovate in firms high on RFI. Thus H1 was just partially supported.

To test the robustness of results, we ran a model that included product involvement as a covariate. Product involvement may account for differences in perceptions of ability to innovate. Those more involved are more likely to engage in stronger information processing mechanisms related to the object of interest (Hernard and Dacin, 2010) thus more likely to identify with those creating for the firm (Thompson and Malaviya, 2013). Although involvement with the product category is significantly related to innovation

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ability ( $M_{\text{Highinvolv}} = 5.82$ ,  $M_{\text{Lowinvolv}} = 5.12$ ;  $F(1, 99) = 7.70$ ,  $p < .001$ ) the main effect of design mode on the firm perceived ability to innovate remained significant ( $F(1, 99) = 4.88$ ,  $p < .05$ ). Thus product involvement alone cannot explain differences in ability to innovate.

*Product evaluations.* At the product level we argued that a user design mode would influence evaluations of product form (aesthetics). H2 posit that product aesthetics would be rated higher in products labelled as user design while professionals would enhance functionality evaluations. ANOVA revealed a main effect of design mode on attitudes towards product form ( $M_{\text{Users}} = 3.93$ ,  $M_{\text{Prof}} = 3.63$ ;  $F(1, 99) = 2.68$ ,  $p = 0.10$ ), confirming our theorizing that the qualities of users to design, such as creativity and aesthetics are appreciated in product design. Nevertheless, the design label on product functionality did not reveal a significant effect ( $M_{\text{Users}} = 3.94$ ,  $M_{\text{Prof}} = 4.28$ ;  $F(1, 99) = 0.49$ , n.s.). However, our results indicate that the direction of our hypotheses is correct. Users' contributions are more valued in product aesthetics. Creativity and originality are easier to relate in the aesthetics dimension while the role of professionals relates to evaluations of sound product. H2 is partially supported. A possible reason for the null effect of professionals design on product function may be related to the nature of the product. Sneakers are both high in product involvement for the student population and complexity<sup>2</sup>. Higher levels of product involvement are reported to be associated with preferences for a user design (Thompson and Malaviya, 2013; Henard and Dacin, 2010) while product complexity attenuates the positive effect of user design in favour of a professional design (Schreier et al., 2012).

*The moderating role of reputation for innovation.* We predicted that RFI would moderate product evaluations, particularly product functionality in a user design mode

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<sup>2</sup> We asked perceived product complexity (measured on a 1 to 7 scale). Sneakers were perceived to involve considerable knowledge and technical skills:  $M = 4.81$ ;  $SD = 1.2$

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(H3). First of all, examining the effect of a user design on product functionality shows that functionality is perceived higher in a professional design when firms are low on RFI ( $M_{\text{Users}} = 3.65$ ,  $M_{\text{Prof}} = 4.28$ ,  $t(56) = -1.85$ ,  $p < .10$ ), i.e., a user design label hurts functionality in firms low on RFI. As predicted, RFI enhances product function evaluations in user designed products ( $M_{\text{High}} = 4.53$ ,  $M_{\text{Low}} = 3.65$ ,  $t(57) = 2.30$ ,  $p < .05$ ). Professionals' input has credence value for product performance. Interestingly, participants rated professionals impact on product functionality the same across conditions ( $M_{\text{High}} = 4.28$ ,  $M_{\text{Low}} = 4.28$ , n.s.), but product function evaluations in firms high on RFI was not influenced by design mode ( $M_{\text{Users}} = 4.53$ ,  $M_{\text{Prof.}} = 4.28$ ,  $p > .10$ ). In line with our theorizing, professionals and firm reputation for innovation seem to have the same credence value on functional assessment: user design mode is enhance by the cues present in firm's RFI while professionals provide the same cues for firms with no RFI, fully supporting H3.

Further analysis revealed a significant interaction on product form between conditions ( $F(1, 99) = 3.06$ ,  $p < .10$ ). This shows that even for the aesthetics dimension when firms do not have reputation for innovation professionals are perceived as designing aesthetically superior products when compared with users. This seems to indicate that a user design effect is stronger for the aesthetic dimension particularly for firms high on RFI ( $M_{\text{Users}} = 5.05$ ,  $M_{\text{Prof.}} = 3.99$ ,  $p < .05$ ). The results show that RFI influences evaluations of both product form dimensions, product design ( $M_{\text{High}} = 4.47$ ,  $M_{\text{Low.}} = 3.31$ ,  $t(98) = 3.71$ ,  $p < .00$ ) and product function ( $M_{\text{High}} = 4.39$ ,  $M_{\text{Low.}} = 3.86$ ,  $t(98) = 1.96$ ,  $p = .05$ ). These results complement those from H2 indicating that a user design label and RFI are synergetic. A user design label thrives in contexts where observing consumers are assured that a users design does not compromise product performance.

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*Purchase intentions.* Purchase intentions vary accordingly to whether consumers evaluate the product in a context of high or low RFI. A significant interaction effect revealed that RFI influences the choices for the product label ( $F(1, 99) = 6.68, p < 0.05$ ). In the low RFI condition, purchase intentions are stronger for a professionals design mode ( $M_{\text{Users}}=2.44, M_{\text{Prof}}= 3.59; t(57) = -2.20, p < .05$ ). Purchase intentions for firms high on RFI seem to indicate a preference for a user design mode but our results did not reach significant levels ( $M_{\text{Users}} = 4.58, M_{\text{Prof}} = 3.78; t(40) = 1.51, p < .10$ ). Our results also show that firms high on RFI displayed significantly higher purchase intentions than firms low on RFI ( $M_{\text{High}} = 4.14, M_{\text{Low}}=2.81, t(98) = 3.74, p < .05$ ).

So, results seem to indicate that the polarization of the design mode highlights the potential advantages of both ends. In fact, when companies are high on RFI consumers intend to purchase more from firms where products are designed by other consumers. On the other hand when companies are low RFI consumers intend to purchase more from firms whose products are created by professionals. The differences reveal a signalling effect about those designing for the company. Reputation heightens consumer confidence in a user design mode. Lacking reputation consumer confidence is heightened by firm's professionals. These results are of importance because they show that design mode and RFI influence purchase intentions.

### 2.8.2 Study 2

Study 2 was performed in two steps. Study 2a aimed at understanding whether our hypotheses regarding a joint design mode were credible while study 2b aimed at testing the differential effects of each design mode on corporate and product purchase intentions.

**Study 2a**

89 students took part in study 2a (47% female, mean age= 20). The product used was backpacks. This study was a three-group design (design mode: users, joint and professionals). Participants were randomly assigned to one of the three design mode conditions and read information about a new collection. After reading about the new collection participants were shown pictures of the collection and asked about their purchase intentions and about ability of those involved in the design to assessed consumer confidence in the design. Design confidence was measured on a two item scale adapted from Klink and Athaide (2010) by asking participants how sure they were that consumers/joint/professionals design could meet their [1] standards for a backpack / [2] satisfactory backpacks (1=not at all confident to 7= very confident,  $r = .87$ ). Our manipulation check was successful. When evaluating who was responsible for coming up with the new collection participants perceived the intended differences ( $M_{Users} = 3.74$ ,  $M_{Joint} = 4.48$ ,  $M_{Prof.} = 5.25$ ;  $F(2, 87) = 22.36$ ,  $p < .000$ ). We then run an ANOVA on the confidence index. The result produced a significant main effect of design mode on meeting product standards and achieving satisfactory products ( $M_{Users} = 4.65$ ,  $M_{Joint} = 5.44$ ,  $M_{Prof.} = 4.57$ ;  $F(2, 87) = 3.09$ ,  $p < .05$ ). Purchase intentions were higher for products labelled as a joint design ( $M_{Users} = 2.85$ ,  $M_{Joint} = 3.78$ ,  $M_{Prof.} = 3.25$ ,  $F(2, 87) = 3.30$ ,  $p < .05$ ). This provided the first indication that consumers indeed perceive differences in a design mode continuum, with the most preferred design mode, apparently, the joint design.

### **Study 2b**

Study 2b aimed to clarify the role of a joint design in the firm ability to innovate, and whether this is reflected on consumers' behavioural attitudes (purchase intention and word of mouth). The research design was a 3 (design mode: user, joint, professional) mixed design. First, to assess ability to innovate design mode was manipulated as a within subject condition. Product evaluation was between-subject design with participants randomly allocated to each design mode condition. 120 students participated (50% female and 94% were under 24 years old) in exchange for course credits.

### **Method**

*Design, procedure and stimuli.* Participants were told they would be participating in the evaluation on new design paradigms for iPad covers. We chose iPad covers due to its relevance to students and because of its relatively low complexity ( $M_{\text{complexity}} = 3.76$ ), as perceptions of the ability to innovate in users should be perceived higher given the simplicity of the product in technological terms (Schreier et al., 2012).

First, participants answered several questions related to their product category involvement (e.g., "How much do you like this type of product", "How important do you think this product is", "How interesting do you think this product is" adapted from Zaichkowsky, 1985). Then they were presented with a description of the design paradigms. All participants read the three design paradigms which described how new products come about. In paradigm A products were designed by company's professionals, paradigm B described a consumers only design and paradigm C a collaboration between consumers and company's professionals. After reading the information participants evaluated company's ability to innovate under each paradigm.

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Half of the participants were presented with Apple and the other half of participants was exposed to Staples. The aim was to control if an effect of firm RFI was driving corporate evaluations and purchase intention. A pilot study of 25 students assisted in understanding which firms scored the highest in RFI for this industry. Participants were first asked to provide top of their mind firms associated with the product category. Apple, Samsung, Channel and Staples were amongst the most referred. We retained Apple and Staples because these firms are among those that have highest market share of iPad covers. Then participants were asked to evaluate both firms. Apple, was identified as the highest firm on innovation for this industry ( $M_{\text{Apple}}= 5.81$ ) and Staples the lowest ( $M_{\text{Staples}}=4.05$ ). Secondly, participants evaluated 18 different iPad covers designs used to build a collection presented in the main study. Behavioural attitudes towards the firm were immediately evaluated after exposure to the paradigms. A final set of questions asked perceptions about those participating in the design. Before leaving participants were debriefed and thanked.

### **Measures**

All responses were measured on a seven-point scale unless otherwise stated (see table 2.3). Participants were first asked *attitudes toward the product* “How much do you like/ important/ interesting this type of product is” ( $\alpha = .87$ ). As in study 1 *ability to innovate* was measured on a three item bipolar scale “Not very high / Very high; Not very strong/ Very strong; Not excellent / Excellent” ( $\alpha = .90$ ). Next, we measured *attitudes towards the firm*. This time, we constructed an index with two items: purchase intention and word of mouth, by asking respondents to rate the following sentences: “I would seriously consider purchasing products from this company” and “I will recommend this company to friends” ( $r = .84$ ).

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To understand how those participating in the design were perceived, in terms of *skills and expertise* we asked participants “In your opinion, how high is the design expertise of the people designing for this company? (1) very low / very high”; Do you think that the people designing for this company have the necessary skills (know-how) and competence to design new products? (2) “They don’t have the necessary skills /They have the necessary skills” (adapted from Ratneshwar and Chaiken, 1991) ( $r = .87$ ). To test for empathy with those designing for the firm, participants indicated the extent to which they thought they were *similar to the person designing* the product (“very dissimilar/very similar) (adapted from Thompson and Malaviya, 2013).

**Table 2.3 Study 2 Measures**

Construct Items	Items	Measurement Items
	3	How would you rate the following regarding [product category]. How frequently do you buy this type of product? How (1) do you like / (2) important is / (3) interesting this type of product? 1 = not at all and 7 "very much" (adapted from Zaichkowsky, 1985)
Product Involvement		$\alpha = 0.87$
	3	What do you think about the firm's innovation ability? I think this company's ability to innovate is (1)"not vey high [1] / very high [7], (2) "not vey srtong/very strong", (3) "not excellent / excellent" (adapted from Schreier et al, 2012)
Ability to innovate		$\alpha = 0.90$
	2	How much do you agree with the following sentences. " I would seriously consider purchasing products from this company ". 1 = strongly disagree and 7 ="strongly agree" (adapted from Hoeffler, 2003)
Purchase intention		$r = 0.84$
		In your opinion, how high is the design expertise of the people designing for this company? (1) “They have very low [1]/They have very high design expertise [7]”; Do you think that the people designing for this company have the necessary skills (know-how) and competence to design new products? (2) “They don’t have the necessary skills [1]/They have the necessary skills [7]” (Ratneshwar and Chaiken 1991).
User base expertise	2	$r = 0.87$
		In your opinion how would you rate the following sentences regarding those designing for the company? (1) They are trustworthy, (2) They have an ulterior motive to participate in the design, (3) They are similar to me. 1 = “strongly agree” and 7 = “strongly disagree” (adapted from Thompson and Malavya, 2013).
User base similarity	1	n.a.



### Results

Participants did not perceive differences between Apple and Staples in terms of evaluations of iPad covers so we collapse findings for RFI condition.

We started by testing H4, where we predicted that design mode influenced perception of the firm ability to innovate. A univariate analysis of variance (ANOVA) revealed a main effect of design mode on the ability to innovate. The results showed that firms pursuing a joint design are associated with higher innovation ability than firms pursuing a design by professionals or users ( $M_{User} = 4.6$ ,  $M_{Joint} = 5.52$ ,  $M_{Prof} = 3.96$ ;  $F(2, 119) = 7.87$ ,  $p < .05$ ) fully supporting H4 (see table 2.4). To address alternative explanations for H4, we ran a model that included product involvement as a covariate. Product involvement ( $M_{Highinvolv} = 4.79$ ,  $M_{Lowinvolv} = 4.69$ ,  $p > .10$ ) was not significantly related to innovation ability therefore controlling for this alternative account, the treatment effect remained significant ( $F(2, 119) = 10.99$ ,  $p < .00$ ).

**Table 2.4 The impact of Design Mode on corporate association and perceptions of skills**

	User (1) n= 40	CC (2) n= 40	Prof. (3) n= 40	DM M. E.
Ability to innovate	4.6	5.52	3.96	7.87 ***
Purchase intentions index	2.86	4.26	3.01	7.09 ***
Skills and Expertise	4.45	4.71	5.23	3.05 ***
Similarity	4.63	3.78	3.4	4.71 ***

\*\* \*p < .01, \*\*p < .05, \*p < .10

Significant differences are observed between

Ability to innovate: (1) – (2) (p < .001); (1) – (3) (p < .10); (2) – (3) (p < .00);

Purchase intention index: (1) – (2) (p < .00); (1) – (3) (n.s.); (2) – (3) (p < .00);

Skills and Expertise: (1) – (2) (p < .001); (1) – (3) (p < .05); (2) – (3) (p < .10);

Similarity: (1) – (2) (p < .05); (1) – (3) (p < .01); (2) – (3) (n.s.);

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To understand whether confidence resulted from higher expertise participants in the main study were asked to indicate their perceived levels of skills about those designing for the company. Interestingly, results showed that professionals are perceived to have the most skills. A significant interaction on skills and expertise revealed that professionals were the ones rated higher ( $M_{Users} = 4.45$ ,  $M_{Joint} = 4.71$ ,  $M_{Prof} = 5.23$ ;  $F(2,119) = 3.05$ ,  $p < .05$ ). Users were perceived the least skilled both against those in co-creation ( $t(84) = -5.21$ ,  $p < .00$ ), and professionals ( $t(84) = 2.14$ ,  $p < .05$ ). No significant differences were found between joint and professionals design ( $t(78) = 1.60$ ,  $p > .10$ ). A mediation analysis with bootstrapping (Preacher and Hayes, 2008) revealed that skills and expertise did not mediate the relationship between a design mode and the firm ability to innovate (bootstrap 95% confidence interval [CI]:  $-.01 < CI < .16$ ). The results are robust if we add our control variable as covariates to the model (95% CI:  $-.001 / .13$ ) showing no support for H5.

To understand other factors related to confidence in a joint design we assessed perceptions of similarity with those participating in the design. This time, we observed an opposite relationship to the one observed for skills and expertise, with observing consumers indicating to feel closer to users ( $M_{Users} = 4.63$ ), followed by jointly design ( $M_{Joint} = 3.78$ ) and then by professionals ( $M_{Prof.} = 3.40$ ). Users related more to users than those involved in a joint work ( $t(78) = 2.03$ ,  $p < .05$ ) or the company's professionals ( $t(78) = 3.03$ ,  $p < .01$ ). Participants did not report differences in similarity between those in a joint work and professionals ( $t(78) = 0.92$ , n.s.). A mediation analysis with bootstrap (Preacher and Hayes, 2008) suggests that the effect of common design by users on ability to innovate is mediated by user perceptions of similarity to those contributing to the design (bootstrap 95% confidence interval [CI]:  $-.28 < CI < -.03$ ). A regression analysis indicated a positive coefficient of perception of similarity on ability

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to innovate ( $\beta = 0.22, p < 0.05$ ). The results are robust if we add our control variable as covariate to the model (95% CI:  $-.24/-.02$ ).

Our results show an innovation effect in a joint design mode, i.e., firms pursuing value creation with the consumer are perceived with higher ability to innovate. Against our predictions the level of expertise and knowledge involved in this collaborative work did not fully explain the higher association with ability to innovate, as professionals are nevertheless regarded as the experts. This indicated that other factors may explain this innovation effect. We particularly looked at perception of similarity to those designing for the company and a strong identification with users seems to drive an innovation ability effect.

To test H6 we run ANOVAs to test for attitudes toward the firm. After exposure to the collection respondents reported higher purchase intention index (an index of purchase intention and word of mouth) for a joint design ( $M_{User}=2.86, M_{Joint} = 4.26, M_{Prof.} = 3.01, F(2,119) = 7.09, p < .00$ ) supporting an innovation design mode effect on our purchase intentions index pay. Comparing purchase intention index products that resulted from a joint work were preferred both in the case of products designed by users ( $t(78) = 3.55, p < .00$ ) and when professionals exclusively designed for the company ( $t(78) = 3.31, p < .01$ ). Participants displayed similar purchase intention patterns on products designed by users and by professionals ( $t(78) = 0.49, p > .10$ ). This is highly relevant to our study and to practitioners in general because it underscores the importance of labelling products correctly, as this will have impact on consumer's goodwill towards the firm. These findings reinforce those from study 1 where we demonstrated that product evaluations vary accordingly to design mode and they impact on purchase intention. At the firm level favourable attitudes are formed when products are labelled as a joint work

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between the firm and the common users. Managers can use this as a tool to enhance product demand.

In summary these results extended existing findings by demonstrating that firms that co-create are perceived as more able to innovate (H4) and that this effect is beyond the level of skills and expertise involved in the design of new products (H5). We identified a mediating effect of perceived similarity suggesting that users possess some knowledge that does not necessary translate in technical skills that is not easily available to the firms' professionals. That is, the more similar observing consumers think they are to those designing the products the higher the innovation effect of the user design. Finally our study confirms why perceptions of innovation matter, by showing that a joint design mode is also associated with higher purchase intention and word of mouth (H6).

### **2.9 General Discussion**

Our research provides initial evidence about the effects of disclosing a user design label and makes three specific contributions. First, our studies show that consumers do not necessarily perceive companies and products designed by consumers as better than those exclusively designed by professionals, challenging the view that firms universally benefit from the “wisdom of the crowd”. Instead, we find evidence that the relationship between product label and corporate and product evaluations occur in a design mode continuum and the relationship with the outcomes assumes an inverted U-shape form. Corporate attitudes (ability to innovate) increase as the firm distances itself from a professional design towards a user design peaking at co-creation and declining as the company continues to incorporate more user input. These findings are echoed in Poetz and Schreier (2012) research where a panel of independent experts analyzed users'

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against professionals' ideas. The former were rated consistently as more creative and incorporating higher customer benefits while the later scored higher for feasibility.

Second, our results offer some explanations on the inverted U shaped relationship. The co-creation peak is related to perceived similarity of designing users and the observing consumer (knowledge about consumers' specific needs), and with the professional excellence in new product development. Professional's input is important for the ability to translate users' creativity in successful new product through their skills. Professionals (at least in our product categories) are perceived as the most capable to new product design. The argument of sticky information held by users (von Hippel, 2005) may be translated in perceptions of similarity with users designing for the company to explain part of the user effect on the ability to innovate. Nevertheless, the ability to come up with more attractive products also requires functional competent products: technical expertise and know-how.

The similarity view is aligned with research on identification which states that consumers are more persuaded by messages from source that come from similar others than when the source of the message is unfamiliar (Wilson and Sherrel, 1993; Thompson and Malavyia, 2013). This similarity may also be understood in the context of democratic views of customer participation (Fuchs and Schreier, 2011) that result in higher corporate associations. Simultaneously, labelling products as user design draws attention to the competences of the creator raising feelings of scepticism (Thompson and Malavyia, 2013). These two opposing effects level themselves out when both professionals and users can be used to their best.

Finally, our study shows that firm's RFI matters for understanding the effects of user generated product on observing consumers. Our results show that when firms already possess an established reputation consumers perceive a stronger effect (favourable

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attitudes) on user designed products. Alternatively when no cues are available to infer about the offerings observing consumers rely on professional expertise to draw confidence about how to evaluate the new product.

## **ESSAY 2: THE BRIGHT AND DARK SIDE OF CSR IN EXPORT MARKETS.**

### **3.1 Abstract**

A large body of literature is debating whether Corporate Social Responsibility (CSR) and innovation have positive or deleterious effects on firm performance and, more recently, if these effects are complementary. Research directly addressing this topic in international business is scarce, and few insights exist regarding when and under what conditions exporting firms might benefit from its CSR and innovation activities. By disentangling how CSR interacts with innovation capabilities in an exporting context, we shed light on this topic.

The study is quantitative and the main instrument is an online survey with two respondents: export manager and R&D manager. Follow up data were gathered on the company's website. To test the conceptual model we used structural equations model on a final sample of 170 exporting firms.

Our findings reveal that while CSR enhances the impact of exploratory innovation on export performance, there is a detrimental impact on the effect of exploitative innovation on export performance. Moreover, while CSR helps exporters to develop greater exploratory capabilities, the CSR effect on building stronger exploitative capabilities was non-significant.

This paper contributes to the on-going debate on the interplay between CSR and innovation on performance. By unveiling contexts in which CSR helps or hinders innovation we add to the innovation related literature, by clarifying a controversial discussion. Furthermore, by showing that CSR does not promote exploitation and exploration simultaneously we bring some new insights to the ambidextrous literature. The findings are important to help export managers understand how CSR can help technology firms to compete in international markets.

**Key words:** Corporate Social Responsibility, Technology Orientation, Exploitative Innovation, Exploratory Innovation, Export Performance

### **3.2 Introduction**

Firms operating in developed markets are increasingly asked by consumers and regulators to address CSR initiatives. Even after the recent economic downturn, CSR initiatives remain high on corporate agendas either as a moral responsibility or as a strategic imperative (McKinsey, 2006). But for CSR to create value firms need to rearrange resources to reshape products, technologies, processes, and business models within socially desirable standards. When operating in international markets such rearrangements are likely to involve innovation capabilities, a key element for a firm's competitiveness in international contexts (Cassiman and Golokvo, 2022; Hortinha et al., 2011).

Innovation capabilities and technological inputs (e.g., R&D expenditure, patents, new product introductions) are critical to increase firms' international competitiveness (Cho and Pucik 2005; Kyläheiko; al. 2011). There is consensus in the exporting literature that more innovative firms are more likely to perform better (Golovko and Valentini, 2011; Hortinha et al., 2011). However, this consensus disappears when researchers look to the interaction between CSR and innovation. Export managers are eager to know how their social investments will affect their technological innovation efforts (Porter and Kramer, 2006; McWilliams and Siegel, 2000; Margolis and Walsh, 2003). Companies use CSR to differentiate themselves by building stronger bonds with communities, greater reputation, and better image, while meeting consumers' needs (Luo and Battacharya, 2006) and facilitating export success (Boehe and Cruz, 2012). At the same time, in a high tech industry context innovation is crucial to compete abroad and innovation based



competition is the industry rule. Authors have looked at CSR and R&D investments as two distinct competitive tools in international markets (e.g. Boehe and Cruz, 2012). The question of how to balance these variables is complex because researchers disagree on the way CSR impacts the firm (for a review see Margolis and Walsh, 2003). This disagreement stems from different reasons. First, through innovation companies may address social concerns using new technologies and processes (e.g. adoption of production processes or product design). However, the contingent nature of CSR varies upon factors such as innovation (Luo and Bhattacharya, 2009; Hull and Rothenberg, 2008). Second, both CSR and innovation outcomes can be used as differentiating factors to outperform rivals in domestic (McWilliams and Siegel, 2000; Surroca et al., 2010) and export markets (Boehe and Cruz, 2012). Third, the exact role of the interaction between CSR and innovation is far from consensual. While some researchers (e.g. Hull and Rothenberg, 2008) contend that CSR impact on performance is greater for companies low on innovation, others (e.g. Luo and Bhattacharya, 2006) view CSR and corporate abilities as synergistic and, as such, firms high in innovation capabilities benefit more from CSR initiatives. Conversely, if innovation capabilities are poor, CSR may harm firm's performance, as consumers perceive such initiatives as diversion from quality and innovation. For example, Bouquet and Deutsche (2008) observed synergies between innovation and CSR only when firms show high levels of CSR commitment (measured by CSR investments) otherwise CSR becomes detrimental to performance. In this paper we disaggregate the effect of CSR on innovation capabilities (exploitation and exploration) to understand the conflicting views presented by earlier research. We investigate how CSR promotes or hampers innovation capabilities in technology oriented firms. Our work is guided by stakeholder theory, which supports the idea that firms must consider a broader range of stakeholders, beyond consumers and

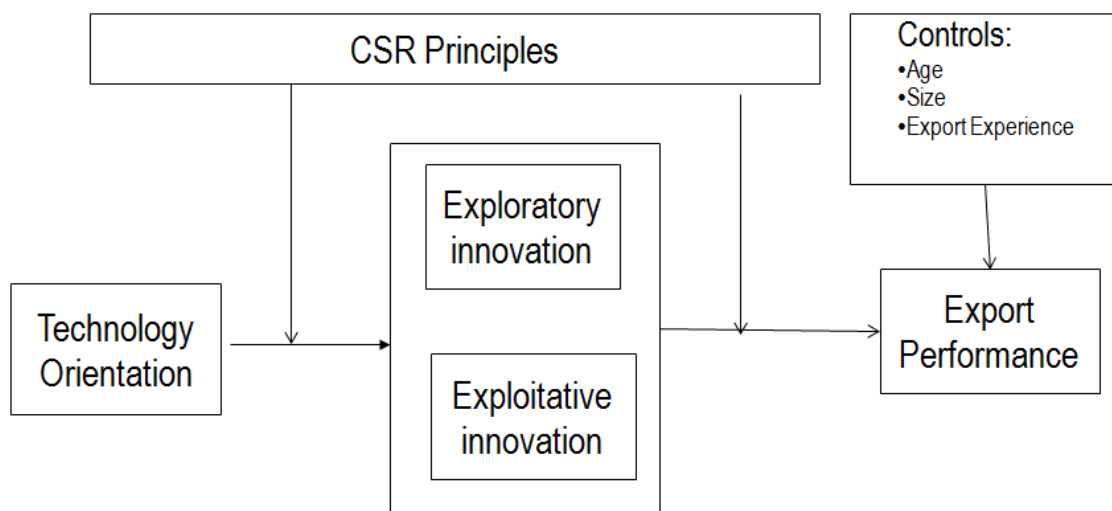
competitors, in order to perform better (Freeman, 1984). We argue that CSR has the potential to develop new capabilities which are manifested in a firm's technology, structure, and performance (Russo and Fouts, 1997). CSR builds managerial competencies, organization-wide coordination, and a forward-thinking managerial style (Orlitzky et al., 2003) that will then manifest in innovation capabilities. This competence building arises through enhanced exploratory capabilities that strengthen the exporter position, amplifying the learning by exports effect. Conversely, we find a detrimental effect of CSR in promoting exploitative innovations. This explains why some studies report conflicting effects between these two activities. In this instance CSR poses challenges that cannot be met with the current capabilities of the firm demanding an exploratory approach to innovation (Driessen and Hillebrand, 2013; Russo and Fouts, 1997).

This research helps to fill three major gaps in the literature. First, we look at the role of both exploration and exploitation of exporting firms to explain conflicting results on the interaction between innovation and CSR and its impact on performance. Although the innovation literature has well established the importance of both exploitation and exploration for exporting firms (Lisboa et al., 2011; Hortinha et al., 2011), to the best of our knowledge no research has sought to understand how these two capabilities may relate differently to export performance in a context of CSR.

Second, the literature between CSR and export performance is scarce, particularly for high tech firms that rely on international markets for expansion and survival. Export markets bring CSR to the fore of firm's concerns since the need for legitimation is likely to be stronger due to greater international scrutiny, higher CSR awareness from consumers, or simply as a differentiation tool.

Third, because CSR implies costs and investments in managerial time and organizational efforts, export managers need to understand the expected return of their resource allocation. So far, with some notable exceptions (Bouquet and Deutsch, 2008), the exporting literature has not established a clear role of how innovation and CSR might bundle to contribute to export performance. We seek to understand how CSR moderates the relationship between technology orientation and innovation and between innovation and export performance. Our conceptual framework is in Figure 3.1.

**Figure 3.1: Conceptual framework**



### 3.3 Conceptual Framework and Hypotheses

#### 3.3.1. Stakeholder theory and CSR

In international markets the firm encounters many entities affected by its presence. A wider variety of issues pertaining to stakeholders becomes relevant to the firm and the firm must take an active role to incorporate them (Driessen and Hillebrand, 2013).

Stakeholder theorists argue that the role of managers is to satisfy a variety of constituents (e.g. workers, customers, suppliers, local community, organizations, and media) who can influence firm performance (Donaldson and Preston, 1995). The ability

to effectively incorporate this wide range of interests relates to how much the firm can learn, i.e. to act on the knowledge available to satisfy stakeholders groups. Stakeholders bring issues to the organization's context that forms the organization's environment. The firm's vulnerability to stakeholders stems from resources dependence (e.g., customers, investors, and employees), to accessing the industry structure (e.g., supply chain associates and strategic alliances), or to acting in the sociopolitical arena (e.g., relationships, communities, and governments) (Donaldson and Preston, 1995). As a result, managers "must pay attention to any group or individual, who can affect or is affected by the organization's purpose, because that group can prevent [the firm's] accomplishments" (Freeman, 1984, p.52). Moreover, empirical evidence also shows that the effective management of the different stakeholders results in good will and intangible resources, namely innovation (Surroca, et al., 2010).

CSR can be broadly defined as "company's activities and status related to its perceived societal or stakeholder obligations" (Luo and Bhattacharya, 2006 p.2). We use this definition to underpin our view of CSR principles. In this study we define CSR principles as the organization's motives for committing to CSR actions. Diagnosing the existence of CSR principles might clarify why some companies react differently when faced with similar external demand. CSR principles may determine how many technology resources the firm is willing to commit, for example, to recyclable technologies or sustainable inputs.

In the case of exporters, who are exposed to a broader set of dynamics including the number of stakeholders, managers have to process more information and develop better integration mechanisms to safeguard the welfare of the firm and balance the conflicting claims of multiple stakeholders (Donaldson and Preston, 1995). It becomes critical that managers identify those actors that can have a major impact on a company's ability to

serve the marketplace (Bhattacharya and Korschun, 2008). When recognizing stakeholders' interests and the need to secure their support (Donaldson and Preston, 1995), the exporting firm is exposed to more demands that will influence its course of action. Greater interaction with different actors allows for a quicker identification of internal deficiencies or resources deployment (Atuahema-Gima, 2005) for solving actors' related issues.

The firm develops competencies for addressing stakeholders' real interests. This may be achieved through one of two types of knowledge related innovation competencies: a) exploitation: developing of existing competencies or b) exploration: developing new competencies. With time, as stakeholders interact with the firm, they are increasingly engaging in routines for knowledge and resources sharing activities (Dyer and Singh, 1998), facilitating new combinations of internal and external knowledge (March, 1991), and developing intangible resources related to knowledge awareness of stakeholders that can be allocated to steer NPD. While doing so, the firm grows in its innovation related knowledge, encouraging higher levels of innovation activity (McWilliams and Siegel, 2000). CSR can become a baseline in itself for differentiation among competitors (Marquina and Morales, 2012) or a means for achieving a more complex product, thereby fostering greater innovation.

### **3.3.2 Research Hypotheses**

Technology orientation is "the ability and the will to acquire a substantial technological background and use it in the development of new products" (Gatignon and Xuereb 1997, p. 78). The willingness to search for technology related information determines how technology is allocated and used, which affects how the firm conducts product

innovation to meet market demands (Gatignon and Xuereb, 1997). It is directly linked to resource allocation because it influences the firm's interpretative framework. By influencing what intelligence is gathered and how it is disseminated, technology orientation can help to explain why some firms developed more new-to-the-world products than others (Hortinha et al., 2011).

When finding a solution to a problem to achieve a competitive advantage, proficient technology firms will rely first on current and known firm boundaries (Zhou and Wu, 2010) since such solutions are consistent with current organizational processes and routines that facilitate exploitation of existing know-how (Stuart and Podolny, 1996). These boundaries reduce the probability of mistakes, and transactional costs associated with search are reduced thereby allowing for greater efficiency and reliability (Atuahene-Gima, 2005). Over time experience accumulates, technological firms become increasingly knowledgeable and efficient about their technical field, and will elicit that knowledge bank to achieve an immediate advantage, through higher levels of product refinement (exploitation) at lower costs (Benner and Tushman, 2003). Zhou and Wu (2010) demonstrate that technology capabilities stimulate exploitation at an accelerating rate. Thus we expect,

*H1a: The relationship between technology orientation and exploitative innovation is positive.*

Exporting firms are by nature exposed to a greater number of knowledge inputs obtained abroad there are often not available in their home markets (Kyläheiko; al. 2011), namely CSR practices (Boehe and Cruz, 2012). This explains why exporters are more likely to be innovators (Golovko and Valentini, 2011). The capacity to innovation is related with the firm's ability to process information and thereby learn. Firms must constantly update their products and adapt to new market conditions by learning about the requirements of international markets. Some authors have termed this as the

“learning by exporting” effect (Golovko and Valentini, 2011). Exporting firms “must apprehend, share and assimilate new knowledge in order to compete and grow in markets in which they have little or no previous experience.” (Autio et al., 2000, p.911). Export markets increase firms’ learning abilities because firms access novel information, technological knowledge, and environmental and employment specifications from the foreign market that can be used in the firm’s innovation process (Cassiman and Golovko, 2011).

Export markets may demand environmentally friendly products, or will only buy from firms that avoid waste or pollution, or do not expose employees to unhealthy working conditions. Some may engage in contracts only with firms that have a track record of social responsibility (Fombrun et al., 2000). The ability to address stakeholders’ needs is more salient for exporting than for domestic firms. Information gathering and adjusting to market needs is also emphasized in the CSR literature, which calls attention to the learning and efficiency arising from the need to process greater amounts of information (Orlitzky et al. 2003).

Through the allocation of existing technological expertise, uniting stakeholders’ concerns within firms’ current activities will be more efficient in technology oriented firms (Driessen and Hillebrand, 2013) since they are technically proficient and flexible, facilitating the refinement of existing technologies to leverage innovation efforts to meet broader stakeholders’ needs (Filipescu et al, 2013). Firms will start by allocating existing patents owned, technical personnel and manufacturing expertise toward the principles it has defined as priorities. Specialized workers refine the technical knowledge and competencies the firm already possesses toward areas of social responsibility (Driessen and Hillebrand, 2013). This leads to products that may be similar to traditional ones (exploitative) but have been re-designed to comply with the

CSR principles. For example, the firm may choose biodegradability for the same product performance level. Thus, we expect,

*H1b: The relationship between technology orientation and exploitative innovation becomes stronger in exporters with CSR principles.*

Exploration involves the acquisition and use of knowledge from outside the organization's technology boundaries. Exploration exposes the firm to new and heterogeneous information that departs from the firm's existing skills, knowledge, and experiences (Levinthal and March, 1993).

A technology-oriented firm is open to ideas that promote state of the art technologies and is actively integrating sophisticated technologies in their NPD process (Hortinha et al., 2011). As the accumulation of technical knowledge takes place, the firm's ability to evaluate new technologies' trajectories increases (Zhou and Wu, 2010). The firm is in a better position to quickly identify new technological trends, experiment with emerging designs, and engage in product innovations beyond the current technological boundaries (Hortinha et al., 2011). Filipescu and colleagues (2013) argued that exporters with more diverse technological knowledge capture more opportunities and tend to develop more radical innovations. Investments in technological resources enhances organizational knowledge and learning capabilities, which in turn are important factors for a firm's capability to develop truly new innovations (Gatignon and Xuereb 1997). Therefore,

*H2a: The relationship between technology orientation and exploitative innovation is positive.*

Technology can be especially important in designing sustainable new products and solving seemingly intractable problems that are not addressable without high technology (Pavelin and Porter, 2008). Reducing the ecological impact of the product, producing easy to assemble packaging, or addressing fair trade issues influences how



and what technology must be used in NPD. Embracing CSR principles enhances innovation efforts in order to compensate for possible negative or conflicting effects of the firm's output. For example, the decision to use only recyclable materials in the production process may force the development of capabilities that are new (exploratory) to the firm to eventually create new-to-the-world products (Atuahema-Gima, 2005).

Firms operating in international markets are exposed to more scrutiny, need to comply with higher standards of labor and environmental pressures, and are often expected to contribute to the welfare of the local community. As such NPD's complexity increases since new knowledge adds heterogeneity to current knowledge providing new solutions patterns for NPD (cf. Wu and Shanley, 2009). To address complexity the firm must be willing to explore a whole new set of knowledge related activities including moving into new product categories or development of new markets (Russo and Fouts, 1997).

The firm will have to search for different fields of knowledge often outside its technology expertise pertaining to the demands of CSR principles if it wishes to succeed with NPD (Russo and Fouts, 1997). Often the firm must be willing to make old products obsolete, allowing entirely new markets to emerge, transform, or disappear as old routines are called into question (Prahalad, 2012).

By their nature, technology exporting firms are more likely to enhance exploratory capabilities to address CSR principles. On one hand exporters are presented with ideas from a greater number of fields and markets that can facilitate innovation (Filipescu et al., 2013). The cost of innovation decreases since exporters can expand their technology base advantage with low or no marginal cost to international markets, and consequently achieve greater returns from continuous technological innovations. Thus, exporters can take advantage of these enhancing innovation activities and develop more new-to-the-world products to achieve greater returns from their innovation endeavors by operating

in more markets (Golovko and Valentine, 2011). On the other hand, technology oriented firms are more receptive to considering new and external knowledge for product development (exploration) because they are used to combining different technologies in hypercompetitive markets having short life cycles and rapid technological changes (Nidumolu et al., 2009). Thus,

*H2b: The relationship between technology orientation and exploratory innovation capabilities becomes stronger in exporters with CSR principles.*

While stakeholder theory underscores the need to scan more information in the environment shedding light on why CSR may contribute to enhance innovation (Driessen and Hillebrand, 2013), the way innovation capabilities relate to export performance in the presence of CSR may differ depending on whether the firm develops more exploitative or exploratory innovation.

Innovation has long been considered a key driver of internationalization, while exporting has been considered a firm-level innovation (Cassinam and Golovko, 2011). Several empirical studies support this positive effect of innovation capabilities on firms' export activities (Cho and Pucik, 2005, Filipescu, et al., 2013) because firms with a technological, R&D based advantage can expand into overseas markets at little or no marginal cost of developing these advantages domestically (Hortinha et al., 2011). Moreover, outperforming competitors in external markets requires a higher value proposition from the core product (Prahalad, 2012) due to the competitive nature of international markets (Cho and Pucik, 2005). The ability to expand to international markets requires a strong focus on competence exploration toward ideas from emerging markets and technologies to produce radical (rather than incremental) innovations that are entirely new and valued by the consumer (Atuahene-Gima, 2005).

As the firm builds and develops new innovation capabilities, building a knowledge stock and efficiently training experts, it becomes positioned to quickly identify new technology trends, experiment with new designs engaging in product innovation that can address new customers, or allow venture into new markets (Lisboa et al., 2011).

Thus,

*H3a: The relationship between exploratory innovation and export performance is positive.*

Compliance with CSR principles demands resources that are not being allocated to other activities, such as cost reduction or quality improvement (Hull and Rothenberg, 2008). Achieving CSR goals requires extensive research to develop a comprehensive view of the problem, the people affected and their numbers, barriers to success, and elaborate on the option to drive change. Such knowledge provides the basis for anticipating resource requirements, developing the business case, and identifying the necessary execution capabilities inside the firm. As such, achieving cost savings and efficiency becomes more demanding under CSR principles (due to CSR related costs). Providing value for customers, such as ease of use, has important resources and capabilities implications if a firm also needs to comply with, for example, limits on gas emissions. Moreover, not only may multiple stakeholders pose conflicting demands (Driessen and Hillebrand, 2013), but more competitors (than in the domestic market) can rapidly copy incremental innovations thus, leaving the firm with a very short time frame (if any) in which to reap benefits from the investments made (Bouquet and Deutsch, 2008). As a result, an exporter with CSR concerns sees the role of exploratory innovation as key to strengthening the firm's international strategic position.

This effect is likely to be self-reinforcing because by demonstrating better exploratory capabilities, international markets get a signal of greater commitment to innovation due

to the longer-term investments in R&D needed for exploratory innovation (Atuahene-Gima, 2005). This can be perceived by customers as greater innovation (a higher corporate capability). As innovation is being rewarded by customers this reinforces the firm's innovation capabilities (Luo and Bhattacharya, 2006). Taken together, these beneficial effects suggest a stronger exploratory innovation-export performance linkage for firms with CSR principles than for firms without CSR principles. Thus, we expect:

*H3b: The relationship between exploratory innovation and export performance becomes stronger in exporters with CSR principles.*

In high-tech exporting industries innovation is a critical element of competition, which due to the nature of the industry, forces firms to constantly introduce new products to rapidly meet changing consumer needs. Failure to innovate often forces the firm to leave the market, especially in international markets (Nidumolu et al., 2009).

Technology can generate competitive advantages through innovation: product differentiation or cost based advantage; both capable of helping the firm to maintain its international market position (Filipescu et al., 2013). Exploitative innovation relates to product developments that are incremental by nature as they focus on the firm's existing capabilities to provide the market with new product refinements (Levinthal and March, 1993). The focus of exploitation is building and replicating the firm's prior knowledge to leverage existing products through technology efficiencies and cost control. The firm explores similar technologies to offer product modification and refinement to incrementally improve the firm's market offerings (Atuahene-Gima, 2005). Thus, we expect,

*H4a: The relationship between exploitative innovation and export performance is positive.*

Although the market values greater corporate abilities and in particular investments in R&D, western consumers expect companies to incrementally improve existing products. Small refinements to existing products are not necessarily visible to all stakeholders (McWilliams and Siegel, 2000). Customers do not identify a better product proposition in the safeguards of legitimate business practice (Boehe and Cruz, 2010). Other stakeholders (e.g., suppliers, SIGs, communities, retailers, and employees) may also view compliance with CSR principles as the minimum level to operate. For example, buyers and end consumers expect environmentally responsible packaging, new ways to deliver goods and services that reduce the carbon footprint, the replacement of conventional materials with materials with a lower environmental impact, or recyclability of products if within the firm's current capabilities (McWilliams and Siegel, 2000). This legitimization might be perceived as incremental in nature as the minimum standard to operate. Meeting CSR expectations becomes important because such stakeholders have the power to determine the long-term success of the firm (for example, succeeding in emerging markets or boycotting the firm's products) by influencing the development and acceptance of new products (for example through media coverage). The challenge becomes that CSR programs that do not have a strong impact on the product or firm's activities bear the costs but fail to reap the benefits of greater perceived differentiation (Bouquet and Deutsch, 2008). Moreover, the nature of such challenges may not be translated into better products or may not be feasible by refining existing products.

Compliance with CSR standards will first be met with the capabilities of the firm (Stuart and Podolny, 1996). Firms are more likely to search within their frame of reference with learned routines and elicit their existing knowledge stores to achieve immediate goals. Therefore, we expect,

*H4b: The relationship between exploitative innovation and export performance becomes weaker but positive in exporters with CSR principles.*

### **3. 4. Methodology**

#### **3.4.1 Sample and Data Collection**

We tested our hypotheses with manufacturer exporters operating in multiple technological industries. We examine Portuguese companies because for them exporting is a condition for survival, not only because of the current economic crisis, but also because of the country's small domestic market. For small economies integration in the world economy is especially important because of scale economies, specialization, and access to technology (OECD, 2008). Moreover Portuguese exports markets are focused mostly in EU countries with tight social policies regarding the environment, labor conditions, health and safety, and certification. Furthermore, Portugal is not competing through costs, since labor costs are higher than those of developing and emerging countries and Portugal can no longer use currency devaluation as a way to offer more competitive prices in foreign markets. As such, Portuguese firms are an interesting context to understand the effects of CSR in an exporting context.

We use as a sample firms operating in medium to high technology industries (cf. Eurostat, 2009). Technological exporters are more likely to build stronger innovation capabilities through more developed learning mechanisms. Technological firms are also more likely to export a higher proportion of their output as a result of knowledge spillover, externalities, and accumulated experience. As the firm develops export activities, it gains knowledge and capabilities, which help to develop new technological innovations (Filipescu et al., 2013), thus becoming an important context to understand how CSR issues influence this relationship.

We obtain a list of technological exporters from the Portuguese business development agency (AICEP, 2007). To increase variance and generalizability of the results we considered manufacturing firms in multiple industries (Morgan et al., 2004). Data collection was through an online survey. The database included the company's name, telephone number, address, industry, products, and number of employees. We first contacted the firms to understand if they had exported in the previous year and if their exports operations were regular (eligibility for participating in the study). We then established contact with the export manager (or the person responsible for the export operations), introduced him/her to the project and asked for the contact of the second respondent, the R&D manager (the name and e-mail address). We also asked the export manager to brief the second respondent about the survey. We used this method following managers' suggestions gathered during preliminary interviews. We then sent an e-mail invitation to respondents to explain the academic purpose of the project, to ensure confidentiality of the responses, and to send the respective link to the survey. We sent an e-mail reminder three weeks later to non-respondents and a final reminder four weeks after that.

Of the 1,031 possible firms available in the database, 191 were not eligible and 94 were not available to answer the questionnaire, which resulted in 746 questionnaires sent out. We obtained 193 usable questionnaires, a response rate of 26%. After data purification, a total of 170 valid questionnaires were retained. We compared late respondents (last 25%) and early respondents (first 75%) to assess nonresponse bias (Armstrong and Overton, 1977). There were no significant differences between the two groups in terms of firm size (number of full-time employees and total sales), export intensity (percentage of export sales in total sales), or export experience (number of countries

with export operations). We therefore concluded that there were no significant threats in this study regarding nonresponse bias.

### **3.4.2 Measures**

All measures were adapted from established literature. To measure CSR principles we followed the procedure of Maignan and Ralston (2002) by analyzing the existence of CSR principles on the company website. We limited our search to areas such as “Company information”, “About Us”, “Mission, Vision and Strategy”, and “Newsletter”. In these areas we looked for information on the following “...CSR is presented as being part of the company culture, or as an expression of its core values”, “...CRS is introduced as a part of the firm's economic mission as an instrument to improve its financial performance and competitive posture”, and “...CRS is presented as a response to the pressures and scrutiny of one or more stakeholder groups”. If no information on CSR could be found in these sections, then the company CSR was considered to be insignificant.

We adapted the measure of technology orientation from the work of Zhou and colleagues (2005) to assess the orientation of the firm’s export operations toward using sophisticated technologies in new product development. For innovation we used the exploratory and exploitative innovation scales from Hortinha et al., (2011) to capture two different dimensions of innovation activities in firms’ export markets.

Export performance is defined as the extent to which the export venture contributes to the firms’ strategic and financial objectives. We view export performance at the strategic level, i.e., the contribution of the export venture to the firm’s overall competitiveness, strategic position, and global market share (Zou et al., 1998). In line



with earlier research (e.g. Lages et al., 2008) the measures were developed at the export venture level, i.e. a specific product exported for a specific market. We used satisfaction with competitiveness, strategic position, and global market share from Zou, and colleagues (1998), which are indicators of strategic export performance, considering this dimension because it is consistent with CSR outcomes, a long-term commitment from the organization. We employed a subjective assessment of performance, as earlier studies have shown adequate correspondence between subjective and objective performance measures (e.g. Lisboa et al., 2011).

We controlled for firm size and age as well as managerial experience in international markets (number of countries with export operations). Older, experienced, and larger firms have more resources available to obtain better market positions in export markets (Lages et al., 2008). All items are shown in Table 3.1.

### **3.4.3 Data Profile**

Exporters in the sample were distributed by size as follows: 61% with fewer than 50 employees and 49% with more than 50 employees. These data reflect the Portuguese exporting industry, in which most firms are small to medium size. The average age of firms participating in the study was 32 years old (standard deviation [SD] = 22; range = 2–100), with average exporting experience of 19 years (SD = 19; range = 1–100). The firms are present, on average, in 11 countries (SD = 13; range = 1–75). The average annual sales of the firms ranged from €1.5 million to €5 million. Exporting operations contributed to 60% of sales for over 50% of the firms.

### **3.4.4 Common-Method Bias**

In order to address common-method bias, we followed the main recommendations from Podsakoff and colleagues (2003). First, we used different sources of information for our constructs (company website and surveys) and split the survey questions between the two respondents, export manager and R&D manager. Second, we used unambiguous, succinct, and exact indicators. Third, the scale formats, anchors, and values were varied across the questionnaire. Fourth, the medium used to collect data was self-administered questionnaires rather than personal interview surveys. Fifth, respondents were assured confidentiality and that there were no right or wrong answers. Additionally, the Harman's single-factor test was performed. Accordingly, all items were loaded into a unique exploratory factor analysis with a non-rotated solution. We extracted six factors with eigenvalues greater than 1.0, and the first factor does not explain more than 50% of the variance (i.e., it accounts for 42% of the variance in the data). As a result, common method bias is judged not to be a major issue in this study.

### **3.5 Results**

We tested the hypotheses using partial least squares (PLS) with Smart PLS 2.2 software (Ringle et al., 2005). In PLS regression the coefficients are estimated interactively, and sample size is normally not a problem, as it is when using covariance-based programs. We considered PLS to be the most appropriate because when testing moderators by subgroup analysis, samples become smaller. We have interpreted the model in two stages. First, we assessed the measurement model in order to test the psychometric properties of the variables. Second, we assessed the structural model to test the hypotheses (Hulland, 1999).

### **3.5.1 Measurement Model**

To assess the adequacy of the measurement mode, we examined individual item reliabilities, convergent validity, and discriminant validity (Hulland, 1999). Evidence for convergent validity is shown by the Cronbach Alpha and the construct reliability coefficients. All factor loadings on the dependent variable are significant and greater than .70 (Bagozzi, 1980) and the average variance extracted (AVE) from each variable is greater than .50 (Fornell and Larcker, 1981) (see Table 3.1). Discriminant validity is evaluated by comparing the correlation between each pair of constructs with the root of AVE among those constructs (Fornell and Larcker, 1981) and by analyzing cross-loadings between items and constructs (Chin, 1998). From an inspection of Table 3.2 we confirm that the square root of AVE between any two constructs (diagonal) is greater than the correlation between those constructs (off-diagonal), thus indicating discriminant validity. Finally, findings show that items load higher on the respective construct than on any other construct and all critical ratios of factor loading indicate highly significant loadings (i.e. t-value greater than 13.59), thus confirming discriminant validity. (see Table 3.1).

**Table 3.1: Scale Items and Reliabilities**

Constructs and Items	Factor loading	T value	Cronbach AVE	Alpha	Construct reliability
<b>Technology Orientation</b>			0.68	0.84	0.89
<b>Zhou, Yim and Tse, 2005</b>					
Q: With regard to your company's actions in the exporting markets, to what extent do you agree with the following sentences?					
We have a long tradition and reputation in our industry of attempting to be first to try out new methods and equipment.	0.76	13.59			
We are actively engaged in a campaign to recruit the best qualified technical personnel available in engineering and production.	0.84	21.52			
We are actively engaged in a campaign to recruit the best qualified marketing personnel available.	0.83	18.10			
We are strongly committed to technological forecasting.	0.88	28.29			
<b>Exploratory Innovation</b>			0.67	0.90	0.92
<b>Hortinha et al., 2011</b>					
Q: With regard to your company's actions in the exporting markets, to what extent do you agree with the following sentences?					
We look for novel technological ideas by thinking "outside the box".	0.81	31.99			
We base our success on its ability to explore new technologies.	0.83	30.02			
We create products or services that are innovative to the firm.	0.84	25.40			
We look for creative ways to satisfy our customer's needs.	0.81	26.19			
We aggressively venture into new market segments.	0.83	28.21			
We actively target new customer groups.	0.79	23.08			
<b>Exploitative Innovation</b>			0.67	0.90	0.93
<b>Hortinha et al., 2011</b>					
Q: With regard to your company's actions in the exporting markets, to what extent do you agree with the following sentences?					
We commit to improve quality and lower cost.	0.80	16.68			
We continuously improve the reliability of its products and services.	0.87	40.53			
We increase the level of automation in its operations.	0.75	16.14			
We constantly survey existing customers' satisfaction.	0.81	21.24			
We fine-tune what we offer to keep our current customers satisfied.	0.87	32.41			
We penetrate more deeply into existing customer base.	0.83	24.83			
<b>Export Performance</b>			0.91	0.95	0.97
<b>Zou, Taylor and Osland, 1998</b>					
This export venture:					
Has improved our global competitiveness.	0.96	66.76			
Has strengthened our strategic position.	0.97	72.25			
Has significantly increased our global market share.	0.93	57.88			
<b>Knowledge Integration Mechanisms</b>			0.74	0.91	0.93
<b>De Luca and Atuahene-Gima 2007</b>					
Q: With regard to your company's actions in the exporting markets, to what extent do you agree with the following sentences?					
We use internal committee to select the best innovation opportunities.	0.83	28.79			
We use formal meetings among different subunits for screening and evaluating innovation projects.	0.91	61.23			
We use of internal experts and/or consultants to synthesize project information.	0.81	21.47			
We formally analyze and discuss past successful innovation projects.	0.88	38.12			
We formally analyze and discuss past failures in innovation.	0.82	28.93			
<b>Corporate Social Responsibility Principles</b>					
<b>Maignan and Ralston, 2002</b>					
Procedure: Assessed if the website displayed any of the following principles					
CSR is presented as being part of the company's culture, or as an expression of its core values					
CSR is introduced as a part of the firm's economic mission as an instrument to improve its financial performance and competitive posture					
CSR is presented as a response to the pressures and scrutiny of one or more stakeholder groups					

Scale format: 1 = "completely disagree" and 7 = "completely agree"

**Table 3.2: Descriptive Statistics**

Descriptive Statistics: Correlations, means, and standard deviations (N = 170)

	Means	Stdv	1	2	3	4	5
1. Technology Orientation	4.76	1.28	<b>0.83</b>				
2. Exploratory innovation	5.11	1.11	.546**	<b>0.82</b>			
3. Exploitative innovation	5.65	0.99	.467**	.727**	<b>0.82</b>		
4. Performance satisfaction	4.90	1.21	.433**	.564**	.560**	<b>0.95</b>	
5. CSR a)	0.30	0.46	.179*	.056	.194*	.160*	<b>1</b>

The diagonal shows the square root of the average variance extracted

\*\*Significant at the 0.01 \*Significant at the 0.05

a) Dummy representing CSR principles, 1 "presence of CSR principles", 0 "absence of CSR principles"

### 3.5.2 Structural Model

We assessed overall model fit by looking at both the amount of significant relationships among the constructs and the explained variance of the endogenous latent variables ( $R^2$ ) (Cool, Dierikx, and Jemison, 1989). Table 3.2 shows the model path coefficients. More than 50% of the relationships tested were significant, including the moderating effects models.

Variance explained is 38% for export performance, 40% and 44% for exploitative and exploratory innovation, respectively, satisfying the minimum value of 10% for the  $R^2$  of the endogenous variable (Falk and Miller 1992). None of the control variables reached significant levels: firm size ( $\beta = .07$ , n.s.), age ( $\beta = .03$ , n.s.), and export intensity ( $\beta = -.07$ , n.s.).

**Table 3.3: Structural Model**

Hypotheses	Model 1		Model 2			
	Main Effects		CSR Principles Present		Keil test	
	Full Sample (N=170)		Yes	No		
Technology Orientation --> Exploitative Innovation	H1a	0.29 (4.19**)	H1b	0.31 (2.60**)	0.28 (3.25**)	0.71
Technology Orientation --> Exploratory Innovation	H2a	0.39 (5.94**)	H2b	0.43 (4.41**)	0.36 (4.27**)	4.31**
Exploratory Innovation --> Export Performance	H3a	0.32 (3.10**)	H3b	0.65 (4.00**)	0.19 (1.59)	15.62**
Exploitative Innovation --> Export Performance	H4a	0.33 (3.18**)	H4b	-0.08 (0.05)	0.50 (3.85**)	-13.20**
<b>Controls</b>						
Firm Age --> Export Performance		0.03 (0.40)		0.10 (1.06)	-0.02 (0.18)	
Firm Export Experience --> Export Performance		-0.07 (1.43)		0.00 (0.03)	-0.08 (1.11)	
Firm Size --> Export Performance		0.07 (0.46)		0.02 (0.02)	0.08 (1.13)	

Note: critical values in ( )

\*\* Significant at the 0.01 \* Significant at the 0.05

Generally, the hypotheses confirmed the literature (see Table 3.3), supporting the mediating effect described in the literature<sup>3</sup>. We then tested this framework in the presence and absence of CSR principles.

### 3.5.3 Testing for Moderation

To test the presence of a moderation effect we use Sharma and colleagues (1981) methodology. First, we created and regressed the interaction between CSR principles and the predictor variable to verify the presence of a significant interaction. Then we assessed the correlation between the moderator and the dependent and independent variables. No significant correlations were found between CSR principles and export

<sup>3</sup> We tested the mediating effect of exploratory and exploitative innovation from technology orientation on export performance following Baron and Kenny's (1986) approach. We ran four PLS models: (1) the effect of technology orientation on export performance without the mediating variables; (2 + 3) the effect of technology orientation on both types of innovation (the mediating variables); and (4) the effect of the independent variable on the dependent variable, in the presence of the mediating variables. The mediating variables are significant in Model 4 and the strength of the relationship between technology orientation and export performance diminished when we controlled for the mediating variables in the model. The Sobel statistic tests whether the indirect effect from technology orientation to export performance is statistically different from zero. The Sobel test was  $z = 5.98$ ;  $p < 0.001$  and  $z = 5.46$ ;  $p < 0.001$  from exploratory innovation and exploitative, respectively. Thus, we found support that innovation is an intervening variable between technology orientation and export performance.

performance, exploratory and exploitative capabilities, and technology orientation.

Thus, the study tested CSR principles as a homologizer moderator (Sharma et al., 1981) through multi-group analysis. We first split the sample between firms that had adopted CSR principles and those that had not. Next, export performance was regressed on the full model allowing all regression coefficients to take on different values in the two subgroups. Table 3.3 summarizes the results for the subgroups.

We have included in our conceptual framework four well established relationships in the literature. Technology oriented firms are simultaneously innovators (Filipescu et al., 2013) and successful exporters (Golovko and Valentine, 2011). Our results confirm that technology orientation has a strong and positive effect on innovation capabilities. Both exploitation (H1a) ( $\beta = 0.29$ ,  $t = 4.19$ ) and exploratory (H2a) ( $\beta = 0.39$ ,  $t = 5.94$ ) innovations are influenced by the technology capability of the firms. In line with reported research our results show that innovation capabilities relate strongly to an international presence. In H3a we expressed our expectations that exploratory innovation helps exporters to compete overseas. This was confirmed ( $\beta = 0.32$ ,  $t = 3.10$ ). Our study also demonstrated that exploitative innovation is a way to promote the firm's presence in international markets ( $\beta = 0.33$ ,  $t = 3.18$ ).

Results for H1b show that CSR principles do not enhance the impact of technology orientation on exploitative innovation. Contrary to our prediction, our model did not support that CSR principles made firm's technology orientation more likely to exploit existing capabilities. Testing for differences between the two models revealed no differences ( $\beta_{diff} = 0.03$ ;  $t_{diff} = 0.71$ ;  $p > 0.1$ ). Thus H1b is not supported.

As initially predicted, in H2b, our results support the belief that technology orientation has a stronger impact on exploratory innovation in firms with CSR principles ( $\beta_{diff} =$

0.07,  $t_{diff}=4.31$ ;  $p<0.05$ ). Technology oriented firms will incorporate<sup>4</sup> goals of responsibility in their innovation efforts.

H3b suggests that CSR principles are a catalyst to capture value in export markets because of higher exploratory innovation. Our results support this view,  $\beta_{diff} = 0.46$ ;  $t_{diff}= 15.62$ ,  $p<0.001$ . CSR principles are a complement to other assets providing a stronger link from innovation to export performance. This reflects the acquisition of competencies to address the challenges posed by stakeholders. The firm broadens the exploratory capabilities it already possesses by discussing the nature of the transformation required by stakeholders.

H4b was partially confirmed. We theorized that the effect of exploitation would still be felt but with lower impact. Technology exporters that have CSR principles lose exploitative innovation as a competitive tool in international markets. Small refinements and extensions of current products when there are expectations of adherence to CSR principles prevent performance enhancements ( $\beta_{diff} = -.58$ ;  $t_{test} = -13.20$ ;  $p<0.001$ ). This shows that the presence of CSR principles bears a cost that, if not translated into higher perceptions of innovation, leaves exporting firms worse off than by simply not having CSR principles. CSR principles raise export markets' expectations about firms' minimum standards for continued business and are not perceived by the market as

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<sup>4</sup> Firms with CSR principles need stronger knowledge integration among departments for reaching organizational consensus on how to exploit existing capabilities, especially when conflicting interests arise. Knowledge integration mechanisms are the processes by which the firm ensures that all types of knowledge, including stakeholders' related, are incorporated among the different units (De Luca and Atuahene-Gima, 2007). We performed a one-way ANOVA to understand how firms scored in knowledge integration mechanisms. Results showed that firms with CSR principles have greater knowledge integration mechanisms than firms that ignore CSR principles ( $M_{CSR} = 4.6$  and  $M_{NonCSR} = 4.1$ ;  $t = 3.91$ ;  $p < .05$ ). Formally reviewing and assessing innovation projects allows for ideas exchange and a possibility for greater flow of communications with more knowledge transferred among units and more issues likely to be considered in innovation efforts.



innovation, but as simply the way businesses are supposed to act. Therefore, we could find only partial support for H4b.

#### **3.5.4 Additional Analysis**

The results presented provide insights into the how technology orientated firms achieve export performance through innovation related competencies in the presence or absence of CSR principles. However, we cannot conclude from the analysis what causes these differences. Firms with strong CSR principles commitment need stronger coordination mechanisms for solving tensions arising from conflicting stakeholders' interests (De Luca and Atuahene-Gima, 2007). For example, customers may demand improved product performance while management is committed to biodegradable materials. These two objectives require a high degree of cooperation and integration of knowledge between different departments: marketing, R&D, and other functional units in the NPD (Narver and Slater, 1990). Knowledge from different organizational departments is necessary in order to reach organizational consensus on how to exploit existing capabilities.

Previous seminal work on strategic orientations acknowledges the critical role of integration and interdepartmental relations (Narver and Slater, 1990) in creating superior customer value and organizational performance. In order to achieve a truly global competitive advantage all functions need to be innovative and contribute to achieving the goals and principles of the organization. More recently, research looked at the importance of internal mechanisms to integrate knowledge and as such assuring that intentions and ideas are effectively shared and acted upon (Driessan and Hillebrand, 2013). "*Knowledge integration mechanisms refer to the formal processes and structures*

*that ensure the capture, analysis, interpretation, and integration of market and other types of knowledge among different functional units within the firm”* (De Luca and Atuahene-Gima, 2007, pp. 95). We conduct additional analysis to understand whether the evaluation of innovation processes from multi tasked teams and external consultants helped diffusion of CSR principles among the different functional units , i.e., whether knowledge –based innovations reviews of NPD were associated with higher presence of CSR principles. We performed a one-way ANOVA to understand how the different firms score in terms of knowledge integration mechanisms. Results showed that firms with CSR principles have in general higher knowledge integration mechanisms than firms that ignore CSR principles ( $M_{CSR}= 4.6$  and  $M_{NonCSR}=4.1$ ,  $p<.05$ , see Table 3.4). Formally reviewing and assessing innovation projects allows for ideas exchange and a possibility for a higher flow of communications where knowledge is transferred among units and more issues likely to be considerate in future NPD stages.

**Table 3.4: Knowledge Integration Mechanisms, ANOVA**

Variable	Group	N	M	SE	ANOVA	
					F	Sig
KIM	CSR Principles	51	4.6	.20	3.91	.049
	No CSR Principles	118	4.1	.12		

### 3.6 Conclusion and Discussion

In conclusion, this study brought some light toward a better understanding of how CSR interacts with innovation capabilities. Results confirm that CSR plays opposite roles regarding its interaction with innovation. While CSR enhances the impact of exploratory innovation on export performance, there is a detrimental impact on the effect of exploitative innovation on export performance. Empirical studies finding support for both views are reported in the literature. Some authors argue for the positive interaction between CSR and innovation (Luo and Battacharya, 2006; McWilliams and Siegel, 2000) reinforcing the view that firms high on innovation would benefit the most from CSR, while others argue that these two strategic activities are conflicting since they are competing for the same resources (Hull and Rothenberg, 2008). Bouquet and Deutsche (2008) also manifest such tensions when reporting that low CSR commitment is worse for firms than no CSR commitment at all.

Our work shows that the integration of CSR principles on NPD extends the firm's technological application field, showing that new capabilities are allocated to innovation (e.g., availability of highly skilled personnel, manufacturing expertise, patents and technology know-how). This is important for business practices as high-tech industries

may have idiosyncrasies that make their success more dependent on new-to-the-world innovations, rather than on refining existing capabilities.

High technology firms have considerable economic and environmental impacts. This increases the exposure to stakeholders, pressure, and number of issues the firms need to address. Firms are compelled to integrate CSR issues into their NPD, anticipating relevant issues for their stakeholders. Green concerns, biodegradable materials, easy assembly of packaging, good working conditions, sustainable products are not easily solved within the current capabilities (exploitation). Firms need to search for solutions outside the realm of current expertise during the innovation process to accommodate this variety of interests. The firm must direct employees and technology development toward new solutions and the cross-fertilization of ideas that move the firm beyond the current pool of expertise. Solving the paradox of doing well while doing good, and achieving a competitive advantage in export markets, depends on the ability to develop exploratory capabilities for NPD.

CSR principles do not influence how existing capabilities are used in NPD in technology oriented firms to achieve better export performance. This may be related to the nature of how compliance with CSR principles develops. First, it is likely to begin with process related innovation without changes to the core product. For example, virtual meetings replace physical ones through IT structure adaption, virtual prototypes replace physical samples, and supply is repositioned to sustainable suppliers. Such changes are not at a first instance incorporated at a product level.

We found that in the presence of CSR principles, exploratory innovation relates more to export performance, while exploitative innovation has a stronger impact in firms not revealing CSR principles. This may be a reflection that CSR is becoming more universal and not just a “green” and highly cause motivated segment. Because of its

lower risk and lower uncertainty in returns exploitative innovation spreads more rapidly. Products that have the same level of performance but do not harm the environment are not perceived by the market as possessing a differentiating factor. These efforts are the minimum standard for continued business and may not be perceived by the market as innovation but just the way businesses are supposed to act. The firm is nevertheless bearing the cost of recombining existing competencies. Also in export markets CSR principles signal markets that firms are honest, credible, and trustworthy organizations (Bouquet and Deutsche, 2008). In unfamiliar markets, good practices are the only guarantee for local markets of the firm's reputation.

Finally, it is the combination of technology and the knowledge resulting from relationships with stakeholders that allows employees and the firm to experiment and to develop products with socially desirable properties. Our results show that such endeavours result in better export performance through introducing more new-to-the-world products rather than refining existing offers.



## **ESSAY 3: MANAGERIAL PERCEPTIONS OF ENVIRONMENTAL TURBULENCE: THE MEDIATION ROLE OF INNOVATIVENESS IN NEW SERVICE SUCCESS IN THE HOTEL INDUSTRY.**

### **4.1. Abstract**

This study identifies key determinants of new service success in the hotel industry when managers perceive different degrees of environmental turbulence. We test our hypotheses with data from surveys and longitudinal archives from 138 hotels in Portugal. Findings reveal that when managers perceive low turbulence, customer-centred innovativeness leads to success. However, this has no impact on future performance. On the other hand, when managers perceive high environmental turbulence (i.e., innovation related opportunities) past performance positively influences managerial decisions. The level of business unit innovativeness, customer innovativeness, and learning orientation attract more resources as performance levels increase. The findings support that in the hotel industry a firm's learning orientation is important to promote business unit values of innovativeness, which leads to future success.

**Key words:** environmental perceptions, innovativeness, learning orientation, past and future performance, hotel industry.

## **4.2. Introduction**

Increasing competition is forcing service companies to place unprecedented emphasis on innovation. The modern organization is constantly interacting with a changing and dynamic environment that challenges managers to respond creatively and act in innovative ways (Zahra and O'Neil, 1998). The ways that managers perceive, learn, and interpret environmental turbulence are the bases of most decisions (White et al., 2003). Those that learn slowly risk seeing their organizations become extinct, selected out by an increasingly demanding competitive environment.

The present study is supported by analysis of the consequences of managerial interpretation of the environment (Thomas et al., 1993; Dutton and Jackson, 1987). This research field argues that the labels managers attach to a situation put the organization on a particular trajectory (Dutton, Fahey, and Narayanan, 1983). Within the same industry managers may have different perceptions of the same reality. Where some see a threat, others see an opportunity, where some see dynamism, others see sloth. Managers' interpretations of the environment provide meaning for ambiguous market situations and as such they become a powerful determinant of organizational response, or lack of it, to external events (Plambeck, 2012). They form the basis for creating different internal orientations that encourage innovation and entrepreneurship as perceptions become reality (Day and Nedungadi, 1994). When looking to the same environment, while some prefer to ignore or allow changes to go unnoticed, others (e.g. Steve Jobs at Apple and Andy Grove at Intel) perceive environmental turbulence as opportunities. Perceptions of market opportunities successfully promote innovations that go beyond current customers' expectations and lead to long-term competitive advantage (Yadav, Prabhu, and Chandy, 2007).



Innovativeness pertains to the degree to which the organizational culture promotes and supports innovation and the capacity to introduce and implement creative new ideas within a firm (Keskin, 2006). Learning orientation and innovativeness are highly correlated (Jimenez and Valle, 2011; Morales, Montes, and Jover, 2006; Hult, Hurley, and Knight, 2004; Calantone, Cavusgil, and Zhao, 2002; Sinkula, Baker, and Noordewier, 1997). Firms exploring learning opportunities are able to enhance their capabilities because they tend to incorporate emerging trends and practices from the marketplace (Hjalager, 2010; Alegre and Chiva, 2008). The present work investigates the role that learning orientation plays in promoting internal (business unit) and external (customer) innovativeness, under high and low managerial perceptions of environmental turbulence.

Research in the field of services innovation indicates that managers tend to be guided by inside-out or outside-in innovativeness. Those in favour of "inside-out" innovativeness argue that firms having an "outside-in" approach become lost because the current rate of change in the marketplace increases ambiguity and uncertainty about the appropriate strategic focus of the company. Internal-oriented companies might also benefit from internal competencies, such as employees' entrepreneurial and innovation skills (Hornby et al., 2009), and avoid paying a penalty for being too customer oriented. The organization becomes open to the tyranny of the served market when managers see the world only through the lens of current customers (Hamel and Prahalad, 1994). Too much customer orientation might detract the firm from radical innovation (Chen and Krumwiede, 2012; Chandy and Tellis, 1998) and gaining a leadership position (Christensen and Bowen, 1996). Those favouring "outside-in" innovativeness, on the other hand, argue that firms should be market oriented and have the customer at the heart of the organization. Firms that consistently identify and respond to customers'

needs are in a better position to satisfy customers and perform better against competitors (Gatignon and Xuereb, 1997; Day, 1994; Deshpande, et al., 1993).

We seek to add clarity to this discussion by explaining how this trade-off between internal (business-unit oriented) and external (customer-oriented) innovativeness contributes to new service success. Additionally, we seek to address the specific issue of innovativeness in the hospitality sector (Ottenbacher and Gnoth, 2005), where little knowledge exists regarding the effect of innovativeness (Tajeddini, 2010) on new service success. The existing literature is based on knowledge gained mainly from the manufacturing sector, while innovativeness in the tourism sector is still in its infancy (Hjalager, 2010).

Finally, this study contributes to the literature by looking at the temporal sequence of performance on innovativeness. Several studies have investigated this sequence and arrived at conflicting results (see Bowen, Rostami, and Steel, 2010 for a review). While there is a consensus about a positive direct relationship between innovation and market performance, the relationship between past performance and innovativeness has been less clear in the literature. Several authors call for an analysis of the moderating effects to further understand the positive (Bolton, 1993), negative (Greve, 2003; Lant, Millikien, and Batra, 1992), or non-significant (Ettlie, 1983) effects. With the present research we wish to clarify the role of performance both as an antecedent and as a consequence of innovativeness. We especially hope to learn if the positive outcome of innovativeness (new service success) is used to further innovation practices or whether, instead, increases managerial complacency to current practices. We do so by combining in the same model subjective metrics in Time 1 with objective performance metrics in Time 0 and Time 2, also avoiding common method bias in the process.

## **4.3 Theoretical background**

### **4.3.1 Organizational Learning Theory**

Our study is supported by organizational learning theory (Baker and Sinkula, 1999a, 1999b; Levitt and March, 1988; Fiol and Lyles, 1985). This theory argues that to remain competitive in a changing environment, organizations must change their strategies and actions to reach evolving goals. For learning to occur, organizations must make a conscious decision to search for knowledge in response to change. Learning orientation helps companies to deal with changing and uncertain environments, and allows them to better understand and interpret the environment and better adapt to changes (Jimenez and Valle, 2011; Weerawardena, O’Cass, and Julian, 2006). The basic assumption is that learning plays a key role in enabling companies to achieve speed and flexibility in the innovation process (Baker and Sinkula, 2007).

Organizational learning theory argues that managers evaluate success or failure by comparing performance outcomes with goals previously set, which, in turn, influence managerial action (Lant, et al., 1992; Lant and Mezias, 1992; Lages, Jap, and Griffith, 2008; Levitt and March, 1988). As such, organizational learning theory focuses on processes that help managers to identify associations between behaviours (e.g., strategies) and outcomes (e.g., performance) (Cyert and March, 1963; Levinthal and March, 1981). Organizational learning also serves as a reference to understand the influence of past performance on innovativeness and learning orientation because the past is a driver of strategic action and change (Lages, Mata, and Griffith, 2012).

### **4.3.2 Innovativeness and learning orientation: an inside-out and outside-in view**

Consistent with a long-standing view in the literature, the distinction between inside-out and outside-in perspective implies that managers can exercise discretion in terms of how much they attend to objects and issues whose primary locus is outside or inside the firm (see Day, 1994). Empirical work provides evidence that the relative emphasis that managers place on the outside-in or inside-out view shapes the organizational actions and performance (Garg, Walters, and Priem, 2003; White et al., 2003; Yadav et al., 2007). These differences of attention are important because they influence the formulation and implementation of strategic actions (Garg et al., 2003; Plambeck, 2012). Given that the nature of managers' interpretations affects the focus of activities, realizing the consequences of those interpretations can have strategic implications for the business.

Hurley and Hult (1998, p. 44) define innovativeness as “the notion of openness to new ideas and an aspect of a firm’s culture... a measure of the organization's orientation toward innovation.” Hult et al. (2004, p. 429) refer to innovativeness as “a firm’s capacity to engage in innovation: that is, introduction of new processes, products, or ideas in the organization”. Business unit innovativeness (inside-out) represents the values and beliefs inside the organization that promote behaviours to develop fresh ideas for new products or processes to achieve new services. Such behaviours foster a culture that re-energizes values of creativity, entrepreneurship, risk taking, commitment, tolerance, and involvement and encourages employees to strive for success (Homburg and Pflesser, 2000).

When the focus of innovativeness is the customer (outside-in), the firm will encourage backwards processes of new programs and services in which the starting point is customer expectations and perceived value (Day, 1994; Kohli and Jaworski, 1990;

Laforet, 2008). When meeting customer needs is an overriding priority for the organization it is more likely that firm performance (Ellis, 2006), the ability to innovate (Laforet, 2008), and level of innovativeness (Hurley and Hult, 1998) will increase.

Learning orientation is conceptualized as the degree to which the organization values knowledge, is open-minded, and has a shared vision (Sinkula et al., 1997). The orientation translates into the ability of the organization to capture the relevant information at any moment more precisely, anticipating market tendencies while discarding the routines that are no longer operative. Learning-oriented firms routinely challenge fundamental beliefs and practices in order to maximize organizational performance (Baker and Sinkula, 1999a) including the innovation process itself (Day, 1994; Baker and Sinkula, 1999b, Vijande, Sanches, and Trespalacios, 2012). Several studies indicate that learning orientation is strongly related to innovativeness. Some demonstrate that learning orientation directly influences innovativeness (e.g. Calantone et al. 2002; Liu, Luo, and Shic, 2002; Hult et al., 2004), while others argue for mediation between key drivers of innovativeness and performance (e.g. Rhee, Park, and Lee, 2010). In this study we follow both perspectives.

Some authors suggest the need for learning to incorporate both outside (market focus) or inside (internal) information to achieve higher innovation output (Kohli and Jaworski, 1990; Slater and Narver, 1995; Weerawardena et al., 2009). The long-term competitive advantage arising from innovation is more likely to come from the disruptive type, thus a focus on customer insights may not be a sufficient condition to develop such innovations (Baker and Sinkula, 2005; Chandy and Tellis, 1998). Market-centric learning prioritizes the expressed needs of customers as learning opportunities, while internal learning explores organizational capabilities to discover the unexpressed

needs of customers by learning from sources within the company (Matuso, 2006; Slater and Narver, 1995; Weerawardena et al., 2006).

### **4.3.3 Managerial perceptions of the environment**

Firm's performance is attributable to a match between strategic behaviours and the perception of environmental conditions (Atuahene-Gima and Murray, 2004; Plambeck, 2012; Meyer, 1982). Understanding the role of middle managers in this context is critical because very often the locus of innovation lies in the middle ranks of the firm. Middle management often play crucial roles in driving change as they are closer to the market and take everyday actions that slowly steer the organization (Hornsby et al., 2009; Yadav et al., 2007).

As managerial actions follow from meanings attached to the environment, managers and thus organizations respond differently to similar environmental events (Dutton and Jackson, 1987; Meyer, 1982). Environmental turbulence arises when managers perceive their business environment or one of its components as volatile (Milliken, 1987). This may encourage a firm to make investments, to introduce profound changes, and assume important commitments such as innovative approaches (Gamero, Azorín, and Cortés, 2011). At the same time, perceived environmental turbulence may increase uncertainty about future returns, causing managers to refrain from innovative endeavours (March, 1991).

Earlier research highlights the importance of labelling events as opportunities or threats, and provides evidence on the implication that such labels have on resource use and allocation. Labelling events as threat or opportunity affects the level of managerial risk taking, involvement, and commitment associated with that particular issue (Dutton and Jackson, 1987; Kahneman and Tversky, 1984; Plambeck, 2012). Managers tend to classify external events along negative-positive, gain-loss, and controllable-uncontrollable spectra (Jackson and Dutton, 1988). The initial categorization is likely to persist over time because managers will continue to perceive the information in such a

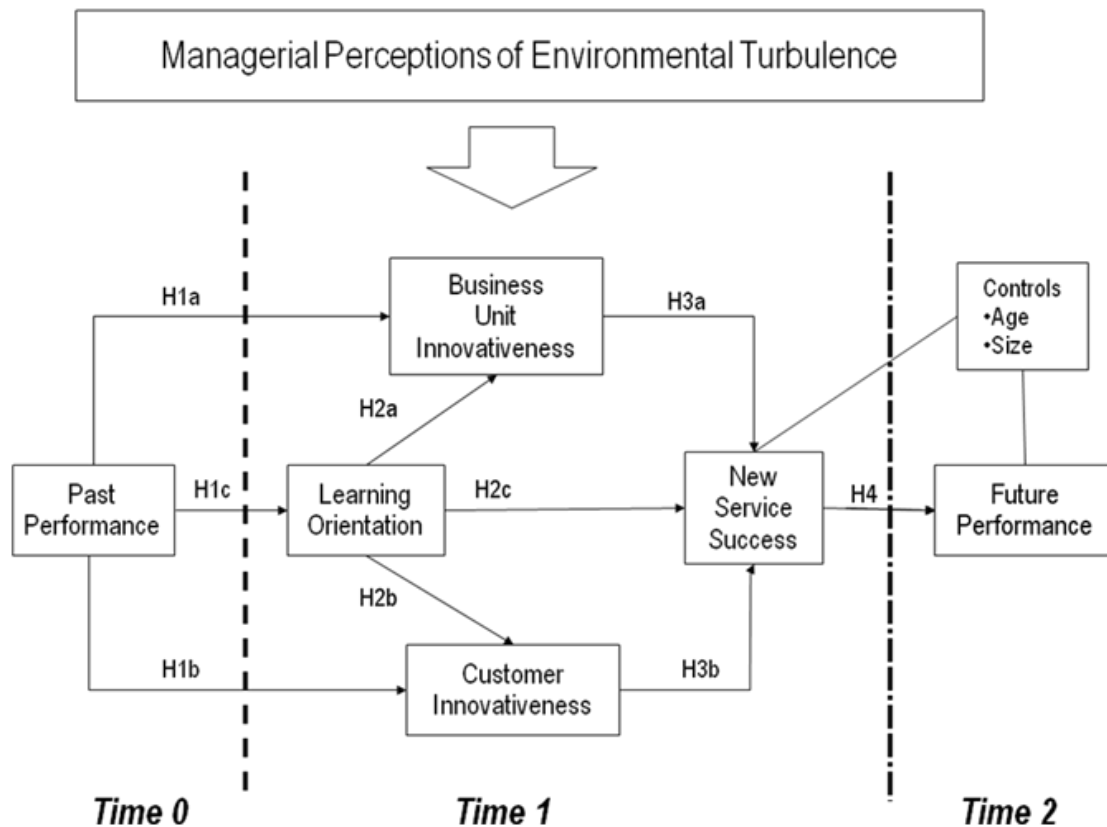
way as to support their initial beliefs. If supporting existing beliefs is the managers' frame of mind, they will be unlikely to direct their choices toward a different strategic action (Day, 1994; Dutton and Jackson, 1987). Therefore, different orientations are contingent on the managers' perceptions of environmental change, namely changes in market opportunities, technology, and innovation.

These three characteristics of the environment are important intervening factors when studying innovativeness (Atuahene-Gima, 2005; Ireland, Covin and Kuratko, 2009). By providing new product-based value propositions more closely aligned with market opportunities, firms can position their products to meet the evolving needs of their markets (Voss and Voss, 2008). Changes in market opportunities are then likely to bring more innovativeness to the market. A second important market condition that relates to innovativeness is the pace of technological change. In today's markets competitive advantage is easily eroded, making technological superiority short-lived. Firms that consider technology to be their main competitive advantage must benefit before that advantage succumbs to technological diffusion. To remain competitive in the market and to prevent erosion of competitive superiority, it is necessary to introduce innovation continually. In a competitive environment firms need to differentiate their offerings from those of rivals. This often translates into innovation, exploiting opportunities to compete on distinct capabilities.

#### **4.4 The Operational Model and Research Hypotheses**

In this section we develop research hypotheses that are summarized in the conceptual framework presented in Figure 4.1. This framework will be tested in contexts of high and low perceived environmental turbulence.



**Figure 4.1 Conceptual Framework**

Managers look at past performance as a basis for future action (Cyert and March, 1963; Iyer and Miller, 2008; Lages et al., 2008; Lant et al. 1992; Levinthal and March, 1981). Organizational learning regards managerial decisions as assessing past performance in accordance with specified goals, and adjusting behaviour in response to favourable and unfavourable feedback (Cyert and March, 1963). Organizations will imitate and perpetuate successful practices, encoding them into knowledge that becomes the rule for accepting or rejecting information (Day, 1994). As such, managers react to past performance when determining current strategies (Lant et al., 1992; Lages and Montgomery, 2004).

Cyert and March (1963) highlighted two triggers for action: problems and slack. Past performance can motivate the search to resolve problems. Poor performing firms will have less room for error than well performing firms. We expect that in the presence of

problems managers seek to identify alternatives to current activities to correct performance shortfalls. Managers will endeavour to fix short-term performance weakness by first searching for solutions within familiar organizational domains, emphasizing internal efficiency, cost cutting, and innovative initiatives (Nohria and Gulati, 1996).

On the other hand, higher performance allows managers to build organizational slack and learning (Chattopadhyay, Glick, and Huber, 2001; Lages, Mata, and Griffith, 2012; Mone, McKinley, and Barker, 1998). When there is a positive performance and slack is available, firms can experiment, which can result in identifying and pursuing new opportunities (Levinthal and March, 1981). The availability of excess resources encourages experimentation and risk-taking behaviours (Burgelman and Sayles, 1986). The experimentation can be of many sorts. Managers can use slack to encourage development of ideas highly uncertain in terms of outcomes. For example, managers might promote new ideas that reflect customer expectations (Cyert and March, 1963; Nohria and Gulati, 1996). By providing a buffer to short-term operations, the organization will facilitate values of creativity and entrepreneurship, encouraging the search for tacit and disruptive knowledge needed for higher levels of innovativeness (Zahra and O'Neill, 1998). By incorporating customer expectations and preferences the firm may develop and modify product offerings (Chandy and Tellis, 1998; Bowen, 1996). Thus:

*H1A: There is a positive relationship between past performance and a) business unit innovativeness, b) customer innovativeness, and c) learning orientation.*

Managers' perceptions of environmental turbulence are likely to moderate this relationship because the perception of market changes puts pressure on firms to introduce more new offerings in the marketplace more quickly (Calantone et al., 2002;

Ireland et al., 2009). These perceptions will guide behaviour and influence resource allocation and its magnitude by shaping perceptions of gains, control, and opportunities arising from the strategic decision (Day, 1994; Dutton and Jackson, 1987). Perceiving environmental turbulence imbues managers with greater audacity and proactivity, encouraging a more critical assessment of current ideas and encouraging the organization to take advantage of innovation opportunities (Athahene-Gima, 2005; Baron and Tang, 2011; White et al., 2003).

Managers may use good short-term performance to generate slack resources such as underutilized capacity and employees, or financial resources (Levinthal and March, 1981). This availability of resources allows for search, which generates opportunities for change (Cyert and March, 1963; Levinthal and March, 1981). Slack acts as an important catalyst for innovation because managers can direct actions to increase the organization's tolerance for ambiguity and risk, nurturing a culture that welcomes change, relaxing controls even in the face of uncertainty (Iyer and Miller, 2008; Lant et al., 1992). When these conditions are met and the manager perceives the market as valuing innovation, the firm has an extra incentive to pursue new ideas to reach the market with new offers. This will be a valuable tool for boosting competitiveness and gaining market share.

When managers perceive that they are competing in changing, dynamic, and complex environments, they tend to believe that more information is needed to know how to provide added value in the marketplace. Under these circumstances a learning orientation becomes more useful (Hitt, Keats and DeMarie, 1998). Quick learning in turbulent markets is increasingly important as adaptation and reaction periods are much shorter (Lages et al. 2008). Shorter reaction time leads managers to increase their information search, and the faster they understand and interpret the environment, the

sooner they are able to adapt and respond to changes, for example by identifying emerging technological paths (Weiss and Heide, 1993). Such search will increase the information available, which will provide a stronger basis for firms to become learning oriented. The greater the learning, the greater the number of informed strategic decisions considered. The firm is thus likely to consider different options in its course of action (Bourgeois and Eisenhardt, 1988). However, in environments with lower levels of perceived change, adaptive behaviour is likely to decrease because complacency and rigidity traits emerge: managers exhibit political resistance to change, become more risk averse, and seek to reinforce action that will maintain the status quo (March, 1991). Therefore, the next hypothesis is:

*H1B: When managers perceive the environment as being turbulent, past performance levels have a greater influence on a) business unit innovativeness, b) customer innovativeness, and c) learning orientation, than when managers perceive the environment as being stable.*

Earlier empirical work has demonstrated that learning and innovativeness are highly correlated (e.g. Calantone et al., 2002; Hult et al., 2004; Morales et al., 2006). Learning influences the propensity of a firm to proactively pursue new knowledge and challenge the status quo (Slater and Narver, 1995; Sinkula et al., 1997). Learning orientation is a route to new service development on its own because of its potential to influence behaviours and improve the firm's capabilities (Baker and Sinkula, 1999a) that enhance innovation (Han, et al., 1998; Hurley and Hult, 1998; Slater and Narver, 1995).

Learning oriented firms are more likely to question whether the core beliefs about customers, competitors, and suppliers that provide the basis for actions remain applicable in changing markets. These firms scan the external environment for new technological paradigms that may offer a better means to deliver core product category

benefits (Baker and Sinkula, 1999b). When learning is a priority, employees are encouraged to question how they operationalize their market-oriented behaviours (Day, 1994), the way they interpret the informational output of these behaviours (Lee, Wong, and Foo, 2011), and the way they integrate this information with other information (e.g., customer satisfaction). Therefore, learning orientation is a resource that influences the quality of customer solutions because it provides the ability to sense events and implement new and creative ideas (Weerawardena et al., 2006). In sum, we propose:

*H2A: There is a positive relationship between learning orientation and a) business unit innovativeness, b) customer innovativeness, and c) new service success.*

A learning orientation strengthens a firm's ability to recognize opportunities, to pursue new ventures effectively, and to achieve continuous alignment with the environment (Lumpkin and Lichtenstein, 2005; Vijande et al., 2012). The capacity to learn about the environment is related to the ability to seize external opportunities (Baker and Sinkula, 2007; Jimenez and Valle, 2011). Managers whose mental models perceive market opportunities rather than threats engage in actions that involve greater risk (higher innovativeness), and that are likely to help the firm to perform better (Dutton and Jackson, 1987). The evidence reported reinforces the view that in environments perceived as being turbulent, learning will become a critical ability to guide the organization. When managers perceive a changing environment, they will be better off investing in learning abilities as a means to adapt to changes as it promotes the capacity to question product paradigms, long-held assumptions, fundamental beliefs, and embedded practices that eventually lead to successful innovation, which in turn will provide a sustainable advantage (Baker and Sinkula, 1999b; Day, 1994; McGill and Slocum, 1993; Weerawardena, et al., 2006). Additionally, learning promotes faster exploration of new opportunities as it allows the firm to encompass visions of what the

market will become (Atuahene-Gima, 2005). The firm will be at best a successful follower if it focuses exclusively on the customer. Hence, several authors argue for the need for complementary firm resources other than a customer focus (e.g. Menguc and Auh, 2006), or to put the customer at arm's length (Christensen and Bower, 1996) to achieve successful innovation. In sum, by combining employees' ideas with a customer centric approach, learning orientation will provide an appealing way to seize market opportunities in changing markets, where innovation and valuable market propositions are obligations that the market imposes (Eisenhardt, 1989; Lant et al., 1992). Hence, we hypothesize:

*H2B: When managers perceive the environment as being turbulent, learning orientation becomes more significant to a) business unit innovativeness, b) customer innovativeness, and c) new service success, than when they perceive the environment as being stable.*

Companies with the capacity to innovate will be able to respond to challenges more quickly than competitors and to exploit new products and market opportunities better than non-innovative companies (Brown and Eisenhardt, 1995; DeSarbo, DiBenetto, Song, and Sinha, 2005). This will improve overall firm performance and achieve competitive advantage. Both the firm and customers are a rich source of ideas and creativity that lead to innovation (Shepherd and DeTienne, 2005). Typically, by collecting intelligence about customers, firms are able to develop products to satisfy their needs and desires (Day, 1994; Deshpande et al., 1993; Hunt and Morgan, 1995; Matsuo, 2006). Indeed, several recent studies have brought to the fore the importance that customers play in developing innovations (e.g. Melton and Hartline, 2010; Ordanini and Parasuraman, 2011). Customer-oriented innovation creates value by exploiting existing resources and by adding new services and features that contribute to new

services' success (Cheng and Krumwiede, 2012). The constant dialogue between the firm and its customers also identifies issues and is a rich source of ideas necessary to foster innovation (Matsuo, 2006; Zhou, Bown and Dev, 2009). The knowledge pertaining to customer collaboration can generate more new ideas, even when the reliance on past experiences is likely to inhibit exploration of drastically new domains (Levinthal and March, 1993; Shepherd and DeTienne, 2005).

Due to the nature of the interaction with the customer, in service firms business units are in a stronger position to come up with new ideas. If the firms cultivate entrepreneurial behaviours and cooperation, and place value on innovative ideas, then the business is likely to come up with ways to improve services that better serve existing and new customers (Tajeddini, 2010). Moreover, it will improve the ability of the organization to adopt or implement new ideas, processes, or products through cost reduction, more efficient resource use, or simply new-to-the-world services (Hurley and Hult, 1998; Ottenbacher and Gnoth, 2005). Innovativeness will occur at both business unit and customer levels. Therefore, we expect that:

*H3A: New services' success is positively affected by a) business unit innovativeness and b) customer innovativeness.*

Managers perceiving greater environmental turbulence often look for alternatives to respond to that turbulence (Eisenhardt, 1989; Lant et al., 1992). Those who see potential in the integration of environmental changes into the firm may take actions that significantly affect the competitive position of their rivals. In a scenario of change, organizations may be more inclined to value employee ideas because those ideas are useful in searching for new strategies (Baron and Tang, 2011; Morrison and Milliken, 2000). When patents are not involved innovation is more protected if sourced by tacit, complex, and specific resources such as employees' ideas, suggestions, and creativity.

In changing markets the transfer of new and complex information needed to achieve successful service development can come only from highly motivated and cooperative internal resources (Luo, Slotegraaf, and Pan, 2006). As such, in turbulent environments the driver of superior performance is often the dedication of employees to new product initiative (Henard and Szymanski, 2001). When innovativeness is supported by creativity and cooperation, competitors will have difficulties in understanding the causal links, and thus be unable to copy the new services with total success (Reed and DeFillippi, 1990). To differentiate themselves from competitors, firms may need to develop and reorganize internal resources and capabilities in order to provide better offerings (Eisenhardt and Martin, 2000).

Some authors also have argued that in turbulent markets characterized by opportunities and technological and process changes end-users expect firms to deliver constant innovation. For example, Melton and Hartline (2010) found that the primary source of service innovation in turbulent environments is customers. Managers may be able to improve business by encouraging new ideas and opening the way for new market niches through the incorporation of ideas and knowledge from the marketplace (Gamero et al., 2011). The firm can deploy the customer knowledge gathered to shift products and services to meet evolving customers' needs, thereby developing more incremental innovations (Cheng and Krumwiede, 2012). Taking all of the above considerations together, we follow the view that the relationship of innovativeness to new services' success is strengthened when managers perceive the environment as changing. Hence, we propose:

*H3B: When managers perceive the environment as being turbulent, new services' success is more strongly influenced by a) business unit innovativeness and b) customer innovativeness, than when they perceive the environment as being stable.*



The importance of innovative offering to the long-term survival of the firm was mentioned by Schumpeter (1934) almost 80 years ago. Since then, many studies have confirmed the positive impact of successful innovation on firms' performance (e.g., Deshpande et al., 1993; Han et al., 1998; Salunke et al., 2012; Weerawardena et al., 2006; Zhou et al., 2009). New service success refers to the rate of new service introductions and market success relative to the firm's largest competitor as well as their degree of differentiation. Successful services are those in which the firm increases revenues by providing more perceived value to existing customers, keeping them satisfied and loyal. Service innovation contributes to new service performance by providing new benefits to existing customers and to new markets, by incrementally adding value to existing services or by adding radically new services (Chen and Krumwiede, 2012; Gatignon and Xuereb, 1997; Zhou et al., 2005). The very nature of services, with intangible features when compared to goods, leads to a greater need to establish credibility with customers. As such, a cycle of successful service innovation often contributes to firm performance (Tsiotsou, 2010), as it generates customer excitement, positive word-of-mouth, satisfaction, and heightened loyalty, which are likely to result in better performance. Thus, we propose:

*H4: There is a positive relationship between new service success and future performance.*

## **4.5 Method**

### **4.5.1 Sample and data collection**

We focus on a single industry in order to capture individual perceptions of environmental change (market opportunities, technology, and rate of innovation change)

within the same context. By doing so, we control for the impact of industry characteristics on manager's perceptions of innovation activity. We examine the hotel industry because this service has undergone many changes in recent years. The unit of analysis is the single hotel establishment.

Recently researchers have called for the need to further investigate innovativeness in the service sector (e.g., Ordanini and Parasuman, 2011; Salunke et al., 2012). Services have become the primary sector of the world's economy, accounting for approximately 70% of the total gross value added for the OECD countries (OECD, 2010). Several authors argue that due to the nature of services the process of innovating is becoming more and more important to achieve a competitive advantage due to its element of intangibility. Services can be a basis for product differentiation due to difficulties of protecting trade secrets through patents and increasing competition. Furthermore, more and more customers today do not look for the product itself, but for the intangible effect it produces.

We collected measures regarding three different time periods: past performance (time 0), innovation measures (time 1), and future performance (time 2).

To assess performance in time 0 we employed two measures: sales per room and operating revenue per room, which are performance measures frequently used in the hotel industry (Verma, Plaschka, and Louviere, 2002). The same measures were used to assess performance in time 2. Consistent with earlier literature on innovation (Han et al., 1998), we collected year-end performance measures for 2003 and 2006 to allow a time lag. Data were obtained from the Bureau Van Dijk database, which contains income statements and other accounting data for Portuguese firms with more than 10 employees. The use of these objective measures of performance in innovation research is rare, but highly recommended, because perceived performance measures tend to

inflate the effects of innovation activities. To collect the measure for time 1, we used a postal questionnaire. All measures were translated from English to Portuguese, using the back-translation method to ensure conceptual equivalence (c.f. Douglas and Craig, 1983). All items were measured using seven-point Likert scales. The final version was mailed to 2,203 establishments. The data were collected in 2005, in the form of 448 valid responses, yielding an overall response rate of 21% (95% confidence level). After matching the questionnaires with objective financial data, our sample was reduced to 138 usable questionnaires. Tests of non-response bias were conducted comparing early and late respondents (Armstrong and Overton, 1977). No evidence of bias was found. Following earlier innovation literature (Damanpour, 1991) the present study controls for firm size (total firm sales) and managerial experience (number of years in the business unit). This diminishes the potentially spurious effects of these variables.

#### **4.5.2 Data Analysis**

In order to assess the validity of the measures, the items (Table 4.1) were subjected to CFA using LISREL 8.51 (Jöreskog and Sörbom, 1993). The chi-square for this model is significant (chi-square = 410.3,  $p < .00$ ). Since the chi-square statistic is sensitive to sample size, the study also assesses additional fit indices: the Comparative Fit Index (CFI= .97) and the Tucker-Lewis Fit Index (TLI= .96). The RMSEA of this measurement model is .06. All constructs present the desirable levels of composite reliability (Bagozzi, 1980) and all passed Fornell and Larcker's (1981) test of discriminant validity. Convergent validity was evident in the significant standardized loadings of each item on its intended construct (average loading size was 0.75). By analyzing values in Table 4.2, the square root of AVE between any two constructs (diagonal) was calculated. Results showed that items load higher in the respective

construct than on any other construct, thus confirming discriminant validity. Table 4.2 provides details of mean, standard deviations, and correlations between constructs.

**Table 4.1 – Final Scale, Items, and Reliabilities**

	$\alpha/\rho$	vc(n)	Stand. Item-Loadin	T-value
<b>Time 0 (2003)</b>				
PAST PERFORMANCE	.97/	.98 /	.97	
Source Verma, Plaschka, and Louviere, 2002				
1. Sales per room 2003			.98	88.13
2. Operating revenue per room 2003			.98	80.72
<b>Time 1 (2005)</b>				
BUSINESS UNIT INNOVATIVENESS	.77/	.80/	.56	
Source: Homburg and Pflesser, 2000				
Please rate your agreement with each of the following statements regarding your accommodation unit				
Scale: 1 = Strongly Disagree; 7 = Strongly Agree				
1. In our business unit, we particularly emphasize innovativeness and creativity			.75	9.09
2. In our business unit, we aspire to cooperative work			.85	10.59
3. In our business unit, we value very highly that every employee thinks and acts like an entrepreneur			.66	7.71
CUSTOMER INNOVATIVENESS	.76/	.78/	.55	
Source: Homburg and Pflesser, 2000				
Please indicate the frequency of the articulation of the following or similar sentences during meetings in your business unit				
Scale: 1= Very Infrequent; 7=Very Frequently				
1. "If we now try to look at this problem from the customer's point of view..."			.77	9.02
2. "What is the value added to the customer of doing that?"			.86	10.20
3. "Can we offer the customers what they are expecting from us?"			.57	6.39
LEARNING ORIENTATION	.84/	.85/	.45	
Source: Baker and Sinkula, 1999a				
Please rate your agreement with each of the following statements regarding your accommodation unit.				
Scale: 1 = Strongly Disagree; 7 = Strongly Agree				
1. The basic values of this hotel unit include learning as a key to our competitive advantage.			.77	15.91
2. The collective wisdom in this hotel unit is that once we quit learning, we endanger our future.			.64	7.14
3. All employees are committed to the goals of this hotel unit.			.74	17.02
4. Top leadership believes in sharing its vision for the business unit with the lower levels.			.63	7.70
5. Our hotel unit places a high value on open-mindedness.			.78	14.39
6. Managers encourage employees to "think outside of the box".			.75	10.90
NEW SERVICE SUCCESS	.91/	.91/	.77	
Source: Sinkula and Baker, 1999				
Please indicate how your business unit has performed over the last three years with respect to:				
Scale: 1 = Very low; 7 = Very high				
1. New service introduction rate relative to largest competitor.			.84	22.76
2. New service success rate relative to largest competitor.			.94	26.85
3. Degree of service differentiation			.90	20.06
MANAGERIAL PERCEPTIONS OF ENVIRONMENTAL TURBULENCE	.81/	.83/	.68	
Source: Menon et al., 1999				
Please indicate how you would describe the level of changes in the following areas over the past three years				
Scale 1= Very low; 7= Very high				
1. Market opportunities.			.62	13.60
2. Production/process technology in your industry.			.88	21.44
3. Products/services innovation in your industry.			.85	20.34
<b>Time 2 (2006)</b>				
FUTURE PERFORMANCE	.97/	.98 /	.97	
Source Verma, et al., 2002				
1. Sales per room 2006			.98	62.77
2. Operating revenue per room 2006			.99	131.01

**Table 4.2 – Means, Standard Deviations and Correlations between Constructs**

Correlation Matrix

	Mean	St. Dev.	Skewness	Kurtosis	1	2	3	4	5
1- Business Unit Innovativeness	6,03	0,81	-1,55	4,46	<b>0,820</b>				
2- Customer Innovativeness	5,13	1,28	-0,76	0,48	0,325	<b>0,815</b>			
3- Learning Orientation	5,64	0,87	-0,61	0,01	0,634	0,460	<b>0,725</b>		
4- New Service Success	4,32	1,16	-0,59	0,47	0,407	0,338	0,433	<b>0,917</b>	
5 - Managerial perceptions of Env. Turbulence	4,22	1,06	-0,98	0,47	0,098	0,219	0,221	0,451	<b>0,734</b>

Note: The diagonal shows the square root of the average variance extracted

## 4.6 Results

### 4.6.1 The structural model

The structural model was assessed using Partial Least Squares (PLS), and specifically used Smart PLS 2.0 due to the relatively small sample size (Hulland, 1999). Moreover, when testing moderators by subgroup analysis, samples become smaller, which makes PLS even more appropriate. Nevertheless, due to sample size PLS results are not a concern as we have 138 responses, which is ten times greater than the number of independent constructs affecting the dependent variable (Chin, 1998). We tested the structural model in two stages, first evaluating the explanatory power of the structural model and second, the level of support for the individual hypotheses. Because PLS does not minimize residual item covariance, there is no summary statistic to measure the overall fit of the models, as is the case with covariance-based techniques. We used variance explained ( $R^2$ ) of the endogenous or dependent variables and significance of the path coefficients to test the proposed model. Consistent with Chin (1998), to evaluate the significance of parameter estimates, we used a bootstrapping method of “sampling with replacement” to re-estimate the parameters, generating standard errors and t-values of the parameters from the vector of parameter estimates, obtained from 500 bootstrapping runs. The R-square indicates the amount of variance the model

explains (Chin, 1998). Variances explained 26%, 22%, and 41% for new service success, customer innovativeness, and business unit innovativeness, respectively.

#### 4.6.2 Direct Effects

Table 4.3 summarizes the PLS structural analysis for the hypothesized relationships.

**Table 4.3 – PLS path coefficients**

	Relationship	Std. Coeff	t-values	Predicted	Findings
H1Aa	Past performance - Business Unit Innovativeness	0.08	1.26	Positive	Not Confirmed
H1Ab	Past performance - Customer Innovativeness	0.07	0.94	Positive	Not Confirmed
H1Ac	Past performance – Learning Orientation	0.18**	2.24	Positive	Confirmed
H2Aa	Learning Orientation – Business Unit Innovativeness	0.60***	12.06	Positive	Confirmed
H2Ab	Learning Orientation – Customer Innovativeness	0.44***	5.99	Positive	Confirmed
H2Ac	Learning Orientation - New Service Success	0.17*	1.98	Positive	Confirmed
H3Aa	Business Unit Innovativeness – New Service Success	0.18*	1.97	Positive	Confirmed
H3Ab	Customer Innovativeness - New Service Success	0.23**	2.22	Positive	Confirmed
H4	New Service Success - Future performance	0.20**	2.94	Positive	Confirmed
	Age – New Service Success	0.08	1.16		n/s
	Age – Future Performance	0.10	0.21		n/s
	Size – New Service Success	0.10	1.36		n/s
	Size – Future Performance	0.31	1.78		n/s

\* Significant at  $p < .05$ ; \*\* Significant at  $p < .01$ ; \*\*\* Significant at  $p < .001$  two-tailed test.

The control variables are non-significant, which is in line with results from earlier research (Damanpour, 1991). Generally our model confirms the theory except for the role of past performance on sources of innovativeness (.08 and .07 for business unit and customer innovativeness, respectively), thus not supporting H1Aa and H1Ab. As initially predicted, learning orientation has a positive impact on business unit, customer oriented innovativeness, and new service success (.60, .44, and .17, respectively;  $p < 0.001$ ) fully supporting H2A. This finding is in line with the view that learning orientation enables the firm to sense and adjust to the marketplace better than competitors and that it is able to transfer knowledge gained from different sources to innovativeness related values. While the direct effect of past performance on the levels

of innovativeness is non-significant (for both customer and business unit), the indirect effect through a learning orientation is highly significant, producing a total significant effect. See Table 4.4 for the total effects of past performance.

**Table 4.4 – Effects of Past Performance on Exogenous Variables**

Learning Orientation			PAST PERFORMANCE						New Service Success		
Direct	Indirect	Total	Customer Innovativeness			Business Unit			Direct	Indirect	Total
0.19** (2.41)	n/a	0.19** (2.41)	0.10 (1.39)	0.08 (1.02)	0.18** (2.51)	0.06 (1.07)	0.12 (1.56)	0.18** (2.52)	n/a	0.11** (2.57)	0.11** (2.57)

\* significant at  $p < .05$ ; \*\* significant at  $p < .01$  two tailed test

We used the Sobel (1982) test to understand the influence of past performance to both business unit and customer innovativeness, and found support for a mediating effect of learning orientation ( $z = 2.26$ ,  $p < .05$ ;  $z = 2.14$ ,  $p < .05$ ). So, although past performance does not influence innovativeness directly (in our sample there were no changes in the allocation of resources as a consequence of different levels of performance), managers assimilate performance information. The nature of information about its current strategy serves as a guide for allocating resources to the different types of innovativeness. Increasing levels of performance are likely to function as incentives for increasing the levels of innovativeness when the current strategy is paying off. These competitive abilities that reside in the cultural traits of innovative firms (business unit and customer innovativeness) are positively affected by levels of past performance. This finding supports the view that managers look at performance increases as buffers for experiments and risk taking.



### 4.6.3 Mediating Effects

To further understand the effect of learning orientation on new service success, we conducted additional analysis. The literature argues not only for a direct effect of learning on performance (Baker and Sinkula, 2002), but also that innovativeness mediates this relationship (e.g., Baker and Sinkula, 1999b, 2002; Han et al., 1998). We followed Baron and Kenny's (1986) approach to test for the mediating effect of customer oriented and business unit innovativeness on new service success, running four PLS models: (1) with the effects of learning orientation (the independent variable) on new service success (the dependent variable) without the mediating variables (Model 1); (2) with the effects of the independent variable on both drivers of innovativeness (the mediating variables) (Models 2 and 3); and (3) with the effects of the independent variables on the dependent variable, in the presence of the mediating variables (Model 4). Table 4.5 presents the results.

**Table 4.5 – Mediating Effects of Innovativeness**

	Model 1	Model 2	Model 3	Model 4
	New Service Success	B. U Innovativeness	Customer innovativeness	New service Success
<b>Main Effects</b>				
Learning Orientation	0.43 *** (6.95)	0.64 *** (13.53)	0.46 *** (7.45)	0.17 * (1.98)
<b>Controls</b>				
Firm Age	- 0.01 (0.12)			0.08 (1.16)
Firm Size	0.12 (1.87)			0.10 (1.36)
<b>Mediating Variables</b>				
Business Unit innovativeness				0.23 ** (2.22)
Customer innovativeness				0.18 * (1.97)

\* significant at  $p < .05$ ; \*\* significant at  $p < .01$ ; \*\*\* significant at  $p < .001$  two tailed test

The mediating variables are significant in Model 4 and the strength of that relationship between learning orientation and new services success was diminished when we controlled for the mediating variables in the model. We conducted the Sobel test to understand whether we could consider the indirect effect as statistically different from zero. The test for business unit innovativeness was  $z = 1.95$ ;  $p = .051$  and for customer oriented innovativeness was  $z = 2.08$ ;  $p = .037$ . In conclusion, we found support for the belief that innovativeness is an intervening variable between learning and new service success.

H3A states that new service success is influenced by both business unit and customer oriented innovativeness. The unrestricted model provides support for the hypothesis that both business unit innovativeness ( $\beta = .18$ ,  $t = 1.97$ ) and customer innovativeness ( $\beta = .23$ ,  $t = 2.22$ ) positively influence new service success. This finding shows that firms can profit from innovativeness either by choosing to focus on customers' needs (being externally focused) or by being creative and entrepreneurial (internally focused). Finally, the study confirms that new services' success is positively related to future performance ( $\beta = .20$ ,  $t = 2.94$ ), contributing to the market performance of the firm, thus supporting H4.

#### **4.6.4 Moderation Effects**

To better understand the presence of a moderation effect, we follow well established methodology (Sharma, Durand, and Gur-Arie, 1981) that examines managerial perceptions of environmental change as a moderating force. First, the interaction term was created and regressed between perceived environmental turbulence and the predictor variable in PLS to determine whether a significant interaction was present. The correlation between the moderator and the dependent and independent variable was

assessed. No significant correlations were found between the perceived environmental turbulence and new service success, or between learning orientation and business unit and customer innovativeness. We then tested perceived environmental turbulence as a homologizer moderator (Sharma et al., 1981) by performing a subgroup analysis. To do this we first sorted the sample in ascending order of managers' perceived environmental innovation activity and then split the sample at the median to form two groups, one with relatively low perceived environmental change and the other with relatively high perceived environmental change, excluding the 10% in the middle to ensure enough contrast (Kohli, 1989). Next, performance was regressed on the full model allowing all regression coefficients to take on different values in the two subgroups. Table 4.6 summarizes the PLS structural analysis for the subgroup analysis.

**Table 4.6 - Results of Sub-group analysis for Managerial Perceptions of Environmental Turbulence**

	Full Model	Perceptions of Environmental Turbulence			t diff.	
		High	Low			
H1a Past performance - Business Unit Innovativeness	0.08	0.16 **	0.02	2.58	p<0.05	
H1b Past performance - Customer Innovativeness	0.07	0.40 ***	-0.07	7.74	p<0.001	
H1c Past performance – Learning Orientation	0.18**	0.26 **	0.08	3.09	p<0.01	
H2a Learning Orientation – Business Unit Innovativeness	0.60***	0.69 ***	0.61 ***	1.04	n/s	
H2b Learning Orientation – Customer Innovativeness	0.44***	0.15	0.55 ***	- 5.68	p<0.001	
H2c Learning Orientation - New Service Success	0.17*	0.17	-0.02	2.41	p<0.05	
H3a Business Unit Innovativeness – New Service Success	0.18*	0.36 ***	0.17	2.93	p<0.001	
H3b Customer Innovativeness - New Service Success	0.23**	-0.03	0.42 ***	-5.97	p<0.001	
H4 New Service Success - Future performance	0.20**	0.31 ***	0.05	4.44	p<0.001	
Age – New Service Success	0.08					
Age – Future Performance	0.10					
Size – New Service Success	0.10					
Size – Future Performance	0.31***					

\* Significant at  $p < .05$  ; \*\* Significant at  $p < .01$ ; \*\*\* Significant at  $p < .001$  two-tailed test.

H1B predicted that the relationship between past performance, sources of innovativeness, and learning orientation is stronger when managers perceive greater

environmental turbulence. To test the differences of significant relationships (i.e., a positive and significant coefficient in the subgroup analysis) the study follows the methodology proposed by Keil, Mann, and Rai (2000). We assess the differences between path coefficients of past performance and learning orientation in the high and low perceived contexts.

The parametric test supports all H1B. Thus, in contexts of high perceived environmental turbulence, past performance influences managerial actions more than in environments of low perceived environmental change. This finding suggests that in highly changing environments managers need to react quicker to stay in tune with the marketplace. Here the information about how the current strategy is doing becomes more valuable because managers can transfer the knowledge gained to make more informed decisions.

H2B hypotheses refer to the importance of learning orientation on sources of innovativeness and on the firms' ability to achieve new service success under high perceived environmental change. Findings fail to confirm the hypothesis. The impact of a learning orientation on customer oriented innovativeness (H2Bb) was not significant in contexts of high-perceived environmental change ( $\beta = .15$ ,  $t = 0.46$ ), but was highly significant in contexts of low perceived environmental change ( $\beta = .55$ ,  $t = 5.29$ ). This finding suggests that managers are unable to use customer intelligence inspiration to bring innovative solutions in highly changing environments. Effective use of customer intelligence is achieved only in low perceived changing environments. Learning in perceived stable environments is likely to have a greater influence on innovativeness than in highly changing environments because levels of ambiguity in the environment are perceived as lower. Conditions of environmental turbulence such as technology change, market opportunities, and innovation are likely to inhibit learning due to inertia,

myopia, and missed opportunities, as managers find it more challenging to use market information to support customers' preferences.

H2Bc is also non-significant ( $\beta = .17$ ,  $t = 1.03$ ), the positive impact of learning on new services success in contexts of high perceived opportunities is not confirmed. This finding is in line with arguments that learning orientation is felt in the longer term because behaviour change is necessary (Baker and Sinkula, 1999a), while making learning from experience more difficult. Finally, the study confirms the positive impact of learning on business unit innovativeness (H2Ba) when individuals perceive the environment as changing ( $\beta = .69$ ,  $t = 9.38$ ,  $p < 0.001$ ). However, the parametric test did not support a stronger influence of learning orientation on business unit innovativeness in high perceived changing environments. Therefore H2Ba is not supported. Nonetheless, the results highlight the importance of a learning orientation to instigate values of internal innovativeness, supporting arguments that the learning orientation effects on performance are mediated by innovativeness.

Results partially confirm H3B. Under high-perceived environmental change only business unit innovativeness is statistically significant ( $\beta = .36$ ,  $t = 2.32$ ). The difference in path coefficients was significant. The driver of new service success in perceived changing environments is statistically different from the driver of new service success when individuals perceive less change.

Environmental change increases the risk associated with matching an innovative offering with the preferences and expectations of the firm's current customer base, forcing service firms to look for alternative drivers of new service to achieve success. In perceived stable environments effective innovativeness is achieved by staying closer to the customer. In this scenario technologies and preference patterns are not constantly changing and, as such, not disrupting the synergies between product, technology,

manufacturing, and customer needs (Baker and Sinkula, 2007; Gatignon and Xuereb, 1997). These findings echo reports in the literature that in more mature markets customer retention is more effective for long-term performance than continuous investment in customer acquisition (Sheth and Parvatiyar, 1995). In environments where change is very frequent service offerings can be more susceptible to the risks of innovativeness because customers may find it difficult to evaluate the intangible elements of service innovation. This occurs because customers expect some level of innovativeness as part of the service value proposition. Furthermore, a focus on the customer is more likely to yield incremental and minor changes in services (Levinthal and March, 1993), making the increased level of service in environments of high change to go unnoticed by customers. Since consumers may base service quality evaluations on a comparison of actual and expected service, service quality evaluations could suffer when actual innovativeness in a service is at a level where it is difficult for consumers to fully or properly assess. Furthermore, H3B complements results of Voss and Voss (2008), reporting that in stable environments performance is more likely to come from meeting current customers' needs rather than from attracting new ones. In changing environments performance is increased by looking for new customers while emphasizing innovation and imitation.

Finally, new service success has a positive effect on performance (H4) in high perceived changing environments, but in slow changing environments successful new services are not enough to influence performance. The finding confirms that when the perceived rate of technology and the pace of market innovation are fast, the ability to contribute to superior market performance is by developing new and unexpected offers (business unit innovativeness). The ability to meet customers' expectations by being

creative and working in team with the customer is likely to generate innovative services, but these do not necessarily generate higher sales or increase operating revenues.

#### **4.7 Managerial Implications**

Our findings provide several insights for managing service innovation, particularly in complex and multiplayer service contexts such as in the hotel sector. First, it highlights the importance of framing issues. Managers who perceive the environment as changing and identify it with opportunities are advised to prioritize values that support internal innovativeness, as they become the source of new service success. Managers have the responsibility to motivate employees toward practices of creativity, innovation, and entrepreneurship, as these factors impact performance. In their innovation endeavours, employees are generally limited by their available options. They are primarily employed to serve the customers, not to develop new resources. However, as long as they feel supported to use existing resources they can contribute with creative ideas, thus building a culture that supports an innovative firm. It is the manager's role to develop policies that promote a culture that encourages and values employee's ideas without penalizing them through the contagion of potentially ineffective ones while encouraging employees' entrepreneurship. Moreover, the organizational support for internal values of innovativeness will be strengthened by a learning orientation. But managers are pivotal in encouraging individuals to learn, ensuring that they pursue and understand the value of learning. A learning orientation needs to have managerial support and commitment in order to take place. Companies that provide real value to customers see their customers less likely to switch to competitors. Our research shows that when individuals perceive the environment as more stable, mastering customer's processes will bring innovativeness awareness for new service improvements that will set the firm

apart from competitors. Innovation efforts are rewarded by focusing on delivering services that draw on the current customer base and its needs. For example, UPS followed this approach, and by better understanding the customers' value chain, started offering new added value services such as handling the entire shipping function for its customers.

Second, our results provide guidance on how top management can influence sources of innovativeness by manipulating perceptions. Managerial discretion can generate the desirable organization focus on anticipated industry changes or industry life cycle stages. Managers may follow a proactive approach rather than a reactive one in order to initiate strategic reorientations to deal with future environmental turbulence. This view is supported by several authors (e.g. Barnett and Pratt 2000), who defend a proactive perspective of provoking changes based on environmental events that may never occur except in the eyes of the individual. Third, our research shows that innovation is a collective endeavour built on a shared sense of the company's dynamic evolution, commitment to learn, and open mindedness. Learning orientation becomes a valuable resource not only in itself but also as it contributes to the accumulation of other organizational capabilities increasing the value of the organization. In this sense, practitioners who wish to motivate innovation and build on innovation programs should consider investing first in a learning orientation.

Finally, we observe that the positive effects of past performance on business unit innovativeness, customer innovativeness, and learning orientation are revealed when managers perceive the environment as changing. Under these conditions managers use available resources (slack) to source innovativeness, namely by giving the right innovation and creativity tools to employees, as this will generate new services' success and, in turn, future performance.



## 4.8 Discussion

Service firms may follow internal or external innovativeness sources in order to bring successful new services to the market. Building on earlier research (e.g., Hurley and Hunt, 1998; Rubera and Kirca, 2012) we examine how managerial perceptions of the environment moderate the impact of innovativeness on performance. Additionally, we disaggregate the individual contribution of each source of innovativeness to new service success. Answering to calls for further understanding of the role of managers' interpretation of the external environment (Hjalager, 2010), we contribute to the literature by showing the impact that such perceptions have on resource allocation and capabilities building within organizations. Earlier research pointed to the importance of managerial emphasis on the creation of an internal business environment conducive to innovative activities. If innovativeness is regarded as the starting point of innovation, employees may be sceptical at first. Promoting values of learning such as openness, creativity, and the sharing of novel ideas may hamper scepticism and work toward development of new services. Innovativeness in the hospitality business was found to have a significant and positive effect on performance in the long term (Tajedinni, 2010).

High-performing service firms in perceived stable environments succeed in new services by staying close to mainstream customers, while in perceived changing environments they succeed by focusing on internal development for innovativeness. This adds to the belief that to make a real difference in the market place in which technology, innovations, and market changes are constant factors, gaining a firmer control of the market by causing something significantly new to happen is more likely to be achieved by those companies that distance themselves from their market. The service management literature is still in disagreement about how to translate innovation models from a manufacturing to a services context (Baker and Sinkula, 2007). Some

authors maintain that a strong interaction with customers leads at best to more incremental innovations (Ordanini and Parasuraman, 2011) while others point to the superior role in service innovation (Melton and Hartline, 2010). Our findings are aligned with the notion in the product innovation literature that the firm is caught by the *tyranny of the served market* (Chandy and Tellis, 1998; Christensen and Bower, 1996; Hamel and Prahalad, 1994), and with the services management literature arguing that customers may not always be the source of sustained competitive advantages (Melton and Hartline, 2010).

Innovation in services is likely to be more important for service companies than for product-oriented companies, which can source themselves in the physical element of the innovation. Given the intangible nature of the service delivery, service firms need to ensure that innovativeness presented to the market is meaningful and understood by the customer, i.e., the novelty is noted. If success of new service comes from internal innovativeness capabilities, the ability of competitors to observe and understand the whole set of distinct and interdependent elements inside the company is limited (Reed and DeFillippi, 1990). The complex interdependencies among internal resources increase the likelihood of the emergence of new ideas unique to the firm that are difficult for competitors to emulate.

The importance of learning to innovativeness has been extensively demonstrated (Hurley and Hult, 1998; Sinkula et al., 1997; Slater and Narver, 1995). Findings suggest that learning promotes the flexibility to deploy the different capabilities required to new service success according to the environment the firm operates in. In a context of low perceived change, high performing firms use learning orientation to acquire knowledge from both the business unit and customer to achieve new service success. The organization is able to translate the knowledge acquired into learning, namely customer

preferences and expectations, and thus enhance market performance (Baker and Sinkula, 2007). But in a context of perceived change, business unit innovativeness provides a much stronger contribution to new service success. Therefore, this study contributes to the literature by demonstrating that the relationship between learning orientation and future performance is not produced directly, but indirectly, through new service success. Under different managerial perceptions, learning orientation may be insufficient on its own to have a significant impact on a company's performance, but it has an indirect effect via innovativeness. This finding allows a deeper understanding of how learning occurs, by understanding how perceptions may affect the transfer of knowledge into results.



## **5. CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH**

### **5.1. Summary of the essays**

This work examined the pivotal notion of innovation for today's organizations. Inspired by Drucker's theory of business we set out to identify and understand three central trends for today's organizations: perceptions of innovation in open innovation models, corporate social responsibility and managerial perceptions of environmental turbulence. Three different industries served as the baseline for our empirical studies, respectively, apparel and fashion, high tech exporting firms and finally the hotel industry. More specifically, we set out to examine how these trends are impacting the (i) the firm's ability to innovate from a user perspective (apparel and fashion), (ii) the prominence of CSR in exploitative and exploratory innovation capacities (high tech firms) and (iii) the level of business unit innovativeness according to perceptions of environmental turbulence (hotel industry).

Although the aim of this dissertation was originally not set out to contribute (explicitly) to the development of marketing theory, the results show that marketing is still a core function to performance by addressing the customer in the new contexts of society. By keeping asking: how do we create a customer, how do we create value for customers, or how do we understand the evolving needs to create value in the future, managers are in the course to achieve long term goals, such as sustainability, profit and financial rewards. These were the questions Drucker kept asking, simple questions that challenged managers' assumptions and mental models but expanded their views of business beyond their functional areas. With these questions in mind the 21<sup>st</sup> marketer addresses emerging trends such as those we identified in this dissertation: do open

innovation models create value for the consumer, do evolving needs of the consumer require a broader view of the organizations and CSR principles? How should manager's perception of environment change encourage value creation? Drucker's remarks towards constantly reviewing business theory (i.e., the business mission), to use other subjects and knowledge to develop new meanings are crucial for the challenges of the 21<sup>st</sup> century.

In the first essay of this dissertation, objective and subjective views of innovation were assessed in corporate and product evaluations. Innovation was looked at from the consumer's perspective and how products labelled as user designed helped or hindered the firm was investigated. We addressed a critical contingency factor, the firm's reputation for innovation for understanding contexts where past actions are signals for future performance, because they influence consumers' perceptions of firms' abilities and product evaluations. This perspective is important because consumers' input in the innovation process is becoming common in the 21<sup>st</sup> century enterprise (Slotegraaf, 2012). Although a general positive feeling prevails about open innovation models our research shows that the effects of disclosure of a user design label (products that are designed by users) can in some circumstances harm firm and product evaluations.

Our results demonstrate that firms with high RFI derive more benefits from a user design than firms with no RFI. In the context of low RFI, results show that consumers prefer (i.e., show higher product evaluation and purchase intention) a professional to a user design. This indicates that both professionals and firm's RFI have signalling power regarding the levels of skills and expertise involved in product design. Furthermore, a hybrid model of innovation (i.e. co-creation) triggers the highest favourable attitudes towards the firm. Co-creation is perceived as entailing skills and competences from

professionals while the input of users serves as assurance that similar others are designing the new product.

This dissertation then enters the field of strategic orientations, to investigate the elements that guide the interaction of the firm with the marketplace, i.e., the strategic focus of managers (Noble et al., 2002). Strategic orientations are the calculated directions taken by a firm to lead to behaviours that ensure continuous (long term) superior performance.

We have integrated the view from Drucker whereby business must do well in order to do good, that no business could prosper in a dying society (Smith, 2009). To this end we researched how these managerial concerns could be synergetic with the firms' competencies on innovation. In other words, we investigated how principles of corporate social responsibility interacted with the firm's innovation capabilities. We integrated two well-established theories: the stakeholder theory and organizational learning. By showing the synergetic effect of CSR principles with exploratory innovation we have offered a new theoretical perspective on the relationship between different corporate abilities, i.e., innovation and corporate social responsibility. This study has analysed the context of exporters. Additionally, the research addressed the trade-offs in an international context. Trade-offs have been mainly investigated in a domestic context which is quite surprising considering that innovation and social responsibility are critical in international markets and are highly related drivers of business today (Boehe and Cruz, 2010; Zang, Li, Hitt and Cui, 2007). As such we have reinforced the importance of our findings for the research community.

Finally in essay 3, we looked at how perceptions of environmental turbulence can foster values of innovativeness, i.e., the firm's capacity to engage in innovation to introduce

new processes, products or ideas in the organization (Hult et al., 2004). Looking at the external environment allowed detecting emerging trends, changes and problems that become management's new reality. Drucker believed that it was a managerial responsibility to develop competences in entrepreneurship and innovation (Drucker 1986) in order to find ways to adapt and innovate in the midst of change (Maciariello 2008). Establishing a parallel to Drucker's view on the importance of the external environment to inform the business mission, we gained insights on how perceptions can be ultimately turned into innovation opportunities. We developed an empirical setting of perceptions of high and low environment turbulence to understand contexts where drivers of innovativeness are most effective in a service setting. Throughout essay 3, organizational learning literature guided our discussion of the importance of a learning orientation to help managers seize the opportunities they perceive in the environment. The result is a deeper insight that perceptions of turbulence foster internal innovativeness whereas perceptions of stability enforce the role of the customer to drive new service success. By using this framework essay 3 also addressed calls for a better understanding of mental models (perceived opportunities) when studying the effects on innovation- resource allocation (Atuahene-Gima, 2005).

We conducted additional analysis to understand the role of performance in this setting. Researchers on organizational learning support the idea that past performance is as an antecedent of strategy (Lages, Jap and Griffith, 2008). We particularly looked to clarify the role innovation plays in the performance cycle, namely, the contribution of performance (as an input and an output) to innovation. This process is informed by the mediating role of drivers of services innovation and moderated by managerial environmental perceptions. We have advanced the literature by showing the self-reinforcing cycle arising from of slack resources on innovativeness, namely by fostering



values that promote innovative behaviours. From a managerial perspective, we expect to have helped managers to define priorities for resource allocation to increase the financial performance of their business units.

## **5.2 Methodology**

### **5.2.1. Data collection**

In essay 2 and 3 the questionnaire was the empirical research instrument used. To inform this dissertation the baseline data from these surveys was already available to the researcher. We then collected extra data to complement results. In essay 3 all the financial data was gathered from Bureau Van Dijk (2009) to extract the objective measure that informed this longitudinal study, namely to test the performance cycle. In essay 2, data for the baseline model had been collected, except for the moderating variable (CSR principles). To provide empirical evidence for the hypotheses being tested on essay 1 the researcher collected primary data using in all studies students as the target population, through laboratory and online experiments.

Table 5.1 provides a summary an overview of all the empirical studies.

**Table 5.1 Summary of the studies.**

	Chapter 2 <i>How innovative are they? The moderating role of Firm Reputation for Innovation in firm and product assessment of a user designed label</i>	Chapter 3 <i>CSR a catalyst of exploratory innovation in high technological firms</i>	Chapter 4 <i>Managerial perceptions of environmental turbulence: the impact on innovativeness in the hotel industry</i>
Object of research	To understand how user designed products benefits or hurt firms in terms of corporate and product evaluations. Central theme of how consumers assess a user design label.	To examine innovation outcomes in the presence of corporate social responsibility principles for technology exporters. Central theme involving a broad range of stakeholders is beneficial for performance	To understand the relationship between environment turbulence, innovativeness, performance and managerial decision making in the hotel industry. Central theme of learning orientation and innovativeness for explaining company performance
Main Hypothesis	Consumers' display higher preference for firms and products in a cocreation mode.	Corporate social responsibility has synergistic effects with both exploitative and exploratory innovation capabilities.	Drivers of new service success are contingent on perceptions of environmental turbulence
Methodology	Experiments: lab and online	Survey and firms' website	Survey and archival data from Portugal
Sample Type & Size	Study 1: 100 students Study 2a: 89 students	170 technological exporters	138 hotel establishments
Data Analysis	Study 2b: 120 students ANOVA and Mediation analysis	Structural equations model (Partial Least Squares) and Multigroup analysis	Structural equations model (Partial Least Squares), Multigroup and Mediation analysis
Key Findings	Results demonstrated that firms that employ cocreation to achieve new product design are perceived with higher ability to innovate and consumers display stronger corporate attitudes. The firm RFI influences product evaluations. User designed products are more valued in firms high on RFI and professional designed products in firms low on RFI.	Exploratory innovation capability are strengthens in the presence of CSR principles. In this instance exporters experience higher export performance	Managerial perceptions of environment turbulence influences sources of innovativeness. When opportunities are perceived these are best seized by internal drivers innovativeness. When environment is perceived as more stable new service success is driven by customer innovativeness

### 5.3. Results from the Three Studies

Overall our research indicates that innovation is a highly contextual factor. We found empirical evidence for substantial moderators when studying the impact of innovation on performance. All three studies suggested that the innovation performance link is moderated by the context under analysis. Although we found support for a positive relationship between innovation and performance, firm reputation for innovation, corporate social responsibility and perceptions of environment turbulence bring new insights to current research. This is important because as society evolves so must the study of competitive success. Customers are the reason why organizations are in the business but they now happen in an era of the globally connected and networked corporation (Fung et al., 2007). For example, customers are more empowered and increasingly asked to perform tasks that firms would have done for them in the past. Old

concepts take place in new contexts including those envisaged by Drucker. It is critical to re-examine old frameworks, namely by understanding how past concepts (moderators) apply today by strengthening or decreasing effects of innovation on performance. Below is the particular contribution from each study.

### **5.3.1 Implications for managers**

This dissertation has provided several recommendations for managers under the three themes addressed in the introduction: managerial perceptions of environmental turbulence, corporate social responsibility and open innovation. The main findings for managers are summarized below:

#### ***Perceptions of innovation***

A conscious choice on how to communicate the product design is important because, as our results show, they influence purchase intention and word of mouth. By studying the reaction of consumer upon learning about a user design label we offer managers the following suggestions when deciding whether to publically display a user design label. To start with a label that communicates a joint work between users and firm's professionals result in higher perceived corporate abilities, product evaluations and ultimately purchase intentions. Observing consumers additively incorporate the benefits of a user innovation with those of the traditional innovation models (i.e., professionals) when assessing the new product.

Of managerial importance is the understanding of the level of RFI of the organization. High RFI firms derive benefits from a user label. In this context, firm and product evaluations are higher when observing consumers encounter a user designed label. Conversely, firms with no RFI yield higher behavioural attitudes in a professional

design. Managers wanting to pursue open innovation models should clearly demonstrate to observing consumers their ability to align the solution space that users can explore with their corporate strategy (particularly in firms without high reputation). This would increase confidence of observing consumers about the “seriousness” on the user design product while providing more alignment with the company’s business interest. Alignment of the solution space requires some rethinking of the organization design (Keinz et al., 2012) namely through dedicated employees, online platforms and timely feedback.

Our findings on the positive effect of a user design label for strong brands (namely on reputation for innovation) are in line with findings in brands as instrumental to build sustainable user contributions (Keinz et al, 2012; Hienerth, Keinz and Lettly, 2011). Strong brands have the advantaged of attracting users, building up critical mass of engaged users who can then be critical to sustain communities and consequently input quality. Our results demonstrate that RFI influences a user design evaluation. Strong brands are in a position to appropriate further synergies from the open innovation ecosystem. This finding are of more relevance as recent research has started to identify the synergies within open innovation ecosystem beyond bilateral benefits for the producer firm, users and communities (Hienerth, Lettl and Keinz, 2013).

***The role of CSR principles.***

We contextualize our findings by analyzing CSR in an export setting, because export markets foster innovation due to knowledge spillovers (Golovko and Valentini, 2010) and are likely to contain social challenges that are not present in domestic markets (Boehe and Cruz, 2010). The adoption of CSR principles can be a subtle way of forcing companies to pursue new knowledge and should be regarded as an innovation related

investment. One reason why CSR often fails is because companies see it as a sporadic action rather than an investment. CSR functions should be regarded as boundary spanning (in line with marketing and sales) in order to ensure that CSR principles permeate other units such as manufacturing, design, and procurement, which can then incorporate the principles into their daily operations and become an internal driver of innovation. The more the knowledge is spread, the greater the chances that it will be internalized with corporate capabilities and operating procedures, which will then be used to meet markets' needs by orientating NPD toward more new-to-the-world products.

In international markets high-tech firms are more likely to struggle to maintain a successful stream of non-incremental innovations. Organizations often find that the superior technology that formed the basis for their initial success eventually becomes a liability. Rather than developing new and innovative technology platforms, established high-technology companies often strive to protect their initial innovations without aggressively pursuing newer innovations. By showing how CSR can enhance exploratory innovation, we demonstrate that CSR can become an instrument to overcome organization inertia and derive higher benefits from such exploratory innovation. Future research is encouraged to test whether our findings are applicable only to high-tech exporting firms and to distinguish between export destination markets or if it can be generalized to other types of firms.

Finally, our results contribute to the export literature by demonstrating that managers can rely on CSR to compete abroad. The search for good practices worldwide, a credibility issue, also brings a competitive resource: the ability to spin out more new-to-the-world products. Firms competing in international markets need stronger differentiating factors. Exploratory capabilities are a means to superior performance.

However, Boehe and Cruz (2010) reported that CSR principles are important to product differentiation if the host market values such differentiation. Otherwise companies are better off focusing on low cost strategies. Future research should test if firms with CSR principles can face a disadvantage when compared to competitors that secure important sources of business through irresponsible practices such as child labor or bribery in markets where socially accepted rules have not yet been enforced. In such cases CSR principles and technology orientation might have no (innovation) synergistic effects.

***Managerial perceptions of environmental turbulence.***

When managers perceive opportunities in the environment they are better off by promoting internal values that foster innovativeness. Their role is to persuade and encourage employees to come up with innovative offerings by nurturing their entrepreneurial skills. Alternatively, stable environments achieve more efficient innovation outcomes (new service success) by mastering the customer process.

Managers can instil a sense of change in the organization in order to direct organization efforts towards innovation. Barnett and Pratt (2000) referred to this process as the autogenic crisis whereby managers create a crisis environment to create the need for change. Our study shows that innovation is a collective endeavour with an active role in managers and employees to drive business performance. Slack resources also support this collective effort. Managers are advised to invest resources to promote a learning environment as this will form the basis for internal entrepreneurial values. These are then used to support increasing levels of innovativeness and ultimately performance.

**5.3.2 Implications for theory**

Below we note some points where contributions to the academic literature are made.

***Perceptions of innovation.***

Our first essay provides important insights for theory. Our research extends work on the effects of consumers' input on new product design. First, it supports the presence of mechanisms of identification and scepticism in a user label. The similarity view is aligned with the argument of sticky information held by users (von Hippel, 2005) where perceptions of similarity with users designing for the company explain part of the user effect on the ability to innovate. Similarity may also be understood in the context of democratic views of customer participation (Fuchs and Schreier, 2011) that result in higher corporate associations. Simultaneously, labelling products as user design draws attention to the competences of the creator, raising feelings of skepticism (Thompson and Malaviya, 2013). These two opposing effects level themselves off when both professionals and users can be used to their best. This is important as research is still to identify which of the effects is most predominant.

Our research highlights contexts where a negative influence on observing consumers occurs. By demonstrating that a process of identification arises in firms high on RFI, we demonstrate that RFI is an important element for understanding judgments about a user label by attenuating the critical thoughts about skills and expertise of those creating the products. Our findings are aligned with research on how established brands leverage on open innovation models. Previous research has demonstrated the intangible value of reputation in generating goodwill (Surroca, Tribo and Waddock, 2010), particularly attracting high valuable contributors (for example lead users) to firm's online innovation platforms (Hinerth; Keinz and Lettl, 2011). These findings are of more relevance as recent research has identified the synergies within open innovation

ecosystem beyond bilateral benefits for the producer firm, users and communities (Hienerth, Lettl and Keinz, 2013).

Thirdly, beyond the importance of RFI we show that product design dimensions (form and function) are differently related to a user label. This study joins research on product design (Dahl and Moreau, 2002; Franke and Piller, 2004) by segregating the effects of a user design label on product form and function. Our findings reveal that the aesthetic view of the product is substantially more valued in a user design label for firms high on RFI. Functionality calls for a different evaluation pattern: a user label in firms with low RFI hurts product function assessments. Product design researchers have called for a better understanding of these two dimensions (Luchs and Swan, 2011) and our findings demonstrate that a user design evaluation are contingent upon product dimensions.

Finally, to our knowledge our research is among the first to analyse a user effect on an innovation continuum of users' input. We find evidence that the relationship between product label, corporate, and product evaluations, occur in a design mode continuum and the relationship with the outcomes assumes an inverted U-shape form. Corporate attitudes (ability to innovate) increase as the firm distances itself from a professional design towards a user design peaking at co-creation and declining as the company continues to incorporate more user input. These findings are echoed in Poetz and Schreier (2012) research where a panel of independent experts analyzed users' against professionals' ideas. The former were rated consistently as more creative and incorporating higher customer benefits while the later scored higher for feasibility.

***The role of CSR principles.***

CSR principles change the balance between innovation capabilities by extending the firm's technological application field. We contribute to the literature in several ways.



First, we provide novel evidence on why the role of CSR and innovation on performance is not consensual. On one hand, CSR and innovation can be synergistic when the firm is in a position to combine the CSR potential to affect internal processes, technologies and processes (Driessen and Hillebrand, 2013; Orlitzky et al., 2003) to develop new capabilities. This results from firm idiosyncrasies toward the market. Technological firms using their capabilities to reach new and distant markets through openness, innovativeness and risk taking are likely to find synergistic effects between CSR and innovation, as both enhance learning and result in new capability development. Theoretically, this supports the view that CSR behaves as a dynamic capability permeating the organization, to integrate stakeholder's issues by continuous innovation and learning (Aragon-Corea and Sharma, 2003; Russo and Fouts, 1997). Empirically our work supports Bouquet and Deutsch's (2008) study, which determined that when firms have high CSR investments they will complement other internal resources to perform better in international markets.

On the other hand, firms that by their nature are more concerned with defending existing markets through technology efficiencies and embedded organizational routines will face a detrimental effect from CSR, as existing capabilities are not enough to translate CSR principles in a higher value proposition for international markets. Theoretically, this view supports findings that CSR draws resources and managerial attention from core areas of the business, such as innovation (Hull and Rothenberg, 2008). The organizational inertia literature offers some explanation whereby organizational inertia leads to the stability of products, processes, and policies that prevent the organization from achieving the best response to new challenges from the environment. Such institutionalized routines usually generate pressures against radical changes from the status quo (Hannan and Freeman, 1984). Further, as Driessen and

Hillebrand (2013) and Russo and Fouts (1997) argue in their studies on how NPD is affected by the complexity of attending to stakeholder's interests, and environmental issues in particular, NPD process requires a rethinking of the entire organization's capabilities. Finally, in high-tech industries the nature of how firms comply with CSR principles may provide another answer for the lack of complementarities. Incorporating stakeholders' concerns is likely to start with process related innovation without changes to the core product.

Our second contribution to the literature is that by considering the interplay between CSR and different types of innovation, we show that CSR may change the balance between firms' capabilities. The ambidexterity literature argues that firms need to simultaneously exploit existing competencies in order to gain efficiency but also provide new-to-the-world products to withstand competitors' imitation and achieve sustainable advantages (Atuahene Gima, 2005; Lisboa et al., 2011). Our findings suggest that CSR principles do not favor the ambidextrous firm, since they prevent existing competencies from contributing to performance, thereby not helping firms to achieve efficiency gains. International markets success is reinforced through higher levels of exploratory innovations. Solving the paradox of doing well while doing good, and achieving a competitive advantage in export markets, depends on the ability to develop exploratory capabilities for NPD.

***Managerial perceptions of environmental turbulence.***

We contribute to the literature by shedding light on the role of manager's interpretation of the external environment, answering recent calls for a deeper understanding of the issue (Hjalager, 2010; Atuahene-Gima, 2005). We demonstrate that managers'

interpretations have an impact on resource allocation and what capabilities the firm builds in. Secondly, we contextualize the discussions about the value of customer insights (Shultze and Hoegl, 2008). Customers often find it hard to express their latent needs especially when they are not equipped to do so or when the environment is too unstable to predict trends. Customers get so accustomed to a given functionality that they find it hard to think of new functionalities that require new thinking and routines. Habits may develop to sub-optimal solutions that apparently become what consumers really want (Christensen, 1997). Our results show that the above discussion is more likely to be moderated by factors that explain the prevalence of one model over another. Research has identified some of those conditions such as culture, technological intensity or the firm's knowledge integration mechanisms (Kirca, Jayachandarya and Bearden, 2005). Essay 3 identifies another moderator: perceptions of the environment turbulence. This discussion gains further importance in a service setting by showing that internal resources are a source beyond the customer. Internal resources in services are especially relevant since services are usually not protected by intellectual property. Competitive advantages based on the interdependent elements inside the company are of limited access to competitors (Reed and DeFillipi, 1990) thus more likely to be sustained in the future. As such, we contribute to the literature by showing how service companies can achieve new service success when managers perceive opportunities in the environment.

#### **5.4 Directions for Future Research**

One clear direction for future investigation is to understand how these broad trends combine into one single object of study. Social sciences due to their nature of being exposed to societal changes and benefit from methodological advances are always calling for reevaluating their field of research. Practices for superior performance diffuse

among managers they stop being superior to become market standards attenuating their previous differentiating factor. For example, we observe that companies are developing (or updating) business models grounded on the sustainability principle under open innovation models. Examples of up cycling which converts discarded materials into newly made and valuable products are now to be found in the innovation field. Toyota delivered a sustainable premise in its Toyota Prius but that has not prevented the company from holding an innovation contest, in 2011, on “Ideas for Good”. Toyota asked individuals to submit ideas on how they would use Toyota’s existing technologies to make a better world. Procter & Gamble’s Connect + Development program seeks the best ideas to their environmental friendly products in the crowd. Today over 35% of P&G’s new products in the market contain elements originally developed outside P&Gs.

What is the exact role of internal (professionals and R&D labs) and external (consumers, suppliers, universities) contributions, namely the role of how innovation capabilities are developed to achieve more radical or incremental innovation? Are consumers more likely to favour firms that incorporate similar others views on sustainability matters? Does a stronger social identification arise and thus higher perceived innovation? Or by contrast the onus placed on internal resources is such that firms are unable to take advantage of the benefits of moving towards sustainability and open innovation models?

We leave these questions open while we provide specific avenues for future research from our studies.

#### **5.4.1 Perceptions of innovation**

Several questions can be posited that would require further investigation. First, a deeper understanding of the personal characteristics of observing consumers should be considered, as they are likely to have implications about how a user input is perceived. For example, the level of individual creativity may determine how users' contributions are assessed. It is likely that more creative individuals perceive higher creativity in similar others. Additionally, individual locus of control (Thomas and Mueller, 2000) should also make a difference. Internals, i.e., those who feel greater control over the environment, should assess higher capacities in other consumers to be able to come up with innovative products. By contrast externals might perceive the traditional innovation model (professionals do it better) as the only model capable of producing truly innovative outcomes.

Product involvement, although used as a covariate, warrants further investigation. First, an understanding of its impacts on the effectiveness of consumer designed products and what process underlies such relationship. Product involvement is likely to enhance perceptions of user participation as consumers put far more effort (in terms of time, ambition, and cognitive effort) into the product definition task than those with low involvement (Franke et al., 2009). As such they are more likely to perceive themselves (and other consumers) as capable of developing their own ideas for the product and thus feeling closer to those that are designed. Lower involved consumers may rely on the default design (professionals) as they do not possess any motivation to activate underlying cognitive mechanism to be able to understand how consumers could contribute to new product design. Similar to evaluations of the ability to innovate the relationship between product involvement and product label may well work at different levels of the user design continuum (user design, joint design, professional design) since each level may entail a different underlying mechanism.

At the product level our framework should also test whether hedonic and utilitarian products derive different benefits from a user effect. Hedonic products have the consumptions experience centred in sensations, fantasy and emotions whereas utilitarian products are sought to provide a solution to a clear identified problem (Vale and Duarte, 2013) thus their choice tends to be more rational. Although our framework indicates that there are differences (mainly when RFI is introduced), further research should analyze differences along the hedonic and utilitarian nature of products. Hedonic products, because they can be more easily assessed at the outset (for example, the look and feel of a dress) are more likely to benefit more from a user effect design. Alternatively utilitarian products (whether the nails will be strong enough to hold the picture) contain more functional risk that is difficult to assess just by inspecting the product (Holbrook and Hirshman, 1982). Furthermore, the look and feel of the product may be less instrumental for product evaluations. It is likely that technical knowledge and perceptions of capacity to perform are the most relevant dimensions for product evaluation.

The RFI effect on hedonic and utilitarian products also warrants investigation. Products with a stronger hedonic dimension are expected to be more valued when consuming from a firm that is high on RFI. In these instances feelings of excitement towards the product are elicited (a multiplicative effect of RFI and design label).

#### **5.4.2 The role of CSR principles**

Our second essay also leaves hints for future research opportunities. Recent work assessing export performance points to limitations of using venture level as the most appropriate level of analysis in an export context (Oliveira, Cadogan, and Souchon,

2012). We acknowledge this limitation and encourage future work to test our framework at the firm level.

Future research is encouraged to investigate if strategic orientations are differentially influenced by type of CSR principle. Magnain and Ralston (2002) classified CSR principles as value, performance, and stakeholder driven. The first relates to how CSR principles are embedded in the culture and core values of the firm, the second to management beliefs of CSR as a way for higher performance, and the later takes the view of CSR principles as a proactive response to the interests of a group of stakeholders. Because these principles are very different in nature, it would be interesting to understand if they all interact with innovation in the same way. For example, firms that have always integrated CSR principles in the way they do business may exhibit less exploratory innovation because the knowledge pertaining to the stakeholders has always been at the core of NPD. Given the implication of our findings, this work would benefit from testing whether findings are exclusively applied to high-tech firms. This would allow more control if the outcomes of the production process (e.g. pollution) place these firms under higher stakeholder pressure, forcing them to act more quickly.

An interesting point for further inquiry is to distinguish firms accordingly to their export destination markets. Boehe and Cruz (2010) reported that CSR principles are important to product differentiation if the host market values such differentiation. Otherwise companies are better off focusing on low cost strategies. Bousquet and Deutsche (2008) unveiled a non-linear relationship between CSR and the number of international markets the firm operates in. Firms with CSR principles can face a disadvantage when compared to competitors that secure important sources of business through irresponsible practices such as child labour or bribery in markets where socially accepted rules have

not yet been enforced. In such cases, CSR principles and technology orientation might have no synergistic (innovation) effects.

#### **5.4.3 Managerial perceptions of environmental turbulence**

Essay 3 focused on a single industry. Worthwhile exploring is whether innovativeness and the dynamics of the learning process apply to other industries and contexts. The present research used a longitudinal study to test causal relationships and to diminish the likelihood of common method bias. The full effects of short-term performance on managerial perceptions and their consequences on future performance were explored. Future research should explore the impact of the constructs under study on long-term performance measures. Through active and proactive learning, a learning organization can succeed in being market oriented, providing its customers with greater value in a sustained way in the long term (Day, 1994). In the long run this will lead to enhanced organizational performance and competitive advantage (Baker and Sinkula, 1999a). Although in this study we used both subjective and objective measures, future researchers are encouraged to include new subjective (e.g., customer satisfaction, relationship quality) and objective measures (e.g., ROI, gross profit).

Finally, the great majority of studies use performance as a dependent variable. This study is one of the rare studies to explore the impact of past performance on innovation as an independent variable. It reveals that past performance is of particular importance in perceived changing environments. It shows that the availability of organizational slack influences the organization's willingness to learn and adopt internal and external approaches to innovativeness. As perceptions of change increase, managers become more vulnerable to signals from short-term performance, which has an impact on sources of both innovativeness and learning. Future research is strongly encouraged to



better understand the relationship between past performance and innovativeness, as this remains unclear (Bowen et al., 2010).

## 6. REFERENCES

### A

AICEP (2007), *Base de Dados de Exportadores*, Agência para o Investimento e Comércio Externo de Portugal.

Al-Zu'bi, Z., & Tsinopoulos, C. (2012). Suppliers versus Lead Users: Examining Their Relative Impact on Product Variety. *Journal of Product Innovation Management*, 29 (4), 667-680.

Alegre, J. & Chiva, R., (2008). Assessing the impact of organizational learning capability on product innovation performance: an empirical test. *Technovation*, 28, 315–326.

Amabile; T. M. (1983). *The Social Psychology of Creativity*. New York: Springer-Verlag

Andrews, J. & Smith, D. C. (1996). In Search of Marketing Imagination: Factors affecting the creativity of Marketing Programs for Mature Products. *Journal of Marketing Research*, 33 (2), 174-87.

Aragon-Correa, A. and Sharma, S. (2003). A Contingent Resource-Based View of Proactive Corporate Environmental Strategy. *Academy of Management Review*, 28 (1), 71-88.

Armstrong, J.S. & Overton, T.S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 16 (Aug), 396-400.

Atuahene-Gima, K (2005). Resolving the capability–rigidity paradox in new product innovation. *Journal of Marketing*, 69 (October), 61–83.

Atuahene-Gima, K. & Murray, J. (2004). Antecedents and Outcomes of Marketing Strategy Comprehensiveness. *Journal of Marketing*, 68 (4), 33-46.

Autio, E., Sapienza, H.J. and Almeida, J.C. (2000). Effects of Age and Entry, Knowledge Intensity, and Imitability on International Growth. *Academy of Management Journal*, 43 (5), 909-924.

### B

Baker, W. & Sinkula, J. (1999a). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27 (4), 411-427.

Baker, W. & Sinkula, J. (1999b). Learning orientation, market orientation, and innovation: integrating and extending models of organizational performance. *Journal of Market Focused Management*, 4, 295-308.

Baker, W. & Sinkula, J. (2005). Market Orientation and the new product paradox. *Journal of Product Innovation Management*, 22 (6), 483-502.

Baker, W. & Sinkula, J. (2007). Does Market Orientation Facilitate Balanced Innovation Programs? *Journal of Product Innovation Management*, 24 (4), 316-334.

## CHAPTER 6: REFERENCES

- Bagozzi, R. P. (1980). *Causal Models in Marketing*. New York: John Wiley and Sons.
- Baldwin, C., Hienert, C., & von Hippel, E. (2006). How user innovations become commercial products: A theoretical investigation and case study. *Research Policy*, 35 (9), 1291-1313.
- Barnett, C. & Pratt, M. (2000). From threat-rigidity to flexibility toward a learning model of autogenic crisis in organizations. *Journal of Organizational Change Management*, 13(1), 74-88.
- Baron, R.M. & Kenny, D.A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-82.
- Baron, R. & Tang, J. (2011). The role of entrepreneurs in firm-level innovation: joint effects of positive affect, creativity, and environmental dynamism. *Journal of Business Venturing*, 26 (1), 49-60.
- Barone, M. & Jewell, R. (2013). The Innovator's License: A Latitude to Deviate from Category Norms. *Journal of Marketing*, 77 (1), 120-134.
- Benner, M.J. & Tushman, M.L. (2003). Exploitation, exploration and process management: the productivity dilemma revisited. *Academy of Management Review*, 28 (2), 238-256.
- Boehe, D. M & Cruz, L. B. (2010). Corporate Social Responsibility, Product Differentiation Strategy and Export Performance. *Journal of Business Ethics*, 91 (2 Supplement), 325-346.
- Borges, Afuah & Bastian (2010). Users as Innovators: A Review, Critique, and Future Research Directions. *Journal of Management*, 36 (4), 857-857
- Bloch, P. (1995). Seeking the Ideal Form – Product Design and Consumer Response. *Journal of Marketing*, 59 (3), 16-29.
- Bolton, M. (1993). Organizational innovation and substandard performance. *Organization Science*; 4 (1), 57-75.
- Bouquet, C. & Deutsch, Y. (2008). The impact of corporate Social Performance on a Firm's Multinationality. *Journal of Business Ethics*, 80 (4): 755-769.
- Bourgeois, L. & Eisenhardt, K. (1988). Strategic Decision Processes in High Velocity Environments: Four Cases in the Microcomputer Industry. *Management Science*, 34 (7), 816-35.
- Bowen, F., Rostami, M., & Steel, P. (2010). Timing is everything: A meta-analysis of the relationships between organizational performance and innovation. *Journal of Business Research*, 63 (11), 1179-185.
- Branco, M. & Rodrigues, L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, 69 (2), 111-132.
- Brown, S. & Eisenhardt, K. (1995). Product Development: Past research, present findings and Future directions. *Academy of Management Journal*, 20 (2), 343-378.
- Brown, T. & Dacin, P. (1997). The company and the product: Corporate association and consumer product responses, *Journal of Marketing*, 61 (1), 68-84.
- Bureau Van Dick (2009). *Sabi database*. Bureau van Dijk Group.

Burgelman, R. & Sayles, L. (1986). *Inside Corporate Innovation: Strategy, Structure, and Managerial Skills*. Free Press, New York, NY.

Burroughs, J.E. and Mick, D.G. (2004). Exploring Antecedents and Consequences of Consumer Creativity in a Problem-Solving Context. *Journal of Consumer Research*, 31(2), 402–11.

## C

Calantone, R., Cavusgil, S., & Zhao, Y. (2002). Learning orientation, firm innovation capacity and firm performance. *Industrial Marketing Management*, 31(6), 515-524.

Calantone, R., Kwong, S. & Cui, A. (2006). Decomposing product innovativeness as its effects on new product. *Journal of Product Innovation Management*, 23 (5), 408-421.

Cassiman, B. and Golovko, E. (2011). Innovation and Internationalization through exports. *Journal of International Business Studies*, 42 (3), 56-75.

Chandy, R. & Tellis, G. (1998). Organizing for Radical Product Innovation: The Overlooked Role of Willingness to Cannibalize. *Journal of Marketing*, 35 (4), 474-488.

Chattopadhyay, P., Glick, W., & Huber, G. (2001). Organizational actions in response to threats and opportunities. *Academy of Management Journal*, 44 (5), 937-955.

Cheng, C. & Krumwiede, D. (2012). The role of service innovation in the market orientation—new service performance linkage. *Technovation*, 32, 487–497.

Chesbrough, H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston, USA, Harvard Business School Press.

Chin, W. (1998). The partial least squares approach for structural equation modeling. In Marcoulides, George A. (Ed). *Modern Methods for Business Research*. Lawrence Erlbaum: Mahwah, NJ, 295-336.

Christensen, C. & Bower, J. (1996). Customer power, strategic investment, and the failure of leading firms. *Strategic Management Journal*, 17 (3), 197-218.

Choi, J., & Wang, H. (2009). Stakeholder relations and the persistence of corporate financial performance. *Strategic Management Journal*, 30 (8), 895–907.

Cohen, W. & Levinthal, D. (1990). Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*, 35 (1), 28-52.

Cooper, R. & Kleinschmidt, E. (1995). Product Development: Past Research, Present Findings and Future Directions. *Academy of Management Review*, 20 (2), 343-378.

Cyert, R. & March, J. (1963). *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice Hall.

Cool, K., Dierickx, I., & Jemison, D. (1989). Business strategy, market structure and risk–return relationships: A structural approach. *Strategic Management Journal*, 10 (6), 507–522.

Crawford, C. & Di Benedetto, C. (2003). *New Product Management*. Boston, McGraw-Hill

## D

## CHAPTER 6: REFERENCES

- Dahl D. & Moreau, P. (2002). The influence and value of analogical thinking during new product ideation. *Journal of Marketing Research*, 39 (1): 47-60.
- Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis of Effects and Determinants and Moderators. *Academy of Management Journal*, 34 (3), 555-590.
- Danneels, E. (2002). The Dynamics of Product Innovation and Firm Competences. *Strategic Management Journal*, 23 (12), 1095-1121.
- Darroch, J., Day, G & Slater, S. (2009). A tribute to Peter Drucker: editors' introduction to the special issue. *Journal of the Academy of Marketing Management*, 37 (1), 1-7.
- Day, G. (1994). The capabilities of market-driven organization. *Journal of Marketing*, 58 (4), 37-52.
- Day, G. & Nedungadi, P. (1994). Managerial Representations of Competitive Advantage. *Journal of Marketing*, 58 (2), 31-44.
- De Luca, L. & Atuahene-Gima, K. (2007). Market Knowledge Dimensions and Cross-Functional Collaboration: Examining the Different Routes to Product Innovation Performance. *Journal of Marketing*, 71 (1), 95-112.
- De Sarbo, W., Di Benedetto, A., Song, M., & Sinha, I. (2005). Revisiting the Miles and Snow Strategic Framework: Uncovering Interrelationships Between strategic Types, Capabilities, Environmental Uncertainty, and Firm Performance. *Strategic Management Journal*, 26 (1), 47-74.
- Deshpande, R., Farley, J., & Webster, F. (1993). Corporate Culture, Customer Orientation and Innovativeness in Japanese firms: a Quadrad analysis. *Journal of Marketing*, 57 (1), 23-27.
- Donaldson, T. & Preston, L. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence and Implication. *Academy of Management Review*, 20 (1), 65-91.
- Douglas, S. & Craig, C. (1983). *International Marketing Research* 2nd Ed., Englewood Cliffs, NJ: Prentice Hall International Editions.
- Driessen, P. & Hillebrand, B. (2013). Integrating multiple stakeholder issue in new product development: an exploration. *Journal of Product Innovation Management*, 30 (2), 364-379.
- Drucker, P. (1954). *The Practice of Management*. New York: Harper & Row Publishers.
- Drucker, P. F. (1984). The new meaning of corporate social responsibility. *California Management Review*, 26 (2), 53-63.
- Drucker, P.F (1985). *The discipline of innovation*. Harvard Business Review, 63 (3), 67-72.
- Drucker, P.F (1986). *Innovation and Entrepreneurship*. New York: HarperCollins.
- Dutton, J., Fahey, L., & Narayanan, V. (1983). Toward understanding strategic issue diagnosis. *Strategic Management Journal*, 4 (4), 307-323.
- Dutton, J. & Jackson, S. (1987). Categorizing Strategic Issues: Links to Organizational Action. *Academy of Management Review*, 12 (1), 76-90.
- Dyer, J. H. & Sigh, H. (1998). The relational view: cooperative strategy and sources of inter-organizational competitive advantage. *Strategic Management Journal*, 23 (4), 660-679.

## E

Eisenhardt, K. (1989). Building theories from case study research. *Academy of Management Review*, 14 (4), 532-550.

Eisenhardt, K. & Martin, J. (2002). Dynamic capabilities: what are they? *Strategic Management Journal*, 21 (10/11), 1105-1121.

Eurostat (2009), Statistical Office of the European Communities, (accessed March 30, 2011), [available at [http://epp.eurostat.ec.europa.eu/cache/ITY\\_SDDS/Annexes/htec\\_esms\\_an3.pdf](http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/htec_esms_an3.pdf)].

Erdem, T., Swait, J., & Valenzuela, A. (2006). Brands as signals: A cross-country validation study. *Journal of Marketing*, 70 (1), 34-49.

Ettlie, J. (1983). Organizational policy and innovation among suppliers to the food processing sector. *Academy of Management Journal*; 26 (1), 27-44.

## F

Falk, R. & Miller, N. (1992). *A Primer for Soft Modelling*. Akron, OH: University of Akron Press.

Filipescu, D., Prashantham, S., Rialp, A., and Rialp, J. (2013). Technological Innovation and Exports: Unpacking Their Reciprocal Causality. *Journal of International Marketing*, 21 (1), 23-38.

Fiol, C. M. & Lyles, M.A. (1985). Organizational Learning. *Academy of Management Review*, 10 (4), 803-813.

Fornell, C. & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18 (1), 39-50.

Franke, N. & Piller, F. (2004). Value creation by toolkits for user innovation and design: The case of the watch market. *Journal of Product Innovation Management*, 21 (6), 401-415.

Franke, N., von Hippel, E. & Schreier, M (2006). Finding commercially attractive user innovations: A test of lead user theory. *Journal of Product Innovation Management*, 23(4), 301-315.

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.

Fuchs, C., Prandelli, E., Schreier, M. & Dahl, W. (2013). All that is Users Might not be Gold: How Labeling Products as User-designed backfires in the context of Luxury Fashion Brands *Journal of Marketing*, 77 (5), 75-91.

Fuchs, C., Prandelli, E., & Schreier, M. (2010). The Psychological Effects of Empowerment Strategies on Consumers' Product Demand. *Journal of Marketing*, 74 (1), 65-79.

Fuchs, C. & Schreier, M. (2011). Customer Empowerment in New Product Development. *Journal of Product Innovation Management*, 28 (1), 17-32.

Fung, V. Fung, W. & Wind, J. (2007). *Competing in a Flat World*. Prentice Hall.

## G

Gamero, M. L., Azorín, J. M., & Cortés, E.C. (2011). Environmental uncertainty and environmental management perception: A multiple case study. *Journal of Business Research*, 64, 427–435.

Garcia, R.& Calantone, R. (2002). A Critical Look at Technological Innovation Typology and Innovativeness terminology: A Literature Review. *Journal of Product Innovation Management*, 19 (2), 110-32

Garg, V. K., Walters, B.A., & Priem, R.L. (2003). Chief executive scanning emphases, environmental dynamism, and manufacturing firm performance. *Strategic Management Journal*, 24 (8), 725-744.

Gatignon, H. & Xuereb, J. (1997). Strategic Orientation of the Firm and new Product performance. *Journal of Marketing Research*, 34 (1), 77-90.

Golovko, E. and Valentini, G. (2011). Exploring the complementarity between innovation and export for SME's growth. *Journal of International Business Studies*, 42 (3), 362-380.

Goode, M. R., Dahl, W. & Moreau, P. (2013). Innovation Aesthetics: The relationships between category cues, categorization certainty and newness perceptions. *Journal of Product Innovation Management*, 30 (2): 192-208.

Gourville, J. T. (2006). Eager sellers, stony buyer: understanding the psychology of new product adoption. *Harvard Business Review*, 84 (6), 98-106.

Greve, H. (2003). *Organizational learning from performance feedback: a behavioural perspective on innovation and change*. Cambridge, UK: Cambridge University Press.

Gürhan-Canli, Z. & Batra, R. (2004). When Corporate Image Affects Product Evaluations: The Moderating Role of Perceived Risk. *Journal of Marketing Research*, 41 (2), 197–205.

## H

Hannan, M. T. and Freeman, J.H. (1984). Structural inertia and organizational change. *American Sociological Review*, 49 (2), 149-164.

Hamel, G. & Prahalad, C. (1994). *Competing for the future*. Boston Harvard Business School Press.

Han, J., Kim, N., & Srivastava, R. (1998). Market orientation and organizational performance: is innovation a missing link? *Journal of Marketing*, 62 (4), 30 –45.

Hauser, J., Tellis, G. & Griffin, A. (2006). Research on Innovation: A Review and Agenda for Marketing Science. *Marketing Science*, 25 (6), 687-717.

Henard, D. & Szymanski, D. (2001). Why some new products are more successful than others. *Journal of Marketing Research*, 38 (3), 362–375.

## CHAPTER 6: REFERENCES

- Henderson, R. & Clark, K. (1990). Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms. *Administrative Science Quarterly*, 35 (1), 9-30.
- Helfat, C.E. (1994). Firm-specificity in corporate R&D. *Organization Science*, 5 (2), 173-184.
- Hienerth, C., Lettl, C. & Keinz, P. (2013). Synergies among Producer Firm, Lead Users and User Communities: The Case of The Lego Produce-User Ecosystem. *Journal of Product Innovation Management*, First online
- Hienerth, C.; Keinz, P. & Lettl, C. (2011). Exploring the nature and implementation process of user-centric business models. *Long Range Planning*, 44 (5-6), 344-374.
- Hitt, M., Keats, B., & DeMarie, S. (1998). Navigating in the new competitive landscape: Building strategic flexibility and competitive advantage in the 21st century. *Academy of Management Executive*, 12 (4), 22-42.
- Hjalager, A. (2010). A review of innovation research in tourism. *Tourism Management*, 31 (1), 1-12.
- Holbrook, M., & Hirschman, E. (1982). The experiential aspects of consumption: Consumer fantasies, feelings and fun. *Journal of Consumer Research*, 9 (2), 132-140.
- Homburg, C. & Pflesser, C. (2000). A multiple-layer model of market-oriented organizational culture: measurement issues and performance outcomes. *Journal of Marketing Research*, 37 (4), 449-62.
- Hornsby, J.S., Kuratko, F.D., Shepherd, A.D., & Bott, P.J. (2009). Managers' corporate entrepreneurial actions: examining perception and position. *Journal of Business Venturing*, 24 (3), 236-247.
- Hortinha, P., Lages, C., & Lages, L. (2011). The trade-off between customer and technology orientations: impact on innovation capabilities and export performance. *Journal of International Marketing*, 19 (3), 36-58.
- Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M. & Singh, S. S: (2010). Consumer Cocreation in New Product Development. *Journal of Service Research*, 13 (3), 283-296.
- Hull, C. & Rothenberg, S. (2008). Firm Performance: the interactions of corporate Social performance with innovation and industry differentiation. *Strategic Management Journal*, 29 (7), 781-789.
- Hulland, J. S. (1999). Use of partial least square in strategic management research: a review of four recent studies. *Strategic Management Journal*, 20 (2), 194-204.
- Hult, G., Hurley, R., & Knight, G. (2004). Innovativeness: its antecedents and impact on business performance. *Industrial Marketing Management*, 33 (5), 429-438.
- Humphreys, A. & Grayson, K. (2008). The Intersecting Roles of Consumer and Producers: A Critical Perspective on Co-Production, Co-creation and Prosumption. *Sociology Compass*, 2 (3), 963-980.
- Hurley, R. & Hult, G. (1998). Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination. *Journal of Marketing*, 62 (3), 42 -54.



## I

Ind, K., Iglesias, O., & Schiltz, M. (2013). Building Brands Together: Emergence and Outcomes of Co-creation. *California Management Review*, 55 (3): 5- 26.

Im, S. & Workman Jr., J. (2004). Market Orientation, Creativity, and New Product Performance in High-Technology Firms. *Journal of Marketing*, 68 (2), 114-132.

Ireland, R., Covin, J., & Kuratko, D., (2009). Conceptualizing corporate entrepreneurship strategy. *Entrepreneurship Theory and Practice*, 33 (1), 19–46.

Iyer, D. & Miller, K. (2008). Performance feedback, slack, and the timing of acquisitions. *Academy of Management Journal*, 51(4), 808–822.

## J

Jackson, P. & Messick (1965). The Person, the Products, and the Response: Conceptual problems, in the Assessment of Creativity. *Journal of Personality*, 33 (3), 309-29.

Jackson, S. & Dutton, J. (1988). Discerning Threats and Opportunities. *Administrative Science Quarterly*, 33 (3), 370-387.

Jöreskog, K. G. & Sörbom, D. (1993). LISREL 8: *Structural equation modelling with the SIMPLIS command language*. Scientific Software International, Inc., Chicago, IL.

## K

Kahneman D. & Tversky A. (1984). Choice, Values and Frames. *American Psychologist*, 39 (4), 341-50.

Katila, R. & Ahuja, G. (2002). Something old, something new: A longitudinal study of search behaviour and new product introduction. *Academy of Management Journal*, 45 (6), 1183-1194.

Keil M., Mann, J., & Rai, A. (2000). Why Software Projects Escalate: An empirical analysis and test of Four Theoretical Models. *MIS Quarterly*, 24 (4), 631-664.

Keinz, P., Hiennerth, C. & Lettl, C. (2012). Designing the organization for user innovation. *Journal of Organizational Design*, 1 (3), 20-36.

Keskin, H. (2006). Market orientation, learning orientation, and innovation capabilities in SMEs. *European Journal of Innovation Management*, 9 (4), 396–417.

Kirca, A.; Jayachandran & Bearden, W. (2005). Market Orientation: A Meta-Analytic Review and Assessment of its Antecedents and Impact on Performance. *Journal of Marketing*, 69 (2), 24-41.

Kirmani, A. & Rao, A. (2000). No Pain, No Gain: A Critical Review of the Literature on Signaling Unobservable Product Quality. *Journal of Marketing*, 64 (2), 66-79.

Klink, R. & Athaide, G. (2010). Consumer Innovativeness and the Use of New versus Extended Brand Names for New Products. *Journal of Product of Innovation Management*, 27 (1), 23-32.

- Kohli, A. (1989). Determinants of influence in organizational buying: a contingency approach. *Journal of Marketing*, 53 (3), 50-65.
- Kohli, A. & Jaworski, B. (1990). Market orientation: the construct, research propositions, and managerial implications. *Journal of Marketing*, 54(2), 1-18.
- Kristensson, P., Gustafsson, A. & Archer, T. (2004). Harnessing the creative potential among users. *Journal of Product Innovation Management*, 21(1), 4-14.
- Kuntz, W.; Schmitt, B. & Meyer, A. (2011). How does perceived firm innovativeness affect the consumer. *Journal of Business Research*, 64 (8), 816-822.
- Kyläheiko, K., Jantunen, A., Puumalainen, K., Saarenketo, S. and Tuppura, A. (2011). Innovation and internationalization as growth strategies: The role of technological capabilities and appropriability. *International Business Review*, 20 (5), 508-520.

## L

- Laforet S. (2008). Size, strategic, and market orientation affects on innovation. *Journal of Business Research*, 61 (7), 753–64.
- Lages, L., Jap, S., & Griffith, D. (2008). The Role of Past Performance in Export Ventures: A Short-Term Reactive Approach. *Journal of International Business Studies*, 39 (2), 304–25.
- Lages, L.F., Mata, J., & Griffith, D. (2012). Change in international market strategy as a reaction to performance decline. *Journal of Business Research*, 66 (12), 2600-2611.
- Lages, L.F. & Montgomery, D. (2004). Export performance as an antecedent of export commitment and marketing strategy adaptation: Evidence from small and medium sized exporters. *European Journal of Marketing*, 38(9/10), 1186-1214.
- Lant, T., Milliken, F., & Batra, B. (1992). The role of managerial learning and interpretation in strategic persistence and reorientation: An empirical exploration. *Strategic Management Journal*, 13 (8), 585-608.
- Lawrence, P., & Lorsch, J. (1967). *Organization and Environment: Managing differentiation and integration*. Boston: Division of Research, Graduate School of Business Administration, Harvard University.
- Laursen K, & Salter A. J.( 2006). Open for innovation: the role of openness in explaining innovative performance among UK manufacturing firms. *Strategic Management Journal*, 27 (2), 131–150
- Lee, A. (1991). Integrating positivist and interpretive approaches to organizational research. *Organization Science*, 2 (4), 342-365.
- Leonard-Barton, D. (1992). Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal*, 13 (S1), 111-125.
- Levinthal, D. & March, J. (1993). The myopia of learning. *Strategic Management Journal*, 14 (8), 95-112.
- Levinthal, D. & March, J. (1981). A model of adaptive organizational search. *Journal of Economic Behavior and Organization*, 2 (4), 307–333.

- Lillen, G.L, Morrison, P. D., Searls, K., Sonnack, M., & von Hippel, E. (2002). Performance Assessment of the lead User Idea-Generation Process for New Product Development. *Management Science*, 48 (8), 1513-27
- Lisboa, A., Skarmeas, D., and Lages, C. (2011). “Entrepreneurial orientation, exploitative and exploratory capabilities, and performance outcomes in export markets: A resource-based approach. *International Marketing Management*, 40 ( 8),1274-1284.
- Lee, L., Wong, P. & Foo, M. (2011). Entrepreneurial intentions: the influence of organizational and individual factors. *Journal of Business Venturing*, 26 (1), 124–136.
- Levitt, B. & March, J. (1988). Organizational Learning. *Annual Review of Sociology* 14, 319-340.
- Liu, S., Luo, X., & Shic, Y. (2003). Market-oriented organizations in an emerging economy A study of missing links. *Journal of Business Research*, 56 (6), 481– 491.
- Luchs, M. & Swan, K. S. (2011). Perspective: the emergence of product design as a field of marketing inquiry. *Product of Innovation Management*, 28 (3), 327-345.
- Lumpkin, G.T. & Lichtenstein, B.B. (2005). The role of organizational learning in the opportunity recognition process. *Entrepreneurship Theory and Practice*, 29(4), 451–72.
- Luo, X. & Bhattacharya, C. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of Marketing*, 70 (4), 1–18.
- Luo, X., Slotegraaf, R., & Pan, X. (2006). Cross-Functional Collaboration: The Simultaneous Role of Cooperation and Competition within Firms. *Journal of Marketing*, 70 (2), 67–80.
- Lynch, J.G. Jr. & Srull, T.K. (1982). Memory and Attentional Factors in Consumer Choice: Concepts and Research Methods. *Journal of Consumer Research*, 9 (1), 18-37.

## M

- Maignan, I. & Ralston, D. A. (2002). Corporate Social Responsibility in Europe and the U.S.: Insights from Businesses Self-presentations. *Journal of International Business Studies*, 33 (3), 497-514.
- Maheswaran, D. & Chaiken, S. (1991). Promoting systematic processing in low-motivation setting: Effect of incongruent information on processing and judgment. *Journal of Personality and Social Psychology*, 61 (1), 13-25.
- March, J.G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2 (1), 71-87.
- Marciariello, J. (2009). Marketing and Innovation in the Drucker management System. *Journal of the Academy of Marketing Science*, 37 (1), 35-43
- Margolis, J. D. & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, 48 (2), 268–305.
- Marquina, P. & Morales, C. (2012). The influence of CSR on purchasing behaviour in Peru and Spain. *International Marketing Review*, 29 (3), 299-312.

## CHAPTER 6: REFERENCES

- Matsuo, M. (2006). Customer orientation, conflict and innovativeness in Japanese sales departments. *Journal of Business Research*, 59 (2), 242-250.
- McGill, M. & Slocum, J. (1993). Unlearning the Organization. *Organizational Dynamics*, 22 (2), 67-79.
- McWilliams, A. & Siegel, D.S. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal*, 21 (5): 603-609.
- Melton, H.L. & Hartline, M.D. (2010). Customer and frontline employee influence on new service development performance. *Journal of Service Research*, 13(4), 411-425.
- Menon, A., Bhatadwaj, S., Adidam, P., & Edison, S. (1999). Antecedents and Consequences of Marketing Strategy Making: A Model and a Test. *Journal of Marketing*, 63, (April), 18-40.
- Meyer, A. (1982). Adapting to Environmental Jolts. *Administrative Science Quarterly*, 27, 515-537.
- Mishina, Y., Block, E. S. & Mannor, M. J. (2012). The path dependence of organizational reputation: how social judgement influences assessments of capability and character!. *Strategic Management Journal*, 33 (5): 459-477.
- Miyazaki, A. D., Grewal, D. & Goodstein, R. C. (2005). The Effect of Multiple Extrinsic Cues on Quality Perceptions: A Matter of Consistency. *Journal of Consumer Research*, 32 (1): 146-153.
- Mone, M., McKinley, W., & Barker, V. (1998). Organizational decline and innovation: A contingency framework. *Academy of Management Review*, 23 (1), 115-132.
- Mohr, J. & Sarin, S. (2009). Drucker's Insights on Market Orientation and Innovation: Implications for Emerging Areas in High-Technology Marketing. *Journal of the Academy of Marketing Science*, 37 (1): 85-96.
- Morales, V. G., Montes, F.L., & Jover, A. V. (2006). Antecedents and consequences of organizational innovation and organizational learning in entrepreneurship. *Industrial Management & Data Systems*, 106 (1), 21-42.
- Moreau, C. & Herd, K. (2010). To Each His Own? How Comparisons with Others Influence Consumers' Evaluations of Their Self-Designed Products. *Journal of Consumer Research*, 36 (5), 806-819.
- Morgan, N., Kaleka, A., & Katsikeas, C. (2004). Antecedents of Export Venture Performance: A Theoretical Model and Empirical Assessment. *Journal of Marketing*, 68 (1): 90-108.
- Morgan, N., Vorhies, D. & Mason, C. (2009). Market Orientation, Marketing Capabilities, and Firm Performance. *Strategic Management Journal*, 30 (8), 909-920.
- Morrison, E. & Millikien, F. (2000). Organizational silence: A barrier to change and development in a pluralistic World. *Academy of Management Review*, 25 (4), 706-715.
- Morrison, P., Roberts, D. & von Hippel, E. (2000). Determinants of User Innovation and Innovation Sharing in a Local Market. *Management Science*, 46 (December), 1513-27.

## N

## CHAPTER 6: REFERENCES

Narver, J & Slater, S. (1990). The Effect of Market Orientation on Business Profitability. *Journal of Marketing*, 54 (4), 20-35.

Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). Why sustainability is now the key driver of innovation. *Harvard Business Review*, 87 (9): 56-64.

Nishikawa, H., Schreier, M. & Ogawa, S. (2013). User generated versus Designer-Generated Products: A Performance Assessment at Muji. *International Journal of Research in Marketing*, 30 (2), 160-167.

Noble, C. Sinha, R. & Kumar, A. (2002). Market Orientation and alternative strategic orientations: A longitudinal assessment of performance implications. *Journal of Marketing*, 66 (4), 25-39.

Nohria, N. & Gulati, R. (1996). Is slack good or bad for innovation? *Academy of Management Journal*, 39 (5), 1245-1264.

## O

OECD (2010). *OECD in figures. Statistics on the member countries*. Available from: <http://www.oecd.org>.

Ogawa, S. & Piller, F. (2006). Reducing the Risks of New Product Development. *Sloan Management Review*, 47 (2), 65-71.

Oliveira, J.S., Cadogan, J.W., & Souchon, A. (2012). Level of analysis in export performance research. *International Marketing Review*, 29 (1): 114-127.

Ordanini, A. & Parasuraman, A. (2011). Service innovation viewed through a service-dominant logic lens: A conceptual framework and empirical analysis. *Journal of Service Research*, 14 (1), 3-23.

Ottenbacher, M. & Gnoth, J. (2005). How to develop successful hospitality innovation. *Cornell Hotel and Restaurant Administration Quarterly*, 46 (2), 205–222.

## P

Page, C. & Herr, P.R., (2002). An investigation to the process by which product design and brand strength interact to determine initial effect and quality judgments. *Journal of Consumer Psychology*, 12 (2), 133-147.

Pavelin, S. & Porter, L.A. (2008). The Corporate Social Performance Content of Innovation in the U.K. *Journal of Business Ethics*, 80 (4), 711–725.

Petty, R., Brinol, P., & Tormala, Z., (2002). Thought confidence as a determinant of persuasion: the self-validation hypothesis. *Journal of Personality and Social Psychology*, 82 (5): 722-741.

Piller, F.T. & Walcher, D. (2006). Toolkits for idea competitions: A novel method to integrate users in new product development. *R&D Management*, 36(3) 307-318.

Plambeck, N. (2012). The development of new products: The role of firm context and managerial cognition. *Journal of Business Venturing*, 27 (6), 607-621.

- Podsakoff, P.M., MacKenzie, S.B. Lee, J. Y., & Podsakoff, N.P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88 (5), 879–903.
- Poetz, M. & Schreier, M. (2012). The Value of Crowdsourcing: Can Users Really Compete with Professionals in Generating New Product Ideas? *Journal of Product Innovation Management*, 29 (2), 245-256.
- Porter, M. & Kramer, M. R. (2006). Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review*, Dec., 78-94.
- Prahalad, C.K. (2012). Bottom of the Pyramid as a Source of Breakthrough Innovations. *Journal of Product Innovation Management*, 29 (1), 6-12.
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5-14.
- Preacher, K. & Hayes, A. (2008). Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models. *Behavior Research Methods*, 40 (3), 879–91.

## R

- Reed, R. & DeFillippi, R. (1990). Causal ambiguity, barriers to imitation and sustainable competitive advantage. *Academy of Management Review*, 15(1), 88-102.
- Ratnesshawar, S. & Chainken, S. (1991). Comprehension's Role in Persuasion: The Case of Its Moderating Effect on the Persuasive Impact of Source Cues. *Journal of Consumer Research*, 18 (1): 52-62
- Ringle, C., Wende, M., & Will, S. (2005). *SmartPLS 2.0 (beta)*, University of Hamburg, Hamburg, Germany.
- Rhee, J., Park, T., & Lee, D. (2010). Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation. *Technovation*, 30 (1), 65–75.
- Rubera, G. & Kirca, A.H., (2012). Firm innovativeness and its performance outcomes: a meta-analytic review and theoretical integration. *Journal of Marketing*, 76 (3), 130-147.
- Russo, M. and Fouts, P (1997). A Resource-Based Perspective on Corporate Environmental Performance and Profitability. *Academy of Management Journal*, 40 (3), 535-559.

## S

- Salunke, S., Weerawardena, J., & Kennedy, J.M. (2012). Competing through service innovation: The role of bricolage and entrepreneurship in project-oriented firms. *Journal of Business Research*, 66 (8), 1085-1097.
- Schau, H., Muniz, A. & Arnould, E. (2009). How Brand Community Practices Create Value. *Journal of Marketing*, 73 (5), 30-51.
- Schreier, M., C. Fuchs, & Dahl, D. (2012). The Innovation Effect of User Design: Exploring Consumers' Innovation Perceptions of Firms Selling Products Designed by Users. *Journal of Marketing*, 76 (5), 18-32.

## CHAPTER 6: REFERENCES

Schulze, A. & Hoegl, M. (2008). Organizational knowledge creation and the generation of new product ideas: A behavioral approach. *Research Policy*, 37 (10), 1742–50.

Schumpeter, J. (1942). *Capitalism, Socialism and Democracy*. New York, Harper, 1975 (org. pub. 1942).

Sethi, R., Smith, D. & Park, C. (2001). Cross-Functional, Product Development Teams, Creativity and the Innovativeness of New Consumer Products. *Journal of Marketing Research*, 38 (1), 73-85.

Shah, S. K., & Tripsas, M. (2007). The accidental entrepreneur: The emergent and collective process of user entrepreneurship. *Strategic Entrepreneurship Journal*, 1 (1-2), 123-140.

Sharma, S., Durand, R. M., & Gur-Arie, O. (1981). Identification and analysis of moderator variables. *Journal of Marketing Research*, 18 (3), 291–300.

Shawley, M., Verona, G., & Prandelli, E. (2005). Collaborating to Create: The Internet as a Platform for Customer Engagement in Product Innovation. *Journal of Interactive Marketing*, 19 (4), 4-17.

Shepherd, D.A. & Detienne, D.R. (2005). Prior knowledge, potential financial reward, and opportunity identification. *Entrepreneurship Theory and Practice*, 29 (1), 91–112.

Sinkula, J., Baker, W., & Noordewier, T. (1997). A framework for market-based organizational learning: Linking Values, Knowledge and Behaviour. *Journal of the Academy of Marketing Science*, 25 (4), 305-308.

Slater, S. & Narver, J. (1995). Market orientation and the learning organization. *Journal of Marketing*, 59 (3), 63-74.

Slotegraaf, R. (2012). Keep the Door Open: Innovating Toward a More Sustainable Future. *Journal of Product Innovation Management*, 29 (3), 349-351.

Smith, N. (2009). Bounded goodness: marketing implications of Drucker on Corporate Responsibility. *Journal of the Academy of Marketing Science*, 37 (1), 73-84.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed), *Sociological Methodology*, 1982 (pp. 290-312). Washington DC: American Sociological Association.

Stock, R. & Zacharias, N. (2013). Two Sides of the Same Coin: How Do Different Dimensions of Product Program Innovativeness Affect Customer Loyalty? *Journal of Product Innovation Management*, 30 (3):516–532.

Stuart, T.E. and Podolny, J.M. (1996). Local search and the evolution of technological capabilities. *Strategic Management Journal*, 17 ( Special Issue), 21-38.

Surroca, J., Tribo, J., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal*, 31 (5): 463–490.

## T

Tajeddini, K. (2010). Effect of customer orientation and entrepreneurial orientation on innovativeness: evidence from the hotel industry in Switzerland. *Tourism Management*, 31 (2), 221-331.

## CHAPTER 6: REFERENCES

Thomas, A. & Mueller, S. (2000). A Case for Comparative Entrepreneurship: Assessing the Relevance of Culture. *Journal of International Business Studies*, 31 (2), 287-301

Thomas, J., Shawn, M., & Gioia, D. (1993). Strategic sensemaking and organizational performance: Linkages among scanning, interpretation, action and outcomes. *Academy of Management Journal*, 36 (2), 239–70.

Thompson, D. & Malaviya, P. (2013). Consumer-Generated Ads: Does Awareness of Advertising Co-Creation Help or Hurt Persuasion? *Journal of Marketing*, 77 (3), 33-47

Tsiotsou, R.( 2010). Delineating the effect of market orientation on services performance: a component-wise approach. *The Service Industries Journal*, 30 (3), 375–403.

## V

Vargo, S. L.,& Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68 (1), 1-17.

Verma, R., Plaschka, G., & Louviere, J. (2002). Understanding customer choices: a key to successful management of hospitality services. *Cornell Hotel & Restaurant Administration Quarterly*, 43 (6), 15-24.

Vijande, S., Perez, S., Gonzalez, A., & Casielles, V. (2005). Organizational learning and market orientation: interfaces and effects on performance. *Industrial Marketing Management*, 34(3), 187-202.

Vijande, S., Sanchez, L., & Trespacios, J.A. (2012). How organizational learning affects a firm's flexibility, competitive strategy, and performance. *Journal of Business Research*, 65 (8), 1079-1089.

Von Hippel, E. (1986). Lead Users: A Source of Novel Product Concepts. *Management Science*, 32 (7), 791-805.

Von Hippel, E. (1988). *The Sources of Innovation*. Oxford University Press: New York.

Von Hippel, E. (2005). *Democratizing Innovation*. Cambridge, MA: MIT Press.

Von Hippel, E., Ogawa, S. & de Jong, J. (2011). The Age of the Consumer-Innovator. *MIT Sloan Management Review*, 53(1), 27-35.

Voss, B. & Voss, Z. (2008). Competitive density and the Customer Acquisition-Retention Trade-off. *Journal of Marketing*, 72 (6), 3–18.

## W

Weerawardena, J., O' Cass, A., & Julian, C. (2006). Does industry matter? Examining the role of industry structure in innovation-based competitive marketing strategy. *Journal of Business Research*, 59 (1), 37–45.

Weiss, A. & Heide, J. (1993). The Nature of Organization Search in High-Technology Markets. *Journal of Marketing Research*, 30 (2), 220-33.

Wilke J & Sorvillo N. (2005). *Targeting early adopters—a means for new product survival*. ACNielsen BASES publication.



## CHAPTER 6: REFERENCES

Wilson, E. & Sherrell, D. (1993). Source Effects in Communication and Persuasion Research: A Meta-Analysis of Effect Size, *Journal of the Academy of Marketing Science*, 21 (2), 101-112.

Wind, J. (2009). Rethinking Marketing: Peter Drucker's challenge. *Journal of the Academy of Marketing Science*, 37 (1), 28-34.

White, C., Varadarajan, P., & Dacin, P. (2003). Market Situation Interpretation and Response: The Role of Cognitive Style, Organizational Culture, and Information Use. *Journal of Marketing*, 67 (July), 63-79.

Wu, J. and Shanley; M. (2009) Knowledge stock, exploration, and innovation: research on the Unites States electromedical device industry. *Journal of Business Research*, 62 (4), 474-483.

## Y

Yadav, M.S., Prabhu, J.C., & Chandy, R. K. (2007). Managing the Future: CEO Attention and Innovation Outcomes, *Journal of Marketing*, 71(4), 84-101.

## Z

Zahra, S. & O'Neill, H (1998). Charting the landscape of global competition: Reflections on emerging organizational challenges and their implications for senior executives. *Academy of Management Executive*, 12 (4), 13-21.

Zahra, S. (2003).The Practice of Management: Reflections on Peter F Drucker's Landmark Book. *The Academy of Management Executive*, 17 (3), 16-23.

Zang, Y., Li, H., Hitt, M. & Cui, G. (2007). R&D intensity and international joint venture performance in an emerging market: moderating effects of market focus and ownership structure. *Journal of International Business Studies*, 38 (6), 944-960.

Zeithaml, V., Berry, L. & Parasuraman, A. (1993). The Nature and Determinants of Customer Expectations of Service. *Journal of the Academy of Marketing Science*, 21 (1), 1-12.

Zeithaml, V., Parasuraman, A. & Berry, L. (1985).Problems and Strategies in Services Marketing. *Journal of Marketing*, 49 (2), 33-46.

Zhou, K., Brown, J., & Dev, C. (2009). Market orientation, competitive advantage and performance: A demand-based perspective. *Journal of Business Research*, 62 (11), 1063-1070.

Zhou, K., Yim, C., & Tse, D. (2005). The effects of strategic orientations on technology- and market-based breakthrough innovations. *Journal of Marketing*, 69 (3), 42-60.

Zhou, K. & Wu, F. (2010). Technological capability, Strategic Flexibility and Product innovation. *Strategic Management Journal*, 31 (5), 547-561.

Zou, S., Taylor, C., & Osland, G. (1998). The EXPERF Scale: A Cross-National Generalized Export Performance Measure. *Journal of International Marketing*, 6 (3), 37-60.