



The Role of Market Orientation in Incumbent Firm's Defense Against Disruptive Innovations

Ossi Heiskala

Bachelor's Thesis

Spring 2017

Department of Marketing

Aalto University School of Business

Abstract

This bachelor's thesis builds on the phenomenon of disruptive innovation and the business philosophy of market orientation. More specifically, it strives to study how market orientation could help incumbent companies to defend against disruptive innovations (i.e. avoid losing market share disruptive competitors). The main research methods are literature reviews as well as qualitative meta-analysis, which both help in the definition and discussion of the relevant concepts, such as market orientation and disruptive innovation. Based on the literature of innovation management and management practice research streams I identified four components which are crucial to incumbent's defense against disruptive innovations: (1) early recognition of potential disruptions, (2) response strategy formulation, (3) response strategy implementation, (4) innovation ability. Subsequently, these items are cross analyzed with the existing literature of marketing orientation, resulting in a confirmation of marketing orientation's positive effect on three of the components, namely 1, 3, and 4. The findings are significant, as they open a novel instance of market orientation's indirect performance benefits. In addition, the thesis contributed to the disruptive innovation research by suggesting a broader approach to disruptive innovation responding.

Table of Content

1. Introduction.....	4
1.1. Research objectives and research questions.....	5
2. Disruptive Innovation – definition & discussion.....	6
2.1 Examples of Disruptive Innovations.....	10
2.2 Defending against Disruptive Innovations.....	12
3. Market Orientation - definition.....	15
3.1 Cultural perspective.....	16
3.2 Behavioral perspective.....	18
3.3 Synthesis of perspectives.....	20
4. Market Orientation & defending against Disruptive Innovations.....	23
4.1 Recognizing potential disruptions.....	24
4.2 Response strategy formulation.....	25
4.3 Response strategy implementation.....	26
4.4 Innovativeness.....	27
4.5 Core propositions.....	28
5. Discussion and Implications.....	28
5.1 Theoretical implications.....	29
5.2 Practical implications.....	30
6. Conclusion.....	31
6.2 Limitations and scope of research.....	32
6.3 Possible areas for future research.....	32
7. References.....	33
8. Appendix.....	36

1. Introduction

The research at hand builds on the phenomenon of disruptive innovation (DI) and the business philosophy of market orientation (MO). More specifically, it centers on how MO could help incumbent companies to defend against DIs (i.e. avoid losing market share disruptive competitors).

Today's world is developing faster than ever and just in the last decade we have seen the mobile, as well as the social media revolution. Examples like Facebook and Airbnb, have made traditional companies vigilant with their fast market entries and steep growth curves. Accompanied by new products, services, and business models, come also changes in consumer behavior (Paap & Katz, 2004).

All new product, service, process or business model introductions naturally are not DIs. Some can be barely called innovations, some are sustaining (ie. incremental), some disruptive, and some are radical (Schmidt & Druel, 2008). As stated earlier, this research focuses on DIs. I chose to study DIs because of two reasons: first, there are already well-researched best practices in place for forecasting and evaluating sustaining innovations (Meade & Islam, 2006). Second, radical innovations are generally close to impossible to prepare for, as they generally are the result of extensive investments combined with luck – resulting in extensive improvement of given performance metrics (Govindarajan, Kopalle, Danneels, 2011). DIs, however usually emerge slowly from the remote markets without warnings and require no large scale investments (e.g. Christensen 1995; 2003). In addition they have been proven to be forecastable (Govindarajan and Kopalle 2006), thus, making them also manageable. In short: businesses already know how to manage sustaining innovations, have very limited possibilities to defend against radical innovations, but can learn how to defend against DIs.

Some business orientations enable companies to defend against DIs better than others. Out of the numerous business approaches, MO provides an interesting candidate. I arrived to this conclusion by comparing the definitions(s) of MO and the inherent characteristics DIs have. Majority of the field seems to agree that market intelligence generation, dissemination and operationalization, with the objective to create customer value are central in elements of MO (Raaij & Stoelhorst 2008; Lafferty & Hult, 2001). Especially market intelligence generation and customer value creation are actions aiming to discern emerging competitors and/or consumer behavior patterns, which essentially open the road for DIs (Christensen 2015). Thus, MO and DI their crossroad form the base of my thesis.

Furthermore, while DIs and MO have both been extensively researched and contributed to by the academia since the 1990s (for an overview, see Liao, Chang, Wu & Katrichis, 2011; Yu & Hang, 2010), there has not been much research on their relationship. From the research stream of DI Gans (2016) and Charitou and Markides (2002) are one of the few to have shed light on how incumbents should response to DIs, but they do not take MO into account. From the MO research stream Huhtala, Sihvonen, Frösén, Jaakkola, and Tikkanen, (2014) and Govindarajan et. al. (2011) have studied the interface, but they only focus on MO's effect on firm's innovation capability. Thus, a more comprehensive take on MO's potential effect on the Incumbet defense capabilities against DIs is well in place.

1.1 Research objective and research questions

The objective of the research is to specify the role of MO in defending against DIs by reviewing the relevant literature in both, the MO and DI research streams. This action will provide the answers to research questions (1) "What are Disruptive Innovations", and (2) "What is Market Orientation?" Subsequently, attributes that are addressable to MO and which might prove to have an effect on defending against DIs are mined out and listed. This in turn, will help to formulate the answer to the research

questions (3), “What are the ways by which MO could help incumbent companies to defend against DIs?”,

Then, at the crossroad of the research areas of MO and DI a qualitative meta-analysis will be performed on the literature. The meta-analysis will provide answers to the research question (4) “What is the assumed nature (positive, neutral, or negative) of MO’s effects to incumbent firm’s defense capability against DIs. The findings of this analysis should be divided to theoretical and practical implication. The practical implications of the research shed light on the current best practices of market orientation in the successful defense against DI and disruptive environments. The theoretical implications in turn, broaden the understanding of the performance implications cause by MO, and also offer a potential base for future, empirical academic research, which are needed to further verify the findings of this research.

2. Disruptive Innovation – definition & discussion

The concept of disruptive innovation (DI) was first introduced to the world by Clayton Christensen and Joseph Bower in their paper “Disruptive technologies: catching the wave” in 1995 (Christensen et. al. 2015). Originally Christensen and Bower (1995) named the phenomenon as ‘disruptive technology’, defining the concept to encompass only technological innovations. However, after further research on the subject and refinement of the theory in his two books (Christensen 1997; Christensen and Raynor 2003), Christensen and Raynor (2003) ultimately widened the definition to include also business model and product innovations and gave the concept its present name, ‘disruptive innovation’.

Disruptive innovation, as a term, can be dangerously misleading - especially for those unfamiliar with the field’s academic literature. Due to the recent increase in the interest towards the phenomenon and

the accompanied indefinite usage of the term, DI is often falsely associated with all kinds of innovations that lead to radical changes in a given industry (Christensen et. al. 2015). I argue that the problem lies in the wording of the term itself, as probably most of us, when facing the term the first time, understand it to describe innovations that *are disruptive*. However, in this academic setting, this is not necessarily always the case, and the correct processing would be to consider it as a single term with its own, defined, characteristics. Schmidt and Druehl (2008) encapsulate the term's problematics ably: "A disruptive innovation (i.e., one that dramatically disrupts the current market) is not necessarily a disruptive innovation (as Clayton Christensen defines this term)" (p. 347).

According to the most up to date definition of DI by Christensen et. al. (2015), (1) DIs emerge only in in low-end or new-market footholds. This means that DIs are initially adopted either by the less served and less demanding customers, or previous nonconsumers, which the DI turns to consumers. Moreover, (2) at the time of their emergence, DIs do not satisfy the needs of mainstream customers, and thus are not consumed by them. Only after DIs have developed the mainstream customers' preferred quality, will they start to appeal to them. Below, Fig. 1 depicts the disruptive innovation model, where the red lines are product performance trajectories, which represent the development of products or services. The blue lines are different customer segments' willingness to pay for performance. The general process that leads to disrupted markets starts when incumbent companies improve their offering with continuous sustaining innovations, leading their products' performance to float upwards toward the high-end market, while simultaneously overserving the needs of the mainstream and low end of the market. This creates a market hole for challengers at the lower end of the market, and the more they improve their products' performance, the more they start to win the mainstream customers, ultimately challenging the incumbents.

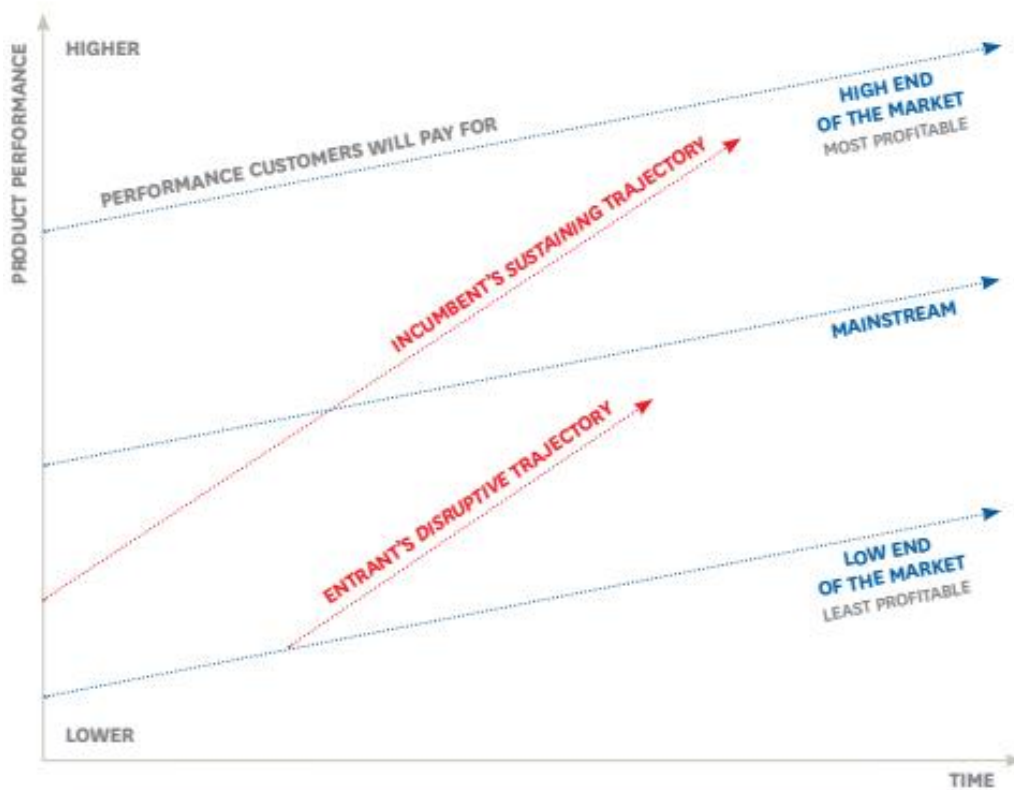


Fig.1 From “What is disruptive innovation” Christensen et al., (2015)

Although being the inventor of the term DI, and widely considered as a seminal character in the innovation research academia, Christensen’s research has not always been accepted outright, and still up to this day it continues to inflict conversation (see Sampere, Bienenstock, Zuckerman, 2016; King & Baatartogtokh, 2015). Regarding different researchers’ stances on Christensen’s research, robust categorization leads to two groups: supporters and critics.

Supporters hold Christensen’s DI theory (Christensen, 1997; Christensen & Raynor, 2003) as fully or at least principally correct. In addition, they also contribute to the literature by providing complementary models to the original theory, which help to further explain some inconsistencies left unaddressed in Christensen’s theory (Christensen, 1997; Christensen & Raynor, 2003). One example of this group’s members are Govindarajan and Kopalle (2006), who introduce high-end disruptive innovations, as well as validate the theory’s ability to forecast which companies could potentially become disruptors.

Another noteworthy mention are Schmidt and Druehl (2008), who rigorously undergo several DI example cases, including their relevant data, ultimately introducing a DI theory complementing encroachment terminology (see Appendix 2 for full list) (Yu & Hang, 2010).

The critics on the other hand consider that there is something rather major incorrect or inaccurate in Christensen's theory (Christensen, 1997; Christensen et. al., 2003), and often question its significance. Markides (2006) for example, unhappy about Christensen and Raynor's (2003) disruptive technologies' expansion to also consider business model and product innovations, calls for a much finer categorization of innovations, as "mixing apples with oranges" (p. 19) hampers the field's development, as different type of innovations, despite some similarities, have different implications for practitioners. Also Danneels (2004) criticizes Christensen's DI theory's (Christensen, 1997; Christensen & Raynor, 2003) definition of DI of being too broad and vague, as well as questions its ability to forecast DIs ex ante (i.e. before they happen). In addition Danneels (2004) suggested that perhaps the reason behind incumbent companies' failure to respond DI was not of lacking technical capabilities, but rather lacking marketing competence, as the incumbents generally could produce prototypes (i.e. master the technology) but failed to find the right customers or ways to market the new innovation to them.

The earlier mentioned King and Baatartogtokh's (2015) article in turn, questions in effect the whole DI theory's (Christensen et al., 2015) validity. King and Baatartogtokh's (2015) arguments are based on the notion that 79 interviewed experts could not link or identify 4 key specifications of DIs present at the very companies Christensen (1997) and Christensen et.al. (2003) had used as examples in their research. Given King and Baatartogtokh's paper's disposition, it is no miracle that a parry was due. Once the supporters gathered their ranks, the validity of King and Baatartogtokh's method (i.e. expert interviews), as well as the 4 key areas of DI chosen by them, were questioned (Sampere et al., 2016).

Also one reason for the missing link between the companies and disruption in King and Baatar-togtokh's data could be that the companies initially affected by disruptive events could have found ways to avoid being disrupted (Gans, 2016). One of the three defender-debaters, Zuckerman (deputy dean & Alvin J. Sitema Professor of Strategy and Entrepreneurship at the MIT Sloan School), concludes that "One hopes that in the future, the theory of disruptive innovation is recognized for what it is rather than promoted or attacked for what it is not" (Sampere et al., 2016, 3rd opinion piece).

All stances and perspectives considered, my personal view is that despite Christensen's DI theory probably not withstanding rigorous validation in all of its areas, in its core it is still a very useful theory to help understand the underlying "hidden" weaknesses of incumbent businesses against innovations which first seem as frivolous but later significantly grow in their ominousness.

The different views of DI and the theory behind the term have now been defined and introduced by their relevant outlines. However in order to elucidate the phenomenon slightly further, in the following chapter I will present three business cases and review them through the lenses of DI.

2.1 Examples of disruptive innovations

In this chapter I will introduce two business cases, which embody the characteristics of some of the DI types described in the previous chapter, as well as one case where a company appears to be disruptive, but after a more careful inspection, surfaces as (radically) sustaining.

The pattern of multiple DIs in the hard-disk-drive industry serves a classic example of the DI theory, as it was the first ever example of DI, introduced already in 1995 by Bower and Christensen. The

history of the hard-disk drive industry has several disruptions and coup d'état-like market share fluctuations of which Bower and Christensen (1995) showcase the transitions from 14-inch to 8-inch to 5,25-inch to 3,5-inch drives. In all of the cases, the leading industry players rejected the smaller drives, as they provided less storage capacity than the larger sized drives. The smaller drives however had other advantages, such as their smaller size, internal power supplies, light weight, and lower power consumptions. These new performance parameters opened the doors for the development of their end products, such as minicomputers, desktop PCs, and lastly portable computers. None of the smaller disk drives were especially hard to manufacture at their time, but they didn't seem as good investments from the incumbent companies' point of view, as the companies were mainly serving company customers who didn't have the need for smaller, portable or personal computer enabling drives at that moment (Bower and Christensen, 1995).

A good example of a rarer case of DI are mobile phones at the time of their emergence. Mainstream customers were not interested in the product, because landline phones provided better coverage and lower cost. Therefore the first customer of mobile phones were corporate executives, who appreciated the mobility and were not as price sensitive. Only after mobile phones' coverage was better and their cost lower, did the mainstream customers start to purchase them (Yu and Hang, 2010). Here the initially undervalued performance metric was mobility, whereas coverage and low price were the primary performance metrics. Depending from the point of view, the diffusion of mobile phones can be seen as high end infiltrating DI (Govindarajan & Kopalle, 2006) – a perspective emphasizing product price, or from the customer needs viewpoint as detached-market low-end encroachment (Schmidt & Druehl, 2008).

A third example, the case of the (ac)claimed taxi industry disruptor Uber, brings forth the perils of perfunctory popularization of management science theories. As Christensen et. al. (2015) stated, the

DI term has been widely misused, and this is also often what happens when Uber is described. Uber has certainly transformed the taxi industry, but its service does not fulfill the definitions of DI. Christensen et. al. (2015) point out two mismatches of Uber and the DI definition. First, upon its emergence, Uber targeted mainstream taxi customers, not the low-end market (e.g. public transport users), nor did it create a new market; same customers are still purchasing a taxi drive from A to B, now just by phone. Second, DIs are initially considered inferior by the mainstream customers, but due to many factors, Uber's service was considered as superior by the mainstream customers already during its emergence. Hence, being more sustaining than disruptive in its nature, Uber could be categorized as a radical business model innovation.

2.2 Defending against Disruptive Innovations

The previous section introduced two examples of the dissemination of various DIs. This section in turn discusses how the incumbent companies at the receiving end should operate in order to avoid being disrupted. The main purpose is to articulate the actions and processes required of incumbent companies to successfully manage potentially disruptive competition and markets.

Literature from the management practice and innovation management research offers a myriad of various strategies which incumbents should follow and operationalize when they encounter a DI. However as logic demands, responding to something requires first being aware of it. Thus, an incumbent's actions (or inactions) leading to the recognition of the DI must also be taken in to account. According to Danneels (2006), monitoring a company's remote markets is crucial to recognize potential disruptions. Paap and Katz (2004) define two potential causes for disruption: remote customers with unserved needs, or competitors capable of awakening new needs (often with new technology or business-mod-

els). Scanning the market environment for disruptors is especially important, as the earlier the threatening DIs are discerned, the more room and affordable response options remain at the incumbents' disposal (Markides 2002; Gans 2016). In addition, if the monitoring is very successful, the incumbents can even recognize and exploit disruptive technologies before the emergence of challengers (Paap & Katz, 2004).

As mentioned before, the existing literature provides many approaches for businesses on how to respond to DIs. However, no single approach rises above others in terms of (validated) performance. This is unsurprising, as finding the suitable response is highly dependent on multiple factors (e.g incumbent capabilities, industry, characteristics of DI etc.), making generalization close to impossible. Hence, this chapter focuses on showcasing the different response possibilities. Bergeck, Berggren, Magnusson, and Hobday (2013) propose a creative accumulation approach based on their comprehensive analysis on the technological discontinuities in the auto and gas turbine industries. According to the authors, incumbents wishing to avoid disruption should simultaneously (1) develop their existing technologies, (2) acquire new resources or technologies, as well as (3) integrate the new and existing knowledge for the best possible offering. Charitou and Markides (2002) in turn suggest that an incumbent should reflect on its position and competences on the industry as well as the characteristics of the faced DI. Depending on these factors, the best strategy for an incumbent may range from ignoring the DI to disrupting the disruptor (for a full list of Charitou and Markides' proposed strategies, see appendix 4). On the other hand, in addition to the above, Gans (2016) suggests that incumbents have the option of acquiring or co-operating with the challengers. Moreover, in some cases, incumbents may possess certain assets that give them the luxury to delay or block the DIs access to the mainstream market (Gans, 2016). Lastly, Arend (2009) introduces *actively pre-empting rival innovation defenses*, of which some are rather questionable in nature, such as “[...] disrupting key points in the rival's

innovative process in order to make success at each key point more costly, time-consuming, and frustrating than it would otherwise be.” (p. 199) (see full list of Arend’s innovation defenses in Appendix 5). Disregarding moral questions and given that the local market legislation allows for these kind of actions, Arend’s (2009) suggestions might prove effective - though they still lack validation.

A well formulated response strategy increases an incumbent’s chances for success, but the threat of disruption is still imminent. Strategies rarely are implemented exactly as they were planned, and the end result is always a sum of planned and unplanned emergent strategies (Mintzberg, 2003). In the case of DIs, or business strategies for that matter, well begun is not half done: “[...] doing is harder than dreaming, and a poorly executed strategy is merely a vision of what could be” (Olson, Slater, & Hult, 2005) (p. 47). Olson et. al. (2005) also discovered that the performance of different strategies is not dependent on specific organizational types, but rather than how well companies manage to align their policies, structures, and behavior with the chosen strategy. Thus it can be inferred that in addition to response strategy formulation, also the strategy’s successful implementation is crucial for deterring disruption.

As the fourth focus point in the incumbent’s action list for successful defense against DIs, is innovation. Good innovation capability is important, as it overall helps an incumbent’s position. For example, if an incumbent is innovative, it is also more likely to distinguish further (disruptive) innovations which it may then exploit or prepare against (Kandampully, 2002; Mumford, 2002). Also many of the response strategies required either internal innovation, or at least integration of challenger’s innovations (e.g. Markides 2002; Gans, 2016). Moreover, the probability for disruption arguably is lower for an innovative company, as it has already probably commercialized a certain number of innovations, requiring, on average, more effort from the challengers to invent new ones.

In conclusion, for incumbents to successfully defend against DIs, they have to (1) recognize the potential disruptions, (2) formulate a suitable response strategy, (3) implement the response strategy, and lastly (4) be capable of innovation.

The next section introduces market orientation, its two main perspectives, as well as the perspectives' synthesis. The introduction of market orientation will serve as a basis for later discussion on its potential effects on the above listed four actions.

3. Market orientation – definition

MO has its roots in the business philosophy of marketing concept, which has played an important role as one of the foundations for modern marketing (Lafferty & Hult, 2001; Kirca et al., 2005). In fact, the research stream of MO started to bloom much due to Webster's (1988) acclaimed paper, "The rediscovery of the marketing concept" (Raaij & Stoelhorst, 2008). The marketing concept, in turn, is defined as a philosophy which "[marketing concept]... holds that the key to achieving organizational goals is being more effective than competitors in creating, delivering, and communicating superior customer value to your target markets" (Kotler & Keller, 2016, p. 42). Subsequently, MO is associated with the implementation or appearance of the marketing concept (Kohli & Jaworski, 1990; Lafferty & Hult, 2001; Liao et al., 2011). MO can be essentially described as the scale of how much of the marketing concept is embodied in a given company or organization.

The MO literature itself provides a "rich but fragmented picture of what market orientation is [...]" (Raaij & Stoelhorst 2008 p. 3). This is naturally reflected as multiple and more focused definition(s) of MO from various perspectives. The most distinguished perspectives in the MO research stream, and under which most of the research falls into, are the (1) cultural perspective first introduced by Narver

and Slater (1990) and the (2) behavioral perspective by Kohli and Jaworski (1990). (See eg. Griffiths & Grover, 1998; Homburg & Pflesser, 2000; Kirca et al., 2005). The following subchapters, 3.1 and 3.2, will discuss these perspectives more in detail, while the third and last subchapter of the MO-chapter will attempt to synthesize the common elements inherent in these perspectives.

3.1 Cultural perspective

The cultural perspective views MO as an organizational culture, which most effectively evokes the type of behavior required for the delivery of superior value to buyers, and therefore also increased business performance (eg. Deshpandé et al., 1993; Narver and Slater, 1990; Webster, 1988). Based on previous literature, Narver and Slater (1990) induced a framework (see Fig. 2 below) for cultural MO. According to them, “[...] market orientation consists of three behavioral components – customer orientation, competitor orientation, and interfunctional coordination – and two decision criteria – long-term focus and profitability” (Narver & Slater, 1990, p. 21).

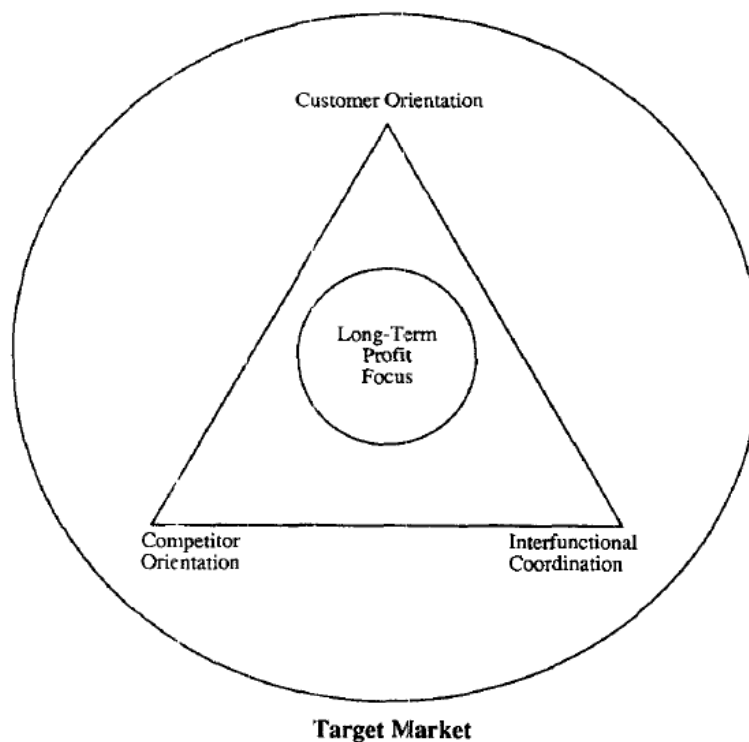


Fig. 2 From “The effect of a market orientation on business profitability” (Narver & Slater, 1990)

The first and perhaps the most intuitive component of the framework, customer orientation is described by Narver and Slater (1990) as the comprehensive understanding of the continuously evolving value chains of a business’s target buyers and their buyers to distinguish all the potential customers, as well their present and future needs. Competitor orientation in turn, much like customer orientation is defined as understanding a company’s competitors, as well as potential future competitors short both long and long term weaknesses, strategies, and abilities (Narver & Slater, 1990). Lastly, Narver and Slater (1990) define interfunctional coordination as the integrated mustering of a company’s departments and resources for the creation of superior value to its target buyers. It is also worthwhile to note, that Narver and Slater’s (1990) research could not validate the long-term nor profit focus decision criteria’s congruence in their model.

Other notable contributors in the cultural MO stream have also been Deshpandé et al. (1993), with their distinctive focus on the organizational culture aspect. Their research reveals that across industries, corporate cultures that are open and market oriented perform better than closed and internally oriented organizations (Deshpandé et al., 1993; Deshpandé & Farley, 2004). They define MO is a set of beliefs that primarily cater to the customer’s interest (while also taking other stakeholders into account) and also part of larger corporate culture (Deshpandé et al., 1993). It is also noteworthy to mention, that Deshpandé et al. (1993) discuss the term ‘customer orientation’, but mention to conceive it as a synonym of the term MO. In his later research (although with a different assembly of scholars), Deshpandé had also switched to use the MO term, as well as to behavioral (re)definition of MO (Deshpandé & Farley, 1998).

In addition, Homburg and Pflesser (2000) (citing Deshpandé et al. (1993), Narver and Slater

(1990), and Slater and Narver (1994)), make an interesting note that among the cultural perspective MO literature, behavioral traits have commonly been the main channel for measuring and understanding MO. However, without questioning the validity of the statement in itself, the notion is inaccurate with respect to the research of Deshpande et al. (1993), for their research specifically addresses the elements of corporate culture, not behavior. This inaccuracy is also supported by Raaij & Stoelhorst, (2008): “All [other MO definitions], except for the definition of Deshpandé et al. have a clear action component, i.e., being responsive to customers”. On the other hand, regarding Narver and Slater’s (Narver & Slater, 1990; Slater & Narver, 1994) research, Homburg and Pflesser’s (2000) notion is inherently accurate, as Narver and Slater’s (1990) very definition of MO is based on behavioral components. The relationship between the behavioral and the cultural perspective, as well as Homburg and Pflesser’s (2000) research will be further discussed later in this thesis. Consequently, to maintain coherent structure I will priorly discuss the behavioral MO perspective in the next subchapter.

3.2 Behavioral perspective

The behavioral MO research stream holds MO as a set of actions or processes that are in line with the business philosophy of marketing concept (Kirca et al., 2005). In many of the behavioral research stream’s definitions of MO, the action component of generating market or customer intelligence is present (eg. Kohli & Jaworski, 1990; Shapiro, 1988; Ruekert, 1992). After the subsidence of the equivocal state present in most emergences of new research streams, most of the behavioral stream’s research has accepted Kohli and Jaworski’s (1990) definition of MO; “the organisationwide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organisationwide responsiveness to it” (p. 6) (Raaij & Stoelhorst, 2008). According Kohli and Jaworski (1990) this definition avails the conceptualization of the marketing

concept, as it centered upon “[...] activities rather than philosophical notions” (p. 6). Next, I will explain in detail the above mentioned three components.

Truly market oriented companies should not limit their market intelligence gathering only on current customer needs, but also on the fluctuations of the external forces affecting those needs, such as changing regulations and the actions of competitors (e.g. pricing) or customers’ customers (Kohli & Jaworski, 1990). Understanding the whole market environment in this larger sense, will also help the companies to be better able to forecast the future needs of their customers. Kohli and Jaworski (1990) also suggest a range of tools which enable this kind of information generation, such as sales report analysis, test markets, and customer database analysis. Despite the years between the paper’s publication and present day, many of the tools are still relevant, just perhaps in more “digitalized” form. In addition, the Kohli and Jaworski (1990) highlight that these tools should be used widely – solely relying on customer surveys won’t suffice.

In order for the market intelligence to be beneficial, it also has to be accessible for the relevant stakeholders. However, all of the beneficial intelligence is not always created at the function which would benefit of or need the intelligence the most (Kohli & Jaworski, 1990). As a solution, Kohli and Jaworski (1990) propose that companies should facilitate proper formal and informal communication (and even internal sales) channels to ensure the efficient dissemination of market intelligence.

Lastly, Kohli and Jaworski (1990) state that not much is gained if the intelligence is first generated, then disseminated effectively, but never acted upon. These actions which respond to market intelligence touch organizations across functions, as the business examples collected by Kohli and Jaworski (1990) suggest; market selection, product design, promotion, and distribution.

Similar to the first and third element of Kohli and Jaworski's (1990) definition, Ruekert's (1992) research on the development MO emphasizes the importance of market intelligence generation and use. However Ruekert (1992) also takes a more strategical point of view on MO by also incorporating the development and implementation of a customer needs fulfilling strategy to his notion of MO. Moreover, Ruekert (1992) holds three organizational systems: recruiting, training, and compensation as key processes to the development of successful market oriented strategies.

Also Shapiro's (1988) research places highlight on processes – on decision making processes. In his view, market oriented companies do not only co-ordinate their actions across functions well, but also practice integrated decision making, which enables better organizational commitment as the actors implementing the plan were also making the plan. Naturally, as with the MO research in general, Shapiro (1988) also acknowledges the need for market intelligence generation and distribution.

In the next chapter I will discuss the relationship and confluences between the cultural and behavioral MO approaches in order to establish a more unambiguous gestalt. This will alleviate the inspection of MO's role in the process of defending against DIs

3.3 Synthesis of perspectives

Although different, the behavioral and the cultural approaches to MO have a lot in common. This can already be perceived when comparing all the notions of MO covered in the last three chapters. For example, the focus on customer is highlighted across all views, as well as the importance of intelligence generation, whether it be explicitly stated to be of customers, markets, competitors, or a mixture of these, as in the end, they all denote the same. Additional points of shared agreement among most of the MO research are also the interfunctional coordination and action taking (Lafferty & Hult, 2001).

To discuss the interplays of the perspectives further, Griffiths and Grover's (1998) research opens a new venue for discussion. According to them, the two perspectives are not only similar, but compatible, as MO behaviors are the function or product of a MO culture (Griffiths and Grover, 1998). The authors reason that if MO behaviors are allowed to be carried out and form patterns, will they also ultimately increase the MO of an organization's culture. Respectively, if an organization's culture's MO is increased, also more MO behaviors will follow (Griffiths and Grover, 1998). However, behaviors are not the only factor influencing the culture, as also forces such as underlying rules (organizational cognition), heroes and customs (organizational symbolism), system of beliefs imported (organizational membership), and key policies (psychodynamic/ structural changes) play a role (Griffiths and Grover, 1998). It is worth noting, that even though Griffiths and Grover's (1998) paper follows intuitive rationale, the authors' propositions are based solely on their own deduction and existing literature, and are not verified by quantitative means.

On the other hand, verging on Griffiths and Grover's (1998) research, Homburg & Pflesser's (2000) paper introduces a very similar idea of MO behaviors being the product of MO culture, but with the distinction that MO behaviors are incorporated in the MO culture, and are not a separate construct, as Griffiths and Grover (1998) propose. Homburg and Pflesser (2000) illustrate their model in an encompassing framework (see Fig. 3 below) which integrates the whole MO construct from both, the behavioral and the cultural perspectives by taking into account multiple the multiple layers of organizational culture: shared basic values, behavioral norms, artifacts, and behaviors. Shared basic values represent the general set of underlying shared "guidelines" of modes, means and behavior, while norms are similar, but more focused and behavioural context-bound (Homburg & Pflesser, 2000). In turn, artifacts, such as jargon or stories, are the embodiment of culture and they, along with behavioural norms, ultimately affect the behaviours (Homburg & Pflesser, 2000). The authors' research is especially significant because of two reasons: first, it is the first in it's field (MO) to

introduce artifacts as cultural factors, and second, because they succeeded in validating their integrative construct quantitatively (Homburg & Pflesser, 2000).

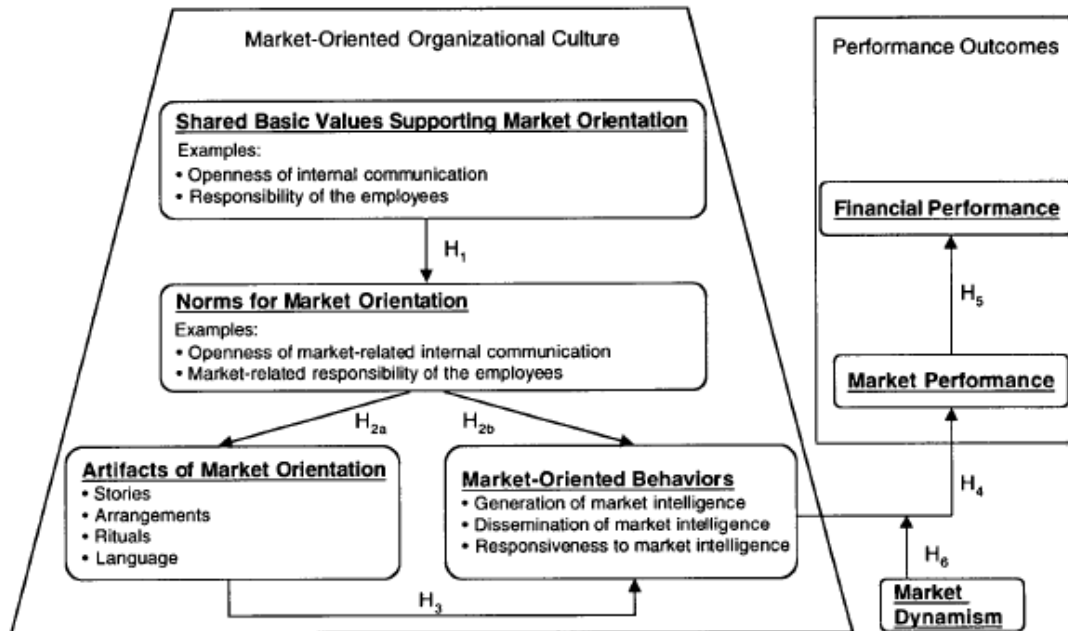


Fig. 3 From “A Multiple-Layer Model of Market-Oriented Organizational Culture: Measurement Issues and Performance Outcomes” (Homburg & Pflesser, 2000)

In conclusion, it can be deduced that the cultural understanding of MO is essential when the objective is to learn and examine more widely the different mechanisms which, in most circumstances, create the certain behaviors in a company. Such a situation could for example be when a manager seeks to improve the MO of his or her business. On the other hand, in situations which require measurement and weighing of the outcomes of the culture, one should focus on examining the behaviors.

In the following chapter I will analyze of the potential effects of MO on incumbent firms’ defense capabilities against DIs and formulate the core propositions of this thesis.

4. Market Orientation & defending against Disruptive Innovations

In a research paper published in 1996, Christensen and Bower listed very much the same idea about DIs they had already presented in their seminal paper a year before (Bower & Christensen, 1995), but with the exception of stronger emphasis on their conclusion that listening to customers too carefully was the primary reason for incumbent failure. Christensen and Bower had clearly understood the concept of listening to customer too narrowly - a matter to which Slater and Narver (1998) took response by articulating the difference between customer-led (focus on current customer needs and short term) and market oriented (focus on both current and latent customer needs and long term) businesses. It is noteworthy that this academic discussion took place on the pages of Strategic Management Journal and not in a more traditional marketing research publication. Also, in a subsequent debate on the journal of product innovation management, Danneels (2006) places doubts on Christensen's literacy regarding marketing concepts and expresses a wish for a more genuine approach to cross-disciplinary research on the field of DI.

Following Danneels' (2006) wish, in the next four sections I will synthesize innovation management, management practice, and MO literature by cross analyzing the incumbent's four defensive action points against DIs with the MO construct. The MO construct encompasses either, both, or the combination of the MARKOR (Kohli et. al., 1993, see appendix 1) and the MKTOR (Narver & Slater, 1990, see appendix 2) scales, as most of the research on the MO stream is based on similar settings (Raaij & Stoelhorst 2008). This choice is justified as the inclusion of both scales enables the consideration of behavioral as well as the cultural MO research streams' views. Additionally, MARKOR and MKTOR

correlate highly (Deshpandé & Farley, 1998) and the thesis at hand does not include data collection, ergo there is little reason for the truncation of the construct.

4.1 Recognizing potential disruptions

As stated in a previous chapter of this thesis – 2.2, defending against DIs, disruptions are generally either customer (underserved needs) or competitor induced (ability to awaken new needs) (Paap & Katz, 2004). Various components of MO (i.e. customer orientation, competitor orientation market intelligence generation) imply an intuitive link between MO and the recognition of these potential disruptions. This link is also supported by Kirca et. al (2005): “[MO] provides a firm with market-sensing and customer-linking capabilities [...]” (p. 25) as well as Kumar et. al. (2011): “[MO provides] both information on customers’ implicit and expressed needs and competitors’ strengths [...]” (p. 19).

However, as misunderstandings such as the earlier mentioned Christensen’s (1996) narrow understanding of “listening to the customer” happened, several new terms, such as proactive market orientation (Narver, Slater, MacLachlan, 2004), second order marketing competence (Danneels, 2006), emerging customer orientation (Govindarajan, Kopalle, & Danneels, 2011), were formed to describe and highlight further the aspect of MO which concentrated on finding out the latent, potential, long term needs of customers. It was also discovered, that these aspects could simultaneously co-exist in a same company (or business unit) with the more responsive, current customer needs-focusing, aspects of MO (e.g. Govindarajan et. al., 2011).

Moreover, Slater and Narver (2000) define the market-focused intelligence creation to consist of (1) improvement of customer satisfaction, (2) tracking competitors, (3) investing in new market opportunity identification and understanding, (4) endeavors to find “news ways of looking at customers and their needs” (p. 126), and (5) systematic customer need information collection.

Taking into account the “encroaching” nature of DIs, it can be concluded from the MO literature that participation in the proactive MO behaviors will very likely have a positive effect on the recognition of potential disruptions, whereas participation only in the reactive, customer-led orientation would carry neutral or negative implications. However, as the focus on potential, emerging customer needs and competition is already inbuilt in first definitions of MO (see e.g. Narver & Slater, 1990), it can be directly deducted that MO has a positive effect on the recognition of potential disruptions.

4.2 Response strategy formulation

Despite an extensive multi-disciplinary literature review no direct link between increased quality in response strategy formulation and MO could be established. The reason behind the disconnectedness might lie in the case-by-case-nature of strategy formulation – every encounter between a business and a DI forms a unique set of different influencing factors.

Some indirect effects can however be distinguished. For example, MO has been proven to have a strongly positive effect on innovation capability (Huhtala et. al., 2014) and increased innovation capability in turn could help companies to invent better strategies. Another potential route of impact could also be the increased amount of viable response options discovered as a result of enhanced information gathering inherent in MO organizations.

The above mentioned suggestions are nonetheless dubious and could not be verified by existing literature. In conclusion, MO does not have an effect on the quality of response strategy formulation.

4.3 Response strategy implementation

Even if a link between response strategy formulation and MO couldn't be established, could there be a connection between MO and strategy implementation? According to a research by Homburg, Krohmer, and Workman (2004), which brings novel empirical evidence on the effects of intangible organizational variables to strategy implementation, there is. The researchers discovered that MO has an important (positive) mediating role between strategy and performance and suggest that managers' shouldn't overlook a strategy's implementation as strategies, per se, do not offer performance (Homburg et. al, 2004).

Also Ruekert (1992) found support for the same phenomenon, as in his research, the level of MO in the implementation of a business unit was the best indicator of performance. One reason behind better implementation of strategies by MO businesses could be that they are capable of linking their structures and behaviors with their chosen strategy better than others (Olson et. al., 2005).

Thus, MO could only have a negative effect on a given strategy's implementation if it would steer towards anti-MO behaviors. However, as most of the strategies' ultimate goal is to capture the loyalty of the emerging customers the choice of such strategy in a sanely functioning business seems highly unlikely. Consequently, the MO literature suggests that MO has a positive effect on response strategy implementation.

4.4 Innovativeness

The effect of MO to innovation capability has been widely studied and empirically proven as positive (for an overview see Liao et. al., 2011). In fact, innovativeness has been found to be an important mediating factor between MO and firm performance (Kirca et. al, 2005; Huhtala et. al., 2014).

Even different types of innovations and MO's impact on them has been researched. In their paper Govindarajan et. al. (2011) report that mainstream customer orientation supports companies endeavors to develop radical innovations, but inhibits their ability to introduce DIs. On the other hand emerging customer orientation has a positive effect on the development of DIs, and a neutral relationship to radical innovations (Govindarajan et. al. (2011). It is also worthwhile to remember, that these two customer orientations did not correlate with each other, which means they can exist simultaneously in an organization.

In addition, many of MO's characteristics listed on the recognizing potential disruptions –chapter also effect a firm's innovation capability positively, as MO improves innovation capability by enabling businesses to uncover both expressed and latent customer needs (Narver et al., 2004; Kumar et. al., 2011). For example, technology scanning was in found to affect radical innovation capability positively in a study by Govindrajan et. al. (2011).

Due to the existing literature's homogenous stance on MO's strengthening impact to firm innovativeness, it can be drawn that MO has a positive effect on a company's ability to innovate.

4.5 Core propositions

Based on the previous four sections, the core propositions of this thesis are depicted below (Fig. 4):

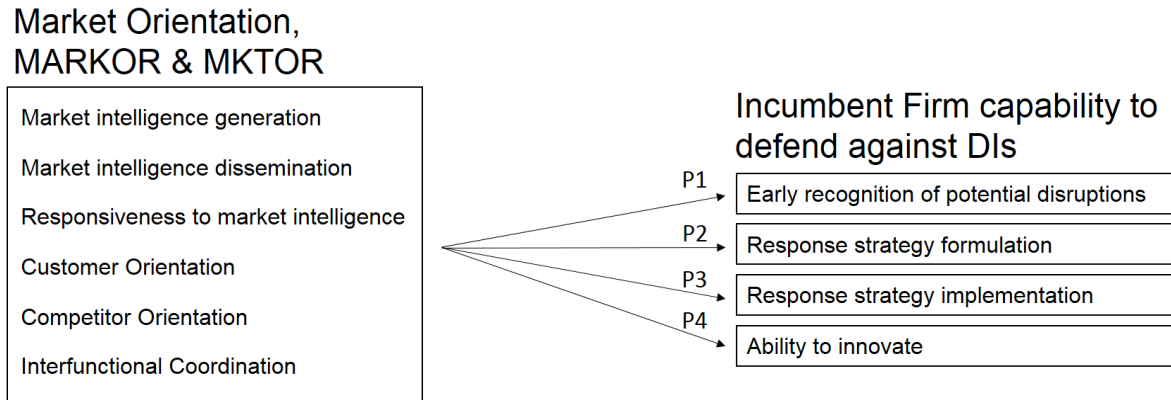


Fig. 4 The effect of Market Orientation on Incumbent defense capability against Disruptive Innovations. Self formulated.

P1: Market Orientation has a positive effect on the recognition of potential disruptions.

P2: Market Orientation has no effect on the disruption response strategy formulation.

P3: Market Orientation has a positive effect on disruption response strategy implementation.

P4: Market Orientation has a positive effect on a firm's innovation abilities.

A positive link could be established between MO and three out of the four components required for successful defense against DIs. The existing literature from the research streams of MO, innovation management, and marketing practice therefore implies that MO can strengthen an incumbents defense capabilities against DIs, thus decreasing its chances of being disrupted. The implications of these findings will be discussed in the following section.

5. Discussion and Implications

In the opening section of this thesis, two distinct research gaps as well as several managerial question marks were noted to exist at the crossroad of MO and DI research. Based on these blind spots, four

research questions were formed. The purpose of this section is to discuss the findings of the literature review and the succeeding qualitative meta-analysis that followed in relation to the previously stated research gaps and research questions. Theoretical implications will be addressed first, after which I will discuss the practical implications.

5.1 Theoretical implications

MO has been researched extensively since 1990, and especially its relationship with performance and innovativeness has gained a lot of academic attention (Liao et. al., 2011). Also the concept of DI, the capability to predict DIs, as well as how to enable DIs have been studied considerably (Yu & Hang, 2010). There even exists research focusing on the effects of MO on (disruptive) innovation (e.g. Huhtala et. al., 2014; Govindarajan et. al., 2011), but these studies have been invariably conducted from the innovator's point of view.

Moreover, research from the DI perspective has distinguished a point of confluence with marketing, especially with the customer orientation (Yu & Hang, 2010). The need for more, truly cross-disciplinary research from the field of marketing (Danneels, 2004; 2006) was also noted.

Thus, the implications of the thesis at hand are twofold. First, the findings contribute to MO literature as the beneficial performance effects of MO can be understood more broadly, now also including enhanced defending capabilities against disruptions. This benefit is ought to be of increasing importance in the today's ever-complexing competitive environment (Paap & Katz, 2004). Moreover, the findings also address a new area regarding MO: Incumbent response to DIs. Second, in the research streams of DI and management practice, the findings help to broaden the perspective of disruption responding to

also consider such variables as potential disruptor recognition and strategy implementation. Consequently, perhaps also marketing's (or MO's) company-wide role will also be better understood amid these fields of research.

5.2. Practical implications

Although the findings of this thesis are preliminary, they still provide some interesting conclusions for practitioners. First, as the link between MO and enhanced defense capabilities against DIs has been initially proven, managers are able to weigh the benefits of engaging in MO activities or culture more accurately.

Second, the findings further highlight the importance of proactive MO beside the reactive, or mainstream MO (Narver et. al., 2004). For example the benefits mentioned above cannot be reaped without actively seeking different way to find and fulfill customers' latent needs. Engaging in only reactive MO may even prove harmful. Thus practitioners should seek to establish the needed cultures, structures and processes to incentivize such behavior, have they not already done so.

Third, the results of the innovation management literature review showcases a broader framework for addressing the DI threat, providing managers with additional straightforward action points in addition to response strategy selection.

In the next and last section in the body of this thesis I will summarize the thesis' key findings, discuss the limitations, as well as suggest possible areas for future research.

6. Conclusion

In the beginning of this thesis, I introduced the need for further research on the crossroads of the research streams of MO and DI. Subsequently, I presented the definition of DI as well as the critique and expansions regarding the concept (e.g Markides, 2006; Schmidt and Druehl, 2008). It became apparent, that Christensen's DI theory (Christensen et. al., 2015) is not meant to be bullet-proof, but rather to act as a tool for better understanding of certain types of innovations and market events. After the introduction of DI, I followed to review the field's research in order to formulate a set of required actions for successful defense against DI, as no model previously existed to suit that task. The components of this set are: (1) early recognition of potential disruptions, (2) response strategy formulation, (3) response strategy implementation, (4) innovation ability.

Next, I shifted to introduce MO and its two main perspectives, the behavioral perspective (Kohli & Jaworski, 1990) and the cultural perspective (Narver & Slater, 1990). Additionally, I discovered that these two perspectives are very similar, even complementary, and presented a synthetization of the concepts using Homburg and Pflesser's (2000) Multiple-Layer Model.

Finally, I cross analyzed relevant MO literature with the four different components effecting incumbent's defense against DIs and found evidence for a positive link between MO and (1) early recognition of disruptions, (3) response strategy implementation, and (4) innovation ability. Following this, the implications for theory as well as for practice were discussed.

6.1 Limitations and scope of research

The main and only methods of this thesis are literature review and qualitative meta-analysis, which means the findings of the analysis are not directly verified empirically. Additionally, the research focuses only on MO and its relationship to another concept, DI, MO is not compared with other competing orientations. Respectively, DIs are a special, precisely defined category of innovations, meaning that the findings are not necessarily transferrable to other types of innovations.

6.2 Possible areas for future research

One very clear and potential area for future research would be the empirical verification and validation of the core propositions of this thesis. Regarding this, also the validity and relevance of the incumbent defense capability construct should be tested.

A second interesting venue for further research would be the unestablished link of MO and (DI response) strategy formulation. There seemed to be some potential indirect paths for MO's impact to these, but I personally did not come across them when reviewing the literature.

In addition, research on the penetration of the proactive or second-grade MO among different companies would be very beneficial, as many of the positive and beneficial effects of MO are exactly connected to this approach of MO (e.g. Danneels, 2006; Narver et. al, 2004; Govindarajan et. al. 2011). Yet it is also clear, that this type of MO is harder to achieve than mainstream MO, bringing forth the question of its distribution.

7. References

Articles

- Arend, R. J. (2009). Defending against rival innovation. *Small Business Economics*, 33 (2), 189-206.
- Bergek, A., Berggren, C., Magnusson, T., & Hobday, M. (2013). Technological discontinuities and the challenge for incumbent firms: Destruction, disruption or creative accumulation?. *Research Policy*, 42 (6), 1210-1224.
- Bower, J. L., & Christensen, C.M. (1995) Disruptive technologies: catching the wave. *Harvard Business Review*, 73 (1), 43–53.
- Charitou, C. D., & Markides, C. C. (2002). Responses to disruptive strategic innovation. *MIT Sloan Management Review*, 44 (2), 55-64.
- Christensen, C. M., & Bower, J. L. (1996). Customer power, strategic investment, and the failure of leading firms. *Strategic management journal*, 17 (3), 197-218.
- Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). What is disruptive innovation?. *Harvard Business Review*, 93 (12), 44-53.
- Danneels, E. (2004). Disruptive technology reconsidered: A critique and research agenda. *Journal of product innovation management*, 21 (4), 246-258.
- Danneels, E. (2006). Dialogue on the effects of disruptive technology on firms and industries. *Journal of Product Innovation Management*, 23 (1), 2-4.
- Deshpandé, R., Farley, J. U., & Webster Jr, F. E. (1993). Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. *The journal of Marketing*, 57, 23-37.
- Deshpandé, R., & Farley, J. U. (1998). Measuring market orientation: generalization and synthesis. *Journal of market-focused management*, 2 (3), 213-232.
- Deshpandé, R., & Farley, J. U. (2004). Organizational culture, market orientation, innovativeness, and firm performance: an international research odyssey. *International Journal of Research in Marketing*, 21 (1), 3-22.
- Gans, J. S. (2016). Keep calm and manage disruption. *MIT Sloan Management Review*, 57 (3), 83.
- Govindarajan, V., & Kopalle, P. K. (2006). The usefulness of measuring disruptiveness of innovations ex post in making ex ante predictions. *Journal of product innovation management*, 23 (1), 12-18.

- Govindarajan, V., Kopalle, P. K., & Danneels, E. (2011). The effects of mainstream and emerging customer orientations on radical and disruptive innovations. *Journal of Product Innovation Management*, 28 (1), 121-132.
- Griffiths, J. S., & Grover, R. (1998). A framework for understanding market orientation: The behavior and the culture. *In American Marketing Association - Conference Proceedings*, 9, 311.
- 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), 449-462.
- Homburg, C., Krohmer, H., & Workman, J. P. (2004). A strategy implementation perspective of market orientation. *Journal of Business Research*, 57 (12), 1331-1340.
- Hult, G. T. M., & Ketchen, D. J. (2001). Does market orientation matter?: A test of the relationship between positional advantage and performance. *Strategic management journal*, 22 (9), 899-906.
- Huhtala, J. P., Sihvonen, A., Frösén, J., Jaakkola, M., & Tikkanen, H. (2014). Market orientation, innovation capability and business performance: Insights from the global financial crisis. *Baltic Journal of Management*, 9 (2), 134-152.
- Kandampully, J. (2002). Innovation as the core competency of a service organisation: the role of technology, knowledge and networks. *European Journal of Innovation Management*, 5 (1), 18-26.
- King, A. A., & Baatartogtokh, B. (2015). How useful is the theory of disruptive innovation?. *MIT Sloan Management Review*, 57 (1), 77.
- Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of marketing*, 69 (2), 24-41.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: the construct, research propositions, and managerial implications. *The Journal of Marketing*, 1-18.
- Kohli, A. K., Jaworski, B. J., & Kumar, A. (1993). MARKOR: a measure of market orientation. *Journal of Marketing research*, 467-477.
- Kumar, V., Jones, E., Venkatesan, R., & Leone, R. P. (2011). Is market orientation a source of sustainable competitive advantage or simply the cost of competing?. *Journal of marketing*, 75 (1), 16-30.
- Lafferty, B. A., & Tomas M. Hult, G. (2001). A synthesis of contemporary market orientation perspectives. *European journal of marketing*, 35 (1/2), 92-109.
- Liao, S. H., Chang, W. J., Wu, C. C., & Katrichis, J. M. (2011). A survey of market orientation research (1995–2008). *Industrial Marketing Management*, 40 (2), 301-310.
- Markides, C. (2006). Disruptive innovation: In need of better theory. *Journal of product innovation management*, 23 (1), 19-25.
- Meade, N., & Islam, T. (2006). Modelling and forecasting the diffusion of innovation—A 25-year review. *International Journal of forecasting*, 22 (3), 519-545.

- Mumford, M. D. (2002). Social innovation: ten cases from Benjamin Franklin. *Creativity research journal*, 14 (2), 253-266.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *The Journal of marketing*, 20-35.
- Narver, J. C., Slater, S. F., & MacLachlan, D. L. (2004). Responsive and proactive market orientation and new-product success. *Journal of product innovation management*, 21 (5), 334-347.
- Olson, E. M., Slater, S. F., & Hult, G. T. M. (2005). The importance of structure and process to strategy implementation. *Business horizons*, 48 (1), 47-54.
- Paap, J., & Katz, R. (2004). Anticipating disruptive innovation. *Research-Technology Management*, 47 (5), 13-22.
- Ruekert, R. W. (1992). Developing a market orientation: an organizational strategy perspective. *International journal of research in marketing*, 9 (3), 225-245.
- Sampere, J. P. V., Bienenstock, M. J., & Zuckerman, E. W. (2016). Debating disruptive innovation. *MIT Sloan Management Review*, 57 (3), 26.
- Schmidt, G. M., & Druehl, C. T. (2008). When is a disruptive innovation disruptive?. *Journal of product innovation management*, 25 (4), 347-369.
- Shapiro, B.P. (1988). What the Hell Is 'Market Oriented?'. *Harvard Business Review*, 66, 119-25.
- Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation-performance relationship?. *The Journal of Marketing*, 58, 46-55.
- Slater, S. F., & Narver, J. C. (1998). Customer-led and market-oriented: Let's not confuse the two. *Strategic management journal*, 19 (10), 1001-1006.
- Slater, S. F., & Narver, J. C. (2000). Intelligence generation and superior customer value. *Journal of the academy of marketing science*, 28 (1), 120-127.
- Van Raaij, E. M., & Stoelhorst, J. W. (2008). The implementation of a market orientation: A review and integration of the contributions to date. *European Journal of Marketing*, 42 (11/12), 1265-1293.
- Webster, F. E. (1988). The rediscovery of the marketing concept. *Business horizons*, 31 (3), 29-39.
- Yu, D., & Hang, C. C. (2010). A reflective review of disruptive innovation theory. *International Journal of Management Reviews*, 12 (4), 435-452.

Books

Christensen, C.M. (1997). *The innovator's dilemma: when new technologies cause great firms to fail*. Boston MA, Harvard Business School Press.

Christensen, C.M., & Raynor, M.E. (2003). *The Innovator's Solution: Creating and Sustaining Successful Growth*. Boston MA, Harvard Business School Press.

Kotler, P., & Keller, K. L. (2016). *Marketing Management (15th ed.)*. Essex, Pearson Education Ltd

Mintzberg, H. (2003). *The strategy process: concepts, contexts, cases (2nd European ed.)*. Essex, Pearson Education Ltd.

8. Appendix

Appendix 1.

Scale of Market Orientation (MARKOR) by Kohli, Jaworski, and Kumar (1993) (p. 66)

(5-point scale, in which 5 = strongly agree and 1 = strongly disagree).

A 20-item scale consisting of three subconstructs.

Intelligence Generation

1. In this business unit, we meet with customers at least once a year to find out what products or services they will need in the future.
2. In this business unit, we do a lot of in-house market research.
3. We are slow to detect changes in our customers' product preferences
4. We poll end users at least once a year to assess the quality of our products and services.
5. We are slow to detect fundamental shifts in our industry (e.g., competition, technology, regulation).
6. We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.

Intelligence Dissemination

7. We have interdepartmental meetings at least once a quarter to discuss market trends and developments.
8. Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.

9. When something important happens to a major customer of market, the whole business unit knows about it within a short period.
10. Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.
11. When one department finds out something important about competitors, it is slow to alert other departments.

Responsiveness to Market Intelligence

12. It takes us forever to decide how to respond to our competitor's price changes.
13. For one reason or another we tend to ignore changes in our customer's product or service needs.
14. We periodically review our product development efforts to ensure that they are in line with what customers want.
15. Several departments get together periodically to plan a response to changes taking place in our business environment.
16. If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.
17. The activities of the different departments in this business unit are well coordinated.
18. Customer complaints fall on deaf ears in this business unit.
19. Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion.
20. When we find that customers would like us to modify a product or service, the departments involved make concerted efforts to do so.

Appendix 2.

Scale of Market Orientation (MKTOR) synthesized from Narver and Slater (1990) (p. 24) & Deshpandé and Farley (1998) (p. 226-227)

(7-point scale, in which 7 = To an extreme extent and 1 = Not at all).

A 15-item scale consisting of three subconstructs.

Customer Orientation

1. We constantly monitor our level of commitment and orientation to serving customer needs
2. Our business strategies are driven by our beliefs about how we can create greater value for our customers
3. Our strategy for competitive advantage is based on our understanding of customer's needs
4. Our business objectives are driven primarily by customer satisfaction
5. We measure customer satisfaction systematically and frequently
6. We give close attention to after-sales service

Competitor Orientation

7. Our salespeople regularly share information within our business concerning competitors' strategies.
8. We rapidly respond to competitive actions that threaten us.
9. Top managers regularly discuss competitors' strengths and strategies
10. We target customers where we have an opportunity for competitive advantage

Interfunctional Coordination

11. Our top managers from every functions regularly visit our current and prospective customers
12. We freely communicate information about our successful and unsuccessful customer experiences across all business functions
13. All of our business functions (e.g., marketing/sales, manufacturing, R&D, finance/accounting, etc.) are integrated in serving the needs of our target markets.
14. All of our managers understand how everyone in our business can contribute to customer value
15. We share resources with other business units

Appendix 3.

The Encroachment terminology by Schmidt and Druehl (2008) (p. 348).

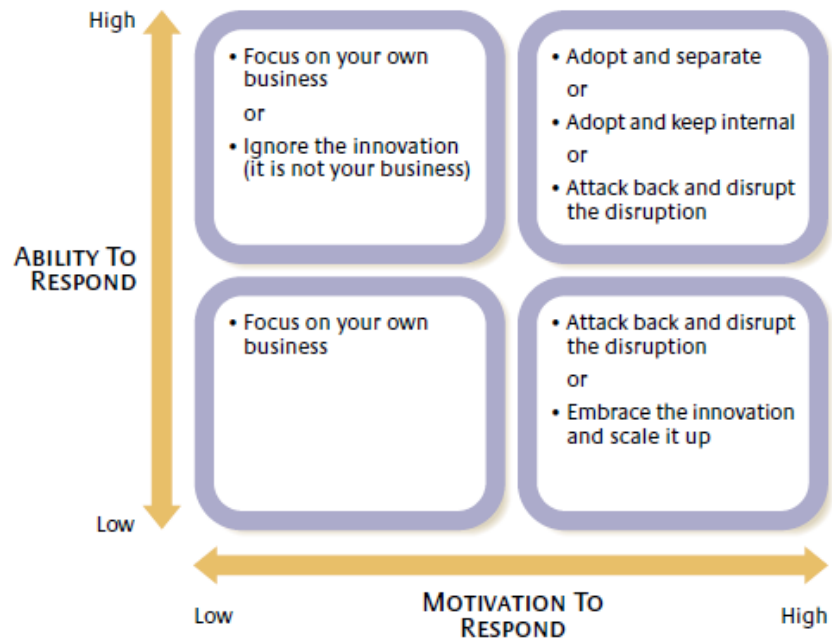
Table 1. Mapping of the Type of Innovation to the Type of Diffusion

Type of Innovation	Type of Diffusion to which It Maps	Description	Example
Sustaining Innovation	High-end encroachment	The new product first encroaches on the high end of the existing market and then diffuses downward.	Pentium IV relative to Pentium III
Disruptive Innovation	Low-end encroachment	The new product first encroaches on the low end of the existing market and then diffuses upward.	
New-Market Disruption	Fringe-market low-end encroachment	Before encroachment begins, the new product opens up a fringe market (where customer needs are incrementally different ^a from those of current low-end customers).	5.25 inch disk drive relative to 8 inch drive
	Detached-market low-end encroachment	Before encroachment begins, the new product opens up a detached market (where customer needs are dramatically different ^a from those of current low-end customers).	Cell phone relative to land line
Low-End Disruption	Immediate low-end encroachment	Low-end encroachment begins immediately upon introduction of the new product.	Discount relative to department stores

^aThe distinctions between fringe and detached markets and between incrementally and dramatically different preferences are illustrated in the disk-drive examples provided herein.

Appendix 4.

How to Respond to Disruptive Strategic Innovation by Charitou and Markides (2002) (p. 62)



Appendix 5.

An analysis of active innovation defenses by Arend (2009) (p. 197)

Table 1 An analysis of active innovation defenses

	Confuse	Collude	Capture	Corrupt
Target	Information	External resources	Efficiency & information	Specific rival decision points and specific rival partners and people
Stage	Every Stage (the earlier the better, especially at awareness, motivation)	Commercialization	Successful commercialization or earlier (depending on what the firm can do with the invention itself)	Every stage, but especially at significant milestones of the processes
Target innovation characteristics	More incremental (use of familiar information) Medium size of impact (incentives higher to get needed info, but likely rival countermeasures)	More incremental (use of familiar supply chain parties) Larger impact size (more incentives by current third parties to collude)	Medium radicalness (incentives higher for less familiar invention, but bargaining power is lower) Lower impact size (the costs of capture rise with the impact size)	More incremental (more familiar with steps in process) Medium impact size (greater incentives to try corruption but more likely rival countermeasures as well)
Target rival characteristics	More familiar rival; less informed rival	Poorly networked rival (in bad bargaining positions with needed partners)	Smaller rivals, with low bargaining power, not well connected.	Transparent, easy-access rivals, with many information spillovers, and unloyal partners.
Tactic	Disinformation to: disincentize the rival; have rival make errors	Ally the firms that would suffer (or could appropriate) from the rival's success to generate more frictions (increase bargaining power)... all to reduce the rival's rewards	Acquire the firm (its invention, a license, an option ...) at a price that appropriates some of the possible profits (given the assumed weaker position of the rival)	Artificially attack significant milestones of innovation process; influence market's perceived benefits of innovation
Main drawback	High level of knowledge of possible innovative threats and threatening rivals	Risk of drawing the ire of anti-trust regulators	Relatively high cost of monitoring and acquiring; risk of winner's curse due to remaining information asymmetries	Depth of competitive intelligence to identify key milestones, partners, and employees
Differences to existing defenses	Affecting rival information about new opportunities rather than creating ambiguity of own bases of advantage to hinder rival imitation	Allying mostly vertical firms that have a common status-quo interest against changes caused by a common threat rather than mostly horizontal firms that have a common interest in restricting supply caused by a new imitative source	Acquiring imitators usually uneconomical versus simple expansion	Attacks on innovation process not on imitation process