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The influence of performance targets on the development of innovative capabilities

Thokozani Eric Khwela

A research report submitted to the Wits Business School, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies

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ABSTRACT

The major contribution of the report is the exploration of how customer and competitor orientation of performance targets influence the development of explorative and exploitative capabilities in South Africa in the context of the telecoms sector.

The study utilises a qualitative approach and the data was gathered through semi-structured interviews from two telecoms companies, one in the private and the other in the public sector.

The study found that customer oriented performance targets have a positive impact on the development of explorative capabilities and that customer oriented performance targets have a positive impact on the development of exploitative capabilities, therefore by implication market oriented performance targets have a positive impact on the development of innovative capabilities. Furthermore, the study found entrepreneurial orientation to have a significant moderating effect on the relationship between market oriented performance targets and the development of innovative capabilities. Lastly, the results of this study find that the design and structure of the performance targets is critical for there to be positive outcomes from the targets.

The results also provide strong support for practicing managers to start experimenting with customer and competitor-oriented performance targets based on their requirements to develop either exploitative or explorative capabilities.

KEY WORDS

Performance Targets, Innovative Capabilities, Resource-based View, Explorative Capabilities, Exploitative Capabilities

DECLARATION

I, Thokozani Eric Khwela, declare that this dissertation is my own unaided work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies at the Wits Business School in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other University.

Signature: ……..

On this …… day of ……20 ……..

Thokozani Eric Khwela

DEDICATION

This dissertation is dedicated to all the researchers whose work this study is based on because none of the work on this dissertation would have been possible. These are the people on whose shoulders we stand on.

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I am grateful to my supervisor, Dr. Mjumo Mzyece for his guidance throughout the research process. My thanks also go out to my family, who has been supportive of my studies through the long nights studying when I could have been spending that time with them.

I would also like to extend thanks to my manager who has been supportive at work and understanding that postgraduate studies are demanding, allowing me to take some time to do my studies. I am also grateful for the many discussions we had on innovation studies whilst I tried to refine my thoughts and ideas for these studies.

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LIST OF ABBREVIATIONS & ACRONYMS

Term	Definition	Description
DUI	Doing, Using and Interacting mode	An innovation mode based on experience acquired through doing, using and interacting with customers, competitors and other actors and forming linkages (Jensen, Johnson, Lorenz, & Lundvall, 2007)
EO	Entrepreneurial Orientation	An organisation's propensity to explore new opportunities and new ways of doing things (Lisboa, Skarmeas, & Lages, 2011a)
Gbps	Gigabits per second	Data transfer speed (Bandwidth)
NLS	National Learning System	An innovation systems framework that takes into consideration that late industrializing (developing) countries are in the process of learning rather than innovating as a means of industrializing (Viotti, 2002)
PT	Performance Target	The performance targets assigned, could be customer oriented, competitor oriented or both
SMART	Specific, Measurable, Attainable, Resourced, Time bound	Target or goal characteristics
SS	Solution Strategy	The solution one intends to employ in achieving the performance target
STI	Science, Technology and Innovation mode	An innovation mode whose output is based on R&D spend, highly skilled human resources and advanced technologies (Jensen et al., 2007)
VRIN	Valuable, Rare, Inimitable, Non-substitutable	Characteristics of strategic resources that give an organisation sustainable competitive advantage, according to the resource-based view (Barney, 1991)

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CHAPTER 1: INTRODUCTION

1.1. PURPOSE OF THE STUDY

The purpose of this study was to explore how performance targets influence the development of innovative capabilities in telecoms organisations. The central phenomenon under study was how the orientation of performance targets influences the development of innovative capabilities, i.e. how do performance targets encourage the development of explorative and exploitative capabilities.

1.2. CONTEXT OF THE STUDY

Innovation is a societal benefit as the innovation has the capability to lift entire societies to a higher level of performance, this is especially applicable in the emerging economies (Fagerberg, Martin, & Andersen, 2013). Innovative activity has the effect of expanding the organisational performance frontier thereby the economic growth which is especially important in the emerging economies where like in Africa there is a great deal of unemployment and poverty. It also an accepted truth that the company or firm, from a one man show to a large multinational organisation, this is the nexus where innovation must occur as a job and wealth creator. This is not to discount other actors in the systems of innovation who also have a very important role in innovation, like the government, educational actors, consumers, etc., through whose interactions the system of innovation takes effect, whether as a formally driven or an emergent system.

The focus of this study, however, is the firm as the unit of analysis of how the activities of the firm can be influenced both in the short term and long term to result in sustainable innovation. Therefore, a well-accepted truth is that central to organisational performance is the ability to innovate. The ability to innovate is common across all companies, albeit at different levels due to path dependency as they do different things in order to innovate and at different rates. Wang and Ahmed (2007) define the ability to innovate, i.e. innovative capability, as the ability to develop new products, markets and services. They further define this innovative capability as one of the component factors of dynamic capabilities. Dynamic capabilities are those capabilities that enable an organisation to renew, integrate and reconfigure its capabilities in response to environmental dynamism (K.M. Eisenhardt & Martin, 2000;

Teece, Pisano, & Shuen, 1997; Wang & Ahmed, 2007; Winter, 2003). As a component factor of dynamic capabilities, innovative capabilities are the organisational ability to develop and create new products, services and markets through the alignment of the organisation's innovation stance, position and strategies with the processes and activities of the organisation (Wang & Ahmed, 2004, 2007). Organisational capability to innovate can be defined as either exploitative or explorative: exploitative meaning exploiting current skills, competences and knowledge; explorative, meaning the development of new skills, competences and new knowledge (Atuahene-Gima, 2005). There has also been extensive research done in the area of innovative capabilities, i.e. exploitative and explorative capabilities, looking at the willingness to cannibalise existing products (Chandy & Tellis, 1998), marketing and technological resources (Yalcinkaya, Calantone, & Griffith, 2007), market orientation (Atuahene-Gima, 2005; Lukas & Ferrell, 2000), among others.

1.3. PROBLEM STATEMENT

Organisations routinely speak about what innovation is and how important it is to develop innovative capabilities but this is hardly ever taken and developed into performance targets for the people expected to innovate. The question then is how an organisation can use performance targets for its personnel as a means of developing innovative capabilities. Even in the academic space the development of innovative capabilities is extensively researched, e.g. willingness to cannibalise existing products (Chandy & Tellis, 1998), marketing and technological resources (Yalcinkaya et al., 2007), market orientation (Atuahene-Gima, 2005; Lukas & Ferrell, 2000), but not from the perspective of performance targets.

Whilst there is consensus on the impact customer and competitor orientation on the development of innovative capabilities (Atuahene-Gima, 2005; Lisboa, Skarmeas, & Lages, 2011b; Lukas & Ferrell, 2000), this study seeks to provide a direct way that is also tied to daily activities of the organisation in developing either or both the exploitative and explorative capabilities, through the use of performance targets. Everyone in an organisation has performance targets that they need to meet and they are usually motivated by many things to meet those goals, e.g. salaries, bonuses, corner office, etc. So, it would make sense that the effort made to achieve performance targets also directly or indirectly assists in the development of innovative capabilities.

1.4. SIGNIFICANCE OF THE STUDY

This study adds to the extensive literature on the drivers of innovative capabilities. First, it explores the impact of customer-oriented and competitor-oriented performance targets on the development of innovative capabilities. Second, this study will provide an understanding of the nature and the dynamics of the relationship between customer and competitor-oriented performance targets and innovative capability development. Thirdly, it also explores entrepreneurial orientation, i.e. the organisational willingness to engage in innovative behaviour, risk taking and proactiveness (Covin & Wales, 2012), on the relationship between performance targets and the innovative capabilities.

At a firm level this study provides a practical tool that can be utilised by managers to drive their innovative capability development in order to build sustainable competitive advantage.

1.5. DELIMITATIONS OF THE STUDY

This study does not explore the impact of agency in the setting and meeting of the performance targets as the understanding is that it is the structure of targets/goals that matters. In this context agency refers to whether the agent assigned the performance targets achieves them in a manner that is beneficial to only himself/herself or both himself/herself and the principals (Kathleen M Eisenhardt, 1989). How the targets are met can influence profits, ethics, etc. but not innovativeness as innovativeness is independent of whether the agent uses means that are benefit himself/herself to the detriment of the principals in his/her quest to achieve the targets.

It should be noted that not all types of performance targets can be structured as either being customer or competitor oriented, some problems simply do not fit in either category. So, this study is limited to targets that can in theory can be structured as customer or competitor oriented.

This study set out to understand the influence of market-oriented performance targets, not necessarily the structure of the targets themselves but their impact. Although the target structure is an important area of research, this study sought to first understand how the process of innovative capability development occurs.

1.6. ASSUMPTIONS

It is assumed that the theories used to build relationships in the study are true since no literature was found to refute them

It is assumed that the participants will participate in the research interviews in an honest and candid manner.

The performance targets, as a form of problem structure, implied in the study are assumed to be tame rather than wicked.

1.7. DEFINITION OF KEY TERMS

Agency comes from the agency theory which is concerned with whether the desires of the person tasked with achieving certain goals are in conflict with the principals' desires and if the principals can tell (Kathleen M Eisenhardt, 1989), e.g. a CEO tasked with a certain target profitability can still achieve it but it could come at a huge cost to the shareholders as the CEO can choose to meet the targets in a manner that is beneficial to him/her but not the shareholders.

A capability or competence is a single or a collection of routines that enable a firm to deploy resources using both explicit and tacit knowledge to create or deliver superior customer value (Day, 1994; Wang & Ahmed, 2007).

Competitor orientation is the organisation-wide acquisition and generation, sharing and response to information regarding current and future competitors (Jaworski & Kohli, 1993).

Competitor oriented performance targets are targets that are structured in such a way that they require knowledge acquisition about current and future competitors' products, services, strategies, and any other competitor information in order to develop relevant strategies to achieve those targets.

Customer orientation is the organisation-wide acquisition and generation, sharing and response of information regarding current and future customer needs (Jaworski & Kohli, 1993).

Customer oriented performance targets are targets that are structured in such a way that they require knowledge acquisition about current and future customer needs in order to develop relevant strategies for achieving those targets.

Entrepreneurial orientation is the organisation's propensity to explore new opportunities and new ways of doing things, i.e. the organisational willingness to engage in innovative behaviour, risk taking and proactiveness (Lisboa et al., 2011a; Lumpkin & Dess, 1996).

Exploitative capabilities are those capabilities that enable an organisation to develop and refine existing skills, knowledge and competences (Atuahene-Gima, 2005; March, 1991).

Explorative capabilities are those capabilities that enable an organisation to develop new skills, knowledge and competences (Atuahene-Gima, 2005; March, 1991).

Innovative capabilities refer to those capabilities/competences that enable an organisation to develop new products, service, processes and markets by aligning the organisation's innovation orientation with its activities and processes (Hagedoorn & Duysters, 2002; Wang & Ahmed, 2004, 2007).

Market orientation is the organisation-wide acquisition and generation of competitor and customer intelligence, sharing of that market intelligence within the entire organisation and organisation-wide response to that intelligence (Jaworski & Kohli, 1993).

Market-oriented performance targets are combinations of customer-oriented performance targets and competitor-oriented performance targets; however, this definition does not mean that market-oriented performance targets have to be simultaneously both customer and competitor oriented, only that they could be either or both.

Routines are learned, repetitious processes based on tacit knowledge and task specificity.

Tame problems are defined as having a clear solution, can be formulated independent of the solution, have an identifiable root cause, and can be tested as either true or false (Rittel & Webber, 1973).

Wicked problems have no clear solution, understanding them is the same as solving these problem, one cannot tell whether it is a problem or a symptom, and there is no clear demarcation whether the solution is good or bad (Rittel & Webber, 1973).

1.8. CONCEPTUAL FRAMEWORK

The conceptual framework, shown in Figure 1, consists of the interaction of entrepreneurial orientation and performance target setting as drivers of innovative capabilities.

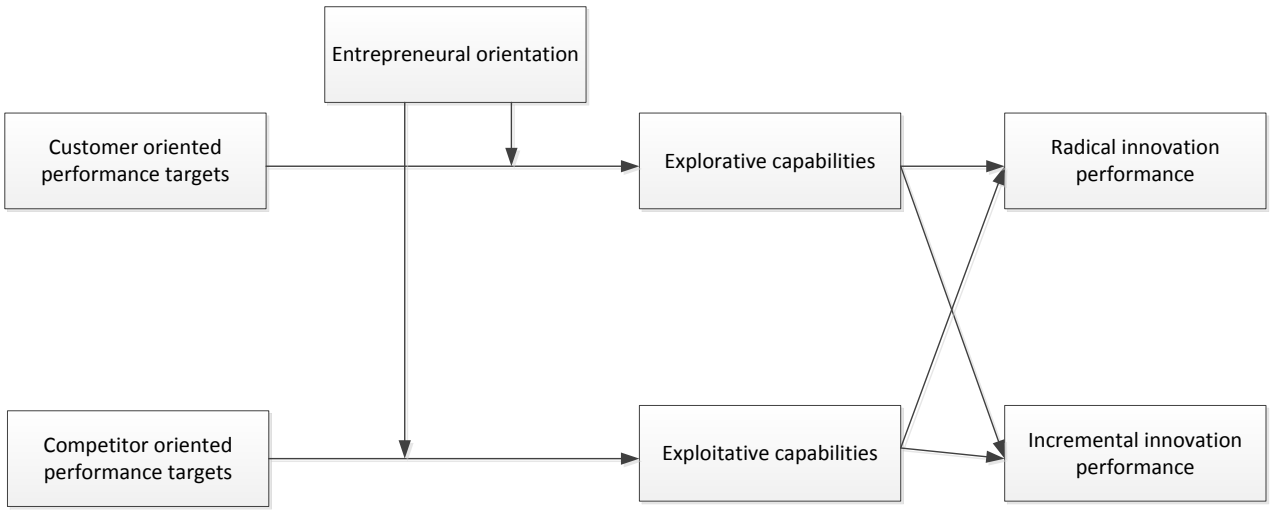

Figure 1: Conceptual framework

1.9. RESEARCH QUESTIONS

The central question for this study is how performance targets influence the development of innovative capabilities. Since the development of innovative capabilities is among other things driven by market orientation (Atuahene-Gima, 2005; Lukas & Ferrell, 2000) then two sub-questions are raised with respect to the customer and competitor orientation of the performance targets on the development of innovative capabilities. Lastly this influence of performance targets on the development of innovative capabilities is explored taking the entrepreneurial orientation of the organisation into consideration.

In summary the central question and the sub-questions are as follows:

- **Central Question**
  - How do market-oriented performance targets influence the development of innovative capabilities?
- **Sub-Questions**
  - How do competitor-oriented performance targets influence the development of exploitative capabilities?
  - How do customer-oriented performance targets influence the development of explorative capabilities?
  - How does the entrepreneurial orientation of an organisation impact the relationship between performance targets and the development of innovative capabilities?

1.10. OUTLINE AND STRUCTURE OF THE REPORT

Chapter 1: Introduction

This chapter introduces the context of the study and what the proposed study is about, i.e. the problem the study is addressing, the significance of the study from the perspective of researchers and business practitioners. The introduction also gives an outline of the report.

Chapter 2: Literature Review

This chapter gives a review of the relevant literature on market orientation, dynamic capabilities, goal-setting theory, and problem-solving theory. Finally, a summary is given with an attempt to synthesise the literature to show the impact of performance target setting on the development of innovative capabilities.

Chapter 3: Research Methodology

This chapter provides information on the methodology that will be used to conduct the research by providing more detail on the sample information, research methodology to be used, means of collecting and ensuring the data is accurate, valid and the study is reproducible.

Chapter 4: Presentation of Results

This chapter presents the collected data in a format that is open to analysis and as per the respective propositions made.

Chapter 5: Analysis of Results and Discussion

In this chapter, the data is analysed and the respective analytical tools are applied to come to the conclusions.

Chapter 6: Conclusions and Recommendations

In the last chapter, a final result is detailed with respect to the acceptance or rejection of the research propositions. Recommendations are made with respect to future research for other researchers.

CHAPTER 2: LITERATURE REVIEW

2.1. LEARNING AND INNOVATION

To position this report and provide context on the area where this research is situated, two modes of learning and innovation are introduced. One is the Science, Technology and Innovation (STI) and the other mode is the Doing, Using and Interacting (DUI) mode.

The STI mode is based on the production and use of explicit written down knowledge scientific and technical knowledge and the DUI mode is an experience based form of innovation (Jensen et al., 2007). The success of the basic research primarily driven by the military and the spillover effects created the bias for the STI mode of innovation (Freeman, 1995). This causes a tension both at the economy level and at the firm level as there is a need to reconcile these approaches to innovation as the are both required and suitable to particular situations with respect to learning. The STI mode is highly suited to the Know-what and the Know-why form of knowledge generation and acquisition which is codified knowledge like R&D (Jensen et al., 2007). The DUI mode on the other hand is suited to the Know-how and Know-who forms of knowledge which is based on hands on experience and is difficult to codify as it is tacit knowledge acquired through experience (Jensen et al., 2007).

The ease of implementation and measurement of the STI mode of innovation has made it a hit with policy makes at economy level and even managers at firm level as it can easily be measured by the number of engineers trained, research paper output, R&D as a percentage of GDP and revenues at firm level, etc (Freeman, 1995; Jensen et al., 2007). Over time however it became visible that the processes of technical change (creative destruction according to Schumpeter) in industrialized and industrializing economies were different where in industrialized economies the technical change is driven by innovation (based primarily on STI mode of innovation) whereas in industrializing economies it is driven by learning (based primarily on DUI mode of innovation). In this context learning is defined as the process of technical change achieved by the absorption of already existing techniques (Viotti, 2002). What this means then is that the National Innovation Systems framework is not appropriate for application in late industrializing countries mainly because this framework is meant to drive technical change in these countries but is based on STI mode of innovation

whereas technical change in these countries is driven by learning as a mode of innovation, i.e. DUI. What Viotti (2002) is proposing is a National Learning System (NLS) for late industrializing countries. The NLS is basically a framework that takes into consideration that late industrializing (developing) countries are in the process of learning rather than innovating as a means of industrializing (Viotti, 2002). This process of learning being the result of absorption of technology innovations developed elsewhere.

2.1.1. Secondary Innovation Process

As stated by Viotti (2002) that late industrialising countries are in the process of learning rather than innovating. The NLS, however, is also problematic especially for the developing countries as it increases the likelihood of being stuck in a cycle of continually getting technologies from the developing world and never catching up and the secondary innovation process seeks to close this gap (Ni & Wu, 2000; Wu, Ma, Shi, Rong, & Wu, 2009). As a technology-based innovation process, the secondary innovation process states that for the late industrialising countries the technological capability building is basically duplicative imitation, followed Creative imitation, followed by Exploitative innovation and then Explorative innovation (Ni & Wu, 2000; Wu et al., 2009). In the secondary innovation process, duplicative imitation is basically the importation and assimilation of imported technology, creative imitation is the structural understanding of the foreign technology, expoitative innovation stage is the point where the localized foreign technology is improved and customised based on customer requirements and is also characterised by a lot of incremental innovations, and then the explorative innovation stage is characterised by new product concepts and requires high level R&D capability. What this means is that in the secondary innovation process, exploitative and explorative innovations only occur much later from the time foreign technology is imported for local use. What the secondary innovation process implies is that for the late industrialising countries the technological innovation process is basically a process of technology acquisition, using and understanding said technology before one can start to innovate along the lines of that technology (Wu et al., 2009).

The later development of exploitative and explorative capabilities in the secondary innovation, after technology acquisition and functional understanding (Wu et al., 2009)

implies that the unlike in the marketing perspective where dynamic capabilites have market dynamism as a key antecedent (Teece & Pisano, 1994; Wang & Ahmed, 2007), in the secondary innovation it is the foreign technology acquisition that is key for technological capability development. Inline with Wu et al. (2009), Yalcinkaya et al. (2007) found exploitative capabilities to be a foundation for the development of explorative capabilities.

There are of course certain contextual factors that must be considered in adoption of China's innovations strategy like China's population size meaning a strong domestic demand, culture, large government subsidies, protectionist policies at least initially, currency strength, good political relations with the industrialised world, etc. A number of late industrialising countries have very different contexts that would need consideration before the adoption of the catch-up strategies similar to those of China.

2.1.2. Learning for Competitive Advantage

Regardless of the system of innovation adopted, an exclusive focus on either STI or DUI modes of innovation is likely to result in less than optimum levels of innovation both at the economy level and firm level. An organisation that combines both the DUI and STI modes is likely to excel over the one that prioritises either mode (Jensen et al., 2007) as research has shown that exclusive focus on the STI mode has a strong effect on technological innovation and exclusive DUI focus has a strong effect on non-technological innovation (Parrilli & Alcalde Heras, 2016).

So the effectiveness of any innovations systems or for any nation to be have any competitive advantage over others it is at the end dependent on the effectiveness of the unit of production, i.e. the firm. This is not to discount any other actors in the innovation system but to highlight the importance of the firm in the creation of value. It is for the reasons above that the focus of this study is on how innovative capabilities can be developed further at the firm level as a unit of analysis.

2.2. MARKET ORIENTATION

The marketing concept is a philosophical idea that places the customer at the centre of all business activities (Barksdale & Darden, 1971) and this line of thinking is in line with (Drucker, 1986, 2008) thinking that the purpose of the firm is to create a customer and innovation. This puts customer value generation at the centre of company

activities. Barksdale and Darden (1971) stated that even though the adoption of the marketing concept contributes positively to the business performance there was no way of implementing it. This shortcoming in marketing was addressed by Kohli and Jaworski in 1990 in their implementation of the marketing concept through market orientation, which is the same thinking is shared by Atuahene-gima (1996) and Jaworski and Kohli (1993).

The dynamism of the markets and increased competition has meant that market orientation is a key requirement for competitive advantage and superior business performance (Han, Kim, & Srivastava, 1998; Jaworski & Kohli, 1993). The key motivation behind the adoption of market orientation is the positive effect it has on business performance (Jaworski & Kohli, 1993; Kohli & Jaworski, 1990; Kumar, Jones, Venkatesan, & Leone, 2011), higher profits (Narver & Slater, 1990), superior customer value (Blocker, Flint, Myers, & Slater, 2011; Woodruff, 1997), product innovation (Lukas & Ferrell, 2000), product success (Narver, Slater, & Maclachlan, 2004), innovation consequences (Grinstein, 2008), Customer loyalty (Blocker et al., 2011), business performance both in the short term and long term (Kumar et al., 2011), higher sales (Kumar et al., 2011). Clearly the adoption of market orientation by a business is a very good thing due to the positive impact on business performance. With all the benefits that to be received from being market oriented it is clearly a minimum requirement for remaining in business (Kumar et al., 2011).

There are however some authors who do not find the impact of market orientation to be a positive on a business, e.g. Atuahene-gima (1996) and Lawton & Parasuraman (1980), who find no relationship between market orientation and new product innovation. Other authors find this relationship to be a negative one, Christensen (1997) finds that some companies have lost their leadership positions due to listening too closely to their customers and this can be a mistake. This, according to Christensen is caused by the difficulty customers have in articulating their latent need beyond current consumption experiences thereby only focus on the customer's 'now' needs.

Being market oriented is defined as the organisation-wide generation of market intelligence, organisation-wide sharing and dissemination of said market intelligence and organization-wide response to said intelligence as a means of generating

customer value (Jaworski & Kohli, 1993; Kohli & Jaworski, 1990), this is in line with Cohen and Levinthal's (1990, p. 128) assertion that “the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends is critical to its innovative capabilities”, which define market orientation. It should be noted, however, that market orientation is not the same thing as being customer-led. Market orientated organizations are focused on customer needs, proactively acting on the changing customer needs and are focused over longer period needs, the knowledge about customers’ needs is based on observing customers not just interviews and questionnaires, are focused on lead users and are continuously experimenting and learning whereas being customer-led focuses on expressed customer wants, is reactive and focused over a short period (Slater & Narver, 1998).

2.2.1. The Market Orientation Construct

As a construct Narver and Slater (1990) find market orientation to consist of competitor orientation, customer orientation and interfunctional coordination as components with a strong correlation with firm performance.

2.2.1.1. Competitor Orientation

Competitor orientation is the organisation-wide acquisition and generation market intelligence about current and future competitors, sharing that intelligence in the firm and generating appropriate strategies to respond to said competitor intelligence (Narver & Slater, 1990).

Being competitor oriented is found to increase to increase the chances of imitative products with a reduction of radical products and product line extensions (Lukas & Ferrell, 2000).

2.2.1.2. Customer Orientation

Lukas and Ferrell (2000) found is that customer orientation increased the chances of developing radical and breakthrough products and reduced the chances of imitative products. On the other hand Christensen (1997) found customer orientation to encourage to encourage “myopic products” due to listening too closely to customers. This understanding of customer orientation is unfortunately a narrow view of customer orientation as it relates to “now” needs by Christensen which is incorrect as customer orientation is according to Narver and Slater (1990) not just about current needs but

future needs which customers may not even perceive at the time. What Lukas and Ferrell (2000) also discovered is that it is the management emphasis on the different components of market orientation that determines the newness of an innovation. This puts control in the hands of management on the preferred types of innovative products whether they be new-to-the-world, line extensions and even imitations.

2.2.1.3. Interfunctional Coordination

Interfunctional coordination is the mobilization and coordination of integrated organisational resources towards the same goal or creating customer value (Narver & Slater, 1990).

In his (Atuahene-Gima, 2005) assets that a firm needs to find a balance between the exploitation of existing competences and the development of new competences, (March, 1991) also gives the same advice. From a market orientation perspective, Atuahene-Gima (2005) finds interfunctional coordination has a moderating effect on the orientation between exploitation and exploration.

2.3. DYNAMIC CAPABILITIES

The dynamic capabilities as a theory emerged from the identification of the shortcomings of the resource-based view. The resource-based view is premised on the understanding that different resource endowments give firms advantage in some performance area or the next resulting in different levels of performance across the industry (Barney, 1991; Wernerfelt, 1984). The key defining feature of these resources is that they are strategic in nature for the firm, meaning that they are used to generate sustainable competitive advantage (Barney, 1991). This view looks at the resources of the firm as a source of its competitive advantage due to the organisation's possession of resources that are considered to be VRIN, i.e. **V**aluable / provide customer value, **R**are / not easy to acquire, **I**nimitable / have no readily available means of imitation, and **N**on-substitutable (Barney, 1991). The resource-based view of the firm has, however, received criticism for failure to explain how these resources are created, renewed and deployed in the firm as the means of achieving competitive advantage (Morgan, Vorhies, & Mason, 2009). Eisenhardt and Martin (2000) and Priem and Butler (2016) level further criticism at this view that it is not the resources themselves through which competitive advantage is achieved but through their deployment and reconfiguration. This sheds light on the resource-based view's failure

to explain how some firms have achieved competitive advantage in rapidly changing markets where competitive advantage due to VRIN resources is not possible (K.M. Eisenhardt & Martin, 2000; Teece & Pisano, 1994). Furthermore, history has shown that superior performance is not necessarily a function of resource ownership but is based on the flexibility, strategic deployment and redeployment of resources in response to the changes in the environment, i.e. environmental dynamism (Teece et al., 1997). Organisations that possess this flexibility to organise, reorganise, renew and integrate resources in response to organisational turbulence are said to possess dynamic capabilities.

Dynamic capabilities are those capabilities that are responsible for and govern the change of ordinary capabilities in the organisation through the deployment, configuration and reconfiguration of organisational resources thereby providing new ways of doing things in response to the environmental dynamism (K.M. Eisenhardt & Martin, 2000; Katkalo, Pitelis, & Teece, 2010; Teece et al., 1997; Wang & Ahmed, 2007; Winter, 2003). Dynamic capabilities enable the firm to achieve competitive advantage through the ability to renew organisational competences/capabilities in order to adapt (innovatively) to the changes in the environment (Katkalo et al., 2010; Teece & Pisano, 1994; Teece et al., 1997).

The organisational ability to respond both reactively and proactively to environmental changes is contingent upon its ability to innovate, recognise and assimilate market information and reconfigure internal processes to capitalise on emerging market opportunities, Wang and Ahmed (2004) call these the component factors of dynamic capabilities viz; innovative, absorptive, and adaptive capabilities.

2.3.1. Innovative Capabilities

An innovation is an introduction of an invention to the market and making it competitive (Gaubinger, Rabl, Swan, & Werani, 2015) and innovativeness as the organisations propensity to introduce new products and processes to the market, exploit new markets and reconfigure it's business model (Hagedoorn & Duysters, 2002; Wang & Ahmed, 2004). The innovative capabilities are the firm's ability to develop new products and processes, exploit new markets, develop new business orientations and align its activities with the strategy of the firm (Wang & Ahmed, 2004).

As a construct innovativeness can be disaggregated into market innovativeness, referring to the how new are the approaches to entry and the exploitation of the targeted markets, product and process innovativeness referring to the newness of firm products and strategic innovativeness referring to the new business models (Wang & Ahmed, 2004). In responding to market changes this means that a firm can innovate with respect to its marketing strategy, develop new products and processes or a new business model. This ability/capability to marshal organisational resources to create new value propositions, be it market or product or business models, for new and existing markets is what is defined as the innovative capability (Wang & Ahmed, 2004).

Regardless of the dimensions of innovativeness, the newness of innovations falls within a spectrum of imitative (and incremental) to radical (and breakthrough) innovations (Assink, 2006; Biedenbach & Muller, 2012; Gaubinger et al., 2015; Goffin & Mitchell, 2016). There does seem there to be an agreement on what is imitative and incremental innovations, i.e. low levels of newness and uncertainty in both technology and the target market of the innovation. Another group or innovations is disruptive innovations which are new to the innovating company in either the technology or the targeted markets, and lastly are breakthrough innovations that are both new in technology and the target markets (Assink, 2006). So, innovative capabilities enable an organisation to develop either or both imitative (and incremental) and radical (and breakthrough) innovations.

Where an organisation's ability/capability to develop innovations that are from imitative to breakthrough is a function of the following factors (Assink, 2006):

- Propensity to stick to the dominant design and what has worked successfully in the past;
- Organisation structure encouraging either routine-based processes or change
- Excessive bureaucracy and the risk of non-compliance;
- Stifling of the status quo
- Inability to unlearn old ways of doing things and learning new ways of doing things
- Response to outdated core competences
- Obsolete mental models and theory in-use
- The learning trap and the "not invented here" syndrome

- Lack or realistic revenue and ROI expectations
- Organisational response to risk and uncertainty
- Unwillingness to cannibalise old products/service with new offerings (Chandy & Tellis, 1998)

Analysis of these factors shows that where an organisation falls on the innovativeness spectrum is majorly influenced by the willingness to either stay with the tried and tested or to explore new ways of doing things, which is risky, entails discarding current modes of thinking, and acceptance of the risk of failure. This effectively means that innovative capabilities are in turn influenced by the propensity to either exploit existing competences (i.e. develop exploitative capabilities) or explore new ways of doing things (i.e. develop explorative capabilities). This is also supported by a number of researchers (Atuahene-Gima, 2005; Lisboa et al., 2011b; March, 1991).

This balance on the development of innovative capabilities, i.e. exploitative and explorative capabilities, is critical as it affects both the firms short term and long term competitiveness through the refinement and improvement of existing competences in order to compete in the present and the development of new competences in anticipation of market changes (Atuahene-Gima, 2005; Lisboa et al., 2011b; March, 1991). Atuahene-Gima (2005) found that organisations often have a challenge of either being too exploitative or explorative in his paper “Resolving the Capability-Rigidity Paradox in New Product Innovation”, however he also found that market orientation has the effect of balancing the development of exploitative and explorative innovations, ensuring simultaneous investments in both customer and competitor orientations. This ensures that the firm is not caught in a stable low equilibrium state of perpetual competency exploitation and at the same time not perpetually exploring new innovations where the competences are not strong enough for competitive advantage before moving on to new ones.

2.3.2. Exploitative Capabilities

Exploitative capabilities entail the exploitation and refining of existing capabilities and knowledge (Atuahene-Gima, 2005; Lisboa et al., 2011b; March, 1991).

The development of exploitative capabilities have been found to result in improved organisational performance through product innovation and market performance

(Yalcinkaya et al., 2007). The improved market performance was, however, found to be temporary (Atuahene-Gima, 2005; Lisboa et al., 2011b; March, 1991) due to the resultant innovations being primarily imitative and incremental in nature as they are mostly based on incremental changes on existing technologies and markets (Lisboa et al., 2011b). This however is not necessarily a bad this as these innovations give the organisations efficiency improvements, entail low levels of risk and give the performing organisation the needed competitive advantage in the short term (March, 1991). Exploitation and refinement of existing capabilities is however likely to result in less that optimal equilibrium in the long term (March, 1991), however, Atuahene-Gima (2005) found that market orientation has the effect of balancing the development of exploitative and explorative innovations, ensuring simultaneous investments in both customer and competitor orientations through interfunctional coordination. This ensures that the firm is not caught in a low equilibrium state of perpetual competency exploitation and at the same time not perpetually exploring new innovations where the competences are not strong enough for competitive advantage before moving on to new ones.

In addition to enabling organisations to refine competences for competing in the short term, exploitative capabilities are also a springboard for the development of explorative capabilities (Yalcinkaya et al., 2007). This is in line with path dependency as explained under dynamic capabilities that past actions inform future options and paths.

Since competitor orientation has been found to have a positive effect on the development of imitative and incremental product innovations (Lukas & Ferrell, 2000) it can be concluded that customer orientation has a positive effect on the development of exploitative innovations (Lisboa et al., 2011b). This makes sense since competitor orientation is about closely watching what the competition is doing, how they are doing it, their strengths and weaknesses, what technologies they are using, the effect is the adoption of similar solutions, looking for areas where the organisation can improve over the competition, etc. The outcome of being competitor oriented is the utilisation of existing competences to better adapt over the competition which has the resultant effect of developing exploitative capabilities.

2.3.3. Explorative Capabilities

Explorative capabilities refer to the exploration and building of new capabilities based on new knowledge and competences (Atuahene-Gima, 2005; Lisboa et al., 2011b; March, 1991).

Exploration is associated with the search for the unknown, uncertain, experimentation, discovery (March, 1991) and the theory of market orientation has shown that customer orientation has the effect of developing new to the world innovations (Lukas & Ferrell, 2000; Yalcinkaya et al., 2007), this is because customer orientation encourages the continuous probing of latent customer needs and future needs among others resulting in the search, exploration and development of capabilities and technologies that are new in order to meet these identified needs (Blocker et al., 2011; Lukas & Ferrell, 2000). This probing of latent needs shows that costumer orientation has the effect making organisations continuously search for new solutions, products, new ways of doing things, etc. in order to continuously meets current and future needs of customers. It can therefore be reasonably deduced that being customer oriented has the effect of developing explorative capabilities as supported by (Lisboa et al., 2011b).

Since customer orientation has been found to have a positive effect on the development of new-to-the-world product innovations (Lukas & Ferrell, 2000) it can be concluded that customer orientation has a positive effect on the development of explorative innovations (Lisboa et al., 2011b). This makes sense since customer orientation encourages the continuous probing of latent customer needs and future needs among others resulting in the search, exploration and development of products that are new in order to meet these identified customer needs (Blocker et al., 2011; Lukas & Ferrell, 2000) resulting in the development of exploitative capabilities. This is not surprising as the voice of the customer ideation methods were in a study by Cooper and Edgett (2008) found to be the most effective in the list of 18 ideation methods explored.

2.3.4. Absorptive Capabilities

Absorptive capability is defined as recognition of new information, absorbing said information and innovatively responding to that information to the benefit of the organisation (Cohen & Levinthal, 1990). This definition of absorptive capabilities is similar to that of market orientation by Jaworski & Kohli (1993) and Kohli & Jaworski

(1990) which means that market oriented organisations have strong absorptive capabilities as being market oriented entail generation, absorbing and organisation-wide response to said information. Organisations with high levels of absorptive have been found to have more developed learning mechanisms and ability to assimilate information in a dynamic environment making easier candidates for new technology adoption (Wang & Ahmed, 2007). The ability to recognise, assimilate and even take advantage of said market information is dependent on prior knowledge as that prior knowledge is required to identify relevant and valuable information from noise (Cohen & Levinthal, 1990).

2.3.5. Adaptive Capabilities

Adaptive capability is an organisation's ability to respond to identified market opportunities (Biedenbach & Muller, 2012; Wang & Ahmed, 2007). This definition of adaptive capabilities is similar to that of market orientation by Jaworski & Kohli (1993) and Kohli & Jaworski (1990) which market oriented place organisation-wide response to market information as one of the factors of market oriented organisation. It can therefore be said that taking actions that result in the generation of customer and / or competitor intelligence and responding innovatively to said information will result in the development of adaptive capabilities.

2.4. GOAL-SETTING THEORY AND PROBLEM SOLVING

2.4.1. Goal-setting Theory

A goal refers to the outcome of an intended action, usually within a certain period (Locke & Latham, 2002), this means that as soon as a goal is created there is deficit between the present state and the end state representing the goal which explains why Locke and Latham (2006) called goal setting "is first and foremost a discrepancy creating process" (p. 265).

The goal-setting theory is premised on the idea that challenging, specific goals result in performance improvement (Latham & Baldes, 1975; Verbeeten, 2008). This immediately mean that it is possible to increase organisational performance without spending any money on additional resources or offering incentives. In the public sector however, in instances where the monetary incentives were attached to the achievement of goals it was found out that incentives had an impact on the quantity of

deliverables but no impact was found with respect to quality (Verbeeten, 2008). Goal setting results in those assigned goals to expend more effort and employ creative tactics to achieve said goals (Latham & Baldes, 1975). Also challenging and specific goals have the effect of improving the quality of planning resulting in improved performance (K. G. Smith, Locke, & Barry, 1990).

Goals affect behaviour and performance through four mechanisms namely (Epton, Currie, & Armitage, 2017; Locke & Latham, 2002, 2006):

i) Goals provide the necessary focus and ensure that effort goes towards the goal-relevant activities and not irrelevant ones;
ii) Having goals provides the necessary focused energy towards achievement of said goals;
iii) Difficult to achieve, not impossible, goals lead to people persevering for longer to achieve them; and
iv) Goals motivate one to use existing knowledge and / or search for new knowledge to achieve goals.

Although in support of Locke and Latham, Epton et al. (2017) found that goal-setting is most effective when done publicly, is monitored if a behaviour based goal without necessarily any feedback, done face to face, in a group.

It should however be noted that there are some negative aspects of performance targets (Ordonez, Schweitzer, Galinsky, & Bazerman, 2009);

i) Narrow goals resulting in people narrowing their focus and being to blind to important issue not related to their goals;
ii) Assigning too many goals resulting in poor quality delivery in order to meet the many goals;
iii) Incorrect goal timelines resulting in the sacrifice of organisational long-term performance in preference to short-term performance in order to meet the short-term goals;
iv) Challenging goals could result in riskier decisions by those assigned goals;
v) Goals could inhibit learning especially if they are complex, challenging and specific as one focusses too narrowly on goal attainment to the detriment of explorative behaviours;

vi) Could create a culture of individualism and competition where teamwork could be more appropriate; and

vii) Continue commitment to goals despite negative feedback (Lee, Keil, & Wong, 2015).

Ordonez et al. (2009) does state however that these negative aspects of performance targets are not cast in stone as there are possible remedies to each one.

A key and relevant aspect of goal theory, in this particular study, is that setting goals can encourage certain desired behaviours.

2.4.2. Problem Solving Theory

A problem is defined as a deficit or a gap between a desired state and the current state and there is a perception that closing this gap will result in value (Cartwright, 1973; Jonassen, 2000; Klein, Pliske, Crandall, & Woods, 2005; G. F. Smith, 1989). This definition of a problem is similar to that of Locke and Latham (2006) which states that "the setting of goals is first and foremost a discrepancy creation process" (p. 265) between the current state and a desired future state. This means that in all respects goal-setting is a "problem" creation process for which there is value in finding the solution or achieving the goals.

The ability to solve a problem is a function of the nature of the problem, problem representation, and the problem solver's individual differences.

2.4.2.1. Problem Formulation

Problem formulation is the translation of the problem symptom/s into a question/s in adequate detail to identify the causes of the symptom/s to enable the search for the solution/s (Baer, Dirks, & Nickerson, 2013). The importance of problem formulation cannot be emphasised enough as it occurs early on in the solution process thereby the costs of problem reformulation are low as opposed to later stages of the problem solving process (Volkema, 1983).

Two problem formulation heuristics were identified by (Volkema, 1983) which are problem-purpose reduction and problem-purpose expansion, where purpose expansion relates to having a broader problem to solve as opposed to narrowing the problem definition. Problem expansion may have a positive effect on idea generation

meaning that problem expansion produces more ideas/solution strategies (Volkema, 1983). This important as it means that expanding performance targets with an aspect of market orientation is likely to result in more solution strategies, however, how a problem is formulated also has an impact on the quality of solution strategies (Ejdelind & Karlsson, 2014). Problem expansion however does have a negative side meaning that as the number of variables increases so does the problem complexity (Jonassen, 2000; Simon, 1962).

Over the years there has been a number of models for problem solving, the prominent ones being the classic General Problem Solver (Simon & Newell, 1970) developed around the height on artificial intelligence another model being the IDEAL problem solver, among others (Jonassen, 2000).

2.4.2.2. Problem Structure

Problems can be grouped as either being well-structured or ill-structured, where well-structured problems can be identified as having a well-defined initial state and goal state with a finite and known set of operations from initial to goal state (Jonassen, 2000). An ill-structured problems are characterised by having multiple solutions, multiple solution evaluation criteria, often require subjective interpretation and these problems are typically found in everyday and professional life (Jonassen, 2000).

Problem complexity can also be influenced by the number of variables or issues under consideration and the interdependency among those variables also making the problem more difficult with more variables (Jonassen, 2000; Simon, 1973), however the increase in the number of variables also increases the number of possible solution strategies (Volkema, 1983), increases the likelihood of finding a suitable solution to a respective problem (Beck & Fox, 2000) and increases the quality of ideas for solving the problem (Ejdelind & Karlsson, 2014).

Problem solving is actually a search and depending on the difficulty and novelty that search could be considered trial and error, however, as Simon (1962) puts it “the trial and error is not completely random or blind; it is in fact rather selective” (p. 472) meaning that there are certain aspects (structure) of the problem that influence the search, even if a random search it will still be selective. Building on Simon's (1962) earlier work, Cartwright (1973) and later Abeysuriya (2008) both agree that how a

problem is formulated affect possible solution strategies, including Baer et al. (2013) who states that the problem symptoms affect the search strategies for the solution. The idea of problem characteristics is also found in well-structured problems in the software development domain here the characteristics of the problem determine the solution patterns (D. K. Kim & El Khawand, 2007).

An example is a problem of road deaths defined in terms of drunk driving will necessarily entail solutions related to driving under the influence of alcohol. On the other hand, if the problem was defined in terms of unroadworthy vehicles on the road, the solution strategies would differ completely. Supposing a problem *P* is defined in terms of variables $x_1, x_2, x_3, \ldots x_n$, mathematically the problem can be defined as of the form $P = P(x_1, x_2, x_3, \ldots x_n)$, where x_n refers to the nth variable in terms of which the problem is defined. This necessarily means that any solution to the problem will take the form $S = S(x_1, x_2, x_3, \ldots x_n)$ (Abeysuriya, 2008; Baer et al., 2013; Cartwright, 1973). This means that how a problem is defined and what factors are taken into consideration in the structure of the problem have an important effect on the structure of possible solutions or alternatively an incorrectly defined/structured problem could result in the solving of a wrong problem which is effectively solving a problem of no importance to an organisation or even a problem based on incorrect assumptions (Lyles, 2014).

Another aspect of problem solving relates to the levels of uncertainty in relation to the problem. Christensen (1985) states that in instances where there are low levels on uncertainty on how to achieve the solution then problem solving becomes the application of existing knowledge, i.e. exploitation, and where the means of solving the problems entail high levels of uncertainty, then the search for the solution requires acquisition of new knowledge, i.e. exploration. This also means that to a certain extent there is a relationship between this uncertainty and innovative capability development due to the learning effects of problem solving.

2.4.3. Synthesis: Goal Setting, Problem Solving and Innovation

The study of goal setting (Latham & Baldes, 1975; Latham & Kinne, 1974; Ordonez et al., 2009; K. G. Smith et al., 1990) has found that setting goals resulted in higher performance for both the organisation and the individual. One of the mechanisms through which goals effected performance was found to be that goals have a directive

effect which directs effort and focus towards actions and activities that contribute towards the achievement of the goals (Epton et al., 2017; Locke, 1968; Locke & Latham, 2002). This seems to be similar to Abeysuriya (2008), Baer et al. (2013) and Cartwright's (1973) assertion that goal structure influences the solution, but here the actions are relevant to the goals.

Lukas and Ferrell (2000) in agreement with Atuahene-Gima (2005) in their study of market orientation find that innovation is impacted by market orientation. In their study they find that being competitor oriented as defined by Jaworski & Kohli (1993) is likely to result in the development of imitative and incremental product innovations. They also, in the same study, find that being customer oriented as defined by Jaworski & Kohli (1993) is likely to result in radical / new to the world product innovations.

Based on the definition of what is a problem, then a performance target becomes a problem that requires solving, i.e. a gap between the current state and the desired state. Logically, this means that a problem (in this instance a *performance target*) that is defined as function of either customer or competitor orientation should by all means have a solution that is also based on customer or competitor orientation. Consequently, this solution will result in the development of either explorative or exploitative capabilities as the relationship between customer and competitor orientation and the development of innovative capabilities has already been proven in Atuahene-Gima (2005) and Lukas & Ferrell's (2000) work on market orientation. The expectation is that performance targets that are set / formulated based on competitor comparisons, i.e. competitor-oriented performance targets, e.g. benchmarking, are likely to result in the development of exploitative capabilities and in incremental and imitative innovations (Atuahene-Gima, 2005; Lukas & Ferrell, 2000). On the other hand, performance targets that are based on customers, i.e. customer-oriented performance targets, will encourage one look to the customers for value and this is likely to result in the development of explorative capabilities and in radical and breakthrough innovations (Atuahene-Gima, 2005; Lukas & Ferrell, 2000).

Some practical examples of these targets include:

- *Example of a competitor-oriented target:* A car manufacturer may state that a competitor’s car uses 8 litres of petrol per 100 km and use that to set a target of 7.8 litres of fuel per 100 km. A target of this nature is a form of benchmarking

and efficiency improvement. Meeting such goals encourages looking to the competition's innovations (e.g. designs, products, services, processes, etc.), current knowledge and expertise for that additional improvement in fuel efficiency.

- *Contrasting example of a customer-oriented target:* A manufacturer may state that customers are unhappy about the fuel efficiency of our cars and they are concerned about the environmental impact of the cars. The target could also state that the customers are 35-year-olds with a graduate degree who are environmentally and tech savvy. Meeting this performance target could encourage looking to hybrid energy solutions like fuel and electricity, perhaps fuel and solar, etc. These solutions encourage looking beyond competition.
- *Different example of a customer-oriented target:* A golf club maker looking at the total potential market of people who could be playing golf but are not could set targets that requires capturing 2 percent of the market made up of people who could be playing golf but are not. A target of this nature forces one to understand the potential customers better, for instance revealing that many people do not want to play golf because the club head is too small and they feel stupid every time they try to hit a ball and miss. They require a golf club that would make it difficult to miss, at least until they have had enough practice not to miss the golf ball. Such a solution was Big Bertha, a golf club with a very big head. This was revolutionary in golf as it represented radical innovation based on new knowledge, skills and technology. In contrast, a target based on the competition would most likely have encouraged a new alloy for the golf club or a lighter one which would not have increased the target market. This example is adapted from *Blue Ocean Strategy* by Kim and Mauborgne (2005).

Mathematically this can be represented as follows:

Let problem $P = P(x_1, x_2, x_3,\ldots x_n)$ which implies solution $S = S(x_1, x_2, x_3,\ldots x_n)$ (Abeysuriya, 2008; Baer et al., 2013; Cartwright, 1973),

where x_n refers to the nth variable in terms of which the problem is defined.

Since a goal, performance target (*PT*) and problem mean the same thing or one can say that performance targets create goals, as per the definitions of

Abeysuriya (2008) and Cartwright (1973) and Locke & Latham (2006), it can be concluded that

Performance target $PT = P(x_1, x_2, x_3, \ldots x_n)$ and the solution strategy (SS) to said performance target takes the form $SS = S(x_1, x_2, x_3, \ldots x_n)$.

If $x_1, x_2, x_3, \ldots x_n$ is such that it is based on competitor orientation, i.e. a target based on competitor comparisons (e.g. mean time to repair, litres per 100km, products, services, processes, etc.), it can be concluded that the solution will also be based on and comparable to how the competitor does it.

If on the other hand $x_1, x_2, x_3, \ldots x_n$ is such that it is based on customer orientation, i.e. a target based the customer, it can be concluded that the solution will also be based on the creation of customer value.

What can be construed from the reformulation of the performance target as a market-oriented performance target is that it expands the problem purpose which has a positive effect on creativity and innovation (Volkema, 1983). What this means is that restructuring performance targets as market-oriented performance targets will result in consideration of more solution strategies for the achievement of the performance targets, rather than narrow the list of solutions.

Furthermore, Lukas and Ferrell (2000) in agreement with Atuahene-Gima (2005) state that being competitor oriented is positively correlated with the development of exploitative capabilities and customer orientation is positively related to the development of explorative capabilities. It can therefore be concluded that performance targets that are competitor oriented will have a positive impact on the development of exploitative capabilities and performance targets that are customer oriented will have a positive impact on the development of explorative capabilities.

This idea of adding an aspect of competitor or customer orientation to performance targets is effectively an expansion on the problem purpose. This expansion has been found to have a positive impact on idea generation (Volkema, 1983). This however has the effect of increasing both the complexity of the problem (Jensen et al., 2007; Simon, 1973), the difficulty in both understanding and solving the problem due now multi-dimensional nature or increased in dimensions of the problem (Adejumo, Duimering, & Zhong, 2008).

This is especially important as it means that goals/targets that are competitor or customer based provide the necessary and directed action to focus on competitor comparisons or customer value creation in meeting the targets. The persistence effecting mechanism means that those assigned market oriented targets will direct and persist their efforts in the right activities, i.e. competence exploitation and / or competence exploration, in achieving their targets thereby developing the organisation's innovative capabilities.

2.5. ENTREPRENEURIAL ORIENTATION

Entrepreneurial orientation (EO) reflects the organisation's propensity to explore new opportunities and new ways of doing things, i.e. the organisational willingness to engage in innovative behaviour, risk taking and proactiveness (Lisboa et al., 2011a; Lumpkin & Dess, 1996). Lisboa, Skarmeas and Lages (2011a) in their study of export markets found EO to be a precursor of exploitative and explorative innovative capabilities. Based on Miller's (1983) work on the determinants of organisational entrepreneurship, Covin and Wales (2012) identify three dimensions of entrepreneurial orientation as proactiveness, innovativeness and risk taking, which is in line with Lumpkin & Dess's (1996) dimensions of EO, that in addition to the above include autonomy and competitive aggressiveness. This study only looks at innovativeness, risk taking and proactiveness as the relevant dimensions of entrepreneurial orientation as they have been found to have an impact on exploitative and explorative capabilities (Lisboa et al., 2011a). Innovativeness is the propensity to be creative and inclination to experiment in order to develop new products and services (Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009). Risk taking refers to the acceptance of risk and investing resources in initiatives with high levels of uncertainty (Lumpkin & Dess, 1996; Rauch et al., 2009). Proactiveness refers to the development of products and services in anticipation of future demand ahead of competition (Lumpkin & Dess, 1996; Rauch et al., 2009).

2.5.1. Risk Taking

Risk taking reflects the organisational propensity and willingness to invest and commit large amounts of resources in projects with a medium to high likelihood of failure (Lumpkin & Dess, 1996). Organisational culture reflects values, ways of thinking and understandings that are shared across the organisation (Goffin & Mitchell, 2016). An

organisational culture that has either a low or a high propensity for risk taking will have an impact on how individuals go about achieving their performance targets. An organisational culture that has a low appetite for risk encourages low risk behaviour, thereby employees regardless of their own personal risk appetite are also likely to adopt low risk solutions to achieve their performance targets, i.e. exploiting existing skills and knowledge due to lower levels of unknowns and lower risk, therefore developing exploitative capabilities. The reason for this is that exploitative capabilities imply lower levels of the unknown, more certain returns and therefore lower levels of risk (Atuahene-Gima, 2005). On the other hand, a culture that has a higher appetite for risk encourages exploration, new knowledge solutions, learning, etc. It provides a safe environment for risk taking. Explorative capabilities imply the acquisition of new knowledge, skills and resources to achieve performance targets, which is likely to result in higher levels of risk due to uncertain, distant and often negative returns (Atuahene-Gima, 2005). The result of adopting a higher risk strategy is the development of explorative capabilities.

2.5.2. Innovativeness

Innovativeness is the tendency of the organisation to support new ideas, novelty and experimentation., i.e. a willingness to depart from the tried and tested solutions, products, services, processes, etc. (Goffin & Mitchell, 2016; Lumpkin & Dess, 1996). An innovative culture has an impact on behaviour, and therefore on how people go about achieving their performance targets. Low organisational innovativeness means that people are unlikely to utilise new ideas, novelty and experimentation in their attempts to achieve their performance targets as they are unlikely to receive support for these solutions. The tried and tested ideas and solutions are likely to receive support in low innovativeness organisations and this is only likely to result in the development of exploitative capabilities and incremental innovations. A high innovativeness culture, on the other hand, is supportive of the unknown and innovative personnel are encouraged to find innovative solutions to their performance targets by using new ideas and experimenting. This is likely to result in the development of explorative capabilities.

2.5.3. Proactiveness

Being proactive means anticipation of future customer needs and developing strategies to actively take advantage of those needs and opportunities which implies the development and generation of new knowledge, competences, technologies that may be required to meet those future needs (Lumpkin & Dess, 1996). This means that a proactive organisational culture encourages solutions that anticipate future customer needs and opportunities. A proactive culture is supportive of solutions that require new technology, skills and knowledge in anticipation of future opportunities, therefore a proactive organisational culture encourages the development of innovative capabilities. Organisational proactiveness levels have an impact on the manner by which performance targets are achieved, i.e. are performance targets solution strategies cognisant of the future or not.

2.6. SUMMARY

The literature on innovative capabilities show that they are driven by customer and competitor orientation (Atuahene-Gima, 2005). Similar literature supports this conclusion but in relation to product innovation that customer and competitor orientation has an effect on the degree of product innovativeness, i.e. incremental innovations (exploitative) or radical innovations (explorative) (Lukas & Ferrell, 2000). Both these and similar studies however are looking at the dimension of understanding one's competitors and customers as a source of innovation. Studies on goal setting and performance targets show that performance targets have an effect on action taken to achieve said targets. Current literature also states that competitor orientation is likely to result in me-too / similar products (Ho, Nguyen, Adhikari, Miles, & Bonney, 2017; Lukas & Ferrell, 2000), which implies the exploitation of current knowledge and capabilities. It can therefore be said that performance targets based on competitor capabilities and products will result in the exploitation of existing knowledge and capabilities, resulting in the development of exploitative capabilities. This is expected to hold in any environment, especially where the dominant design has emerged as all the industry has standardised on those capabilities that will enable the production of products based on the dominant design (Abernathy & Utterback, 1978).

Atuahene-Gima (2005), Lukas & Ferrell (2000) and Slater, Mohr & Sengupta (2014) further state that customer orientation has the effect of resulting in radical / new-to-the

world products and explorative capabilities. It can therefore be expected that performance targets that are based on customers are likely to result in explorative capabilities and therefore radical and breakthrough innovations, this is because customer value is not just about a 'faster horse' but value based on market orientation is based on current and future needs of the customer, i.e. safe, reliable, comfortable transportation, not just a faster horse. It can therefore be said that performance targets based on customer value have the effect of widening the search space for solutions to achieving the performance targets thereby resulting in the development of explorative capabilities and as a consequence the development of radical innovations.

Entrepreneurial orientation is found to have an impact on the development of innovative capabilities (Lisboa et al., 2011a) and also on performance targets through risk-taking, proactiveness and innovativeness. This impact of EO on behaviour is expected to be of a moderating nature as it impacts of the behaviours adopted by people who are tasked with achieving certain performance targets.

In summary, what the literature shows is the following:

- A problem is a function of how it is defined and the solution to said problem is also a function of how the problem is defined (Cartwright, 1973; Simon, 1962). Since a performance target is also a problem it can be concluded that the strategies regarding how performance targets are achieved are also a function of the characteristics of the performance targets, i.e. how the performance targets are formulated.
- The development of explorative and exploitative capabilities is based on customer and competitor orientation.
- It can therefore be said that performance targets that are customer or competitor oriented have the effect of enhancing the explorative or exploitative capabilities as the strategies to meet said targets will either be based on the exploration of new skills, knowledge and competences or the exploitation of existing knowledge, skills and competences.
- Organisational entrepreneurial orientation levels have the effect of encouraging or discouraging the adoption of new ways of doing things in favour of the tried and tested, thereby encouraging the development of explorative or exploitative capabilities. It is to be expected that the levels of EO in an organisation will also

have an overriding moderating effect on the actions taken by those who are executing their strategies to achieve targets based on the organisational levels of innovativeness, risk aversion and proactiveness.

2.7. THEORETICAL FRAMEWORK

The theoretical framework in Figure 2 is based on dynamic capabilities theory, goal setting theory and problem-solving theory. The key theoretical principles include innovative capabilities, entrepreneurial orientation and performance targets.

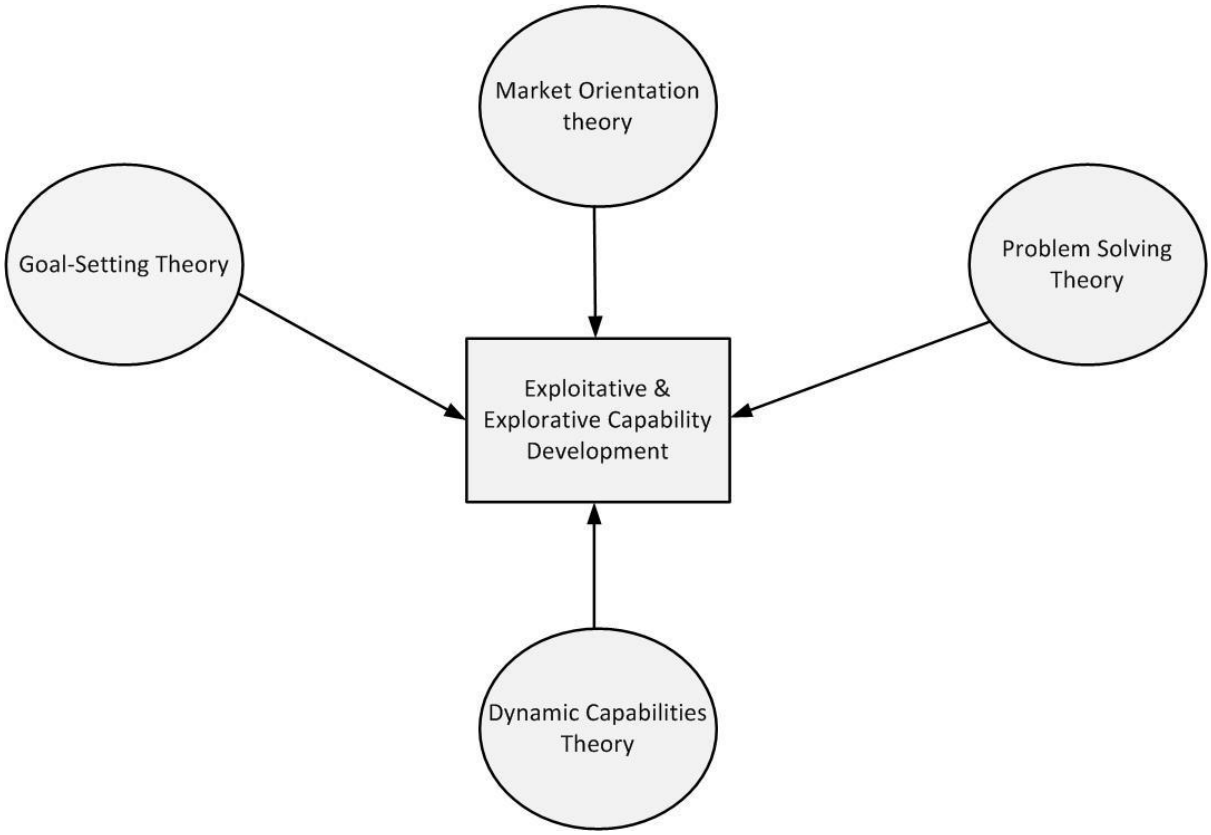

Figure 2: Theoretical framework

Relevant Theorists

Theorists: (Atuahene-Gima, 2005); (Barney, 1991); (Teece et al., 1997); (Latham & Baldes, 1975); (Cartwright, 1973); (Jaworski & Kohli, 1993)

2.8. STATEMENT OF PROPOSITIONS

Based on the above the following propositions are made:

- **Proposition 1:** Competitor-oriented performance targets have the effect of improving the exploitative capabilities of an organisation.

- **Proposition 2:** Customer-oriented performance targets have the effect of improving the explorative capabilities of an organisation.
- **Proposition 3:** The manner in which performance targets are achieved is influenced by the entrepreneurial orientation of the organisation.
- **Proposition 4:** Market-oriented performance targets have a positive influence on the development of innovative capabilities

CHAPTER 3: RESEARCH STRATEGY AND METHODOLOGY

3.1. INTRODUCTION

The research approach for this study is qualitative since the aim of the research of the research is to explore how the setting of performance targets in an organisation influences the development of innovative capabilities. Granted the drivers of innovative capabilities have been explored in a number of contexts but not from the perspective of performance targets.

An interpretivist worldview/paradigm is adopted as the study seeks to understand the nature of the relationship between performance targets and innovative capabilities. The interpretivist worldview is based on seeking the understanding of the world, i.e. construct or interpret the world based on the participants views of it (Creswell, 2013). This worldview is different to the postpositivist worldview which seeks to reduce the world into cause and effects and theory verifications (Creswell, 2013) or the transformative worldview which is change-oriented be it politics, gender issues, injustices, etc. (Creswell, 2013). Such an endeavour requires the adoption of qualitative methods in order to understand how these performance targets influence the development of innovative capabilities.

Creswell (2013) defines the following characteristics of a qualitative study: natural setting, researcher personally collecting the research data from multiple sources, data is analysed through inductive and deductive means to get the participants views, opinions and understanding of the phenomena understudy, the design of the research emerges from the collected data and the ongoing analysis and could change as the research progresses, the interpretation and analysis reflects the researchers background, history, context, etc. and the analysis is holistic.

This study occurs in the natural setting in an environment where the performance targets and innovative capabilities occur and will be explored directly by the researcher collecting data from the participants through interviews, observation of participants in their work environment where possible and review of company documents where possible. The data collected will inform the dynamics and evolution of the research, as Creswell (2013) puts it “The key idea behind qualitative research is to learn about the

problem or issue from participants and to address the research to obtain that information" (p. 312).

3.2. RESEARCH STRATEGY AND DESIGN

Since the aim of this study is to explore how performance targets influence the development of innovative capabilities, a case method was chosen as the most appropriate vehicle for the research design since it is suitable for research questions that ask "how?" and "why?". In-depth analysis of the case allows analysis of issues from different perspectives, e.g. for-profit and non-profit perspectives, (Creswell, 2013; Yin, 1994), and is an effective way of learning about specific phenomena (K. M. Eisenhardt & Graebner, 2007). The reason for multiple-case analysis is that it can enable deeper understanding of the context specific factors that influence the relationship between market-oriented performance targets and innovative capabilities. The focus is on the telecoms companies because, to the best of my knowledge, no studies have yet explored this relationship in the telecoms or any other industry.

3.3. ROLE OF THE RESEARCHER

The nature of qualitative research entails data collection by the researcher through interviews, observations, etc. This means that the data collected by the researcher, unlike in quantitative research where there is very little chance of researcher influence and bias, there is a potential of the collected data being corrupted by the researcher right at the onset of the study by unknowingly influencing the responses, bringing their own issues, biases, etc. into the research (Creswell, 2013). It is important that the researcher is always aware of the influence they may have on the research and remains vigilant at all times

Author's Personal Statement:

I have almost always worked in the telecoms sector from the time I started working in 2002 as a junior engineer. In 2006, I then switched to project management, still in the telecoms sector mainly on projects for the rollout of ICT services to new sites and product development. As of 2014, I then moved again to managing projects that entail providing network connectivity to client organisations. As a project manager, my job entails working closely with product developers, network engineers, internal teams doing administrative work, and also organisations that provide telecoms services to

my organisation. These external parties are sales account managers and network engineers. All of this is done in support of the organisational objectives. I believe the experience working with all these teams enhances my understanding of the issues and many of the challenges of organisations trying to innovate and differentiate themselves and the parties trying to deliver services both in competitive environments and environments with little or no competition. Particular attention will be paid to how the participants go about achieving their performance targets.

Due to my experience in the telecoms environment, certain biases may result, however, to remain objective I will make every endeavour to ensure that my understanding and interpretation of the research data is unbiased. To manage this risk I will enlist my colleagues to conduct an interview on myself, as a research participant, the same way I intend to conduct the interviews. The results of the mock interview are then assessed by the investigator for both the instrument's suitability and bias. This process called "interviewing the Investigator" is a tool used by the research investigator to test for instrument rigour and researcher bias (Chenail, 2011)*.*

3.4. SELECTION OF PARTICIPANTS

The populations for this study consist of two organisations participating in a case study. The study looks particularly at how performance targets influence the development of innovative capabilities of organisations. Since innovative capabilities are driven by customer and competitor orientation, the case study explores this relationship in one organisation where customer and competitor orientations matter because they are in a competitive environment and in another organisation where customer and competitor orientation are not so important.

The criteria used in the selection of the samples were that the organisations must be in the telecoms sector offering network connectivity services as a core product offering to organisations. It was also important the organisation had to be opposites of one another, i.e. one in the private sector and the other in the public sector to be able to identify and cater for nuances that may occur in public but not in private sector organisations. Lastly, the case organisations must offer rich and diverse data as this is not a statistical sampling (Creswell, 2013).

Table 1: Research Organisations

Industry	Sector	Size (employees)	Revenues
Telecoms	Public / Non-profit	50 to 80	Greater than R200 million
Telecoms	Private / For profit	40 to 50	Greater than R100 million

The selection of the participants was based on their knowledge, current role, their experience in the telecoms sector and Cohen and Levinthal's (1990) work on absorptive capabilities that prior experience is an important factor in identifying, assimilating and exploiting relevant market information to the organisation's benefit. The reason for this purposeful sampling was to ensure that the participants will have the necessary expertise to provide rich and detailed responses to the research questions as the interview questions would not be very useful for someone who is not in such an environment. The samples from the private and public sector participating organisations are as shown below in Table 2.

Table 2: Research Participants

Position	Telecoms organisation 1 Non-profit	Telecoms organisation 2 For profit
CEO	1	
Head of engineering	1	1
Head of projects	1	
Head of operations	1	
Head of services development	1	
Senior engineer	1	
Senior project manager	1	1
Project Manager	1	
Business development	1	1

The private sector participants were asked by the researcher to refer/introduce him to other participants who may add value to the study.

Impact of Public-Private Telecoms Case Study

The results between the public and private sector are expected to reinforce one another as innovation capabilities are as defined by (Wang & Ahmed, 2007), independent of a sector. This also applies to explorative and exploitative capabilities, which Atuahene-Gima (2005) defines as being independent of whether the organisation is in the public or private sector. Customer and competitor orientation are associated with the private sector due to the paying customers and the competition in the environment, which are typically not found in the public sector. The public sector telecoms company in question is a little different in that, although the customers targeted are government organisations, they still have a choice of getting the same telecoms services in the private sector, making the private sector a competitor. This means that both companies in the case study are similar in that customer and competitor orientations are relevant. Due to the cases coming from the public sector and the other from the private sector, the expectation is that there will be certain subtle differences caused by factors like entrepreneurial orientation, government subsidies, etc. However, the overall outcomes were expected to largely come to the same conclusions.

3.5. RESEARCH METHODOLOGY

A qualitative approach is adopted for the study since the research study seeks to answer a “how” question (Creswell, 2013), i.e. How do performance targets influence the development of innovative capabilities? Khazanchi and Munkvold (2003) explain through the following reasons that the most appropriate paradigm / worldview for such a research is an interpretivist paradigm:

- The interpretations of the relationship between performance and innovative capabilities are many and complex.
- The researcher assumptions, bias, prior knowledge, values have an influence on how the research is conducted, thereby making the knowledge subjective.
- The researcher interacts with the research participants thereby influencing them and they influencing the researcher.
- The theorising is inductive as it is builds on the observations that will be made based on the collected interview data.

3.5.1. Data Collection and instrument

Data was collected from January 2018 to the end of February 2018. This data collection was primarily done as face-to-face interviews with the participants. The interviews entailed semi-structured questions intended to get insight into opinions and views of the participants about the impact of market oriented performance targets. Creswell (2007, 2013) recommend the development of an interview protocol in order to assist in maintaining consistency in data collection and recording. An interview protocol has been developed to maintain consistency in the manner in which interview questions are asked and for recording information (see Appendix A). The interviews were, with the permission of the participants, recorded for ease of transcribing afterwards.

3.6. DATA ANALYSIS PROCEDURES

Data analysis commenced as soon as first data was collected, this is typical of qualitative studies where analysis occurs in parallel with data collection (Creswell, 2013). As the analysis progressed, themes emerged and the data was then aggregated into said themes.

The electronic tools initially planned for transcribing were not effective, so the researcher manually transcribed the interviews. Data analysis was aided by the use of the ATLAS.ti software which is a qualitative analysis application. In addition to handling large amounts of data, ATLAS.ti software enables coding of data by simply dragging codes to the selected piece of data, linking of findings in a semantically meaningful way, and the visualisation of data (ATLAS.ti, 2017).

The data was analysed through thematic analysis which is a form of pattern recognition for themes that emerge from interviews and other relevant documents, which are then subsequently used for analysis (Fereday & Muir-Cochrane, 2006). Thematic analysis seemed more appropriate for this study than content analysis as this study is more focused on understanding the relationship between market-oriented performance targets and innovative capabilities rather than testing for the presence of said relationship.

3.7. LIMITATIONS OF THE STUDY

The study results are not generalisable, they are only applicable to the case study organisations that participated in the research. However, they point to the broader theoretical issues, regarding how the structure of performance targets influences the development of innovative capabilities and the role of entrepreneurial orientation in this relationship, in other industries beyond the telecoms industry.

3.8. ETHICAL CONSIDERATIONS

As the university subscribes to the research integrity standards as set out in the Singapore Statement (Wits University, 2017), the same standards will be adhered to in this research study. The following principles as stated in the Singapore Statement (Second World Conference on Research Integrity, 2010) will be strictly adhered to during the course of the research study. The researcher will be honest, accountable for all aspects of the research, be fair and respectful to others, act with integrity and provide good leadership over the course of the research.

The researcher further commits to conduct himself in strict adherence to his responsibilities as a researcher as stated in the Singapore statement (Second World Conference on Research Integrity, 2010) to:

- Conduct himself with utmost integrity and ensuring the trustworthiness of the research data and results.
- Objectively collect and analyse research results to reach conclusions backed by evidence and based on appropriate research methods.
- Keep a detailed and accurate record of the research for ease of research replication by others.
- Acknowledge work of other researchers used in this study and other researchers who made significant contributions to the research.
- The researcher will disclose all conflicts of interest that could compromise the trustworthiness of the research or result in another party's harm and will act with honesty at all times.
- Strict anonymity of the participants of the research will be observed and all efforts will be made to protect their privacy. Any direct quotations will only be used in the research with their expressed permission.

- The collected research data will be kept safe and under controlled access with the university.

3.9. RELIABILITY AND VALIDITY

Yin (1994) identifies four tests that are commonly used as a criterion to judge the quality of research design, i.e. construct validity, internal validity, external validity, and reliability. These are further defined as follows:

- *Construct validity* establishes whether the constructs actually measure what they are supposed to measure. As a means of increasing construct validity, Yin (1994) recommends that multiple sources of evidence be collected in the form of interview data and relevant organisational documentation, a chain of evidence be established, and key participants review the draft case study report. These recommendations will be adopted in this study.
- *Internal validity* establishes whether the supposed relationships actually exist among constructs. This is particularly important for this study as it already supposes a relationship between performance targets and innovative capabilities. Although this study explores the nature of this relationship, it is still imperative that internal validity is attended to in order to have a strong foundation for this study. Yin (1994) recommends that to increase internal validity pattern matching, explanation-building, and time-series analysis be done. Due to the very short period of the actual data collection for this study, time-series analysis will not be done, this however is not expected to impact internal validity of the study as it is expected that pattern matching and explanation-building will be adequate.
- *External validity* establishes how generalisable the results of the study are. Although the study is focused on the public sector, another set of results will be collected from a private sector company of similar size providing similar services. The results will not be generalisable but they should at least point to the broader theoretical issues regarding how performance targets influence the development of innovative capabilities.
- *Reliability* demonstrates the extent to which the operations of the study can be repeated and arrive at the same findings, e.g. the use of an interview protocol plays an important role in increasing the reliability of a qualitative study. In

addition to the interview protocol, Yin (1994) also recommends the development of a case study database to keep track of all the documents that were collected in the study. This study only utilises an interview protocol as no documents were necessary or collected for this study, furthermore, adequate participant organisation and individual information is made available.

The research interviews were conducted in line with Yin's (1994) recommendations to ensure the validity of the results and the reliability of the methodology employed.

3.10. SUMMARY

This is a qualitative study that is based on the interpretivist paradigm. The research design is based on the multiple case study design. The data collection is primarily based on semi-structured interviews using thematic analysis for the analysis of collected data.

CHAPTER 4: PRESENTATION OF FINDINGS AND RESULTS

4.1. BRIEF INTRODUCTION

This research aims to explore how customer and market orientation of performance targets influences the development of innovative capabilities in an organisation, specifically in a telecoms organisation. Twelve (12) semi-structured interviews were conducted in both the private and public sectors but within the telecoms industry. The findings show how the structuring of performance targets influences the development of innovative capabilities but they also reflect other important themes that emerged during the interviews.

4.2. SELECTION PROCESS AND BACKGROUND PROFILES OF PARTICIPANTS

The participants were purposefully selected based on their being in the telecoms sector in South Africa. Due to the technical nature of the interview questions, the participants were further selected based on their understanding and knowledge of the Information and communications technology sector (ICT). This was done so they would have the necessary knowledge and skills to make the necessary comparisons as required by the interview questions.

The 12 participants comprised public sector participants who were in the majority (n = 9) and private sector participants (n = 3). The majority of participants were male (n=11) and one female (n=1). Table 3 shows the breakdown of the demographics of the participants.

Table 3: Participants Background Profile

Participant	Sector	Technical Know-how	Business know-how	Gender
1	Public	High	High	Male
2	Private	High	High	Female
3	Public	High	High	Male
4	Private	High	High	Male
5	Public	High	Medium	Male
6	Public	High	High	Male

Participant	Sector	Technical Know-how	Business know-how	Gender
7	Public	High	Medium	Male
8	Public	High	Medium	Male
9	Public	High	High	Male
10	Public	High	High	Male
11	Public	High	High	Male
12	Private	High	High	Male

4.3. PRESENTATION OF FINDINGS AND DATA RESULTS

Semi-structured interviews were used to collect data over a period of two months. A total of 12 interviews were conducted with participants in the telecoms sector, of whom only one (1) was female. The interviews were recorded using a mobile phone and a laptop and later transcribed. Each interview lasted an average of 1 hour and the transcribing took approximately 4 hours for each hour of interviewing. Each interview was conducted in each participant's office or in another area where the interviews could be conducted comfortably, quietly and without disturbances.

4.4. DEVELOPMENT OF THEMES

Based on the interview/survey questions, themes were developed using the raw interview data. This was done in order to address the main research propositions. The research interviews were recorded using a mobile electronic device and later transcribed by the researcher. The transcribed interview data was then categorised by the researcher into codes which were then further aggregated into themes by the researcher. The coding process and the process used to develop themes is elaborated by Creswell (2007, 2013) who details several iterations of reading the transcribed interviews and successive coding thereof to develop themes. This process of developing themes is adopted as a means of being as close to the collected data as possible.

4.4.1. The Use of Pseudonyms

In order to safeguard the privacy of the participating organisations, pseudonyms are used to refer to the respective companies as follows:

- *Company X* is a non-profit telecoms company providing telecoms services to the public sector in the form of broadband connectivity. The target market for this organisation are the public sector science, research and education communities. This is a non-profit organisation.
- *Company Y* is also a research and development organisation that provides research and development services for the private and public sector organisations. In addition to being a non-profit public sector organisation, this organisation is also a parent organisation for Company X[1].
- *Company Z* is a private sector profit driven organisation that provides broadband telecoms services to public and private organisations.

[1] It should be noted that *Company Y* is a parent organisation to *Company X.* The data collection and analysis is based on *Company X* and *Company Z*. The data is collected through *Company Y* indirectly.

Table 4: Themes Developed from Raw Interview Data

Interview Question	Findings	Theme derived
Contrasting traditional performance targets and competitor-oriented performance targets: Let's assume you are a manager responsible for network rollout and planning (coming from the perspective that you are from a telco organisation like DFA, FibreCo, Liquid, etc.) Target 1: Increase network reach to 85% in all major metros by the end of financial year 2018. Target 2: Increase network reach to 85% in all major metros whilst leveraging competitor strengths and weaknesses by the end of financial year 2018. Or Assuming you are a product designer, contrast the following performance targets: Target 1: Develop an upgrade of our software to improve ease of use and implement the upgrade by 31 October 2018.	*"For me having this competitor aspect on a performance target is a good thing because you do not want to reinvent the wheel that is the first thing and you always want something more innovative, to be better than the competitor"* *"when you compare your software with someone else who is doing the same thing that can be at least a benchmark to at least strive towards or exceed"* *"if you are established like we are you could get into capacity swaps with other providers and that would enable you to meet your target in an innovative way"* *"you can even study the way they do things"* *"you need to know how to bring your delivery time back in line maybe with the average, maybe you are way off"* *"Knowing competitors' strengths and weaknesses will help a lot like you said you know now their strengths, for example customers like in terms of timelines everybody wants things to be delivered as quick as possible. It means there is a gap on your capabilities or your performance. You can deliver in 9 weeks whereas your competition can deliver in 6"* *"So when we set the products there is a view of what the industry does, what are the industry standards, what is the performance of the industry as well as what that goes into that product development"* *"it is important to align with industry standards as well on cost and performance"* *"I would basically go for that process of identifying the features, not the features the requirements that the competitor has because that is open information and go through a white box process and then go through the development process to actually implement it in our software"* *"the downside could be that you emulate what your competition is doing. If they solve the GUI problem one way focusing on how they solve it*	**Capability Building**

Interview Question	Findings	Theme derived
Target 2: Develop an upgrade of our software to be much easier to use compared to the competitor's software and implement the upgrade by 31 October 2018.	*with could mean that you have tunnel vision and that is all you see on how to solve it."*	
	"it comes back to how you enable your stuff to actually make that performance target so that it is realistic not only in the industry but also in your own organisation" *"As you have said that that is probably the worst objective I have ever heard in my whole life because an objective has to be SMART, that is not specific that is not measurable it's not time bound it's not achievable you cannot achieve something that is not specific"* *"but if you are saying you install at Tukkies so you should know the IT pain points and what the IT department is doing, what all their departments are doing then the answer is no because that becomes an account management type"* *"if you had to formalise like I said you would have to be able to measure and you would have to scientifically measure"* *"so assigning targets will be best done according to the role that the person is already doing"* *"an engineer would not need to know such a thing"* *"I think the two performance targets you mentioned are for different levels within the organisation. So the one, it's kind of a level where you look at your customers and that is at a strategic level, a planning level, so the person who decides where they might actually put the fibre and they can actually maximize the reach to customers and stuff but on a lower level"* *"why we are considering the competition because we want to just compete with them or to save money or bit of both"* *"think the second KPI is probably it impacts the engineering jobs more than it impacts the project manager because it will dictate the kind of solution they need to implement"*	**Target Structure**
	"if you are established like we are you could get into capacity swaps with other providers and	**Innovative Choices**

Interview Question	Findings	Theme derived
	that would enable you to meet your target in an innovative way" *"you can even study the way they do things to understand how they perform how they do things so that you can also improve in that area is very important"* *"I know that from one point of view that might be saying well you might be out of a job but that is very short-sighted view in my opinion. What it means is that it opens up opportunities for us to do new things"* *"We need to look at competitors and what they are doing well and use that as a benchmark to say shouldn't we be doing something similar?"* *"in the second scenario you actually have more options to play with"* *"I think it opens the door to a lot more interesting scenarios than just rolling out the network, options like partnering with the suppliers focusing on the areas where other suppliers have low presence, becoming more competitive than your competitors in an area by reducing your costs and stuff to actually roll things out"*	
	"So you do need that knowledge that intelligence" *"what have they addressed, what are they focused at? Maybe that has to do with different areas, secondly to look at the infrastructure that they have in place, look at the topologies that they have for their networks"* *"Obviously to leverage on their strengths and weaknesses, I must see where their weaknesses are so that I can capitalise on them, see where their strengths are so that I can be competitive with them"* *"not just go into the project without thinking, it is about thinking, analysing the holistic environment"* *"So there's a lot more work required you will need to do research"*	**Competitor Intelligence**

Interview Question	Findings	Theme derived
	"so I would look at the competition and what it does but I would more focus on the ease of use equivalent or more to differentiate myself from the competitor so yes there is a reason for the client to say I prefer to work with this system it could be better than the competitors it could be a little bit inferior than the competitors but it is giving me this value that is what I want" *"we are uncontended and they are contended simple as that, no contention. Anything with ease of use or with any functionality that is better it should be such a way that we should always be ahead of the competitors so we need that as a benchmark first so that will come with something better"* *"so that at the end you deliver something better"* *"you always want something more innovative to be better than the competitor"* *"they will always run to you they know that they will not get disappointed"* *"identify their weaknesses you can capitalise on that one. Your offerings must improve much better so that you can attract customers"* *"There are a few things we need to do to ensure we deliver quicker than competitors as well"* *"I think that competitor information would probably be relevant in terms of network products to say where is your competitor providing services for example and at what cost so that you can be competitive in the market and then certain other things might be relevant for stuff like tenders, as well as to understand what your competitor has to offer versus what you have to offer so that you can give a better service or a cheaper service or whatever value add into your tender response and ultimately into your product when you do product development"* *"so you will turn to your upgrade to make sure that the things that differentiate you from your competitor, you do them better"* *"Obviously to leverage on their strengths and weaknesses, see where their weaknesses are*	**Competitive Advantage**

Interview Question	Findings	Theme derived
	so that I can capitalise on them, see where their strengths are so that I can be competitive with them" *"What's their pricing like? Can we match their pricing so that we can still make a reasonable profit vs what it would cost us to roll out in that area? You have to take these kinds of considerations and if the answer is no let's say let's rather choose another area that they are not currently active in"*	

Interview Question	Findings	Theme derived
Provide a network solution for this client as follows: Target 1: 10Gbps link between Pretoria and Nelspruit with 99.999% availability. Target 2: 10Gbps link between Pretoria and Nelspruit with 99.999% availability, however, the client is very security conscious. Anytime the network is down the client loses R50,000 per hour. The client hosts and runs a crypto exchange. Contrast how you would go about achieving the first target vs. the second target. What would you do differently?	*"First I will need to do it in such a way that 99.999% or as close as possible to 99.999%, probably I would have to give them a full redundancy Network that is number one. Number two I would need to make sure that whatever is being transmitted over those links it has been encrypted"* *"the money he is going to lose on that, that makes you think. He has an exchange, that needs you to think, he needs a secure link and that needs you to think to say maybe this thing I need to think look at it more seriously or a bit differently than just delivering a link that is point to point with 99% availability"* *"I think this customer orientation on performance targets what it does it makes you think beyond a simple definition of network availability"* *"The second target, the one that explains what applications are run on the network, customer oriented target encourages innovation, that is a better one in my view"* *"The fact that you have to scramble your picture before you send I suppose it does encourage innovation because you have to think of your code that you are going to use to scramble the signal"* *"So you need to also prepare your capabilities to meet even the future demands. You cannot*	**New Ways of Doing Things**

Interview Question	Findings	Theme derived
Which of the two targets encourages the exploration of different solutions? Why is that? Which of the targets encourages innovation? Why is that?	*only as a supplier or service provider react, you need to be proactive"* *"is like customers you must treat as kind of partners as well, not only customers, so it means you collaborate, you know how they work, you like I mentioned before even know their projections, even know their strategies three years down the line so that you grow with them. Deeper knowledge of their plans, deeper knowledge of their projections, deeper knowledge even their growth strategy"* *"If uptime is so important for the client you can even think of alternative solutions to have an alternative route so that you have as a backup route"* *"you can even make a deal with other providers to say if our link goes down we can use your link temporarily"* *"you know you may need to be creative with the types of solutions that you implement, some may be more complex"* *"you can actually build some kind of complex mesh network within the metro or build the core and bring it back to the central hub and stuff like that, which in terms of design innovations and things like that can encourage, almost forces you to be more innovative"* *"you can actually build some kind of complex mesh network within the metro"* *"what do I do to mitigate the risk of unavailability there are few ways I can do that, one way is to give them a protected service even if they say they are asking for a single link I will say I yes I am protecting it myself it's part of my design"* *"crypto exchange, although it is not requested we are gonna put encryption services on that link. You didn't ask for it."*	
	"it comes back to how you enable your stuff to actually make that performance target so that it is realistic not only in the industry but also in your own organisation"	**Target Structure**

Interview Question	Findings	Theme derived
	"As you have said that that is probably the worst objective I have ever heard in my whole life because an objective has to be SMART, that is not specific that is not measurable it's not time bound it's not achievable you cannot achieve something that is not specific" *"so if I look at your example that is very broad but if you break it down one engineer doing installations they would have to be a key account manager for Tukkies in order to understand them. Tukkies is massive there's an IT department and there are researchers and their research base is very diverse, climatology, engineering, computer science all of those so to make one person responsible for that from an engineer perspective for me in my view that doesn't make sense"* *"but if it is a responsibility to find out and make sure you know that is an engagement [what are the customer pain points], that is a different, you actually start to the de-focus an engineer"* *"but if you are saying you install at Tukkies so you should know the IT pain points and what the IT department is doing, what all their departments are doing then the answer is no because that becomes an account management type"* *"you will take on responsibilities that are not your core focus"* *"if you had to formalise like I said you would have to be able to measure and you would have to scientifically measure"* *"so assigning targets will be best done according to the role that the person is already doing"* *"If I wasn't a salesperson I don't know that it will change my behaviour at all"* *"You are not going to tell the technician who is rolling out the fibre, remember that there is some other supplier who is on this route but the planners may need to aware of your fibre providers on the route. Planners and above need to be aware of this (competitors)"*	

Interview Question	Findings	Theme derived
	"I think the two performance targets you mentioned are for different levels within the organisation. So the one, it's kind of a level where you look at your customers and that is at a strategic level, a planning level, so the person who decides where they might actually put the fibre and they can actually maximize the reach to customers and stuff but on a lower level, let's say that a technician from MCT they are given where the fibre need to be rolled out and their target is to just roll out that fibre so I do not know if these to targets are comparable to one another" *"Targets have to be smart, so the example of 300 km of fibre that target fits into the SMART requirement for targets, adding the requirement of looking at your customers to ensure 50% uptake, that fits into the SMART requirement to make it attainable you need to do planning and other stuff around it, I feel like it is a different target"* *"why we are considering the competition because we want to just compete with them or to save money or bit of both"* *"think the second KPI is probably it impacts the engineering jobs more than it impacts the project manager because it will dictate the kind of solution they need to implement"*	
	"I would have to give them full redundancy network that is number one" *"I would need to make sure that whatever is being transmitted over those links it has been encrypted"* *"So obviously it is harder to design but it is a much more logical objective"* *"your design must be smart because every kilometre rollout half of that must be used so I will better roll it out smartly increasing the reach to catch a few extra customers"* *"At the end of the day I think the second KPI is probably it impacts the engineering jobs more than it impacts the project manager because it will dictate the kind of solution they need to implement"*	**Solution Design**

Interview Question	Findings	Theme derived
	"first of all understanding the issue around the fact that there is a an encrypted exchange so encryption services are important the fact that down time, the higher premium that is placed on availability therefore to ensure that they do not lose R50000/hour when the service is down does affect if you consider it during the design of the solution not only in the operation of the link" *"So it could either impact me and how I Design the route, it could impact me on how I operate the route"* *"will install fibre management system. It is the route that I will now put under fibre management"* *"I am building in more fat to make sure that I am mitigating the risk of that 99%, the other thing is by giving this route a dedicated profile in the operations centre. If that is an impacted customer on the route and there's gonna be other customers on the same route please ensure you restore that customer first"*	
	"is like customers you must treat as kind of partners as well, not only customers. So it means you collaborate, you know how they work. Like I mentioned before, you even know their projections, even know their strategies three years down the line so that you grow with them" *"so definitely we need to understand our customers and their needs, and then that influences our baseline targets, that says we need to do a certain project at a certain cost and a certain time"* *"the behaviour change here is sort of the learning aspect the understudy of your environment and your consumers"* *"That is why when I go to the second one (target), I interact with the consumers, I interact with the customers to find out what makes it easier, so that interaction with the users, that full on kind of interaction is what makes it different"*	**Customer Intelligence**

Interview Question	Findings	Theme derived
	"I need this to be consumed, so where do I go? First of all, I need to do some research" *"but then from a customer perspective you would spend a lot more time with your customers getting to know them maybe conduct an interview/meeting where you find out all these details but you'll have to spend time with them to build a relationship with them where they volunteer that information"*	
	"maybe your customers will increase the demand, the output, or maybe you can even tap into another market" *"You don't want to overproduce or oversupply or undersupply, it must be right at the requirement"* *"The benefit of speaking to these customers is the possibility of those customers staying with the product and that product getting a bigger share of the market. As those customers see that the product addresses their needs, their wants, you acquire a bigger market share. It increases the market"* *"Now that is whereby now I go into that area and establish whether are these people actually using this and if they are using it. how do I venture into the market to provide something that will be attractive to them, for them to take the product"* *"you will cover more than the cost of that initial rollout which means you start making profit"* *"obviously the second target is better because your return on the investment you want it least 50% of that 300 km to be utilised you know which I'm assuming means you will cover more than the cost of that initial rollout which means you start making profit"* *"will better roll it out smartly increasing the reach to catch a few extra customers"*	**Financial Performance Improvements**

Interview Question	Findings	Theme derived
What is your organisation's attitude towards risk (Aversion, neutral or seeking)? Why do you say that?	*"I would say the funding model and the risk that are there, also might have an impact on the cost which can result in the loss of money or not getting a benefit out of that investment is avoided. Most projects are analysed for quite a long time to make sure that we know that we do not keep higher risk and can end up in a loss"* *"if the risk is high they will absolutely say no. It is because of the issue of the funding"* *"our interactions say that Company X is risk-averse only because we are part of the Company Y and the Company Y as a group are extremely risk-averse"* *"Our governance processes are a bit too laborious for the type of work we are doing"* *"we follow the rules we comply with the legislation, Company Y policies and procedures and we do everything by the book because we do not want audit findings fruitless and wasteful expenditure and all of those thing"* *"What we can say is our organisation wants to do things based on the rule as opposed to the interpretation. They want to read things in black and white as opposed to interpreting, so in terms of risk they want to do exactly as it says literally (in the applicable legislation) not the essence"* *"then there is the other side where we sit in an organisation that is very risk averse so we have to balance it in terms of what we are doing"* *"but within the larger Company Y organisation we are restricted in what risk we can actually take"* *"I mean Company Y policies and processes and things like that are largely anti-risk because we are governed by them we don't have a choice I think where we can we've pushed the boundary in terms of saying that this is a risk worth taking in other words we are open to being a bit more risky"*	**Organisational Culture**

Interview Question	Findings	Theme derived
	"it will be interesting if we had more freedom to see how much risk you are actually willing to take and at the same time I suppose we have to get approval of our funders but my experience has been that there quite open to that if you can justify the risk" *"I think Company X and has a very high risk appetite but the Company Y is a very low risk appetite which is partially why we struggle to work inside the Company Y"* *"the structure of the shareholders will push you into being more risk-averse so it might not be the company but your shareholders can push you to say hey hold on a second we don't see the same value for that please cut down on that you can only spend where you can get the right level of yield"* *"if you say I'm gonna spend the money now because I think it will help in the future someone will be very rigid to say no, show me the numbers what would we make in this investment in this year. No it's not in this year it only next year, so no"*	

Interview Question	Findings	Theme derived
What is your organisation's attitude towards innovative behaviour? Encourage, discourage, resources, etc.	*"the attitude is also positive in terms of the innovation, in terms of leading the industry, leading South Africa to improve efficiency, to improve the lives of people, to contribute even towards the economy, it is expected"* *"So we definitely reward it and we do it on a monthly basis"* *"so for us that is inherent in the company behaviours (innovativeness is inherent in our company behaviours)"* *"I actually feel that management is actually encouraging employees to figure out new ideas"* *"So for example in December I made a suggestion that that we implement a desktop*	**Organisational Culture**

	IT support ticketing system so that we can better track desktop support because there is one IT guy looking after all of us and we sort of walk to his desk and you say you need this and you need that and if he doesn't remember the record of the request he forgets 6 months down the line you still need the same thing so that is an example"	

Interview Question	**Findings**	**Theme derived**
How would you define your organisational attitude towards anticipated future and emerging products and services (i.e. wait and see approach or proactive)?	*"We wait until it is too late then we start wanting to do it"* *"we are abreast in terms of knowing what is coming, what is in the pipeline in terms of development and acquire details of those things, we collect information, details and analyse. What is a bit lacking is to be the participant, but we keep ourselves abreast of future products or even where the world is moving towards, two we keep ourselves abreast, fully aware but now when we need to become participants that's where we become average instead of the leading role, we do not become active fully but we keep ourselves abreast"* *"we do not a hundred percent take it further but I will say we do not wait-and-see there are some collaborations that we do with other stakeholders"* *"I think we always try to be leading edge, not bleeding edge necessarily"* *"So we try not to be cowboys in terms of going through and customise a service and saying yes it works, we make sure that it is technically feasible and also commercially feasible as well so normally we do a business case for something that is emerging to make sure that it does make financial sense and also that it can be technically implemented and also supported after implementation"* *"So we are very interested in looking at new technologies and understand them but we can't actually really implement them because of the risk associated with that"* *"and all these places and but again it down to sales must bring the signed contract first so*	**Organisational Culture**

Interview Question	Findings	Theme derived
	almost like a wait and see and we are taking so long that DFA and Frogfoot and Vox are starting to build in those towns now" *"so we are very very cautious"* *"they would definitely not take an approach of saying let's try this thing and see where it goes and it's evident with things likes software defined networks"* *"So in general we do take a wait-and-see attitude, that is not where I would like us to end up"* *"there is positive attitude to explore but in a structured fashion"*	
	"secondly that means we do not have enough resources to go out there and do whatever research" *"we are not funded to do those kinds of things"* *"I do not think we have that kind of funding right now"* *"we have the fibre rollouts, we have Joburg metro ring design, we've got all of those kinds of things they take precedence over doing R&D"* *"we are still growing as an organisation (Company Z) where we can't necessarily allocate resources specifically to do that"* *"in a calculated way based on the availability of resources and time we do investigate and explore futuristic aspect to make sure that we can play in that space in the future"*	**Resource availability**
	"We are definitely receptive to new products" *"Where we introduce a new service, yes it is a risk but we do not see it as a risk we see it as being exploratory"* *"for instance when we got eduroam here I do not think it was as global as it is now"* *"If you look at that GNA, there's the Europe to America link, I stand corrected but I think the next one after that is the South Africa to London, so we didn't wait for the other*	**Willingness to try new things**

Interview Question	Findings	Theme derived
	(network) rings and things to be in place to say now we will contribute" *"we do not know, we will try it"* *"I think the attitude that we should have is that there is new and interesting developments in the in the networking space and that we should try and almost pioneer efforts around that"* *"take the likes of ESNet for instance where they are on the cutting edge where you work with vendors on the next generation equipment that can do a terabit per second. Even the pre-emptive space where we say listen we pre-empt that there's going to be a break here or something like that and then we reroute traffic up-front so that when it happens we are ready for it I would like us to be more into that space"* *"So if I can summarise I think that we are very excited and we keep track our finger on the pulse we try and absorb innovations that help us and ensure our relevance"*	

4.4.2. Consolidation of Themes

Due to the overlap between the themes derived from the various research interview questions the initial themes were merged to the following themes:

- The *Competitive Advantage* and the *Financial Improvements* themes are merged to form one theme, the *Financial Performance* theme. This decision is made based on the premise that both these themes relate to the improved financial and market performance of the organisation due to the customer and competitor orientation of the performance targets.
- The *Innovative Choices* and the *Solution Design* themes are merged to form the *Making Choices* theme. This is done due to the strong relatedness of these themes as they are both are about how to respond to the market intelligence gathered from both customers and competitors due to the structure of the respective performance targets.

- The *Target Structure* themes derived from customer-orientated and competitor-oriented performance targets are merged into one theme, *Target Structure*. Although these themes are derived from two areas, one from the customer aspect and the other from the competitor aspect, they speak to the same areas of concern, i.e. the target structure.
- *Willingness to Try New Things* as a theme is very much related to the *Organisational Culture* as they both speak to "how WE do things in this organisation", they are merged into one theme, the *Organisational Culture* theme.
- *Capability Development* theme results from the merging of the *Capability Building* theme and the *New Ways of Doing Things* theme. These are essentially the same theme but focusing on the development and exploitation of existing skills and the development and exploration of new ways of doing things. These themes relate to how the explorative and exploitative capabilities are built.
- *Competitor Intelligence* and *Customer Intelligence* themes are merged to form *Market Research* theme as they are both about the acquisition of relevant market research.

Table 5: Theme Development

Preliminary Theme	**Final Theme**
Capability Building	Capability Development
New Ways of Doing Things	
Target Structure (Competitor oriented targets)	Target Structure
Target Structure (Customer oriented targets)	
Innovative Choices	Making Choices
Solution Design	
Competitor Intelligence	Market Research
Customer Intelligence	
Competitive Advantage	Financial Performance
Financial Improvements	

Preliminary Theme	Final Theme
Willingness to try new things	Organisational Culture
Organisational Culture	
Resource Availability	Resource Availability

4.5. THEMATIC ANALYSIS

Based on the responses received from the participants, the abovementioned themes were derived from the data. Actual participants' responses were used to derive the themes in order to be as close to the data as possible using the semi-structured interview questions.

4.5.1. Theme 1: Capability Development

This capability development is the result of the actions that are taken by the person assigned the targets, it is through these actions that existing skills are honed and refined through repetitive action and new skills are acquired.

"you need to know how to bring your delivery time back in line with the average, maybe you are way off"

(Participant 2, 2018)

"You do not want to reinvent the wheel"

(Participant 10, 2018)

"Study the way they do things to understand how they perform, how they do things, so that you can also improve in that area"

(Participant 1, 2018)

"you look at competitor (and say) can I copy the feature or can I not copy the feature and if you cannot copy it in time or if it's not sensible to do it emphasize your own features and build on that"

(Participant 5, 2018)

“We need to look at competitors and what they are doing well and use that as a benchmark to say shouldn't we be doing something similar?”

(Participant 6, 2018)

What these participants are highlighting is that one should be aligned with the competition and the industry in order to be relevant in the here and now. These competitor-oriented targets mainly result or encourage action that is not new both in the company and in the industry, which is why the focus is on doing what is already being done but just better and more efficiently, not something new. This explains why the key words coming out of the interviews are mainly benchmarking, copy, etc. This means aligning with the herd and not diverging away and doing new things and differently.

What the participants are also highlighting is that as they are looking to learn and imitate their competitors they are also not looking to “re-invent the wheel” which means where needed they are willing to acquire the respective technologies through buying said technologies that will put them on par with their competitors, however, technology acquisition is not limited to buying but entail own technology development “*if you cannot copy it in time or if it's not sensible to do it emphasize your own features and build on that”.*

“I would need to make sure that whatever is being transmitted over those links, it has been encrypted”

(Participant 10, 2018)

“you can actually build some kind of complex mesh network within the metro”

(Participant 8, 2018)

“although it is not requested we are gonna put encryption services on that link, you didn't ask for it”

(Participant 12, 2018)

“the second performance target encourages innovation because it adds challenges or extra requirements that require the thinking out of the box innovations to solve”

(Participant 5, 2018)

What is actually standing out from these quotations is that the participants are stating that in there is a requirement to do things differently which requires providing services out of the norm, having to “think out of the box” or designing solutions out of the norm. All of these are driven by the customer orientation aspect of the performance targets. This requirement, that one does things beyond the ordinary way they do things, adopting new perspectives to how one perceives things, is what drives and results in the development of new capabilities and innovations that are radical in nature.

4.5.2. Theme 2: Target Structure

This factor relates to the structure and importance of performance targets.

“it comes back to how you enable your stuff to actually make that performance target so that it is realistic not only in the industry but also in your own organisation”

(Participant 2, 2018)

“if you build a car and a competitor has a car that is more fuel efficient yes it's a good idea to include it if it means you'd be more fuel-efficient even if you were a Volkswagen but if it the competitor builds big pickup trucks it may not be necessary for us to compete with that again that depends on the product it depends on the product and the situation”

(Participant 5, 2018)

“so if I look at your example that is very broad but if you break it down one engineer doing installations they would have to be a key account manager for Tukkies in order to understand them. Tukkies is massive there's an IT department and there are researchers and their research based is very diverse climatology, engineering, computer science all of those so to make one person responsible for that a from an engineer perspective for me in my view that doesn't make sense"

(Participant 3, 2018)

“that is probably the worst objective I have ever heard in my whole life because an objective has to be SMART, that is not specific, that is not measurable, it's not time bound, it's not achievable, you cannot achieve something that is not specific”

(Participant 6, 2018)

"so, assigning targets will be best done according to the role that the person is already doing"

(Participant 4, 2018)

"why we are considering the competition, because we want to just compete with them or to save money or bit of both"

(Participant 8, 2018)

Target structure reflects the overall characteristics and architecture of the targets regardless of whether the targets are customer or competitor oriented. The participants brought forth several characteristics of the targets which they felt were important, i.e. targets must be specific, measurable, attainable, necessary resources to meet the targets must be made available, targets must have a time frame. These are general and minimum characteristics that are necessary for both customer-oriented and competitor-oriented targets. The importance highlighted by participants on the structure of the targets is also supported by Locke and Latham (2002) who for example find that goal specificity reduces ambiguity about what they need to achieve, which was also an area of importance for participants as they raised the issue of focus. Ill-structured goals could result in the person assigned with the performance targets being defocused and there being confusion as to their role, this could be one of the unintended outcomes of goal setting (Ordonez et al., 2009). Another area of importance is the reasonableness or attainability of the targets where the targets becomes unfair to the person it is assigned to and this is unlikely to result in desired consequences.

4.5.3. Theme 3: Making Choices

This factor relates to the decision on the direction adopted by the participants on how to respond to the customer-oriented or competitor-oriented aspect of the performance target, i.e. would the challenge be met with existing skills and experiences or is it something that will be met with the acquisition of new skills in a new area.

"if you are established like we are you could get into capacity swaps with other providers and that would enable you to meet your target in an innovative way"

(Participant 10, 2018)

“I think it opens the door to a lot more interesting scenarios than just rolling out the network, options like partnering with the suppliers focusing on the areas where other suppliers have low presence, becoming more competitive than your competitors in an area by reducing your costs and stuff to actually roll things out”

(Participant 9, 2018)

The responses shown by participants 10 and 9 reflect a decision on how one would respond to competitor-oriented targets. What both these quotes show is a decision to exploit existing skills, whether that is based on cooperating with the competition as is shown by Participant 10 or seeking new market segments as is shown by Participant 9, the responses still entail the utilisation of existing skills and competences, therefore resulting in the development of exploitative capabilities.

“I would need to make sure that whatever is being transmitted over those links has been encrypted”

(Participant 10, 2018)

In the above quote what participant 10 is recommending is that in fulfilment of the target he would also implement encryption. This reflects a need to go beyond the current capabilities of network provisioning for which the organisation does not have skills and competencies. This is a decision that reflects a desire to go beyond the current skills in order to both meet the targets and also meet customer requirements that were initially not obvious but resulted from the customer-oriented nature of the targets.

4.5.4. Theme 4: Market Research

This theme relates to the acquisition and generation of competitor and customer intelligence.

“what have they addressed, what are they focused on, maybe that has to do with different areas, secondly to look at the infrastructure that they have in place, look at the topologies that they have for their networks”

(Participant 7, 2018)

“Obviously to leverage on their strengths and weaknesses, see where their weaknesses are so that I can capitalise on them, see where their strengths are so that I can be competitive with them”

(Participant 7, 2018)

“but then from a customer perspective you would spend a lot more time with your customers getting to know them, maybe conduct an interview/meeting where you find out all these details but you'll have to spend time with them to build a relationship with them where they volunteer that information”

(Participant 4, 2018)

“so definitely we need to understand our customers and their needs, and then according to that it influences our baseline targets, that says we need to do a certain project at a certain cost and a certain time”

(Participant 2, 2018)

What the participants are highlighting is the need and importance of customer and competitor intelligence as it informs the strategies of how one intends to achieve their performance targets in line with the market research. As an example, what Participant 7 points out is that knowledge of the competitor infrastructure plays an important role in deciding how he/she would go about achieving the assigned performance target, that could be using competitor infrastructure to provide connectivity or even choosing different routing of the link building an advantage where the competition is not present. The point is that market-oriented performance targets encourages market research that helps in making informed decisions on how targets can be achieved.

4.5.5. Theme 5: Financial performance

This theme relates to the overall organisational outcome of the structuring of performance targets from being either being customer or competitor oriented.

“so I would look at the competition and what it does but I would more Focus ease of use equivalent or more to differentiate myself from the competitor so yes there is a reason for the client to say I prefer to work with this system it could be better than the

competitors it could be a little bit inferior than the competitors but it is giving me this value that is what I want"

(Participant 10, 2018)

"we are uncontended and they are contended simple as that, no contention. Anything with ease of use or with any functionality that is better it should be such a way that we should always be ahead of the competitors so we need that as a benchmark first so that will come with something better"

(Participant 10, 2018)

"I will strengthen my quality at a high price because there are customers who do not mind to pay for premium (service). So now you'll have indirect competition and you will be able to retain customers"

Participant 1, 2018)

"There are a few things we need to do to ensure we deliver quicker than competitors"

(Participant 2)

"so you will turn to your upgrade to make sure that the things that differentiate you from your competitor, you do them better"

(Participant 5)

What the quotes above show is that the orientation of the performance targets points to a great extent to the building of competitive advantage in response to competitor strengths and weaknesses. This advantage comes in the form of developing existing skills to be more efficient, strategic positioning vis-à-vis competition, targeting market segments where the competition is strong. This all points to the development of a competitive advantage and the defence of a position beneficial to the organisation

The quotes below, on the other hand, relate to customer-oriented performance targets and what these targets point to is the improved financial performance of the organisation as a result of customer-oriented performance targets.

"The benefit of speaking to these customers is the possibility of those customers staying with the product and that product getting a bigger share of the market. As those

customers see that the product addresses their needs, their wants, you acquire a bigger market share. It increases the market"

(Participant 7, 2018)

"obviously the second target is better because of your return on the investment, you want it least 50% of that 300 km to be utilised you know which I'm assuming means you will cover more than the cost of that initial rollout which means you start making profit"

(Participant 8, 2018)

"will better roll it out smartly increasing the reach to catch a few extra customers"

(Participant 8, 2018)

"I can do what I normally do but now this target, this could be tons of extra business by just knowing who the customer is. Let's go beyond our core, like for instance I know he didn't ask for it but what I'm gonna put in a protected link"

(Participant 12, 2018)

"I'm gonna say listen here it's important that I achieve this route because of future business that's one reason that I would say irrespective you are getting some of the profiles is this the only profile or there's additional stuff. Other profile could have been potential of future business potential future business, I want to make sure that the current customer experience (is excellent), and I'm gonna put in the bells and braces"

(Participant 12, 2018)

Current and future financial performance seems to be a major theme when it comes to customer-oriented targets that this orientation enables one to go into markets or segments they may not have perceived earlier in anticipation of future business.

4.5.6. Theme 6: Organisational culture

"Where we introduce a new service, yes it is a risk but we do not see it as a risk we see it as being exploratory"

(Participant 3, 2018)

“If you look at that GNA, there’s the Europe to America link, I stand corrected but I think the next one after that is the South Africa to London, so we didn't wait for the other (network) rings and things to be in place to say now we will contribute”

(Participant 3, 2018)

“They would definitely not take an approach of saying let's try this thing and see where it goes and it's evident with things likes software defined networks”

(Participant 4, 2018)

“We wait until it is too late then we start wanting to do it”

(Participant 10, 2018)

“So we definitely reward it and we do it on a monthly basis”

(Participant 2, 2018)

“I actually feel that management is actually encouraging employees to figure out new ideas”

(Participant 5, 218)

These quotes reflect the impact of risk on all the areas of entrepreneurial orientation as is expected, i.e. proactiveness of the organisation in adopting new ways of doing things and technologies, the attitude towards innovative behaviour and the risk attitude.

4.5.7. Theme 7: Resource availability

“secondly that means we do not have enough resources to go out there and do whatever research”

(Participant 7, 2018)

“we are still growing as an organisation (Company Z) where we can't necessarily allocate resources specifically to do that”

(Participant 9, 2018)

“in a calculated way based on the availability of resources and time we do investigate and explore futuristic aspect to make sure that we can play in that space in the future”

(Participant 12, 2018)

“we have the fibre rollouts, we have Joburg metro ring design, we've got all of those kinds of things, they take precedence over doing R&D, doing new things”

(Participant 9, 2018)

What seems to be coming forth from the participants is that an important factor of entrepreneurial orientation is the availability of resources which impacts on the organisation’s ability to try new things and thereby the ability to learn new skills and capabilities.

4.6. SUMMARY OF RESEARCH DATA

The research data clearly shows the necessary and key areas for the development of exploitative and explorative capabilities as the desired outcome. Also, what the data shows is the importance of the target structure as being central in getting the desired outcome of market oriented performance targets.

CHAPTER 5: ANALYSIS AND DISCUSSION OF THE RESEARCH FINDINGS

5.1. INTRODUCTION

The main problem the researcher tried to address was based on the fact most people have performance targets that they need to meet as part of their work responsibilities. At the same time, how does an organisation or a company use the effort that goes towards the fulfilment of performance targets to also drive the development of innovative capabilities? The researcher could not find any literature that addresses this particular area of research and it is based on this gap that this research was done. Combining the literature on Market Orientation, Problem Solving theory, Goal Theory, the Resource-Based Theory and Dynamic Capabilities Theory, a set of propositions were made and this study aims to find out how the structuring of performance targets as either being customer-oriented or competitor-oriented influences the development of innovative capabilities.

This chapter begins by focusing on the research problem as defined in Chapter 1, then moves on to the analysis of the research findings from Chapter 4 with the implications for the research question and its sub-questions, which is finally related to the conceptual framework.

5.2. BACKGROUND

This study is based on the understanding that there seems to be a gap in literature on how organisations can use performance targets as a driver of innovative capabilities. This study takes advantage of existing research on market orientation that states that customer orientation has the effect of building explorative capabilities and competitor orientation the effect of building exploitative capabilities (Lisboa et al., 2011a; Lukas & Ferrell, 2000). On the other hand, problem–solving theory states that customer and market oriented performance targets will also have customer and competitor oriented solutions, however, customer orientation builds explorative capabilities and competitor orientation builds exploitative capabilities.

5.3. RESEARCH PROBLEM, QUESTION AND SUB-QUESTIONS

The problem routinely faced by organisations is that they need to innovate yet there are no mechanisms, that the researcher is aware of, that enable the organisation to directly build this innovative capability through purposeful action of employees as part of their daily activities. Granted building innovative capabilities is a complex problem and some may go as far as calling it a wicked problem. However, organisations still need to innovate and they need to build these innovative capabilities and at least try and incorporate this in the activities of their employees as directly as possible.

Whilst organisations struggle with the problem of building innovative capabilities, in a different field of research, Goal-Theory, what Epton et al. (2017), Locke & Latham (2002, 2006) found is that goal-setting provides purposeful, motivated and directed action towards goal attainment. Market-oriented performance targets (goals) provide this purposeful, motivated and directed action that organisations can use to build innovative capabilities. So, if it is possible to use market-oriented performance targets to build these innovative capabilities, then the research question for this study becomes: “How do market-oriented performance targets influence the development of innovative capabilities?” To answer this central question, it is necessary to answer the following three sub-questions.

5.3.1. Research Sub-Question 1: How do competitor-oriented performance targets influence the development of exploitative capabilities?

What came out of the literature and research interviews is that competitor-oriented performance targets are dependent on several areas, i.e. Market research, Target structure, Making choices, Capability development, and Competitive advantage.

Several respondents made it clear that the introduction of competitor orientation in performance targets will tend to introduce complexity in achieving the performance targets, thereby making the achievement of the performance targets harder, which was to be expected as it is in line with Jonassen (2000) and Simon's (1962) literature on the subject. Only one participant had a problem with the aspect of harder performance targets without the necessary compensation. The same participant however did not say he would work less hard if not compensated/incentivised which is in line with Epton et al. (2017) and Locke & Latham (2002) who said that difficult goals encourage one to work harder. What the respondents also said is that the

formulation of the targets is very important as it could easily result in the defocusing and blurring of the objectives, roles and responsibility in instances where the target's structure requires or encourages action beyond that person's role, resulting in problems as was also highlighted by Ordonez et al. (2009). What this meant is that how the target is formulated and the structure of the target is very important: the target should be focused and measurable. A key phrase that several participants used is that targets must be SMART, meaning Specific, Measurable, Achievable, Resourced and Time-bound. This aspect of performance target structure is very important because without proper structuring of the targets they are unlikely to elicit the kinds of responses expected (Ejdelind & Karlsson, 2014).

What also came out is that the competitor orientation of performance targets encourages research on the environment, both competitor research and industry research. This is also not surprising as Epton et al. (2017), Locke (1968) and Locke & Latham (2002) also stated that task complexity resulted in deliberate planning and discovery of target relevant information, i.e. industry and competitor relevant information. This market research was mainly to find out what are the competitor strengths and weaknesses, what is the competitor's position vis-à-vis the organisation one is in (Lukas & Ferrell, 2000). This market research also tended to have an influence on how the participant would go about achieving their target.

Another area that emerged from the interviews is that the market research that resulted meant that the participant now has options as to how to go about achieving their performance targets. These options ranged from total ignorance of the competitor strengths, weaknesses, products, service, etc., to a decision that one must be more efficient in achieving their targets perhaps because the competition does it quicker or perhaps cheaper, to a decision that perhaps the best way to achieve the target is to work with the competition as the competition already has resources in that particular area of interest. An unexpected option that opened up based on competitor research was co-opetition, i.e. co-operating with the competition based on their strengths and weaknesses and the organisation's strengths and weaknesses (Brandenburger, 1998).

It is shown by the responses received that competitor-oriented performance targets have the effect of encouraging intelligence gathering or conducting market research

on the competition (Lisboa et al., 2011b; Lukas & Ferrell, 2000). This market research, based on competitor-oriented performance targets, seems to focus on the strengths and weaknesses of the competition and the industry in general. The area of interest is mainly on benchmarking and comparing organisational strengths and weaknesses with those of the competition. This benchmarking encourages copying or imitation of the competition and efficiency improvements on existing skills and capabilities in order for example to be cheaper, faster, deliver earlier, etc.

The analysis of data shows that most actions taken to achieve the assigned performance targets are in the form of copying and implementing what the competition is doing, whether it be resource efficiency, process efficiency, functionality in the competition product, a service the competition is offering, etc. The key result of this imitation of the competition is the use and exploitation of existing skills and capabilities which mainly results in incremental innovations (Lukas & Ferrell, 2000). This is mainly because these incremental innovations are driven mainly by efficiency improvements from studying how the competitor does it. These improvements are incremental improvements on the existing capabilities of the organisation because they are based on the existing skills, knowledge and competences. This impact of competitor orientation on the performance targets is in line with Lukas and Ferrell's (2000) work on market orientation that competitor orientation has the effect of building exploitative capabilities and thereby incremental innovations. The analysis shows that the competitor orientation of performance targets does have an impact on the development of exploitative capabilities. This process occurs through the use of competitor intelligence which influences how the performance targets are achieved.

In summary, competitor-oriented performance targets through their structure necessitate solution strategies that take the competition into cognisance (Abeysuriya, 2008; Baer et al., 2013; Cartwright, 1973; D. K. Kim & El Khawand, 2007). This is done through intelligence gathering on both the industry on a macro scale and on the competition. The acquired intelligence informs the solution strategies which primarily are of the imitative or copying nature and are based on existing knowledge and skills. However, there are also instances where competitor intelligence results in solutions that are outside of the norm like cooperating with the competition. It is the actual implementation of the targets that innovative capabilities, in this instance exploitative capabilities as they are based on the utilisation and use of existing skills and

knowledge, are developed. What the research data and analysis also show is that this relationship between performance targets and the development of innovative capabilities is moderated by the organisational culture. Depending on the entrepreneurial orientation of the organisation, the prevailing culture can be one that encourages or discourages the development of exploitative capabilities.

An unexpected outcome of the competitor-oriented performance targets is the increased focus on building a competitive advantage over the competition, positioning oneself strategically in the industry and targeting certain market segments where the organisation can have an advantage over the competition. This was a positive outcome of competitor orientation as it forces one to think strategically how they can have advantage over their competition and how their own personal actions can influence that.

From a secondary innovation perspective, exploitative capabilities are can only be developed only after a functional understanding of the respective technology is acquired (Wu et al., 2009). Explorative capabilities in the secondary innovation process can only be developed only after the development of exploitative capabilities and conceptual understanding is acquired (Wu et al., 2009).

5.3.2. Research Sub-Question 2: How do customer-oriented performance targets influence the development of explorative capabilities?

The need for organisations to develop breakthrough and radical innovations cannot be overemphasised. However, organisations have limited tools on how they can develop the necessary explorative capabilities that would enable the development of radical innovations. What the current literature has shown, however, is that customer orientation results in the development of explorative capabilities (Lukas & Ferrell, 2000). The challenge is then how does the organisation continue with its business whilst encouraging the development of explorative capabilities. One of the answers according to Atuahene-Gima (2005) is to become market oriented as interfunctional coordination provides the necessary balance between exploitation and exploration.

The researcher, however, thinks that being market-oriented does not exactly translate into what the personnel in an organisation do every day, which is to achieve their assigned performance targets, where there are performance targets. This line of

thinking is based on work on Goal-theory and Problem Solving that goals guide behaviour and that a problem's structure influences its solution structure meaning that assigning market-oriented goals (thereby creating a "market-orientation" related problem) will result in a particular desired behaviour that would not occur for non-market oriented ones (Abeysuriya, 2008; Baer et al., 2013; Cartwright, 1973; Epton et al., 2017; D. K. Kim & El Khawand, 2007; Locke & Latham, 2002). This study brings the customer-orientation to the day-to-day activities of personnel by making customer orientation part of the performance targets by structuring performance targets to have a customer orientation aspect which is going to encourage this exploration of radical innovations and the development of explorative capabilities. This customer orientation cannot be too difficult to adopt as Participant 7 stated that "everyone has a customer", whether internal or external to the organisation, everyone has a customer. Even Participant 9 stated that this market orientation "completes the scenario", meaning that performance targets that are devoid of the competitor or customer orientation are incomplete.

The process of the development of the explorative capabilities is not too dissimilar to that of exploitative capabilities. The process starts with the development of the targets themselves, then the structure of the targets has an influence on the achievement of development of the capabilities as one Participant 6 stated that ill-structured targets are likely to result in defocus, lack of clarity on what is to be achieved, and they become unmeasurable. Participant 6 put is as: "that is probably the worst objective I have ever heard in my whole life because an objective has to be SMART". The structure of the targets has an important role to play as the rest of the process is dependent on the targets. The structure of the targets is very important because as Lyles (2014) puts it that incorrect target formulation could result in solving the wrong problem, developing targets that do not result in the development of innovative capabilities.

What the targets have shown is that properly structured, the party responsible for the performance targets is encouraged to research the relevant aspects of their customer(s) in relation to the performance targets (Epton et al., 2017; Locke & Latham, 2002). Properly constructed goals and performance targets encourage one to search for customer and competitor relevant knowledge which explains the strong showing in the research data of the need to acquire customer intelligence.

The market intelligence opens up options as to how one is to achieve the performance targets in line with the customer intelligence showing what pain points the customer experiences, how the achievement of the performance target impacts the customer, and what are the customer characteristics. As Participant 5 put it: “I think it is essential for anybody that works on a product, to deliver that product, to know what is the problem that is being solved, to understand the customer's problem that is being solved and not strictly giving a spec and you work against the spec and you do not know what the customer is trying to solve, you will not have a happy customer”. It is the customer intelligence that opens up options/choices how one can achieve their target. This customer intelligence impacts on the design and can in some circumstances result in the increased scope of the performance target.

The Making Choices theme was unexpected but it is also important as it is the point at which a decision is made how one intends to respond to customer intelligence in fulfilment of their performance targets. This is the point at which a decision is made on whether the response is to go for new ways of doing things or to go for the tried and tested.

After the design is the actual implementation of the solution or means of achieving the performance target. The participants tended to go beyond just the requirements of their performance targets. The additional customer intelligence made them recommend new ways of achieving their targets than mere provision of a link, solutions like mesh networks and encryption were encouraged. These were requirements that are beyond the current capabilities of the respective organisations, e.g. encryption services. These solutions meant, for implementation, that there was a need to learn about new technologies, new products and services, which meant the development of new and novel capabilities for the organisations. This however does not mean that current skills and competences were not used, only that customer-oriented performance targets resulted in the exploitation of current capabilities and, in addition to that, the exploration of new capabilities also occurs.

Customer-oriented performance targets through their structure necessitate solution strategies that take customer value creation into cognisance as part of the solution strategy, thereby changing the resultant solution strategies (Abeysuriya, 2008; Cartwright, 1973). This is done through intelligence gathering on the customer beyond

just the currently known characteristics of the customer and potential customers. The acquired customer intelligence results in the solution strategies that, as shown by the research data, are based on new knowledge, new skills and competences since they entail solutions that are not part of the current set of products and services of the organisation, e.g. encryption services. This results in the development of explorative capabilities. This, however, does not mean that all customer-oriented performance targets will result in the development of explorative capabilities and radical solutions; rather this means there is a higher propensity to look beyond the norm when performance targets are customer oriented. It is in the actual implementation of the targets that innovative capabilities are developed, in this instance explorative capabilities as they are based on the search and acquisition for new skills and knowledge. What the research data and analysis also show is that this relationship between performance targets and the development of innovative capabilities is moderated by the organisational culture. Depending on the entrepreneurial orientation of the organisation, the prevailing culture can be one that encourages or discourages the development of explorative capabilities.

5.3.3. Research Sub-Question 3: How does the entrepreneurial orientation of an organisation impact the relationship between performance targets and the development of innovative capabilities?

In line with the current literature on entrepreneurial orientation (Lumpkin & Dess, 1996), organisational culture featured strongly as a factor that impacted the entrepreneurial orientation of the organisation. The research showed that organisational culture majorly impacted the extent to which the organisation tended to encourage the adoption of new technologies and new ways of doing things (Lisboa et al., 2011a). This meant that an organisation that has a culture that encourages the adoption of new projects and technologies for which there are currently no customers is likely to encourage the development of explorative capabilities and if the culture discourages proactiveness you are also likely to see more support for the development of exploitative capabilities due to the lower risk attached with the use of existing skills and competences.

Organisational culture was also found to have a major impact on the innovative behaviour of people in an organisation. A culture that encourages innovative behaviour is also likely to support the development of explorative capabilities and vice versa.

Unsurprisingly risk attitude was found to also be majorly impacted by the organisational culture, this finding is also supported by Lumpkin and Dess (1996). Of the two organisations that participated in this research study, the participants in *Company Z* felt that they cannot be very proactive as they have limited resources and very low risk tolerance, whereas *Company X* has very high levels of proactiveness despite limited resources, with their attitude reflected in the words of Participant 3 who stated that “we accept the risk and we continue but we have a management strategy around it” which effectively meant this organisation has a culture of mitigating risk, not avoiding it.

A surprising finding that was not found in the reviewed literature relates to the impact of resource availability on proactiveness. Resource constraints, i.e. lack of resources, in this particular study tended to encourage the use of the tried and tested solutions and away from the trying new things and exploring new areas of interests and products. This does seem to be a strange outcome since start-up companies have very limited funding yet they are primarily the drivers of new technologies and innovations meaning they are very proactive despite the resource constraints, perhaps there could be other factors driving this response to resource constraints in *Company Z.* Another surprising finding was that the risk attitude of a parent company does not necessarily get adopted by the subsidiary company as was seen in the risk attitude of *Company X* (subsidiary) which is at most risk neutral versus *Company Y* (parent company) which is very risk averse. This could be explored in a different study to see if this is perhaps an anomaly.

This effectively means that entrepreneurial orientation has a moderating effect on the effectiveness of the customer and competitor oriented performance targets in the sense that the fact that a performance target is customer oriented does not mean that the party responsible for the fulfilment of that target will necessarily adopt solutions that will result in the exploration of the new and novel solutions thereby developing explorative capabilities, and vice versa, i.e. even if it does happen, it might well be muted.

What also becomes evident in the analysis of the data is that entrepreneurial orientation has a greater impact on the development of explorative capabilities than there would be on the exploitative capabilities. This assertion is made on the premise

that a conservative organisational culture would discourage the development of explorative capabilities but not the exploitative capabilities since there would be no need to radically change the way the organisation does things. In fact, a conservative organisational culture would encourage the development of exploitative capabilities.

5.3.4. Central Question: How do market-oriented performance targets influence the development of innovative capabilities?

With the sub-questions answered, it is now possible to answer the central question. What sub-question 1 shows is that competitor-oriented performance targets have the effect of developing exploitative capabilities. Sub-question 2 shows that customer-oriented performance targets, on the other hand, have the effect of developing explorative capabilities. Since explorative and exploitative capabilities are components of innovative capabilities, it can be concluded that since market-oriented performance targets have an influence on the development of explorative and exploitative capabilities, they have an influence on the development of innovative capabilities.

The manner in which the performance targets occurs is through the structuring of the targets. These targets encourage customer or competitor research, which results in solution strategies that are primarily based on the utilisation of new knowledge, skills and competences for customer-oriented performance targets and the utilisation of existing skills and competences for competitor-oriented targets. These performance targets result in the development of exploratory capabilities for customer oriented targets and the development exploitative capabilities for competitor oriented targets. These explorative and competitive capabilities are innovative capabilities meaning that customer-oriented and competitor-oriented performance targets result in the development of innovative capabilities. This process of development of innovative capabilities is however influenced by the organisation's entrepreneurial orientation through primarily organisational cultural appetite for and attitude towards the tried and tested, and through resource availability. This process is shown in Figure 3 below depicting the key components of the development of innovative capabilities.

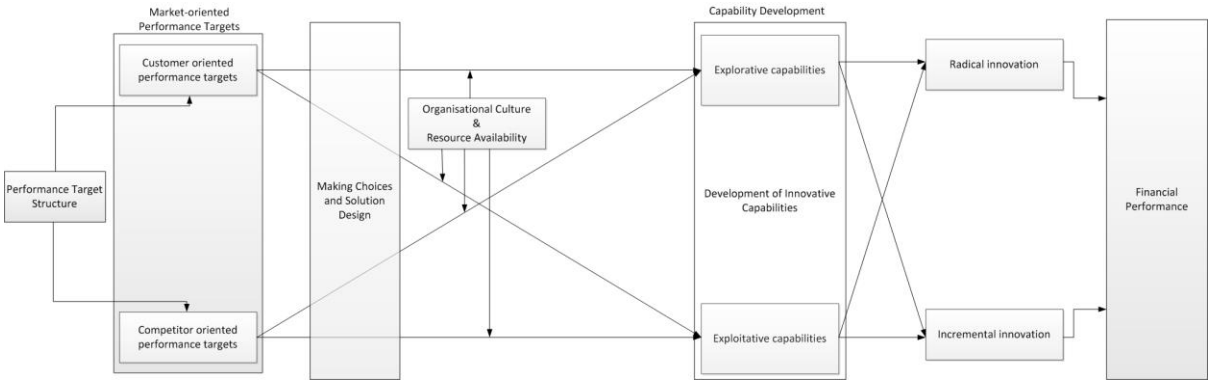

Figure 3: Updated Conceptual Framework

The main theories that influence the conceptual framework for this study are the Problem Solving Theory by Cartwright (1973) and Lukas and Ferrell's (2000) theory on the impact of market orientation on the development of innovative capabilities. The developed themes also reflect a slight update of the conceptual framework due to information that emerged from the research interviews and the developed themes.

The new areas on the conceptual framework show the following:

- The Target Structure is critical as it directly impacts on the effectiveness on the targets as they need to be specific, measurable, achievable/attainable, adequately resourced and time bound (SMART) as a bare minimum in order for the targets to be effective.
- The Organisation Culture and Resource Availability reflects how an organisation does things, i.e. the acceptable way of doing things in this organisation and this has an impact on the decisions and choices people make in their attempts to achieve their performance targets. It is unlikely that one will go against the accepted way in fulfilment of their targets, so this theme moderates the relationship between the targets and the development of innovative capabilities. Closely related to this theme is resource availability which also has the effect of influencing the decisions taken to achieve targets in environments of either abundance or scarcity.
- The Financial Performance area relates to the improved financial performance/position of the organisation, be it because of increased sales driven by new customer acquisitions, increased sales, or strategic positioning, differentiation of the organisation, etc.

What also came out of the study is the impact of market oriented performance targets on the development of adaptive and absorptive capabilities. Wang & Ahmed (2007) defined adaptive capability as the organisation's ability to recognise and take advantage of emerging market opportunities and absorptive capability as the absorption of new information, absorbing and innovatively responding to said information.

Based on the definition for adaptive capability, the study indicates that market-oriented performance targets have the effect of developing adaptive capabilities as some of the interview responses have shown that market-oriented performance targets have resulted in a need to reorient the organisational strategic position and at times target certain market segments in adapting to competitor information. This can be defined as market-oriented performance targets building the organisational capabilities to adapt to the changing environment. Similarly, market-oriented performance targets were found to develop absorptive capabilities due to the acquisition of customer and competitor intelligence, assimilating and analysing such intelligence and developing innovative strategies to achieve targets in light of said intelligence. Seeing that market-oriented performance targets have the effect of developing all the component factors of dynamic capabilities it can be concluded that these targets have a positive effect on the development of dynamic capabilities too.

5.4. SUMMARY OF THE DISCUSSION

What the analysis shows is that customer-oriented performance targets have the effect of building explorative capabilities for an organisation through the exploration and adoption of new ways of doing things in order to achieve assigned performance targets. This process, however, is dependent on the structure and quality of the target itself and could have the unintended consequence of defocusing the person assigned the target if not structured properly as was pointed out by Ordonez et al. (2009). The effectiveness of customer-oriented performance targets in building explorative capabilities is also dependent on the acquired customer intelligence to provide the necessary options for the explorative capability development.

The analysis also shows that competitor-oriented performance targets have the effect of building exploitative capabilities by encouraging the person assigned the target to look to the competition for comparisons and benchmarking which encourages

competitor copying and efficiency improvement solutions and the use of existing knowledge for the achievement of assigned performance targets. The effectiveness of competitor-oriented performance targets is also dependent on the quality of acquired competitor intelligence. The effect of organisational culture on the development of exploitative capabilities, on the other hand, is limited since a culture that is not receptive to new things would not encourage the development of exploitative capabilities. A culture that encourages and is accepting of new ways of doing things and the unknown cannot necessarily be assumed to have a negative impact on the development of exploitative capabilities; the research study did not provide any information contrary to that assertion.

The adoption of customer and competitor-oriented performance targets is also shown to have a positive impact on financial performance in the form of competitive advantage and improved financial impact.

To effectively use performance targets to build innovative capabilities, a close eye needs to be kept on the structure of the performance targets, customer and competitor intelligence must be made available, and organisational culture must be aligned to support the desired innovative capability desired, i.e. explorative or exploitative capability.

Market-oriented performance targets were also found to have a positive impact on the development of dynamic capabilities which is beyond the original expectations of this study, i.e. the positive impact on the development of innovative capabilities. Market-oriented performance targets were also found to have a positive impact on the other two component factors of dynamic capabilities which are absorptive capabilities and the adaptive capabilities, therefore it can be concluded that market-oriented performance targets have a positive impact on dynamic capabilities.

In summary, market-oriented performance targets are found to positively influence the development of innovative capabilities by encouraging the development of exploitative and explorative capabilities which are components of innovative capabilities. The relationship between market oriented performance targets is also found to be moderated by entrepreneurial orientation through the impact organisational culture and resource availability.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1. SUMMARY

This study commenced, in Chapter 1, with the presentation of the research question which is the exploration of how performance targets influence the development of innovative capabilities. The study further moved on to the literature review in Chapter 2 to show the relationships between performance targets, market orientation and innovative capabilities and entrepreneurial orientation.

In Chapter 3, the research methodology chapter, a qualitative study based on the interpretivist paradigm is adopted as this research aims to understand the 'how' of the relationship between performance targets and innovative capabilities. This chapter further elaborates how the data is collected and from whom.

Chapter 4 begins with the presentation of the key demographics of the research participants and then moves on to the presentation of the research data and the themes that emerged from the data.

Chapter 5 presents an analysis of the data and shows the linkages between the themes, the outcome of which is the acceptance that a relationship does exist between performance targets and innovative capabilities and that relationship is moderated by the entrepreneurial orientation of the organisation in question. The analysis further explains and shows how that relationship occurs through the updated conceptual framework. Lastly, answers are provided to the research question presented in Chapter 1 asking how performance targets influence the development of innovative capabilities.

This chapter, Chapter 6, presents the major findings of this study, key conclusions, what are implications of this study for the research community and the practitioner community, and recommendations for further research.

6.2. MAJOR FINDINGS

The major findings of the study are as follows:

- Customer-oriented performance targets have the effect of building both exploitative and explorative capabilities in an organisation,

- Competitor-oriented performance targets have the effect of building exploitative capabilities in an organisation;
- Performance target design and structure needs careful consideration in order to have effective targets with the desired outcome;
- Organisational culture has an impact on the effectiveness of customer-oriented and competitor-oriented performance targets in a sense that it could encourage either risk taking or risk avoidance and therefore the development of explorative or exploitative capabilities;
- Resource availability has an influence of the effectiveness of customer oriented and competitor oriented performance targets meaning that resource constrained organisations are unlikely to take a course of action that encourage explorative capabilities higher uncertainty of outcomes and risk;
- Entrepreneurial orientation has a moderating effect on the relationship between market oriented performance targets and the development of innovative capabilities; and
- Market-oriented performance targets have a positive influence on the development of dynamic capabilities by positively influencing the development of the component factors of dynamic capabilities, i.e. innovative capabilities, adaptive capabilities and absorptive capabilities.

6.3. KEY CONCLUSIONS OF THE STUDY

At the start of this research study several research questions were asked and propositions made. Now that the research has been completed, answers are provided for the research questions and responses to the research propositions:

6.3.1. Research Questions

The central question for this research is: How do performance targets influence the development of innovative capabilities? To answer this central research question, it was necessary to first answer the following sub-questions to the central question:

- *Sub-Question 1:* How do competitor-oriented performance targets influence the development of exploitative capabilities?

  Answer: Competitor-oriented performance targets encourage the acquisition and generation of industry and competitor intelligence which in turn informs the

strategies that one employs in the fulfilment of their performance targets. This intelligence has been found to encourage benchmarking and copying of how the competition does things and that has resulted in solutions that are primarily efficiency based and are imitations of how the competition does it. The outcome of this copying and looking to competitors are solution strategies for achieving performance targets that are primarily based on exploitation of existing skills and knowledge resulting in the development of exploitative capabilities. This relationship was also found to be moderated by the entrepreneurial orientation of the organisation in question.

- *Sub-Question 2:* How do customer-oriented performance targets influence the development of explorative capabilities?

  Answer: Customer-oriented performance targets encourage the acquisition and generation of customer intelligence which in turn informs the strategies that one employs in the fulfilment of their performance targets. This has been found to encourage solutions that are based on new knowledge and skills thereby resulting in the development of explorative capabilities. This relationship was also found to be strongly moderated by the entrepreneurial orientation of the organisation in question.

- *Sub-Question 3:* How does the entrepreneurial orientation of an organisation impact the relationship between performance targets and the development of innovative capabilities?

  *Answer***:** Organisational culture as an element/factor of entrepreneurial orientation was found to have an impact on proactiveness, innovative behaviour, and risk attitude. This meant that organisational culture has an impact on the organisational propensity to adopt new ways of doing things, utilisation of new knowledge and skills versus the current knowledge and skills, i.e. the tried and tested. This meant that organisational culture has an impact on the development of explorative capabilities which are based on new knowledge and skills, and organisational culture also has an impact on the development of exploitative capabilities which are based on existing knowledge and skills.

  Another aspect of entrepreneurial orientation that was found to have an impact on the development of innovative capabilities is the resource availability.

Resource constraints were found to have an impact on the extent to which an organisation tended to adopt new ways of doing things. This is because the new carries higher risk of failure than the tried and tested. Therefore, resource availability impacts proactiveness and therefore development of explorative capabilities.

Consequently, entrepreneurial orientation impacts the development of innovative capabilities through organisational culture and resource availability which have an impact on the organisation's propensity to adopt new ways of doing things versus the tried and tested. So entrepreneurial orientation moderates this relationship through organisational culture and resource availability.

With the analysis and acceptance of the preceding sub-questions, a response to the central question is provided as below:

- *Central Question:* How do market-oriented performance targets influence the development of innovative capabilities?
  Answer: Orientation of performance targets as being either customer-oriented or competitor-oriented results in the development of explorative or exploitative capabilities, respectively. Since exploitative and explorative capabilities are components of innovative capabilities, it can be concluded that performance targets influence the development of innovative capabilities, as explained above. This relationship between targets and innovative capabilities is also moderated by entrepreneurial orientation through the latter's influence on the development of exploitative and explorative capabilities.

6.3.2. Research Propositions

The following propositions were made:

- *Proposition 1:* Competitor-oriented performance targets have the effect of improving the exploitative capabilities of an organisation.
  Response: The proposition that performance targets based on competitor comparisons have the effect of improving the exploitative capabilities of an organisation was found to be true. The process of building exploitative capabilities was found to occur and is encouraged by comparison and benchmarking with the competition, resulting in solutions to the performance targets that took advantage

of competitor strengths and weaknesses, and the types of solutions were primarily imitative of what the competition is doing and mostly based on efficiency improvements and time-saving, which emphasised the exploitation of existing skills, knowledge and competences, which leads to the development of exploitative capabilities. It should be noted also that competitor-oriented performance targets can also result in explorative capabilities as was seen in the recommendation for solutions that recommended working with the competition, i.e. simultaneously co-operating and competing with the competition whilst at the same time competing, which is new and requires new skills and competences to manage effectively

- *Proposition 2:* Customer-oriented performance targets have the effect of improving the explorative capabilities of an organisation.

  Response: The proposition that performance targets based on increased customer value have the effect of improving explorative capabilities was also found to be true. This process of building explorative capabilities occurred through the use of customer-oriented performance targets. These customer-oriented performance targets encouraged the party assigned the targets to look at the target relevant customer intelligence and had the effect of changing the solution for the assigned performance targets. This customer intelligence had the effect of encouraging solutions that required the acquisition of new skills, knowledge and competences beyond the current set of skills. This results in the development of new skills and competences and therefore the development of explorative capabilities.

- *Proposition 3:* The manner in which performance targets are achieved is influenced by the entrepreneurial orientation of the organisation.

  Response: The proposition that the manner in which performance targets are achieved is influenced by the entrepreneurial orientation of the organisation was also found to be true. Competitor-oriented performance targets encouraged solutions that exploited existing skills and knowledge, and customer-oriented performance targets encouraged solutions that required the exploration of new knowledge and solutions. Entrepreneurial orientation was found, via organisational culture, to have an impact on the solution structure in a manner that low levels of entrepreneurial orientation would discourage the adoption of

solutions that are based on new knowledge, skills, competences and technology whereas higher entrepreneurial orientation would encourage solutions based on new knowledge, skills, competences and technology.

- *Proposition 4:* Market-oriented performance targets have a positive influence on the development of innovative capabilities.

  Response: The proposition that the orientation of performance targets has an influence on the development of innovative capabilities was also found to be true. This proposition is accepted based on the acceptance of the earlier propositions that customer-oriented and competitor-oriented performance targets have the effect of improving explorative and exploitative capabilities, respectively, which are also components of innovative capabilities.

  Market-oriented performance targets were found to point to a positive impact on the development of absorptive and adaptive capabilities. Innovative, absorptive and adaptive capabilities are component factors of dynamic capabilities (Wang & Ahmed, 2007) and market oriented performance were found to have a positive impact on all of them, it can be concluded that market-oriented performance targets have an overall positive impact on the development of dynamic capabilities.

6.4. KEY IMPLICATIONS OF THE STUDY

What this study does is open a new area of research and practical application for the development of innovative capabilities through the use of market-oriented performance targets. Firstly, what the researcher realised during data collection was that there is a misconception that performance targets have the effect of reducing innovation. However, as the interviews continued participants mindset changed as they started to think about the impact of performance targets in the development of innovative capabilities based on their own responses. The key implication of this study is that it shows the relationship between performance targets, market orientation and innovative capabilities.

The key implication for the practicing community is that this research enables business practitioners to do their analysis regarding their innovative capabilities and decide which of these capabilities they need to improve, i.e. incremental innovation or radical

innovation by developing their exploitative or explorative innovative capabilities (Atuahene-Gima, 2005). That knowledge enables them to decide whether they want to primarily develop and improve explorative or exploitative capabilities and they can set that by primarily orienting their performance targets as being either customer-oriented or competitor-oriented, respectively. This study enables practitioners to bring the development of innovative capabilities to the daily activities of the organisation without necessarily deviating from what need to be done day-to-day.

6.5. RECOMMENDATIONS FOR BUSINESS / STAKEHOLDERS

Businesses that wish to develop either explorative or exploitative capabilities can now use performance targets to develop either capabilities based on their needs by structuring targets as being either customer or competitor oriented.

As one participant in the study stated “everyone has a customer”, this is applicable to the public sector even where there may be no competition. Customer-oriented performance targets were found to encourage the “out of the box” kind of thinking that creates customer value regardless whether in the public or private sector. So, it would be recommended even for the public/government sector to explore the effectiveness of customer-oriented performance targets.

Competitor and customer intelligence featured strongly in the research interviews. Organisations that wish to adopt market-oriented performance targets must have support processes for the acquisition of this customer and competitor intelligence.

Target structure is an area that still requires extensive research, in the context of market-oriented performance targets. Any organisation that wants to adopt this process for the development of market-oriented performance targets needs to plan very carefully around the structure of targets.

It should be noted however that this study’s recommendations are not a substitute for R&D driven innovations but are a complement, the importance of R&D cannot be overemphasised, e.g. Bayer and BASF are now over a century old and they maintain their competitive advantage due to their extensive basic R&D investments (Freeman, 1995). Despite limited resources, even organisations in emerging economies should invest in R&D whenever they can, albeit guided by market orientation.

6.6. SUGGESTIONS FOR FUTURE RESEARCH

The following topics are potentially fruitful areas for future research to extend the findings of this study:

- An experimental study can be done to see the actual results of customer-oriented and competitor-oriented performance targets on several organisations, to see how well innovative capabilities are developed, what competitive and strategic advantages develop, and the financial impact thereof.
- Target structure was initially out of scope for this study. However, data analysis has shown this to be a very important area that resulted in a dedicated theme in this study. Further research needs to be done on the structure of targets in the context of market-oriented performance targets.
- A study can be done to find out to what extent resource availability impacts the entrepreneurial orientation of an organisation.
- A study can be done to better understand the process of Making Choices highlighted in the study. How does is it occur? What are the drivers of that process?
- What would be the effect of applying performance targets that are both customer-oriented and competitor-oriented simultaneously?
- Although this study did not find any support for the view that a proactive organisational culture has a negative impact on the development of exploitative capabilities; that however does not mean that there isn't one. A new study could look into this area.
- An area that perhaps did come out strongly is that of the negative effects of goal setting, other than indirectly through the structure of goals. (Ordonez et al., 2009) found goals setting to have a number of negative effects on behaviour by encouraging those assigned goals to act in undesired ways.

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APPENDICES

APPENDIX A: Interview Protocol and Questions

Interview Protocol Project: The influence of performance targets on the development of innovative capabilities	
Time of interview:	
Date:	
Place:	
Interviewer:	
Interviewee:	
Position of interviewee:	
NB	The interview is anonymous and transcripts strictly confidential Data will not be used for anything other than the research Request permission to record interview

Questions:

1. Contrast two performance targets:

Let's assume you are a manager responsible for network rollout and planning (coming from the perspective that you are from a telco organisation like DFA, FibreCo, Liquid, etc.).

Target 1: Increase network reach to 85% in all major metros by the end of financial year 2018.

Target 2: Increase network reach to 85% in all major metros whilst leveraging competitor strengths and weaknesses by the end of financial year 2018.

Or

Assuming you are a product designer, contrast the following performance targets:

Target 1: Develop an upgrade of our software to improve ease of use and implement the upgrade by 31 Oct 2018.

Target 2: Develop an upgrade of our software to be much easier to use compared to the competitor's software and implement the upgrade by 31 Oct 2018.

2. Provide a network solution for this client as follows: Target 1: 10Gbps link between Pretoria and Nelspruit with 99.999% availability. Target 2: 10Gbps link between Pretoria and Nelspruit with 99.999% availability, however, the client is very security conscious. Anytime the network is down the client loses R50,000 per hour. The client hosts and runs a crypto exchange. Contrast how you would go about achieving the first target vs. the second target. What would you do differently? Which of the two targets encourages the exploration of different solutions? Why is that? Which of the targets encourages innovation? Why is that?
3. To what extent do you need to share any customer and competitor information in your organisation? Why do you need to do that? How does that benefit your organisation?
4. What is your organisation's attitude towards risk (aversion, neutral or seeking)? Why do you say that?
5. What is your organisation's attitude towards innovative behaviour? Encourage, discourage, resources, etc.
6. How would you define your organisational attitude towards anticipated future and emerging products and services (i.e. wait and see approach or proactive)?
Please thank the participant!!!

APPENDIX B: Request to conduct an Interview

University of the Witwatersrand
1 Jan Smuts Avenue
Braamfontein
Johannesburg
2000

16 November 2017

Company X
Pretoria
0001

Dear Sir/Madam,

RE: Request to Conduct Research Interviews with Company X Personnel

My name is Thokozani Eric Khwela and I am a Masters student in Innovation Studies at Wits University in Johannesburg. As part of my studies I have to undertake a research project, and I am investigating "**The influence of performance targets on the development of innovative capabilities"**. The aim of this research project is to explore how the structure of performance targets influences the way people go about achieving said performance targets and how that impacts the development of innovative capabilities.

As part of this project I would like to request permission to approach some of your organisational personnel for an invitation to take part in a research interview. Each interview will take around 90 minutes and I have a target of 5 interviews with your organisation.

The collected data will be kept safe, treated with utmost confidentiality and used for academic purposes only. The research findings will be shared with your organisation and your organisational participation will be kept confidential.

I would greatly appreciate your consent at this request.

Yours sincerely,
Thokozani Eric Khwela

Researcher: Thokozani Eric Khwela, 1801532@students.wits.ac.za
Supervisor: Dr. Mjumo Mzyece, mjumo.mzyece2@wits.ac.za

APPENDIX C: Participant Information Sheet

University of the Witwatersrand
1 Jan Smuts Avenue
Braamfontein
Johannesburg
2000

Dear Sir/Madam,

My name is Thokozani Eric Khwela and I am a Masters student in Innovation Studies at Wits University in Johannesburg. As part of my studies I have to undertake a research project, and I am investigating **The influence of performance targets on the development of innovative capabilities.** The aim of this research project is to explore how the structure of performance targets influences the way people go about achieving said performance targets and how that impacts the development of innovative capabilities.

As part of this project I would like to invite you to take part in an interview. This activity will involve a single interview and will take around 90 minutes. With your permission, I would also like to record the interview using a digital device.

You will not receive any direct benefits from participating in this study, and there are no disadvantages or penalties for not participating. You may withdraw at any time or not answer any question if you do not want to. The interview will be completely confidential and anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation, in my final research report. If you experience any distress or discomfort, we will stop the interview or resume another time.

If you have any questions afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you upon request. If you have any queries, concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee, telephone +27(0)11 717 1408, email hrec-medical.researchoffice@wits.ac.za/ Shaun.Schoeman@wits.ac.za

Yours sincerely,
Thokozani Eric Khwela

Researcher: Thokozani Eric Khwela, 1801532@students.wits.ac.za
Supervisor: Dr. Mjumo Mzyece, mjumo.mzyece2@wits.ac.za

APPENDIX D: Participant consent form



University of the Witwatersrand
1 Jan Smuts Avenue
Braamfontein
Johannesburg
2000

The influence of performance targets on the development of innovative capabilities
Thokozani Eric Khwela

I …….. agree to participate in this research project. The research has been explained to me and I understand what my participation will involve.

I agree that my participation will remain anonymous	YES	NO	(please circle)
I agree that the researcher may use anonymous quotes in his research report	YES	NO	
I agree that the interview may be audio recorded	YES	NO	
I agree that the information I provide may be used anonymously by other researchers following this study	YES	NO	

…… (signature)

…… (name of participant)

…… (date)