# Examining how organizational identity influences innovative capacity

A multiple qualitative case study that examines the effect of organizational identity towards innovative capacity across different sectors



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#### **Abstract**

It is increasingly becoming more important for organizations to engage in innovations in order to remain competitive in their competitive environment. Literature states that organizational identity can influence the capacity of an organization to engage in innovations. Through abductive research in the healthcare and IT-consultancy sectors, this research found that organizational identity can either work enhancing or constraining regarding the innovative capacity of organizations. The results highlight a differentiating effect of organizational identity across sectors. Organizational identity in the healthcare sector functions as an constraining factor when it comes to engaging in both radical and incremental innovations. This research argues that limited organizational flexibility is the reason for this. On the contrary, in the IT-consultancy sector organizational identity has an enhancing effect on both radical as incremental innovations. The identity of organizations in this sector create flexibility and with this facilitate the engagement in innovations.

**Key words:** Organizational identity, organizational flexibility, innovative capacity, healthcare and IT-consultancy sector.

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# 1. Introduction

Recently, the research field on competitive dynamics has developed strongly (Chen & Miller, 2012). Competitive dynamics is the study of interfirm rivalry based on specific competitive actions and reactions, their strategic and organizational contexts, and their drivers and consequences (Baum & Korn, 1996). According to Chen & Miller (2012), the strengthening of this field is due to the fact that competitive dynamics offers a fine-grained approach, to understanding what specific organizations do when they compete with rivals to create a competitive advantage. This competitive behaviour of organizations consists out of a series of actions and reactions among competitors and can create a destructive pattern that sabotages rival's profits and even threatens the survival of some firms (Ketchen, Snow, & Hoover, 2004). In current competitive dynamics literature, scholars believe that actions are aimed at appropriating value from rivals (Chen & Miller, 2012). Organizations aim to achieve this through the medium of disrupting, outcompeting or dethroning competitors (Ferrier, Smith, & Grimm, 1999), or to increase their own market shares (Chen & MacMillan, 1992). These actions can be defined as, competitive actions, and are externally directed, observable competitive moves carried out to improve the organizations relative competitive position (Smith, Ferrier & Ndofor, 2005). A competitive action can consist out of many characteristics (Smith, Grimm, Gannon & Chen, 1991), however, this research focusses on the innovative capacity of organizations that could result in an improved competitive position in the market.

In this research, innovative capacity is defined as the engagement of an organization in innovation. That is, the generation, acceptance, and implementation of new processes, products, or ideas within the organization (Koc & Ceylan, 2017; Ferreira, Coelho, & Moutinho, 2020). Innovative capacity is classified into various categories such as exploitative and exploratory innovation (Jansen, Van Den Bosch, & Volberda, 2006), managerial innovation, process innovation and product innovation (Lee, Leong, Hew, & Ooi, 2013); innovation speed and innovation quality (Le & Lei, 2018a, b), and radical innovation and incremental innovation (Souto, 2015). This study is focused on researching radical and incremental innovations, as they are recognized as two critical aspects of innovative capacity, since they reflect two different degrees of novelty of innovations (Nguyen Lei, Vu, & Le, 2018).

Engaging in innovations is increasingly becoming important as there is a continuous growth of competition in every industry. This is due to organizations strategic policy directions, an increased number of competitors in industries and clients' requests for improved processes and products (Ndebele, 2021). As a result, organizations need to be innovative in order to remain competitive and deliver improved products that meet the ever-increasing high client's standards (Ndebele, 2021). This is possible as innovations can provide tremendous opportunities for firm growth and renewal (Tripsas, 2009). Organizations that innovate are able to improve their performance, remain competitive and can deliver value for their stakeholders (Karabulut, 2015). However, the challenges of capitalizing on these opportunities are significant (Gans, 2016). According to Karabulut (2015), it is important for organizational performance to engage in innovations. The exponential increase in the literature, which addresses the role, and the nature of innovation shows the growing importance of the subject (Koc & Ceylan, 2007). As a result of this increase in literature, many antecedents of innovations have been identified. Georgsdottir and Getz (2004), identified organizational flexibility as the antecedent that leads to innovative capacity. The reason for this is that flexible organizations are more effective when adapting to changes and, innovations in this research are defined as changes (Yang, Nguyen & Le, 2018). Literature suggests that the innovative capacity of an organization is affected by the identity of an organization (Anthony & Tripsas, 2016).

Organizational identity can be defined as the characteristics of an organization that are central, enduring, and distinctive (Albert & Whetten, 1985). It both constrains and aligns behaviour, enabling actors to act through their shared understandings of who the firm is (Ashforth, Roger, & Corley, 2011). Moreover, organizational identity informs managers' strategic choices, as they filter the competitive context through their own beliefs about the organization, and so align actions with identity (Chen & Miller, 2012). Organizational identity can be a source of competitive advantage, as managers draw on these unique characteristics to differentiate themselves from competitors in their competitive environment (Fiol, 2001). Using organizational identity as a key perceptual filter and motivational force that affects innovations, differences in innovative capacities could be explained, and advice could be provided to enhance innovative capacity. Organizational identity has prevalently been considered to be enduring and stable (Albert & Whetten, 1985). However, more recent research suggests that organizational identity is enduring yet flexible and that it can be changed and strengthened (Ravasi & Schultz, 2006). Organizational identity and

organizational change are interrelated in the sense that organizational identity serves as a guideline for deciding which changes to engage in (Lin, 2004).

However, despite recent advances in the field of competitive dynamics, much remains unclear about how and why organizations pursue certain strategic moves (Robinson & Chiang, 2002). In this research, the strategic moves that are examined can be seen as the engagement of organizations in innovations, as this impacts the competitive position (Karabulut, 2015). Organizational identity has been defined as a perceptual filter that guides organizations when it comes to deciding on strategic moves. Examining how organizational identity influences innovative capacity could provide additional knowledge to the existing literature. The generated knowledge could provide useful insights in understanding how and why organizations pursue certain strategic actions.

In previous research, competitive dynamics scholars often viewed competitive behaviour from a rational, objective and cognitive perspective (Chen & MacMillan, 1992; Kilduff, 2019). These studies neglect the concept of individual perception on the micro-level (Chen & Miller, 2012). Individual human perceptions are at the heart of micro approaches in organizational behaviour where perceptual biases are the focus of studies of decision making and choice (Ariely, 2008). Just as individual perceptions lead to actions that are concentrated to influence corporate behaviour, so do more macro concepts such as organizational identity, identity domains, and corporate interaction histories shape the perceptions of individual decision makers functioning within organizations (Le Breton-Miller, Miller & Lester, 2011).

Currently, in the field of competitive dynamics, the linkage between micro-level actors and macro-level actors remains insufficiently investigated and therefore offers a lot fertile possibilities for integration (Chen & Miller, 2012). The actors in this research, are defined as the employees of organizations. The micro-level constitutes out of the perceptions, personalities, intentions, and motivations of individual actors and lead to competitive actions in organizations (Chen & Miller, 2012). Competitive actions may also be a product of human talents, committees, task forces, departments, and top management teams and therefore can be seen as macro-level (Chen & Miller, 2012). This research is focussed on the micro-perspective in order to get a better understanding of how and why organizations engage in certain innovations. The micro-level in this research can be seen as how employees perceive the organizational identity. The macro-level concepts that can are identified are organizational identity and innovative capacity.

This paper aims to contribute to the field of competitive dynamics by examining how organizational identity influences innovative capacity. As previously described, innovative capacity relates to the engagement in two types of innovations, namely: radical innovations and incremental innovations. This research is not only focused on examining how these central concepts influence each other, but also examine whether these effects differentiate across sectors. In order to examine this the following research question has been formulated: "How does organizational identity influence innovative capacity across different sectors?"

In order to formulate a satisfying answer to the research question, a qualitative multiple case study is conducted, focused on multiple organizations who operate in either the healthcare sector or the IT-consultancy sector. This is done with the aim of being able to indicate whether there is a differentiating effect of identity on innovative capacity across sectors. To research this, an abductive line of reasoning is adopted in this research. The data in this study is collected from publicly available sources, such as 'about us' pages on websites. In order to gather more in-depth information, eight semi-structured interviews were conducted with employees that posses over the hierarchical power to decide on the kind of innovations an organization should implement.

Answering this research question is theoretically relevant, as much is unclear about how and why organizations pursue certain strategic moves (Robinson & Chiang, 2002). According to Lin (2004), organizational identity serves as a perceptual guideline for employees when deciding which innovations they want to engage in. In current literature, organizational flexibility is seen as antecedent of innovative capacity. This research aims to examine how organizational identity impacts flexibility and through this innovative capacity.

Adding new information to the existing body of knowledge would be practically relevant as organizational identity shapes the perception of employees when deciding whether they should engage in innovations. Therefore, it would be valuable to have more insight in this relationship as according to literature, organizational identity is a concept that can be formed and changed over time and the unique characteristics of the organizational identity can result in a competitive advantage (Dhalla, 2007). The increase of knowledge in this area can potentially help the understand the relationship between organizational identity and innovative capacity. Organizations would be able to use this knowledge to create identities that would enable them to engage in innovations. This effect has been examined across

multiple sectors, to get a better understanding of the enabling and, constraining factors that organizational identity has on innovative capacity.

In order to answer the research question, chapter two will provide a thorough description of the key concepts and their expected relationship. Including previous research regarding organizational identity, innovations and their underlying relationship. To conclude chapter two a conceptual framework is constructed in order to visually support the purpose of the research. Chapter three will provide an explanation and motivation regarding the methodological decisions that were made during the research. In chapter four, the gathered data is analysed in a structured and consistent manner. To conclude this research, chapter five, discussion and conclusion were drafted to summarize the key findings that the research provided and the implications that these findings could have for further research.

# 2. Theoretical background

The second chapter focusses on the theoretical background, which provides an understanding of the theories and concepts that are relevant for this study. It provides a theoretical foundation for the conduct of the study. First, the theoretical concept of organizational identity is elaborated. Subsequently, innovative capacity is defined as a competitive action and with that the antecedents have been identified. To conclude, the theoretical background the relationship between organizational identity and innovative capacity is illustrated

### 2.1 Organizational Identity

According to Gioia, Patvardhan, Hamilton, and Corley (2013) organizational identity represents those features of an organization that in the eyes of its members are central to the organizations character or self-image, make the organization distinctive from other similar organizations, and are viewed as having continuity over time. In other words, organizational identity refers to the situated perceptions of "who we are" as an organization (Albert & Whetten, 1985). These perceptions establish a cognitive lens that provides a basis for sensemaking (Cornelissen, Haslam, & Balmer, 2007), and therefore, influence how employees attend to, interpret and respond to changes (Livengood & Reger, 2010).

Literature suggests that organizational identity is a key intangible aspect of any institution. As it not only affects how an organization defines itself, but also how strategic issues and problems, including the definition of firm capabilities and resources, are defined and resolved (Dutton, 1997). According to Albert and Whetten (1985), organizational identity consists out

of the *central*, *enduring* and *distinctive* (CED) characteristics of an organization (Albert & Whetten, 1985). It both constrains and aligns behaviour, enabling actors to act through their shared understandings of who the firm is (Ashforth et al., 2011).

Characteristics are defined as central when they include important and essential features of the organization (Albert & Whetten, 1985). These are considered as the organization's core programs, policies and procedures, and reflect its highest values of the organization (Whetten, 2006). Organizational identity is enduring when it is stable and durable over time (Gioia et al., 2013). However, it is not seen as a fixed element of organizational identity. The enduring element refers to identity as "having continuity over time" (Albert & Whetten, 1985, p. 265). Distinctive characteristics refer to the ability of the identity to distinguish the organization from others (Albert & Whetten, 1985). Identity should provide a specific classification that identifies the organization as recognizably different from others and similar to organizations of the same class (Albert & Whetten, 1985). The enduring nature of identity might be the most discussed and debated aspect of the literature on organizational identity. Despite the CED characterization and thus the assumption that organizational identity does not easily change, different researchers have shown that organizational identity does change (Gioia, Schultz & Corley, 2000; Ravasi & Schultz, 2006; Dhalla, 2007). Based on the empirical evidence that identity has a dynamic and flexible component, organizations could strategically change their identity in order to constrain or enhance change. Gioia et al., (2000) agree with the idea that the concept of organizational identity must be fluid, it allows the organization to prevent stagnation in a competitive environment that inevitably changes. Other literature suggests that organizational identity should not be fluid or static, but inherently sticky (Scott & Lane, 2000). They claim that identity should change, however, not constantly. According to Scott and Lane (2000), organizational identity should only be changed if the needs of key stakeholders change.

The definition of organizational identity refers to the situated perceptions of "who we are" as an organization (Albert & Whetten, 1985). The CED components are elaborated and provide the building blocks for "who we are" on the organizational level, the macro-level. Actors at micro-level perceive the organizational identity in their own way due to perceptual biases (Ariely, 2008). Le Breton-Miller et al., (2011) suggest, that organizational identity influences perceptions at the micro-level and, this affects decision making regarding competitive actions. These concentrated actions at micro-level influence corporate behaviour, the macro-level (Le Breton-Miller et al., 2011). Given that organizational identity is a socially

constructed phenomenon (Ashforth & Mael, 1996), it is not surprising that individuals located in different levels of an organization's hierarchy might have different perceptions about what is central and distinctive about the organization (Corley, 2004). Corley (2004) conceptualised that there indeed is a difference in perception of organizational identity between the multiple hierarchical levels in an organization.

The top of the hierarchy is more likely to see organizational identity in relation to the organization's strategy and purpose, they are more concerned with the perceptions of stakeholders from the external environment. Accordingly, top managers are more likely to see organizational identity as something that needs to be aligned with the demands and constraints placed on the organization by the changing external environment. This approach to seeing and managing organizational identity creates flexibility to help the organization adapt and survive in its competitive environment (Corley, 2004).

In contrast, in the lower levels of the hierarchy, perceptions of organizational identity shifted to more of a cultural perspective, where answers to the question 'who are we as an organization?' are answered with statements about values and beliefs (Hatch & Schultz, 2002). As a result, employees lower in the hierarchy perceive organizational identity as being more stable and harder to change, and thus are less likely to be influenced by changes in the external environment (Corley, 2004).

Based on this literature it can be concluded that, organizational identity influences how members perceive the physical, social and political environment within the organization (Dutton & Dukerich, 1991). These perceptions establish a cognitive lens that enacts as a guidepost for behaviour and decision making (Kogut & Zander, 1996; Cornelissen et al., 2007). Perceptions of organizational identity are particularly salient and influential when external events require organizations to make fundamental changes (Nag, Corley, & Gioia, 2007). Therefore, it is likely that organizational identity influences innovative capacity. Although the extensive literature, the potential implications of organizational identity regarding the engagement in innovations remains underdeveloped (Kogut & Zander, 1996).

## 2.2 Competitive Actions

Competitive action is the central construct and a key distinguishing feature of competitive dynamics research (Chen & Miller, 2012). Competitive actions can be defined as a specific and detectable competitive move, such as a price cut or a new product introduction initiated by an organization, to defend or improve its relative competitive position (Smith et al., 1991).

This research adopts the definition of (Smith et al., 1991), but focusses on the facet of introducing new ideas, products, and processes into organizations in order to influence the competitive position, otherwise known as innovative capacity (Koc & Ceylan, 2017).

Current markets are more and more dynamic and fast changing. Furthermore, as competition increases due to globalization and more dynamic markets the nature of the market has changed drastically (D'Aveni, Dagnino, & Smith, 2010). There is a continuous growth of competition in every industry due to organizations strategic policy directions, an increased number of competitors in the industries and client's requests for improved processes and products (Ndebele, 2021). Increased dynamic competition and market volatility pressures organizations to engage in innovations in order to remain competitive within the markets (Chen & MacMillan, 1992). Engaging in innovations is supposed to yield higher revenues, increase market share and expand the organization, which, in turn positively affects an organizations performance (Tripsas, 2009; Yannopoulos, 2011; Karabulut, 2015). Therefore, the engagement of organizations in innovations can be seen as a competitive move and will be elaborated in the next paragraph.

# 2.3 Innovative capacity

Engaging in innovations is becoming increasingly important as there is a continuous growth of competition in every industry due to organization's strategic policy directions, an increased number of competitors in the industries and clients' requests for improved processes and products (Ndebele, 2021). For organizations to remain competitive, they need to be innovative and deliver improved products that meet the ever-increasing standards of customers (Ndebele, 2021). Organizations that innovate are believed to be able to improve their performance, remain competitive and deliver value to their stakeholders (Karabulut, 2015). This could be explained as innovations are able to provide tremendous opportunities for firm growth and renewal (Tripsas, 2009). However, the challenges of capitalizing on these opportunities are significant. The exponential increase in the literature that address the role and-, the nature of innovation, show the growing importance of the subject (Koc & Ceylan, 2007). As a result, innovation is a widely studied subject (Agarwal & Brem, 2012), and for that reason, there are many definitions of the term innovation available. Koc and Ceylan (2017) define innovation as, the introduction of new processes, products, or ideas in the organization. It refers to the ability of an organization to continuously transform knowledge and ideas into new products, processes, and systems for the benefit of the firm and its stakeholders (Lawson and Samson, 2001). In other words, innovation is a process that is

focussed on turning opportunities into practical use to create value (Tidd, Bessant & Pavitt, 1997). The effective deployment of innovation has been widely recognized in recent years as a means of building sustainable competitive advantage and thereby enhancing organizational performance. (Koc & Ceylan, 2017). Therefore, the organizational capacity to innovate is among the most important factors that impact business performance (Hogan & Coote, 2014)

Based on literature, it could be concluded that the engagement in innovations is of high importance for the success on an organization (Gans, 2016). Mendoza-Silva (2020) underlines that, the concept of innovation capacity has been approached from multiple perspectives and can be considered a multi-faceted construct (Saunila, 2014). As a result, many researchers have aimed to identify the antecedents of innovative capacity in order for organizations to stimulate innovative capacity (Mendoza-Silva, 2020). At this moment, due to different perspectives and definitions in the study of innovative capacity, there have been mixed conclusions (Samson, Gloet & Singh, 2017). Previous studies have identified that some of the determinants of innovative capacity are, strategic alignment (Liu, 2009), knowledge management (Lin, 2007), internal collaboration (Weber & Heidenreich, 2018), organizational culture (Çakar & Erturk, 2010) and top management commitment (Koc & Ceylan, 2007).

This research, however, adopts the views of Georgsdottir and Getz (2004). They claim that organizational flexibility is an antecedent for innovative capacity. Flexible organizations are more effective when adapting to changes and, innovations in this research are defined as changes (Yang et al., 2018). When organizations are flexible, they increase their innovative capacity as this allows organizations to choose different alternatives to satisfy their customers on a sustainable basis, so that this will provide a basis for the survival (Banbury and Mitchell, 1995).

Organizational aspects that are identified in literature as antecedents of innovative capacity and used throughout this research are: organizational structures and cognitive frames of employees. First, organizations should create a flexible organizational structure, this way organizations are able to create more control in a constantly changing environment. According to Subramanian and Nilakanta (1996), decentralized and informal structures facilitate innovations. Chen and Cheng (2012), support this claim and state that decision speed is key when engaging in innovations. Organizations which have a high degree of

centralization and formalization have lower decision speed, and are therefore limited when aiming to engage in innovations (Chen & Cheng, 2012)

In addition, this research defines flexibility of cognitive frames as an antecedent of innovative capacity. Cognitive frames are interpretive lenses that shape employees' perceptions of their environment and their responses (Eggers & Kaplan, 2013). When making an adoption decision, employees consider the potential value of an innovation, through cognitively framing the innovation in terms of its relevance to the organization. (Raffaelli, Glynn, & Tushman, 2019). A contracted cognitive frame is one that narrows the employee's ability to consider innovation options by holding closely to its existing trajectory (Raffaelli et al., 2019). In order to increase innovative capacity, employees should adopt flexible frames to avoid excluding valuable innovations for their organization. This research adopts the cognitive lens of organizational identity. Organizational identity refers to the situated perceptions of "who we are" as an organization (Albert & Whetten, 1985). These perceptions establish a cognitive lens that provides a basis for sense-making (Cornelissen, Haslam, & Balmer, 2007), and therefore, influence how employees attend to, interpret and respond to changes (Livengood & Reger, 2010).

Besides the relevance and antecedents of innovation, literature also identifies multiple classifications of innovations This study is focused on researching radical and incremental innovations as they are recognized as two critical aspects of an organization's innovative capacity. Nguyen et., (2018) claim that because they reflect two different degrees of novelty of innovations and therefore different degrees of flexibility are required to successfully engage in them.

Leifer, O'connor, and Rice (2001) describe radical innovation as a product, process or service with either unprecedented performance features or familiar features that offer significant improvements in performance or cost that transform existing markets or create new ones. In other words, this type of innovation breaks with previous structures, procedures, activities and products in an organization (Martínez-Ros & Orfila-Sintes, 2009). A radical innovation, then, is an innovation with a high degree of novelty, which breaks with what existed previously and is the result of non-obvious paths or ideas. Consequently, a radical innovation involves great challenges and opportunities as more flexibility is required to engage in them (Teece, 2010).

In contrast, incremental innovation is an innovation with a low degree of novelty, as well as less risk and costs than radical innovations (Martínez-Ros & Orfila-Sintes, 2009), though with considerably less potential for positive impact on firm performance. Thereby, incremental innovation does not break with previous products, processes or organizational methods, because it is a significant improvement of previous products, processes or organizational methods (Martínez-Ros & Orfila-Sintes, 2009), as this carries a lower degree of novelty.

# 2.4 The relationship between organizational identity and innovative capacity

By its very nature, innovating is about exploring new terrain (Antony & Tripsas, 2016). Organizations search across boundaries (Rosenkopf & Nerkar, 2001) and absorb external knowledge, adapting to and creating novel technologies and practices (Cohen & Levinthal, 1990). Thus, at its core, innovation is about new things. In contrast, organizational identity is rooted in coherence and endurance (Albert and Whetten, 1985). While recent work has considered organizational identity as more emergent and subject to evolution and change, change is not easy (Fiol, 2001). This results in a fundamental tension between organizational identity and innovation. While innovation is about change, organizational identity is about stability and the difficulty of change. In order for organizations to remain competitive in their external environment, they need to be innovative and, deliver improved products that meet the ever-increasing high client's standards (Ndebele, 2021). Anthony and Tripsas (2016) have examined the relationship and concluded that organizational identity influences the direction of the innovative activities of organizations. Despite the relevance of the topic, the relationship between organizational identity and innovative capacity remains understudied in the literature (Anthony & Tripsas, 2016). This research is focused on the effect of organizational identity on two aspects of an antecedent of innovative capacity. These aspects are organizational structure and cognitive frames.

Literature suggests that organizational identity influences organizational structure (Clark, Gioia, Ketchen, & Thomas, 2010) and that structure impacts innovative capacity (Subramanian & Nilakanta, 1996). Organizational structure can be seen as a *central* characteristic of the organization as it reflects the core programs, policies and procedures of the organization (Whetten, 2006). This study considers that the speed of organizational decisions stem from organizational structure, and therefore affects the organizational flexibility. According to Chen and Chang (2012), organizational structures should have a low degree of centralization and formalization in order to increase innovative capacity. When

organizations have a high degree of centralization, they have reduced decision speed. Decision speed is an important factor regarding innovative capacity, as it increases the organizational flexibility (Chen & Chang, 2012).

In order to facilitate radical innovative capacity, it is believed that organizations should adopt a decentralized structure. The reason for this is that the engagement in radical innovations compared to incremental innovations requires more organizational flexibility (Teece, 2010). Radical innovations are changes of a great nature and therefore require a high degree of organizational flexibility. On the contrary, incremental innovations also require organizational flexibility. These changes, however, are of a smaller nature and are more in line with the current trajectory of the organization and therefore, requires a lower degree of organizational flexibility to engage in them.

In addition, this research is focused on the micro-perceptions of employees regarding the macro-concept, organizational identity and how these perceptions affect innovative capacity. Organizational identity functions as a cognitive frame that provides a basis for sense-making (Cornelissen et al., 2007). Cognitive frames are interpretive lenses that shape employees' perceptions of their environment and their responses (Eggers & Kaplan, 2013). These cognitive frames also influence innovative capacity, as employees consider the potential value of an innovation through cognitively framing the innovation in terms of its relevance to the organization (Raffaelli et al., 2019). Employees located in different levels of an organization's hierarchy might have different perceptions about the cognitive frame, organizational identity (Corley, 2004). Corley (2004) conceptualised that there indeed is a difference in perception of the cognitive frame organizational identity between the multiple hierarchical levels in an organization.

At the higher hierarchal levels, the cognitive frame of organizational identity is perceived as something that needs to be aligned with the demands and constraints placed on the organization by the external environment (Corley, 2004). This approach to seeing and managing organizational identity results in the adoption of a more flexible cognitive frame. Adopting flexible frames is important as it avoids the exclusion of innovations that could be of value for the organization. Therefore, innovative capacity, both radical and incremental, is positively influenced when employees adopt a flexible cognitive frame of organizational identity.

On the contrary, it is believed that at the lower hierarchal level, perceptions of organizational identity shift to more of a cultural perspective, where answers to the question 'who are we as an organization?' are answered with statements about values and beliefs (Hatch & Schultz, 2002). As a result, employees lower in the hierarchy tend to think of identity as being more stable and harder to change (Corley, 2004). These employees have a contracted cognitive frame of organizational identity, this negatively affects the radical innovative capacity as it narrows the employees' ability to consider innovation options by holding closely to its existing trajectory (Raffaelli et al., 2019). Hence, radical innovations are perceived as identity threats and lead to employee resistance and represent an important mechanism by which innovative projects may fail to gain momentum within an organisation (Kavanagh, Perkmann, & Phillips, 2021). Incremental innovative capacity is less affected by employees which have a contracted frame of organizational identity. This is because these innovations do not break with previous products, processes or organizational methods, because it is defined as a significant improvement of previous products, processes or organizational methods (Martínez-Ros & Orfila-Sintes, 2009).

# 3. Methodology

This chapter discusses the methodology that is used in order to formulate an answer to the formulated research question: "How does organizational identity influence innovative capacity across different sectors?"

This chapter includes the research methodology that has been applied to execute this qualitative research, first the design of the research has been elaborated. The research design describes the qualitative method that is used throughout the study and the motivation behind this decision. In the following paragraph the process of collecting data has been described, indicating of which sample and selection of methods. Paragraph 3 is aimed to provide an explanation regarding the data analysis procedure. Paragraph 4 addresses the research ethics is addressed. To conclude, this chapter provides the conceptual framework that is used to visually support this research.

### 3.1 Research Design

Qualitative research aims to create a deeper understanding of social phenomena investigated compared to quantitative research (Fossey, Harvey, McDermott & Davidson 2002). This is

appropriate for this research because this research is aimed to create a deeper understanding between organizational identity and innovative capacity. Qualitative research makes it possible to dive deep into topics and get insights in perceptions and motivations (Bleijenbergh, 2015). This research is aimed at understanding how individuals perceive organizational identity; therefore, a qualitative method was chosen. This decision was made as the purpose of this study is not intended to prove anything, but it is intended to be able to develop an in-depth understanding about the complex relationship between the different central concepts and their dimensions. To achieve this, according to Doorewaard, Kil, and van de Ven (2015), it is best to choose a qualitative research approach. A qualitative study makes it possible to understand the underlying relationships between the dimensions of the key concepts of this research. Organizational identity is about "who we are" as an organization (Albert & Whetten, 1985). As introduced in the introduction, this is a concept that is constructed at macro-level, but it is perceived by individuals within the organization, the micro-level. In order to create insight in how organizational identity affects innovative capacity, an organizations capacity to engage in the introduction of new processes, products, or ideas within the organization (Koc & Ceylan, 2017). It is necessary to create understanding in how the employees of an organization perceive the identity of their organization.

Furthermore, a multiple case study approach is adopted to formulate a satisfying answer to the research question. Creswell (2013, p. 97) defines a case study as a method that "explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information... and reports a case description and case themes". In a multiple case study, multiple cases are investigated to understand the differences and similarities between the cases (Baxter & Jack, 2008). This research examines multiple cases as the aim of the research is to understand how organizational identity affects innovative across sectors. This method defines a case to explore a setting to understand it and to discover the 'how' and 'why' questions of a system being examined (Noor, 2008). To gain the most valuable answer on the research question, the results of both researched sectors are compared with each other. In addition, this research is focussed on how individual employees perceive organizational identity. A case study makes it possible to discover phenomena at the participant layer of analysis, the individual employees (Stake, 1995). This was done by using multiple cases in each sector to be able to compare the perception of organizational identity. According to Yin (2003), multiple case studies are suited to demonstrate contrasting or similar results between cases

Another important decision related to the research method is the decision between inductive and deductive research. To explain the decision that has been made for this research the two different concepts will first be explained. According to Cypress, (2019, p. 267)." "Inductive research, strives to develop a new theory of how a certain phenomenon works by trying to find patterns and relationships within the data, while deductive research tries to test whether a certain assumption or theory is right or wrong." This research is not situated on one of these two extremes but is rather located somewhere on the tipping point between them. Therefore, this research adopts an abductive approach. This is because, the researcher encounters empirical phenomena that cannot be explained by the existing range of theories (Myers, 2019). However, it requires existing theories in qualitative data analysis and the relationship between methodology and theory generation (Timmermans & Tavory, 2012). In current literature, the relationship between organizational identity and innovative capacity remains under looked (Anthony & Tripsas, 2016). However, this research aims to further explore this relationship trough organizational flexibility. Literature provides theories that explain the relationships between identity and flexibility and, flexibility and innovative capacity.

### 3.2 Data collection and research context

In order to create understanding, in how organizational identity influences innovative capacity across different sectors. This research is executed on the basis of document analysis and interviews. Document analysis is an efficient and effective way of gathering data because documents are manageable and practical resources (Bowen, 2009). In this research, documents were used to create understanding of the identities of the organizations that were incorporated in this research. The documents that were used for this are the "about us" pages on the websites of the organizations. However, this research was focussed on the role of individual perceptions of identity and how this influences innovative capacity. In order to create insight in these perceptions, eight semi-structured interviews have been executed.

In a semi-structured interview, the format is partly determined prior to the interview, this provides a clear structure and a certain safety net for the interview (Bleijenberg, 2015). Furthermore, there is room for asking follow-up questions to get a deeper understanding of a certain phenomenon (Bleijenbergh, 2015). Next to that, different respondents are asked more or less the same questions which improves generalizability within the phenomenon (Blijenbergh, 2015). A questionnaire (Appendix 1) based on the formulated topic list

(Appendix 2) was used throughout the interviews The topic list is based on the operationalization of the central concepts in Chapter 2, the theoretical background.

In order to develop a comprehensive understanding of phenomena, triangulation can be used (Patton, 1999). In qualitative research, this is usually done through the use of multiple methods or data sources. More specifically, data source triangulation involves the collection of data from different types of people to gain multiple perspectives and validation of data (Triangulation, 2014). In this study, data source triangulation is first accomplished by applying the information gathered of "about us" pages to ask follow up questions in the semi-structured interview. Through the combination of data sources more rich information could be gathered conducting the interviews. Second, data source triangulation is accomplished in multiple ways. Interviews were conducted within two different sectors and, within sectors different employees were interviewed.

#### 3.3 Research context

To be able to answer the research question data has been collected throughout two different sectors. The organizations that were examined were either active in the healthcare sector or the IT-consultancy sector.

The healthcare sector consists out of all providers of care that are focused on cure or long-term care and nursing (Centraal Bureau voor de Statistiek, 2020). This sector has to deal with multiple challenges due the developments in the labour market and the aging society. Over the past decade, the proportion of people aged sixty-five and over in the Netherlands has increased from over 15 percent to almost 20 percent. People are getting older and staying vital for longer while there is an increasing shortage of personnel (Centraal Bureau voor de Statistiek, 2020). According to (Kennisplein Zorg voor Beter, 2022), organizations in healthcare need to be innovative to deal with these challenges to produce creative solutions. Organization X is an organization that is active in the healthcare sector. It is a mid-ranged sized healthcare organization that is located in north and central Limburg, a province in the Netherlands.

Consulting organizations can be defined as, organizations that provide expertise to a third party for a fee, the service may involve advice or the implementation of advice. Consulting organizations can relate to any branch of business. However, this research is focused on consulting organizations in information technology (IT). Technology is of great importance in society as it creates efficiency through innovations, and this results in an increase in

welfare (Ministerie van Economische Zaken, Landbouw en Innovatie, 2022). Organizations B, C, D, E, F, G, and H are all active in the IT-consultancy sector. These organizations aim to incorporate innovative technological solutions in their own organizations and in organizations of their customers. Each of these organizations provide services in their own niche segment within the IT-consultancy market.

Both sectors are inherently different from each other as they have contrasting views on the creation of value. Therefore, it would be interesting to examine whether organizational identity influences innovative capacity in a consistent manner. This research is aimed at understanding how organizational identity influences innovative capacity across sectors. Respondents 1, 2 and 3 are employed in the healthcare sector while respondents 4, 5, 6, 7 and 8 are active it the IT-consultancy sector. The selection criteria used for respondents is straight forward. Respondents need be employed in the organization so that their perception of identity can be researched. In table 1 an overview is provided that shows relevant information regarding the interviews.

Table 1

Overview of the interviews

Name	Sector	Location	Function
Respondent 1	Healthcare	Face to face	Manager
Respondent 2	Healthcare	Face to face	Manager
Respondent 3	Healthcare	Face to face	Director
Respondent 4	IT-Consultancy	Online video	Founder/
		call	CEO
Respondent 5	IT-Consultancy	Telephone	Founder/
			Consultant
Respondent 6	IT-Consultancy	Online video	Founder/
		call	Consultant
Respondent 7	IT-Consultancy	Online video	Manager
		call	

Respondent 8	IT-Consultancy	Telephone	Manager/
			Consultant

# 3.4 Data analysis

After conducting the interviews, transcripts of the recordings were made. Transcriptions are in Dutch since the interviews were conducted in Dutch. This also contributed to maintaining the original meaning of the answers given by the respondents. The transcriptions contained the essence of the answers, this was done to simplify the process, pauses and hesitations are not incorporated into the transcripts. However, as every spoken word is transcribed, to ensure that there is no loss of essential, relevant data. In order to structurally code the gathered data, ATLAS.ti was used. According to Creswell (2013, p.156), "Coding is the process of analysing qualitative text data by taking them apart to see what they yield before putting the data back together in a meaningful way." Each semi-structured interview is studied, and each relevant sentence and paragraph was coded (Saldaña, 2021).

First, the secondary data was coded to create insight in the organizational identity of the organizations. This was done based on the operationalization of the central concept, organizational identity (Appendix 2). This research, aimed to create understanding in how organizational identity influences innovative capacity. Organizational identity in this research is defined as a perceptual filter and therefore employees could have different perceptions of identity.

Furthermore, in order to create insight in how employees perceive identity the semi-structured have been coded using the identical operationalization of organizational identity (Appendix 2). This research adopted organizational flexibility as the antecedent of innovative capacity and organizational identity as antecedent of organizational flexibility. To identify the underlying relationships between the central concepts labels were used in the coding process. The labels that have been applied throughout the coding process are based on the dimensions of the operationalization of the central concepts (Appendix 2, 3 and 4). This coding method made it possible to create a structured overview of the most important quotes regarding the dimensions and their underlying relationships. Based on the gathered quotes for each dimension, a general summary could be made. To conclude the data analysis, the quotes that stood out the most were incorporated in chapter 4 to support the general findings from the research.

#### 3.5 Research ethics

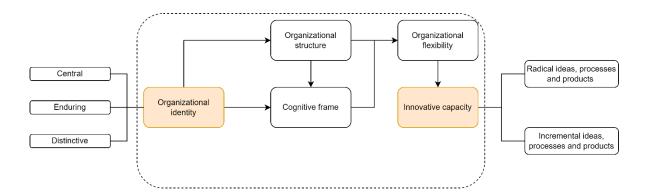
In this study, personalized data is gathered using semi-structured interviews. Therefore, it is important to discuss ethical considerations made by the researcher. In this section, there will be an elaboration on research ethics. Smith (2003) formulated five principles for research ethics, and these are used to set the ethical boundaries for this study. These principles consist out of frankly discussing intellectual property, being conscious of multiple roles, following informed-consent rules, respecting confidentially and privacy, and tapping into ethics resources. First, the intellectual property will be discussed by applying the guidelines set up by American Psychological Association (APA) version 7. Second, each interviewee participated voluntarily in this research. Third, before every interview, the interviewee is informed about the purpose of the study and limits of confidentiality. Fourth, the confidentiality and privacy of the respondents will be respected by anonymising the names of the interviewees. For the organization itself, a an alias will be used to be able to guarantee anonymity. After the interviews, each interviewee was asked if they wanted to receive a copy of the transcript. To conclude, when conducting this research, ethical resources were consulted to assess whether it was ethically appropriate to ask certain questions during the interviews.

## 3.5 Conceptual framework

Figure 1 provides visual support regarding the conceptual framework that has been used throughout this research

Figure 1:

Conceptual framework



## 4. Results

In this chapter, organizational identity is described based on data regarding the CED components of organizational identity. The enduring aspect of organizational identity has been addressed last in each paragraph as this contained the most relevant information. In paragraph two, the innovative capacities across sectors are disclosed, in which a contrast has been made between radical and incremental innovative capacity. To conclude this chapter, the results that show the link between organizational identity and innovative capacity are presented. In order to provide consistency with the rest of the chapter, this has also been done for both sectors to analyse whether this effect differentiates.

## 4.1 Organizational identities

### **Identity in the Healthcare sector**

In order to get an understanding of the organizational identity in the healthcare sector, the respondents 1, 2 and 3, employees of healthcare organization X were asked questions to describe "who we are" as an organization.

First, the respondents were asked questions to describe how they perceive the *central* characteristics of the organization. Overall, the data suggest that the respondents 1, 2 and 3 have a consistent perception regarding the *central* characteristics, those that represent the highest values of the organization. Data suggests that respondents 1, 2 and 3 perceive their organization as an organization that aims to help people in elderly care, so that they are able to continue to live independently as much as possible. But try to add value by making every day special for those who need help, meaning, providing them to get the support and help they need to be able to live their lives as usual. This is a *central* characteristic throughout the whole organization as the name of organization X means "first of all", "in the first rank", "in the first place". With this, it is made clear that organization X puts their client first. The following quotes represent that providing care for clients is indeed a *central* characteristic of the organization.

Respondent 1: "It is our aim is to enable older people to continue to live as independent as possible, but at the same time to make every day special for those people who need care. That means that they get the support and help they need to live their lives."

Respondent 2: "We are not here to make our organization big, we are here to provide our clients with good quality care in the region that they live in."

In order to get a better picture of "who we are" the respondents were asked what the core programs of the organization are that help them to achieve their goal. Data suggests that the organization puts their clients needs first through the concept of healthcare entrepreneurs with the supporting knowledge and resources of the mother organization. Besides externally combining efforts, organization X also helps their clients internally, in their own residences if possible. The following quote of respondent 1 illustrates how the organizations aims to realize their *central* characteristics.

Respondent 1: "People increasingly want to continue living in their own village, if possible, even if they need care. In order to realize this wish for the clients, we came up with the healthcare entrepreneur's concept. These healthcare entrepreneurs are their own bosses but lean on the facilities that organization X has, especially in the area of quality of care, but also on the whole back office."

Respondents 1, 2 and 3 describe the healthcare entrepreneurs' concept as a new way in working in the sector. Aligned with the theory, this can be indicated a radical innovation. This way of working allows organization X to distinct themselves from their competitors in the market and can therefore be seen as a *distinctive* characteristic. Respondents 2 and 3 illustrate this with the following quotes.

Respondent 2: "We are one of the only healthcare organizations that integrated this way of work in our business model. What we are doing now is just adding a unique segment, the small-scaled 24/7 care of clients in their own district."

Respondent 3: "Every organization thinks of itself as having something distinctive. On the fringe of where we have something different is particularly the healthcare entrepreneurship concept".

Furthermore, data suggests consistency among perceptions of the *central* and *distinctive* organizational characteristics among respondents 1, 2 and 3. However, when asked about the *enduring* aspect of the organizational identity, the respondents provided the following information. Organization X is operational in the healthcare sector and is mainly focussed on the elderly care. Organizations in this sector have to change the way the operate in order to anticipate and overcome the demographic trend of the ageing society. In addition, the healthcare sector is already struggling, as there is a shortage of personnel in periods and predictions are that this will only increase in the coming years. Data indicates that respondents 1, 2 and 3, who are active in the higher hierarchal levels of the organization

acknowledge that the organization needs to change. Results indicate that change is required in order to increase efficiency to be able to overcome the challenges presented by the external environment. However, the respondents emphasize that they want these changes so that the organization can keep providing value for their clients in the future. Data suggests that respondents in the higher hierarchal level perceive organizational identity as flexible. But, within the guidelines of identity to align with the *central* characteristics of the organizations. Respondents 1, 2 and 3 support this with the following quotes.

Respondent 1: "Because of the shortage on the labour market and also because of the evergrowing demand for care, as a result of people getting older and older, it is necessary to innovate and digitize. So, the position of IT within a healthcare institution is changing completely. It is changing from a supportive department that carries out tasks for people who ask for them, to a department that plays a prominent role in the healthcare landscape and is actually part of the healthcare process."

Respondent 2: "So now, in the summer period for example, we actually can hardly provide the necessary care. That is going to be harder and harder to deliver because staff are not available. So, you have to come up with creative solutions to solve problems."

Respondent 3: "Then I also looked at the demographics, you can predict very little, but demographics can. CBS has the figures that in twenty years there will be so many elderly people, those figures are facts. There are so many elderly people arriving now that we have to change the way we do business."

On the contrary, data indicates that employees that function at the lower hierarchal levels are not so much interested in adapting to the changing external environment. They seem to be more interested in the keeping things the way they are. Results indicate that their perception of identity is of a more *enduring* nature. Care employees are interested in actually taking care of clients, as that is their reason for working in this sector. Results suggest that employees in the lower hierarchal level are against changes that improve efficiency as they perceive the creation of value through personal focus and do not strive for efficiency. To support this the following quotes have been adopted in this research.

Respondent 1: "Care employees think, that in order to provide care they always have to be there themselves. But it is imperative that these people come to understand that changes are necessary in order to continue delivering care in the future."

Respondent 2: "The employees that provide care to our clients are not able to look into the future, they only want to take care of clients."

Respondent 3: "From the other side, you have to deal with the classic mindset from people in healthcare. Who say, this change just cannot happen because the way we do it now is the best."

As a result, differentiating perceptions regarding the *enduring* aspect of organizational identity can be identified. Results indicate that employees at lower hierarchal levels are mainly focussed on the here and now and taking care of clients. By doing this, they constrain the organization in preparing for the challenges presented. Nevertheless, within organization X, a lot has changed during the last years, the healthcare entrepreneurs' concept was introduced within the organization and provided opportunities to grow for the organization. Nonetheless, data suggests that it is not as swell as it seems. When asked to describe "who we are" as an organization the respondents also produced similar and more negative attributes of the organization and the healthcare sector in general. The internal organization is described as a risk-averse organizational that has the agility of an oil tanker. Respondents 2 and 3 support this and the following quotes are used to illustrate this.

Respondent 2: "Our organization is really a drama, internally. These kinds of concerns are system organizations, and those systems are killing, you can hardly change them."

Respondent 3: "If you do something new in a large organization then the immunity system of the organization is literally like: here comes a bacterium, and the immunity system thinks everything that is new must be destroyed and killed."

Respondent 3: "Then you really have to distinguish between healthcare institutions and commercial companies. Look, healthcare institutions are generally risk averse. There's relatively little entrepreneurship in them, and we're not allowed to make a profit."

To conclude, respondents 1, 2 and 3 had a consistent perception of the *central* and *distinctive* aspects of the identity of organization X. Data indicates, that the organization indeed puts their customers first and their policy is aimed to create maximum value for their clients. However, results indicate, that due to complex organizational structure and different adoptions of organizational identity as cognitive frame, the *enduring* aspect is interpreted different across hierarchal levels. This leads to risk-averse attitudes at the lower hierarchical

levels and as a result, opportunities to increase efficiency remain unutilized. Table 2 provides an overview of the perceptions of organizational identity across the organization.

 Table 2

 Cognitive frames of organizational identity across hierarchal levels in the healthcare sector

	Lower hierarchal level	Higher hierarchal level
Central	Create value for clients	Create value for clients
Enduring	Stable and focussed on here and now	Flexible but within guidelines of the identity
Distinctive	Healthcare entrepreneurs	Healthcare entrepreneurs

# Identity in the consulting-IT sector

To create insight in how identities are perceived in consulting-IT sector, respondents 4, 5, 6, 7 and 8, which are employed in these sectors, were asked to describe "who we are" based on the CED components of organizational identity. First, questions were asked to create insight in the perception of the *central* characteristics. Results indicate that these organizations operate in their own specific segment in this rather large market. Nevertheless, data indicates that, the *central* characteristics that reflect the highest values of the organizations were very similar across the organizations in this sector. Organizations in this field of work are all about creating maximum value for their customers and society. In order to facilitate this as best as possible, organizations strive for organizational flexibility, to prevent ruling out valuable innovative lanes that could be beneficial for the creation of value. The quotes of respondents 5, 6 and 7 are used to illustrate this.

Respondent 5: "We are a consulting firm that helps organizations prepare themselves for the future. However, we only help companies that have the same values as us, companies with great socially responsible purposes."

Respondent 6: "we bring a lot of innovation to the work. We see ourselves somewhat as the ultimate educator, internally for our own employees and externally when we advice

customers. This way we are able to create value internally for our employees and, through this we are able to create value for our customers."

Respondent 7: "Central to our organization is still, largely innovation in combination with social awareness."

To realize the highest values of the organization, the creation of maximum value for customers. Data suggests that there is another common *central* characteristic in this sector. All organizations have the policy, whether they have thousands of employees or a handful, they all strive for organizational structures that minimize the thinking in silo's and thus splitting up the work. As a result of this, no real distinction can be made between hierarchal levels. Some organizations even go as far as adopting a network structure, as a consequence these organizations have a very limited workforce in quantity. When asked about how this *central* policy is enacted in reality, respondents 5, 6 and 7 provided the following quotes.

Respondent 5: "We have a network-based structure within our organization. The important argument is that in order to help a customer, we want to put together the best team. And that those are almost never people you employ, so we always put together a team from people we know, because people are different in style and competence."

Respondent 6: "If you think in silos, then you are really a boomer. We have a different philosophy, there is no silo thinking here. So, we may project ourselves in silos to the outside world, but our people walk through all these segments and often do assignments where all these areas of expertise are also criss-crossed."

Respondent 7: "For each product or service, one person is now responsible, and this was also done to facilitate the adoption of innovations and react faster to possible valuable opportunities to allow us to create value for customers."

Results indicate that all organizations aim to create value for customers through the combination of expert knowledge across multiple segments of the market. The linkage of segments often results in unique value propositions and innovative solutions. Organizations within this field are being described by their employees as ultimate learning organizations. Data suggests that employees are continuously being educated and by doing this organizations are able to create more value for their customers as employees possess more expertise knowledge that ultimately, results in innovative solutions. Through the creation of unique expertise knowledge, these organizations are able to *distinct* themselves from the

competitors in their field. When asked about *distinctive* features of the organization, respondents 5, 7 and 8 provided the following information.

Respondent 5: "What really makes us unique is the way that we are able to combine multiple fields of expertise."

Respondent 7: "For the consumer, the innovations, the brand name and the quality for which the brand stands are then very important. The confidence that the consumer has in the brand name is in many cases that what provides us the edge over our competitor."

Respondent 8: "We have fierce competition and the only way to stay ahead of them is through innovation. One of the main goals in our company is to innovate as much as possible."

Data indicates that employees in these organizations have a consistent perception of their organizational identities as there are fairly no hierarchal levels in these organizations. This could be a consequence of innovativeness being a *central* characteristic, and innovativeness equals changing. Therefore, employees have a flexible perception of the *enduring* aspects of their organizational identity. It seems that, the reason for adopting this flexible frame is to be able to align the internal capabilities to deal with challenges from the external environment. Through this, flexibility is realized, so that these organizations can remain providing their customers with value. The quotes of respondent 4, 6 and 7, illustrate this by stating.

Respondent 4: "For example, we do something like a new release every week in some shops, so there you look much more at a short schedule. This does give you flexibility and avoids rigidity through innovative experimentation. Ultimately if you want to be relevant in this market then you automatically end up in this."

Respondent 6: "And with us innovating, it's just really in our DNA, so it always comes across in everything we do, and when something is in your DNA it happens much, much more often."

Respondent 7: "Innovation, on the other hand, is absolutely essential to its survival. Of course, it is a company built by techies, so innovation is obviously the most important thing."

To conclude, the data that has been presented in this paragraph provide the following insights regarding the organizational identity in the IT-consulting sector. The data advocates for a consistent perception of organizational identity throughout the sector. Organizations in this

sector have the *central* characteristic to create maximum value for customers and aim to realize this through their *distinctive* characteristics, unique value propositions. To accomplish this goal, organizations aim to be flexible. Data shows that organizations in this sector are aware of the need of flexibility. Organizations adopted decentralized organizational structures, this way no distinction can be made between hierarchal levels. As a result, employees do not perceive organizational identity as *enduring*, they perceive it as more flexible.

 Table 3

 Organizational identity in the IT-consultancy sector

	Perceived identity characteristics
Central	Value oriented for customers and society
Enduring	Flexible to facilitate change
Distinctive	Unique value propositions, through
	innovative solutions

# 4.1.1 Comparing identities across sectors

The perceived organizational identities are described in the paragraphs above based on the data provided by the respondents. Based on the stated information, a comparison can be made between the perceived identities across sectors. In the healthcare sector as the IT-consultancy sector creating value for customers can be seen as the *central* characteristic of organizations.

Within the healthcare sector the *distinctive* feature derives from something that is not internal to the organization. This unique aspect stems from a collaborative cooperation which originated internally. As organizations in the healthcare sectors are described as risk-averse rigid system organizations, this *distinctive* feature needed to be executed externally to limit resistance from the internal organization. This internal resistance could be related to the differentiating perceptions of the *enduring* aspect of organizational identity. Being a rigid system organization, hierarchical levels can be identified throughout the organization. As a consequence, employees situated throughout the organization have differentiating perceptions of identity. Employees in the lower hierarchal levels have a more *enduring* view on identity while employees in the higher hierarchical levels have a more flexible interpretation of identity.

Furthermore, organizations in the IT-consultancy sector have the *central* goal to create value for the customer or society in general. Organizations in this sector are *distinctive* through the creation of unique value propositions. These value propositions are created by means of combining and integrating expert knowledge. Organizations in the IT-consultancy sector have identities that are perceived as progressive and aimed to realize organizational flexibility. When flexible, it is easier to respond to changes that affect or could benefit the organization. Organizations in this sector are *distinctive* through the creation of unique value propositions. These value propositions are created by means of combining and integrating expert knowledge. In this sector, data did not identify perceptual differences regarding the *enduring* aspect of the organizational identity. As a result of aligned perceptions, these organizations are able to translate the challenged proposed by the external environment in internal capabilities that allow organizations to overcome these challenges. In table 3 an overview is provided, containing visual support of the perceived organizational identities across sectors.

 Table 4

 Key CED-components of organizational identities across sectors

	Healthcare	IT-Consultancy
Central	Client oriented	Value oriented for
		customers and society
Enduring	Differentiating	Consistent perceptions
	perceptions across	leading to flexibility
	hierarchal levels	
Distinctive	Healthcare entrepreneurs'	Unique value
	concept	propositions

# 4.2 Innovative Capacity

In order to research the effect of organizational identity on innovative capacity, both organizational identity and innovative capacity are assessed. This paragraph presents the data that has been collected regarding the innovative capacities across both sectors. First, the innovative capacity of the healthcare sector has been elaborated and after which, the same has been done regarding the innovative capacity in the IT-consulting sector. To conclude this paragraph, a comparison is made between the innovative capacities across sectors.

#### Healthcare sector

In the interviews the respondents 1, 2 and 3 of organization X were asked whether their organization was able to introduce ideas that would have a significant impact on the current practices and performance of the organization. The gathered data provided a limited quantity of examples regarding the engagement in radical innovations. Nevertheless, respondents 1, 2 and 3 all consistently named the previously mentioned concept of healthcare entrepreneurs. This idea can be seen as a radical innovation as it resulted in a transformation in the way of working within the organization and even within the healthcare sector in general. In addition, this radical concept impacted the overall performance of the organization as it doubled their capacity. The quotes from respondents 2 and 3 are provided to illustrate this.

Respondent 2: "Then we started setting that up from nine to now eventually 500 beds for clients and we are going to grow even more, because the goal of the board is to eventually have 1000 beds for that."

Respondent 3: "So, I think with those healthcare entrepreneurs I'm not saying it's the solution but, it is a rather new solution in the direction of solving the problem in elder care."

The respondents 1, 2 and 3 all described the healthcare entrepreneur's concept. When introduced at first, this radical idea generated a lot of internal resistance. This resulted in externally establishing this concept as the internal organization made it impossible to engage in this radical idea. When asked about other radical innovations, respondents were not able to provide additional examples. In addition, respondents 1, 2 and 3 were asked questions about incremental innovations within the organization. Regarding this aspect, the respondents were able to provide numerous examples compared to the quantity of radical innovations. A rather large part of these incremental innovations was implemented with the goal to increase efficiency within the workforce. Examples of incremental innovations are described based on the following quotes of respondents 3 and 7.

Respondent 3: "With robotization. Yes, they have already made sure that there are little robot dogs that are supposed to keep people company. And of those home automation things like automatic curtains and stuff like that."

Respondent 7: "The ICT department is changing from a department that is executive oriented and performs things for people who request them. To a department that takes a prominent

role in the healthcare landscape and is actually part of the healthcare process. You can see this, for example, in the use of E-Health."

Respondent 7: "You have sensors that which you can put in there and they are able to indicate whether a diaper is full. Based on those sensors the caretaker is able to determine if it needs to be changed, Yes or no. This way employees only need to go when the client needs care and does not have to spent time to go there multiple times when no care is needed."

However, respondents 1, 2 and 3 identified an important factor regarding the innovative capacity. The organization only successfully engages in innovations when the employees who have to work with these innovations understand the additional value that it creates. If not, the implementation of these innovations will not have the expected outcome, being increased efficiency. Incremental innovations do not break with previous products, processes or organizational methods. Data suggests, that makes it easier for employees to engage in as the degree of novelty is relatively low and, therefore closer attached to the current content of work. Regarding radical innovative capacity, the concept of healthcare entrepreneurs was the only example of a radical innovative capacity in the healthcare sector is poor. In conclusion, data indicates that the radical innovative capacity in the healthcare is inferior when being compared with the incremental innovative capacity.

### **IT-consultancy sector**

When asked, the respondents of the organizations operational in the IT-consultancy sector indicated that radical innovations are of high importance. Respondents declared that radical innovations are necessary in order to adapt to the changing needs in the market. Even if this means changing organizational structures, starting new business units or acquire start-ups. Organizations, in this sector, continuously aim to radically innovate as respondents 6 and 8 claim that large parts of turnover stem from the engagement in radical innovations. Data suggests, that work processes are radically innovated in order to facilitate the engagement in innovations as these organizations strive for organizational flexibility. Respondents 6, 7 and 8 emphasize this with the following quotes.

Respondent 6: "Everything we do now with Power BI is actually a result of our innovation lab. We started experimenting once when almost nobody was doing anything with Power BI. We learned a lot about how to apply it, how to set it up efficiently and how to bring it to

customers in the best possible way. And nowadays this is really a business for us and that is where 10% of our turnover comes from."

Respondent 7: "And now more recently we have introduced a process innovation. We have changed our work process to mini-CEOs, so now there is one person responsible for each product or service. This is also done to be able to adopt innovations better and react faster."

Respondent 8: "One of the main goals in our company is to innovate as much as possible. Quite a large part of our turnover each year comes from radical innovations, which have been created in the last five years. So, the biggest turnover really comes from new products that have been developed in the last five years."

Besides the importance of radical innovative capacity, data suggests that these organizations are continuously aiming to incrementally improve their products, services and processes. The data indicates that organizations in this sector do this in order to keep creating additional value for their customers and the environment. Respondents 4 and 7 illustrate this with the following quotes.

Respondent 4: "We do something like a new release every week in some shops, so there you look much more at a short schedule. This does give you flexibility and avoids rigidity through innovative experimentation. Ultimately if you want to be relevant in this market then you automatically end up in this."

Respondent 7: "We are still coming up with new techniques, special new heat pumps which are much better for the environment."

Data suggests that organizations in this field of practice are constantly innovating, radically as well as incrementally. The respondents mostly emphasized the importance of radical innovations as it has the most impact regarding organizational performance. Nevertheless, these organizations constantly engage in incremental innovations in order to increase value for their customers. Ultimately, results indicate that both radical as incremental innovative capacity in this sector are of a high degree.

### Comparing innovative capacity across sectors

Based on the gathered data that has been presented, a comparison can be made between the innovative capacity in the healthcare sector and the IT-consultancy sector. The data indicates that organizations is the healthcare sector have much difficulty with engaging in radical

innovations. The engagement in incremental innovations in the healthcare sector seems to perform better, as it is perceived as closer to the trajectory of the organization. On the contrary, the IT-consultancy sector is successful in the engagement of both radical as incremental innovations. The next paragraph is aimed to create insight in the role that organizational identity plays in the differentiating innovative capacities across sectors.

 Table 5

 A visual representation of innovative capacity across sectors

	Incremental capacity	Radical capacity
Healthcare	Medium	Poor
IT-consultancy	High	High

# 4.3 The influence of organizational identities on innovative capacity

#### Healthcare sector

In the healthcare sector "who are we" can be described as presented in Table 2. Organizations are aimed to create value for their clients, this *central* characteristic is reflected throughout policies and day to day activities.

First, data indicates that, organizations in this sector are structured in a centralized and formalized way. Consequentially, resulting in the identification of multiple hierarchal levels, where a distinction can be made between the lower, and higher hierarchal level. Respondent 2 argues that as a result, the organization becomes rigid as decision speed is negatively affected through centralized organizational structures. Data suggests that innovative capacity is negatively affected. Respondent 2 argues that the reason for this is limited organizational flexibility. The quote from respondent 2 below, illustrates this by stating.

Respondent 2: "But you know what is most difficult, the internal organization because that is again that rigid tanker, with all those layers and that makes change difficult. That's why I started to set up the healthcare entrepreneurs concept externally."

Second, data showed that organizations in this sector can be described as system organizations which are rooted in routines. Mainly employees in the lower in the hierarchal levels are rooted in these routines. Data suggests that as a result, these employees have adopted a contracted cognitive frame of organizational identity and perceive it as *enduring*.

While employees in the higher hierarchal levels seem to perceive organizational as a more flexible cognitive frame. Quotes of respondents 2 and 3 have been adopted to illustrate the effect of perception of organizational identity and cognitive frames.

Respondent 2: "These kinds of concerns are system organizations, and those systems are killing for change, and you cannot break them, you can hardly break them. We just suffer from that old-fashioned thinking of the employees in healthcare."

Respondent 3: "Current healthcare workers have a great deal of difficulty in thinking differently. But I call it a plague (high increase of elderly people) on purpose, because there is so much involved that you have to start looking at the work in new ways and for the people who do that work, it is very difficult to make that mental leap."

The *enduring* perception of organizational identity results in the adoption of a contracted frame of organizational identity. Results indicate, that when it comes to engaging in innovations at the lower hierarchal levels this contracted frame constrains the engagement in innovations. Employees who have adopted this cognitive frame, quickly perceive innovations as not in line with the trajectory of the organization. Based on the data, it could be suggested that organizational identity in the healthcare sector, operates as a constraining factor when it comes to innovative capacity. The reason for this being limited organizational flexibility through centralized structures and contracted cognitive frames. However, both radical and incremental innovative capacity require different degrees of flexibility.

First, the engagement in radical innovations. Respondents 1, 2 and 3, suggest that engaging in radical innovations is difficult within this sector. The healthcare entrepreneurs' concept is a good example for this as it took years to transition it from an idea to reality. In addition, this concept was the only example that could be provided as a radical innovation.

Second, the engagement in new minor improvements or simple adjustments in current products, services, social structure or technology seems to be more successful in the healthcare sector. Data indicated multiple examples of the engagement in incremental innovations. However, respondents 1 and 3 illustrated the constraining role of cognitive frames and organizational structure by stating the following.

Respondent 1: "For example, now there is E-health. A watch for example which indicates you have to take this medication now, there are no employees for that. Only, people who

work primarily in healthcare, are opposed to it because they are believe that healthcare should be provided through human contact, and they do not really want these digital solutions."

Respondent 3 "I had so many ideas, but every time I suggested new innovative ideas to my boss he said: No, we are not going to do that, we are not going to do that."

In conclusion, based on the data presented it could be suggested that organizational identity in the healthcare sector has a constraining effect on innovative capacity. The reason for being, limited organizational flexibility in this sector. Data suggests that organizational identity affects organizational flexibility through organizational structure and cognitive frames.

### IT-consultancy sector

Data suggests that identities in the IT-consultancy sector were perceived as focussed on creating value through the creation of unique value propositions. Data suggests that these unique value propositions often originate from expertise knowledge which enhances the engagement in innovations. In this sector, innovativeness can be seen as a *central* characteristic. The respondents were asked how CED components that construct the "who we are" as an organization affected their innovative capacity. Respondents 4, 7 and 8 emphasized that having innovation as a *central* characteristic stimulates innovative capacity. The following quotes are incorporated to illustrate this.

Respondent 4: "Innovation is expressed in a KPI in which it has to show some kind of innovation every month, this way we can innovate structurally."

Respondent 7: "Innovation is absolutely essential to the survival of the organization. Of course, it is a company built by technicians, so innovation is obviously the most important thing."

Respondent 7: "We innovate to optimize. The commercial marketing aspect is therefore not so relevant to us. We do it purely for ourselves so we can work more efficiently and thus save costs and improve quality."

Respondent 8: "I think we are more concerned with innovating and then companies come to us to start a collaboration to be able to integrate that innovation themselves, in collaboration with us."

Based on the data gathered from the respondents it could be suggested that the identities in this sector positively effect their innovative capacity. This could be due to the fact that most

organizations describe themselves as innovative. Engaging in innovations is not described as a goal in order to increase performance. These organizations innovate because it is in their DNA to do so. Through the creation of new knowledge and innovations, ultimately organizations are able to create unique value propositions for their customers. As a result of this pure intrinsic motivation to innovate, no real distinction can be made between the engagement in radical innovations or incremental innovations as every form of innovating can be seen as a success.

# 4.3.1 Comparing the effect of identity on innovative capacity across sectors

When examining the relationship between organizational identity and innovative capacity, a distinction can be made when this effect is compared across sectors. Data suggests that organizational identity in the healthcare sector can be seen as a constraining factor. Results indicate that organizational identity negatively impacts the organizational flexibility. Data suggests two different reasons for this.

First, organizational structure and second, the adoption of different cognitive frames of organizational identity. Organizational flexibility, in this research is defined as the antecedent of innovative capacity. Data suggests that organizational identity has a constraining effect on innovative capacity in the healthcare sector. However, a distinction can be made between the effect of identity on radical and incremental innovative capacity.

Radical innovative capacity requires a higher degree of organizational flexibility to engage in these innovations. These types of innovations break with previous structures, procedures, activities and products. Consequently, a radical innovation involves greater challenges, and opportunities as more flexibility is required to engage in them. Results indicate that organizational identity in the healthcare sector constrains organizational flexibility, and with that, radical innovative capacity in two ways.

First and foremost, as a consequence of centralized structures, decision speed is negatively affected which limits the flexibility to engage in radical innovations. Second, as a result of organizational identity and the organizational structure, hierarchal levels can be identified. Data suggests that employees in the lower hierarchal ranks perceive organizational identity as a contracted frame compared to employees in the higher hierarchical ranks. Employees in the lower hierarchal ranks, rule out the engagement in innovations that are not in line with the existing trajectory of the organization. The adoption of a contracted frame of organizational identity limits the flexibility to engage in these types of innovations. For this reason, the

constraining effect of organizational identity is of a high degree regarding radical innovative capacity.

Incremental innovative capacity is also constraint by organizational identity within the healthcare sector. However, this effect is of a lesser degree as incremental innovations are more in line with the existing trajectory of the organization. The engagement in these innovations therefore require a lower degree of organizational flexibility. The same reasoning can be applied for organizational structure, the other antecedent of innovative capacity. Incremental innovations are changes with inferior impact compared to radical innovations. As a consequence, less decision speed is required from the organizational structure to engage in them.

Data suggests, that in the IT-consultancy sectors, organizational identity does not have a constraining effect on the innovative capacity. It is the rather opposite, organizational identity in this sector has a high and enhancing effect on innovative capacity. This regards to both the radical as incremental innovative capacity. Organizations in this sector have decentralized structures to increase decision speed to facilitate change, whether these are radical or incremental. As a result of decentralization, no hierarchal distinction between levels can be identified. In this sector, organizational identity is perceived as flexible and not *enduring*. Data suggests that this is a consequence of innovativeness being a *central* characteristic in this sector. Through the adoption of flexible cognitive frames, employees in this sector avoid excluding valuable radial and incremental innovations for their organization. Table 6 provides an overview of the effect of organizational identity on innovative capacity across sectors.

Based on the presented data, it could be suggested that the main difference between the healthcare and the IT-consultancy sector lies within organizational flexibility. Organizational identity can either be an enhancement or a constraint for organizational flexibility. In the healthcare sector, identity functions as a constraint. Employees adopt a contracted cognitive frame, which results in an enduring view of organizational identity. An *enduring* perception of identity means perceiving it as more stable and harder to change, therefore constraining innovative capacity. Employees in the lower hierarchal levels perceived identity as enduring, while the perception in the higher organizational levels appeared to be more flexible. On the contrary, organizational identity in the IT-consultancy sector had an enhancing effect on flexibility and with that innovative capacity. These organizations defined innovativeness as a

central characteristic of their organizations. Consequentially, employees throughout the organizations perceived identity to be flexible, and not enduring as their central aim is to engage in innovations to create value for their customers, another central characteristic. Organizational identity enhances innovative capacity in this sector by means of the CED components. These characteristics operate as a guideline for strategic decisions, such as organizational structure. Ultimately, these decisions can either make or break organizational flexibility, and with that enhance or constrain innovative capacity. Table 6 below is provided to create an overview of the differentiating effect of organizational identity across sectors.

 Table 6:

 Differentiating effect of organizational identity across sectors

	Effect identity on radical	Effect identity on
	innovative capacity	incremental innovative
		capacity
Healthcare sector	High and constraining	Medium and
		constraining
IT-Consultancy	High and enhancing	High and enhancing

# 5. Discussion and conclusion

This research has been constructed with the following aim: creating insight in how organizational identity influences innovative capacity and examine whether this effect differentiates across sectors. In this chapter, the implications of the results of are discussed and compared to the existing body of literature. After the discussion of the results, the managerial implications are discussed which are followed by the limitations of this research. Furthermore, the recommendations for further research are provided. To conclude this chapter, and this research, a conclusion is configurated in order to formulate an answer to the research question.

#### 5.1 Discussion

The interviews provided data on how the employees in each sector perceived the identity of their organization and were asked how this influenced their innovative capacity. After analysing the data, it could be suggested that there indeed is a differentiating effect of organizational identity across sectors. This research adopted the theory of Georgsdottir and

Getz (2004), who identified organizational flexibility as the antecedent that leads to both radical and incremental innovative capacity. The results showed that organizational identity in the IT-consultancy sector facilitated flexibility through the medium of organizational structure and the adoption of a flexible cognitive frame of organizational identity. Consequentially, organizations in this sector had no troubles with the engagement in both, radical as incremental innovations.

On the contrary, identity in the healthcare seems to function as a constraining factor for innovative capacity. Data suggests that organizations in this sector have limited flexibility as organizational structure is centralized, resulting in a low degree of decision speed. Therefore, organizations in this sector are constrained when it comes the engagement in both radical and incremental innovations. These findings are consistent with the theory of Chen and Chang (2012), stating that decision speed is key when engaging in innovations. Organizations which have a high degree of centralization have lower decision speed and are therefore limited when aiming to engage in innovations (Chen & Cheng, 2012).

This research examined another aspect of organizational flexibility, the adopted antecedent of innovative capacity. This aspect being the flexibility of cognitive frames of employees. Corley (2004) conceptualized that employees could have differentiating perceptions of cognitive frames based on their hierarchal rank in the organization. The results showed consistency with the conceptualised theory of Corley (2004). In the healthcare sector, employees in the lower hierarchal levels perceived organizational identity contradictorily with employees situated in the higher hierarchal ranks. The higher hierarchal ranks perceived the cognitive frame of organizational identity as flexible. Lower hierarchal ranks perceived identity as a contracted frame. Organizations in the IT-consultancy sector, all had decentralized organizational structures, therefore no obvious distinction between hierarchal levels could be identified. As a result, the data suggests that organizational identity in this sector, is perceived consistent and as a flexible cognitive frame.

The adopted cognitive frames of organizational identity result in differentiating innovative capacities across sectors. In the healthcare sector, employees adopt a contracted frame of identity, and as a result they have limited abilities to engage in radical innovations as these are not perceived as in line with the existing trajectory of the organization. The adopted flexible cognitive frame of identity in the IT-consultancy sector has an enhancing effect on both radical as incremental innovative capacity. These findings are consistent with the

research of Raffaelli et al., (2019), they state that a contracted cognitive frame is narrows the employee's ability to consider innovation options by holding closely to its existing trajectory. In order to increase innovative capacity, employees should adopt flexible frames to avoid excluding valuable innovations for their organization (Raffaelli et al., 2019).

This research adds to the existing body of literature, as it combines the theories of Georgsdottir and Getz (2004), Corley (2004) and Raffaelli et al., (2019). By combining the theories of these researchers' additional knowledge could be generated regarding the relationship between organizational identity and innovative capacity. Anthony and Tripsas (2016) have examined this relationship and concluded that organizational identity influences the direction of the innovative activities of organizations. However, previous literature neglected the concept of individual perception on the micro-level (Chen & Miller, 2012). Therefore, this research was focussed on the micro-perspective in order to get create a better understanding of how and why organizations engage in certain innovations. The macro-level concept organizational identity can be perceived in different ways by individuals, the microlevel. Based on the adopted cognitive frames on micro-level, they make an adoption decision through cognitively framing the innovation in terms of its relevance to the organization, thereby influencing the innovative capacity at macro-level. This research contributes to literature by examining the role of individual perceptions of organizational identity. Including, the impact of these perceptions on the macro-level by means of the concept innovative capacity.

# 5.2 Managerial implications

Practical implications have a direct impact on the results of related practices or relevant parties, such as top management team (TMT) members (Isen, 2001). The practical implications of this research are particularly important for the management of healthcare organizations. The practical implications are not as relevant for organizations in the IT-consultancy sector as their organizational identity already enhances the engagement in innovations. Examining how organizational identity informs innovative capacity is relevant as according to Gans (2016), innovations can be seen as the lifeblood of organizations and yet the engagement in them posses' considerable challenges. The generated insights could help these organizations to overcome these challenges.

Organizational identity can enhance or constrain the successful engagement of innovations.

At this moment in time organizations in healthcare seem to have organizational identities that

both constrain the engagement in radical as incremental innovations. However, as organizational identities have a dynamic and flexible component, organizations can strategically change their identity (Gioia & Thomas, 1996). In order to enhance innovative capacity, healthcare organizations should decentralize their structures to increase decision speed and thereby, create flexibility. If organizations adopt these structures hierarchal levels will be decreased. This results, in the adoption of a more flexible cognitive frame by employees regarding organizational identity. To conclude, management of organizations should strive for decentralized structures. This allows organizations to stimulate decision speed and the adoption of flexible cognitive frames. Both factors, positively affect the organizational innovative capacity as organizational flexibility is increased.

#### 5.3 Limitations

In this section, the limitations of the study will be discussed. First, this study only assessed one case in the healthcare sector while multiple cases were assessed in the IT-consultancy sector. This has implications on the transferability of the results of this study. In addition, it is questionable if the case in the healthcare sector can be seen as representative for the entire sector, thereby affecting the external validity of the research. Second, a limitation is that only eight interviews are conducted. Of those eight interviews, five interviews are conducted with employees of the IT-consultancy sector. This means that only three interviews are conducted with employees of the healthcare sector. As result, there is a skewed ratio of respondents among the sectors. Third, the obtained results from secondary data and semi-structured interviews are influenced by the underlying subjectivity of the respondents and the researcher. The problem occurs in the coding process of the data. The researcher aimed to be as objective as possible. However, the researcher still had several biases in the process of coding. These biases can be based on the researcher's appearance and disposition. Research bias, therefore, affected the reliability of research outcomes. Finally, the respondents of the healthcare sector were solely employees from the higher hierarchal levels. Results regarding the perception of employees in the lower hierarchal ranks were based on the description of employees in the higher hierarchal ranks. Thereby, affecting the internal validity of the research.

#### 5.4 Future research

This study is limited since relatively limited data has been collected, therefore an extension of this study is recommended for future research. First, future research is suggested to focus on the perception of organizational level at lower hierarchal ranks in organizations. As

mentioned, this research described the cognitive frames of identity by employees in the lower hierarchal ranks. However, this is based on how employees in the higher ranks describe how they perceive identity. High workload due to personnel shortage in the lower hierarchal ranks in healthcare hindered that employees could participate in this research. However, to examine how organizational identity is perceived throughout hierarchal ranks, future research is recommended. Second, future research should be conducted in a context of a multiple case study within multiple organizations in the healthcare sector. This could be explored further by interviewing a larger sample of respondents within the same industry. This would create useful insights and improve the external validity of the research. Finally, this studied focused on the understudied relationship between organizational identity and innovative capacity (Anthony & Tripsas, 2016). Currently, the existing body of literature is rather slim.

Nevertheless, literature identified a relationship between these concepts. Innovative capacity being an important factor for organizational performance and survival it would be recommended to further explore this relationship.

#### 5.5 Conclusion

In this section, based on the conceptual framework and the results obtained in chapter 4, an answer is formulated to the research question constructed in chapter 1: "How does organizational identity influence innovative capacity across different sectors?"

The results indicate that organizations in the IT-consultancy sector have superior innovative capacity compared to organizations in the healthcare sector. Data suggests that this is a result of the differentiating degrees of organizational flexibility. As organizational flexibility can be seen as the antecedent of innovative capacity. The results suggest that the CED-components, the building blocks of organizational identity, impact organizational flexibility. Therefore, this study indicates that organizational identity influences innovative capacity through the concept of organizational flexibility. Furthermore, the results of this study indicate two mechanisms that answer how organizational identity influences innovative capacity. First, data suggests that structure impacts organizational flexibility through decision speed. Second, data suggests that the flexibility of the adopted cognitive frame impacts organizational flexibility. The results indicate, that the organizational identity in the IT-consultancy sector has an enhancing effect on both radical and incremental innovative capacity. The reason for this seems to be that, these organizations have change as their *central* characteristic. This results in sufficient organizational flexibility to engage in both radical as incremental innovations.

On the contrary, data suggests, that organizational identity in the healthcare sector has a constraining effect on innovative capacity. Data indicates that there are two reasons for this. First, the centralized organizational structure can be seen as a consequence of the central characteristics of the organization and as a result limit organizational flexibility. Second, employees have differentiating perceptions of the *enduring* component of identity. Data suggests that this results in contracted frames and therefore constrains organizational flexibility. To conclude, the results imply that organizational identity in the healthcare sector has a constraining effect on both radical and incremental innovative capacity. However, the constraining effect on incremental innovative capacity is of a lesser nature.

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# **Appendices**

# Appendix 1

Semi-structured interview guide

- Thanking them for to participate in the research
- Ask to record the interview and guarantee anonymity
- Short description of the research: The influence of organizational identity on innovative capacity

• Could you briefly introduce yourself? Who are you and what is your role in this company?

Organizational identity: Who are we?

Central & Enduring Attributes: Are manifested as an organization's core programs, policies and procedures, and that reflect its highest values. Attributes that have passed the test of time or on some other bases operate as "irreversible" commitments.

- What would you say that is the key characteristic of this organization, what attributes are key in defining this organization?
- Has this always been the case or has the purpose/key characteristics changed over time? Did this significantly impact the character / history of the organization?
- Does this attribute reflect the organization's highest priorities and deepest commitments? If so, is this noticeable in day-to-day activities within the organization?
- Would you say that this attribute is an accurate reflection of the organization's core programs, policies and procedures, and that reflect its highest values?
- Is it considered as a key element within the organization? Is it key in the survival of the organization? If so, why would you say so?

Distinctive Attributes used by an organization to positively distinguish itself from others. Attributes spanning what is required and what is ideal for a particular kind of organization.

- Does this attribute reflect the organization's distinctive set of preferences / commitments? Would it be considered an organization-specific attribute?
- Is it a positive distinction? Is it an essential distinction?
- What kind of services/products does your organization offer?
- Could you give me a description of the key day to day activities of the organization to result in the so-called production of these "products"/ "services"?
- Do you think that these activities represent the previously mentioned key characteristics or are these organizational attributes not so much noticeable on day-today basis?

• Are the aspired attributes that define the organization strongly respected or would you say that the ideal picture that we just sketched differs from reality?

# Capability to engage in innovations:

• Does the organization actively scan the competitive environment to stay up to date on developments? If so, could you provide me with an example?

# Radical innovations/ Incremental innovations

- Would you define the organization as keen on innovating? If you could you describe an example of innovations that occurred in the past?
- Did these innovations have a lot of impact on how the organization operates?
- Did these innovations have a fundamental impact of on the product/service that you offer or the process behind the offering?

#### *Linkage of organizational identity and innovative capacity:*

- The identity of an organization determines "who you are" as an organization do you think that this influences your perception of possible innovations that could have a positive impact on the organization?
- Do you think that innovations need to align with the values/goals of the company?

Appendix 2: Operationalization organizational identity

Central concept	Dimension	Topic
Organizational identity	Central	Organizational programs
		Core policies
		Organizational procedures
		Highest values
	Enduring	Stable over time
		Flexible characteristics
	Distinctive	Unique characteristics
		Similarity in market

Appendix 3: *Operationalisation of innovative capacity* 

Central	Dimension	Topic
concept		
Innovative	Radical innovative capacity	New product with high degree of
capacity		novelty and risk for the organization
		New process with high degree of
		novelty and risk for the organization
		New service with high degree of
		novelty and risk for the organization
	Incremental innovative	New product with low degree of
	capacity	novelty and risk for the organization
		New process with low degree of
		novelty and risk for the organization
		New service with low degree of novelty
		and risk for the organization

Appendix 4: Operationalisation organizational flexibility

Central concept	Dimension	Topic
Organizational flexibility	Organizational structure	Degree of centralization
		Decision speed
		Formalization
	Cognitive frames	Contracted cognitive frame
		Flexible cognitive frame