



Radboud Universiteit Nijmegen

Master Thesis

How do Mintzberg's design parameter relate to the ability of SMEs to identify entrepreneurial opportunities?

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Date: 04.07.2019

Acknowledgements

First of all, I would like to thank my supervisor Marc Wijngaarde for his countless efforts in order to provide me with comments, feedback and advices. This helpfulness of Marc along the way kept me motivated and focused. In addition, I would also like to thank my second examiner Hans Lekkerkerk for his feedback throughout this process.

In addition, I would like to thank all my interview respondents who gave me valuable insights that were necessary in order to write this thesis and gave me the possibility to interview them. Without them, this thesis would not have been possible.

Finally, I would like to thank my family, girlfriend and friends who provided me with the necessary moral and emotional support whenever I had doubts and needed somebody to talk to.

Abstract

Previous research provides limited insights about the relation between organisational structure and the opportunity identification capabilities (OIC) of small and medium-sized enterprises (SMEs). As a consequence, Mintzberg's (1980) theory on organisational structure has been used as a tool in order to further study the relation between organisational structure and the OIC of SMEs. Here, it is argued that job specialization, formalization of behaviour, unit grouping, unit size, liaison devices and decentralization relate to the OIC of SMEs. To test these ideas, a qualitative multiple case study was conducted in four different SMEs operating in different industries and located both in the Netherlands as well as in Germany. The findings of this research show that job specialization, formalization of behaviour and unit size are negatively related to the ability of SMEs to identify new goods, services, raw materials, markets and organizing methods (i.e. their OIC) whereas unit grouping, decentralization and liaison devices positively relate to the OIC of SMEs. Here, especially the parameters 'job specialization' and 'formalization of behaviour' seem to profoundly influence the capabilities of SMEs to identify new opportunities as high levels of both parameters inhibit that organisational members can experiment, be creative and take risks. These findings are stemmed in six recommendations for SMEs that helps them to increase their capabilities to identify new opportunities.

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1. Introduction

1.1 Innovation in the realm of entrepreneurship

In its narrowest sense, entrepreneurship “*involves capturing ideas, converting them into products and, or services and then building a venture to take the product to market*” (Johnson, 2001, p.138). This creative act requires taking investments in the form of time, effort and money without knowing the respective returns (Venkataraman, 1997). As a result of entrepreneurship, value for the individual or the society can be achieved such as new products, new markets or new technologies. In other words, it might lead to innovation (Baggen, Mainert, Lans, Biemans, Greiff & Mulder, 2015) which has gotten plenty of attention as the key engine for economic growth in organisations (Henderson, 2017).

Referring to Amit, Glosten and Mueller (1993) and Casson (1982), entrepreneurship can also occur in existing organisations which is often referred to corporate entrepreneurship (Zahra, 1991; Burns, 2011). According to Burns (2011), corporate entrepreneurship refers to the achievement of competitive advantage (e.g. new ideas or opportunities) through the encouragement of innovation. Zahra (1991) defined corporate entrepreneurship as a set of activities that enhance an organisation’s ability to innovate, take a risk and seize the opportunities that are allocated in the market. Therefore, the application of the innovative abilities and skills among the organisational members seems to be at the central heart of corporate entrepreneurship (Rutherford & Holt, 2007). This implies that the focus is on the entrepreneurial activities of multiple organisational members.

Furthermore, this seems to be especially important for small and medium-sized enterprises (SMEs) which can be defined as organisations with between 1 and 249 employees (Eurostat, 2019). Referring to Gielnik, Zacher and Frese (2012) corporate entrepreneurship has a profound influence on the overall performance of SMEs. This means that, according to Gielnik et al. (2012) and Sambasivan, Abdul and Yusop (2009), the better the capabilities of SMEs to identify new opportunities, the better their performances. Thus, opportunity identification can be considered as one of the key capabilities for SMEs in order to ensure organisational wellbeing. Therefore, the following research will focus on how SMEs can increase their opportunity identification capabilities (OIC).

1.2 Entrepreneurial OIC

Although some scholars argue that OIC are central within the realm of entrepreneurship research (Corbett, 2007; Gaglio & Katz, 2001; Ardichvili, Cardozo & Ray, 2003), Baggen et

al. (2015) and Ardichvili et al. (2003) argue that OIC have not been fully explored yet. Presumably, this implies that many SMEs rely too much on a single entrepreneur which is one of the most cited barriers to innovation (Pont & Oliveira, 2013). Nevertheless, there are plausible arguments that prior knowledge about the target market (Ardichvili et al., 2009; Kirzner, 1997; Shane, 2000, Venkataraman, 1997), entrepreneurial orientation (Covin, Green & Slevin, 2006; Gathungu, Aiko & Machuki, 2014) and business networks (Burt, 2000; Zaefarian, Henneberg & Naudé, 2011; Thornton, Rupp & Hoffman, 2015) influence OIC. For the purpose of this research, these aspects will be used in order to measure the concept of OIC and will further be motivated in the next chapter.

Moreover, OIC can be defined as *“the ability to identify ideas for new products, processes, practices or services in response to a particular pain, problem or new market need”* (Baggen et al., 2015, p.417). Since this definition has also been used in another scientific study about OIC (Baggen et al., 2015), this definition will also be used for the purpose of this research, thereby allowing for comparison purposes.

There are two perspectives related to OIC. These are the discovery and the creation perspective. Related to the discovery perspective, this perspective states that opportunities already exist in the market while only those individuals are able to capture them who have specific capabilities and characteristics that other people do not have (Alvarez & Barney, 2007). With regard to the creation perspective, this perspective states that opportunity identification is an iterative process in which individuals collectively develop opportunities (Vaghely & Julien, 2010). Throughout this research, the focus will be on the creation perspective due to the following reasons. Firstly, it will further be investigated what impacts the OIC of the collective (i.e. many organisational members). Therefore, the creation perspective with its focus on the collective development of opportunities is more suitable than the discovery perspective which focuses on the capabilities of a single entrepreneur (Vaghely & Julien, 2010). In addition, there is not much literature available yet that examines the fundamental underlying assumptions of the creation perspective (Alvarez & Barney, 2007). According to Ardichvili et al. (2003) and Baggen et al. (2015) this seems to be a general limitation concerning the concept of OIC as there is no comprehensive theory that fully explores this concept yet. However, since *“an inquiry into entrepreneurial opportunity has the potential to unlock one of the greatest intellectual puzzles of our time, namely the creation of new value in society”* (Sarasvathy, Drew, Velamuri, & Venkataraman, 2010, p. 94), this research will try to further develop theoretical insights into the concept of OIC of SMEs.

1.3 Structuring SMEs for corporate entrepreneurship

Related to OIC, scholars argue that organisational structure influences entrepreneurial opportunity identification (Burgelman & Sayles, 1986; Drucker, 1985; Pinchot, 1985; Covin & Slevin, 1988; Srivastava & Agrawal, 2010; Kuratko, Montagnano & Hornsby; 1990; Damanpour, 1991; Foss, Lyngsie & Zahra, 2015). Although the influence of organisational structure on OIC is tentatively given, there seems to be still a wide range of topics to be researched with regard to this relationship. For example, which specific structural parameters relate to the OIC of organisations (Foss et al., 2015; Suddaby, Bruton & Si, 2015; Zahra, 1991). Foss et al. (2015) identified that decentralization and formalization are related to OIC. Moreover, Srivastava and Agrawal (2010) argue that entrepreneurial organisations incorporate flatter hierarchies, broader work specialization, broader spans of control as well as decentralization. At the same time, direction for future research is provided by stating that additional organisational design variables should be considered as well (Foss et al., 2015; Zahra, 1991). For example, referring to Zahra (1991), it would be interesting to consider other organisational design variables besides communication, scanning, integration, differentiation and control. Resulting from this gap in literature, Mintzberg's (1980) theory on organisational structure will be applied as a tool in order to further study the relation between organisational structure and the OIC of SMEs.

1.4 Mintzberg's theory on organisational structure

As part of Mintzberg's theory on organisational structure, Mintzberg (1980) developed eight design parameters that operationalize the concept of organisational structure. These parameters are job specialization, formalization of behaviour, training and indoctrination, unit grouping, unit size, planning and control systems, liaison devices and decentralization. For the purpose of this research study to further study the relation between organisational structure and the OIC of SMEs, the parameters job specialization, formalization of behaviour, unit grouping, unit size, liaison devices and decentralization will be investigated. This selection will further be motivated in the next chapter as well as why Mintzberg's theory on organisational structure will be applied for the purpose of this research.

1.5 Research objective

Referring to the above addressed research gap, the research objective of this study can be formulated as follows:

The objective of this research is to gain insights about the relation between job specialization, formalization of behaviour, unit grouping, unit size, liaison devices, decentralization and the OIC of SMEs. The outcome of this study will contribute to the scientific gap concerning the creation perspective by means of identifying ways in which SMEs can structure their firms in such a way that the capabilities to identify entrepreneurial opportunities can be increased. The results will provide structure related recommendations and guidelines, enhancing the abilities of SMEs to identify new opportunities.

1.6 Research question and sub research questions

In order to be able to achieve the aforementioned research objective, the following main research question can be formulated:

What is the relation between job specialization, formalization of behaviour, unit grouping, unit size, liaison devices, decentralization and the ability of SMEs to identify new ideas for new products, processes, practices or services?

In addition, this main research question will be broken down into six sub-questions which will be addressed separately in the main analysis of this research. These respective sub-questions are:

1. What is the relation between job specialization and the OIC of SMEs?
2. What is the relation between formalization of behaviour and the OIC of SMEs?
3. What is the relation between unit grouping and the OIC of SMEs?
4. What is the relation between unit size and the OIC of SMEs?
5. What is the relation between liaison devices and the OIC of SMEs?
6. What is the relation between decentralization and the OIC of SMEs?

1.7 Scientific relevance

According to Alvarez and Barney (2007), the underlying assumptions of the creation perspective are not sufficiently examined yet. This corresponds with what Ardichvili et al. (2003) and Baggen et al. (2015) argue that researchers have until not fully explored the concept of OIC yet. Although plausible arguments about the influence of organisational structure on OIC are given (Burgelman & Sayles, 1986; Drucker, 1985; Pinchot, 1985; Covin & Slevin, 1988; Srivastava & Agrawal, 2010; Kuratko et al., 1990; Damanpour, 1991; Foss et al., 2015), there is still little empirical evidence that suggests which specific structural parameters relate to the OIC of SMEs. In addition, many scientific sources solely focus on

one or two parameters in isolation (Park, 2005). For example, Foss et al. (2015) provided insights about the roles of decentralization and formalization related to opportunity identification while they at the same time provide direction for future research by stating that additional structural parameters should be investigated. This corresponds with the request of Zahra (1991) who claimed that additional variables may need to be studied in order to develop a comprehensive framework about the antecedents of corporate entrepreneurship. Therefore, Mintzberg's design parameters job specialization, formalization of behaviour, unit grouping, unit size, liaison devices and decentralization will be used in order to study their relation with OIC. Here, the focus will be on SMEs because opportunity identification can be considered as one of the key capabilities of SMEs in order to ensure organisational wellbeing (Sambasivan et al., 2009; Gielnik et al., 2012). As a result, new scientific insights can presumably be gathered that contribute to further study the relationship between organisational structure and OIC of SMEs.

1.8 Practical relevance

Besides the scientific relevance, this study will also provide practical relevance since the results of this research will provide recommendations how SMEs can increase their OIC. This means that SMEs might be able to handle Mintzberg's design parameters job specialization, formalization of behaviour, unit grouping, unit size, liaison devices and decentralization in a way that enables them to be not dependent anymore on the cognitive capabilities of a single entrepreneur (Alvarez & Barney, 2007), but instead can collectively identify opportunities due to the underlying organisational structure. This might increase the probability that SMEs will face innovations such as new products, services, processes, markets, supplies or ways of organizing the production (Skroupa, 2017).

1.9 Research outline

In the following sections of this research, the relevant theoretical background, the conceptual model as well as the research methodology will be addressed. Afterwards, the collected research results will be analysed and interpreted. Based on the analysis of the data, a conclusion will be drawn. Finally, the findings will be critically reviewed in the discussion section.

2. Theoretical background

In the following paragraphs the relevant theoretical background of this research will be outlined. This means that the concepts ‘OIC’ and ‘organisational structure’ will be addressed as well as the influence of organisational structure on the OIC of SMEs. Therefore, Mintzberg’s theory on organisational structure will be used as a tool in order to test this relationship. As a consequence, it will also be motivated why Mintzberg’s theory on organisational structure is suitable for the purpose of this research and why not all of his design parameters will be used for the purpose of this research.

2.1 Opportunity identification in the realm of corporate entrepreneurship

Zahra (1991) defined corporate entrepreneurship as a set of activities that enhance an organisation’s ability to innovate, take a risk and seize the opportunities that are allocated in the market. Based on this definition, it can be seen that the last part is about the identification of entrepreneurial opportunities. This will also be the focus of the following research. This decision has been made based on the findings of Gielnik et al. (2012) and Sambasivan et al. (2009) that opportunity identification has a profound influence on the wellbeing of SMEs. As a consequence, this presumably implies that opportunity identification can be considered as one of the key capabilities for SMEs in order to stay competitive in today’s highly competitive environment. Therefore, the following sections will outline what an entrepreneurial opportunity is as well as how opportunities are commonly identified. In addition, a definition about OIC will be provided while factors that seem to have an influence on OIC will be outlined.

2.1.1 What is an entrepreneurial opportunity?

Entrepreneurial opportunities can be defined as *“those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their costs of production”* (Casson, 1982; Shane & Venkataraman, 2000, p.220; Eckhardt & Shane, 2003, p.336). Since this definition is a classic definition in literature within the context of opportunity identification, it will also be used for the purpose of this research. As a result, it is possible to compare existing literature with this research. In addition, this definition is also understandable and accessible for “non-experts” which means that it can be easily referred to the above-mentioned situations in case somebody has difficulties in understanding what is meant with an entrepreneurial opportunity. This ensures that the broad idea of an opportunity is made more concrete and specific which allows for a better usage for the

purpose of this research. Resulting from this, this definition is easy to use during semi-structured interviews which are needed in order to collect data for this research. However, this will be motivated more in detail in the next chapter.

2.1.2 The opportunity identification process

A considerable body of scholars argues that it is debatable how entrepreneurial opportunities can be identified (Ardichvili, Cardozo, & Ray, 2003; DeTienne & Chandler, 2004; Renko, Shrader, & Simon, 2012). However, there are two perspectives related to the identification of entrepreneurial opportunities. These are the discovery and the creation perspective (Alvarez & Barney, 2007). With regard to the discovery perspective, this perspective entails that opportunities already exist in the market waiting to be discovered and exploited by an insightful and clever entrepreneurial mind (Alvarez & Barney, 2007). Since this perspective focuses on the individual entrepreneurial mind, this perspective is less suitable for the purpose of this research. Thus, the discovery perspective provides little possibilities to further study the influence of organisational structure on the OIC of SMEs due to its focus on personal skills and the entrepreneurial alertness of individuals (Zahra, 2008). Therefore, the following research will focus on the creation perspective and the OIC of the collective. Contrasting to the discovery perspective, opportunities within the creation perspective are socially constructed (Sarason, Dean & Dillard, 2005; Alvarez & Barney, 2007). According to Anderson and West (1998), this construction of opportunities often happens in a collective team effort which entails an iterative trial-and-error process (Vaghely & Julien, 2010) as well as collective sensemaking (Alvarez & Barney, 2010). This means that once opportunities are identified, they need to be evaluated which might lead to the identification of additional opportunities (Ardichvili et al., 2003). Here, it can be said that “*technological advances, political or regulatory climate and demographic shifts*” (Suddaby et al., 2015, p.3) contribute to the identification of entrepreneurial opportunities in the realm of the creation perspective. As a result of the characteristics of the creation perspective, it becomes clear that this perspective is more suitable in order to study the relationship between organisational structure and the OIC of SMEs.

2.1.3 Definition of OIC

OIC are often also referred to competences. However, Mulder (2017) concluded that both terms can be used interchangeably. According to Baggen et al. (2015, p.417), OIC can be defined as “*the ability to identify ideas for new products, processes, practices or services in response to a particular pain, problem or new market need*”. Additional examples related to

OIC include the abilities of organisational members to identify niches in existing markets, to identify new markets and to quickly take competitive advantage of new opportunities (Griffin, 2009). Some scholars argue that these capabilities can be both developed as well as learned (Biemans, Wesselink, Gulikers, Schaafsma, Verstegen & Mulder, 2009). Since this definition has also been used in another scientific study about OIC (Baggen et al., 2015), this definition will also be used for the purpose of this research. Again, this definition should also be understandable for “non-experts”, thus allowing to refer to the mentioned situations in case interview-partners have difficulties in understanding the central concept of OIC.

2.1.4 Antecedents of OIC

Antecedents of OIC cover a broad range of factors that seem to have an influence on OIC (Wang, Ellinger & Wu, 2013). Here, the focus is especially on individual factors (Park, 2005; Smith, Matthews & Schenkel, 2009; Corbett, 2007) which corresponds with the discovery perspective of opportunity identification. However, referring to Wang et al. (2013), an organisation is likely to have difficulties in initiating and achieving entrepreneurial and innovative activities without the intention of organisational members to identify new opportunities. Presumably, individual factors therefore also seem to be applicable for the creation perspective and the purpose of this research. Based on this, the following paragraphs will elaborate on the factors ‘*prior knowledge about the target market*’, ‘*business networks*’ and ‘*entrepreneurial orientation*’ which seem to influence the OIC of SMEs.

2.1.4.1 Prior knowledge about the target market

According to Shane (2000) and Ardichvili et al. (2003), prior knowledge about the target market is important with regard to OIC. Here, especially the knowledge of organisational members about both existing markets and how to serve these as well as about customer’s problems seem to influence the OIC of organisational members belonging to SMEs (Shane, 2000). Moreover, Alsos and Kaikkonen (2004) argue that prior entrepreneurial experience of organisational members (e.g. prior business ownership, work experience or due to a hobby) provide a source of information that might increase OIC. Referring to Alsos and Kaikkonen (2004), this applies to both the discovery as well as the creation perspective. In order to actively search for entrepreneurial opportunities as part of the creation perspective, organisational members need to use their capabilities and prior knowledge in order to chase the opportunity (Alsos & Kaikkonen, 2004; Arthurs & Busenitz, 2006). This means that, referring to Ward (2004), the usage of knowledge can either be a bridge on the road to entrepreneurship or a detour of organisational members to fruitless paths. Therefore, it is

presumably important that information and knowledge is distributed among the organisational members of SMEs while, according to Wang et al. (2013), an organisational context should be created that enables organisational members to gather and assimilate entrepreneurial information. For example, through brainstorm or information sharing meetings. As a result, this might increase the capabilities of organisational members to identify new opportunities.

2.1.4.2 Business networks

Given the suggestions in literature that knowledge and information play an important role with regard to OIC (Ardichvili et al., 2003; Shane, 2000, Gaglio & Katz, 2001; Wang et al., 2013), business networks also seem to serve as an important source of knowledge concerning new opportunities (Burt, 2000; Zaefarian, Henneberg & Naudé, 2011; Thornton et al., 2015). Here, business networks can be defined as complex networks of organisations who work together in order to accomplish a particular goal (Ford, 2002). In addition, Ahmadian and Abdolmaleki (2018) argue that the more network ties an organisation establishes, the better are the chances to identify new opportunities. This means that, according to Wang et al. (2003), engaging with for example customers, suppliers or other business partners might be helpful in order to access information that is necessary to increase the OIC of SMEs.

Besides these informal networks consisting of, for example current or past customers, suppliers or other business partners, organisational members of SMEs can also seek information about (potential) opportunities through the participation in professional forums (Ozgen & Baron, 2007). For example, at conferences, seminars or workshops. Again, information sharing should therefore be encouraged by the management of SMEs (Wang et al., 2013). As a result, both informal networks as well as professional forums might be valuable sources of information in order to increase the OIC of SMEs.

2.1.4.3 Entrepreneurial orientation

According to Gathungu et al. (2014), entrepreneurial orientation represents a mindset about entrepreneurship. Lumpkin and Dess (1996) described entrepreneurial orientation as a measure of firm-level entrepreneurship consisting of innovativeness, proactiveness, risk-taking, competitive aggressiveness and autonomy. Here, innovativeness relates to *“a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes”* (Lumpkin & Dess, 1996, p.142). For example, the encouragement of the top management to think about and develop new innovative opportunities (Matsuno, Mentzer & Özsomer, 2002). In addition,

proactiveness can be defined by the extent to which an organisation operates in anticipation of future problems, needs or changes (Webster, 1977). Referring to Matsuno et al. (2002), this for instance implies that a change in the market rather creates an opportunity instead of an organisational problem. Next, risk-taking concerns the extent to which the top management of an organisation is willing to make large and risky resource commitments (i.e. when there is a high chance of costly failures) (Miller & Friesen, 1978, p.923). Moreover, competitive aggressiveness relates, referring to Lumpkin and Dess (1996, p.148), to *“a firm's propensity to directly and intensely challenge its competitors to achieve, entry or improve position, that is, to outperform industry rivals in the marketplace”*. Finally, the term autonomy refers to the ability of organisational members to take decisions and to proceed with their work activities independently and without any restrictions on the part of the organisation (Lumpkin & Dess, 1996). This is similar to Mintzberg's (1980) description about the decentralization-parameter which will be motivated more in detail under the paragraph 2.3.3.8. According to Covin et al. (2006) and Gathungu et al. (2014), entrepreneurial orientation enables organisations to better identify opportunities. Therefore, entrepreneurial orientation might presumably also increase the OIC of SMEs.

2.2 Organisational structure

According to Biemans et al. (2009), OIC of organisational members belonging to SMEs are directly influenced by the organisational context. Here, it can be said that, besides other factors (e.g. environmental or technological factors), organisational structure is one of the context factors that seem to influence the OIC of SMEs (Burgelman & Sayles, 1986; Drucker, 1985; Pinchot, 1985). Therefore, this relationship between organisational structure and the OIC of SMEs will further be outlined in the following paragraphs.

2.2.1 Definition of organisational structure

According to Lunenburg (2002), organisations exist to achieve goals. In order to reach these goals, organisations are usually organized in a structure. This means that the goals of the organisation are broken down into tasks and activities as the basis for jobs (Lunenburg, 2012). In addition, these jobs are usually grouped to organisational units. Besides the division of labour, coordination between organisational units forms the basis of organisational structure.

In existing literature, different definitions of organisational structure exist. For example, Achterbergh and Vriens (2010, p.240) defined organisational structure as *“the grouping and coupling of transformations into tasks and the resulting relations between these*

tasks relative to orders”. This definition requires elaboration. Referring to Achterbergh and Vriens (2010), this can be done with either what is called horizontal decomposition or vertical decomposition. With regard to horizontal decomposition, new sub-transformations emerge that cover the whole original transformation while it focuses only on a certain aspect (e.g. input or output) of it. Concerning vertical decomposition, new sub-transformations emerge which are coupled serially which means that each output of one sub-transformation is the input of the next sub-transformation (Achterbergh & Vriens, 2010). As a result of these ideas, a task can be defined as a set of sub-transformations that can be assigned to an organisational unit such as for instance an employee, a department or a business unit (Achterbergh & Vriens, 2010).

Mintzberg (1980) defined organisational structure as the way in which the main task of an organisation is broken down into subtasks and then coordinated. Other scholars define organisational structure as the ‘*formal configuration between individuals and groups regarding the allocation of tasks, responsibilities, and authority within the organisation*’ (Galbraith, 1987; Greenberg, 2011 as cited in Lunenburg, 2012, p.1). Based on these three definitions, the following definition will be used for the purpose of this research:

“Organisational structure can be defined as the grouping and allocation of tasks, responsibilities and authorities that can be assigned to individuals and groups”. This merged definition addresses the core aspects of organisational structure, namely the division of labour and coordination.

In order to better outline what organisational structure actually entails, the following paragraphs will address both the elements and tasks of an organisational structure as well as the assumed influence on the OIC of SMEs.

2.2.2 Elements and tasks of organisational structure

Organisational structure can be broken down into six different elements. These elements are work specialization, departmentalization, chain of command, span of control, (de-)centralization as well as formalization (Robbins, De Cenzo & Coulter, 2014). With regard to these different elements, work specialization (e.g. division of labour) concerns the extent to which tasks in an organisation are broken-down into separate jobs (Robbins et al., 2014). The second element of organisational structure, departmentalization, relates to the basis on which units are grouped together. According to Robbins et al. (2014) this can be done on the basis of performed functions, served products, geographical areas, processes and addressed customers. Next, the element ‘*chain of command*’ can be described as the line of authority that spreads

from the top management to the lowest hierarchy in an organisation. The task of the chain of command is to clarify which organisational member reports to whom (Robbins et al., 2014). Related to the chain of command is the element '*span of control*'. The span of control measures how many organisational members are managed by a single manager. Here, it can be said that in case the span of control becomes too large, this has negative consequences for the effectiveness of the organisational performance (Robbins et al., 2014). Furthermore, there is the element referred to centralization and decentralization. On the one hand, centralization addresses the extent to which decision-making power is concentrated at a single point in the top of an organisation. On the other hand, decentralization relates to the extent to which all organisational members can influence or make decisions (Robbins et al., 2015). The last element of organisational structure is '*formalization*'. This element addresses the extent to which tasks and activities in an organisation are standardized by fixed rules and procedures (Robbins et al., 2014).

Based on these elements, it can be said that an organisational structure consists of different elements. As a consequence, this means that an organisational structure determines the allocation, coordination and supervision of tasks and activities within an organisation in order to achieve the organisational goals (Elsaid, Okasha, Abdelghaly, 2013).

2.2.3 The influence of organisational structure on the identification of entrepreneurial opportunities

Furthermore, scholars provide plausible arguments that organisational structure influences the OIC of organisations (Covin & Slevin, 1988; Srivastava & Agrawal, 2010; Kuratko et al. 1990; Damanpour, 1991; Foss et al., 2015; Zahra, 1991). For example, Foss et al. (2015) identified in a quantitative research that decentralization and formalization are related to the OIC of organisations. At the same time, they call for future research to not focus solely on two elements of organisational structure but instead to include additional elements of organisational structure (Foss et al., 2015).

Moreover, Zahra (1991) further studied the antecedents of corporate entrepreneurship. Therefore, he examined to what extent organisational structure, and in particular the variables communication, scanning, integration, differentiation and control, are associated with the corporate entrepreneurship activities of organisations. According to Zahra (1991), especially the quality and amount of communication are of crucial importance to the successful initiation and implementation of corporate entrepreneurship. This means that communication helps to

introduce new ideas to the organisation and to familiarize organisational members with recent market trends, thus creating a basis for identifying new opportunities (Zahra, 1991). In addition, communication brings also together different organisational units which seem to positively influence the pursuit of corporate entrepreneurship activities (Zahra, 1991).

Furthermore, Zahra (1991) provides arguments that scanning is positively associated with the corporate entrepreneurship activities of organisations. This can be described as the formal efforts of organisations in collecting, analysing and interpreting data about its external environment and the competition (Zahra, 1991). As a result, scanning allows for the accumulation of information that seems to be necessary in order to identify new opportunities.

In addition, Zahra (1991) argues that the variable *'integration'* is positively related to corporate entrepreneurship. Referring to Kanter (1986), integration refers to the formal organisational activities that focus on the linkage of different organisational units through the exchange of information. According to Zahra (1991), this helps to exchange information and ideas as well as to generate support for new opportunities among different organisational units. On the other hand, Covin and Slevin (1988) and Jennings and Lumpkin (1989) motivate that an extensive reliance on integration may prevent organisations from corporate entrepreneurship activities.

Next, Zahra (1991) also argues that formal control is negatively associated with corporate entrepreneurship activities. This might be due to the assumption that formal controls add rigidity to an organisational structure and frustrate organisational members to chase new opportunity as they first of all need to 'go through channels' in order to receive support for the pursuit of their ideas (Zahra, 1991).

With regard to the variable *'differentiation'*, Zahra (1991) assumed a positive relation with corporate entrepreneurship in his study. While differentiation relates to the division of labour within organisations (Zahra, 1991), it helps, referring to Daft (1988) and Kanter (1989), with both the identification of the mission of organisational units as well as with the commitment to their goals. According to Zahra (1991), this presumably implies that committed organisational members will proactively search for new ideas in order to ensure the success of the organisational unit. In addition, it is argued by Zahra (1991) that an increased differentiation facilitates communication among organisational units, thus encourages the exchange of entrepreneurial ideas. Nevertheless, the results of Zahra's (1991) study were not absolutely consistent with the above-stated predictions. This means that based on Zahra's (1991) results, differentiation is negatively associated with corporate

entrepreneurship. However, Zahra (1991) also states that it is necessary to develop an overarching framework that covers the antecedents of corporate entrepreneurship. Therefore, it should be considered to include additional variables besides communication, scanning, integration, differentiation and control in order to further study the influence of organisational structure on corporate entrepreneurship (Zahra, 1991). In addition, it seems to be necessary, referring to Srivastava and Agrawal (2010), to conduct more qualitative research within the field of corporate entrepreneurship, thus to gather additional insights about which aspects, like for example organisational structure, influence corporate entrepreneurship.

2.3 Mintzberg's theory on organisational structure

In order to further study the relationship between organisational structure and the OIC of SMEs, Mintzberg's theory will be used as a tool in order to gain insights about organisational structure. In the following paragraphs, Mintzberg's theory will be motivated in more detail. Therefore, it will firstly be motivated why Mintzberg's theory will be used for the purpose of this research. In addition, a summary of his theory will be provided as well as an elaboration on his eight design parameters. This elaboration will also contain a selection of the parameters that will be included for the purpose of this research.

2.3.1 The reasons why Mintzberg's theory on organisational structure will be used

Throughout literature, there are different organisational design theories that can be used in order to assess the organisational structure. For example, De Sitter's socio-technical design theory (1997), Womack's and Jones' Lean approach (1990) or Mintzberg's configuration theory (1980).

Concerning the Lean approach, with its roots in the automobile industry, the idea is to increase customer value and to eliminate or reduce any form of waste. Therefore, an organisation needs to be structured in such a way that production flows can be established in order to create value for the customers. According to Womack and Jones (1990), this requires continuous improvement and employee involvement in order to maximize efficiency. Due to this focus on efficiency and (especially) manufacturing companies (Womack & Jones, 2005; Ballé & Ballé, 2005), this approach was considered to be less suitable for the purpose of this research.

With regard to the socio-technical design theory, De Sitter's (1997) idea is to design organisational structures that minimize the amount of disturbances and increase the regulatory capacity at individual workstations. Therefore, De Sitter states seven design parameters which

are functional concentration, differentiation of operational transformations, specialization of operational transformations, separation between operational and regulatory transformations, differentiation of regulatory transformations into aspects, differentiation of regulatory transformations into parts, and specialization of regulatory transformations (Achterberg & Vriens, 2010). Related to these design parameters, it is argued that in order to keep the quality of the organisation, the work and the working relations high, the mentioned parameters should score low values (Achterbergh & Vriens, 2010). According to Moorkamp (2019), De Sitter's work is in particular developed for a certain type of organisation. This particular type of organisation is referred by De Sitter to as 'Mainstream-Holland Inc.' which can be characterized by standard bureaucratic designs (Moorkamp, 2019). Although De Sitter's theory might also be useful for the purpose of this research, it will not be used as it is intended by the researcher to also select cases that cannot necessarily be described as a 'Mainstream-Holland Inc'.

Mintzberg's configuration theory on organisational structure is proven as a classical approach in the realm of organisational design (Matheson, 2009; Kumar, 2015; Pugh & Hickson; 2007; Doty, Glick & Huber, 1993; Lunenburg, 2012; Miller, 1990; Pichault & Schoenaers, 2003). Mintzberg's (1980) idea is that organisations can be divided into five basic configurations that an organisation can favour in order to align the internal processes with the environment. These configurations can be described by different elements such as the key parts of the organisation, coordination mechanisms, design parameters and contingency factors. Corresponding to the argument of Närman, Johnson and Gingnell (2016), Moorkamp (2018) argued in a lecture that Mintzberg's configuration theory is applicable in a broad variety of organisations. Presumably, this increases the possibilities for the researcher to select appropriate cases in order to collect data necessary for the purpose of this research. As a consequence, Mintzberg's theory on organisational structure will be used as a tool in order to further study the relation between organisational structure and the OIC of SMEs.

2.3.2 A summary of Mintzberg's theory on organisational structure

According to Mintzberg (1980), organisations consist of five basic parts which are the operating core, the strategic apex, the middle line, the technostructure and the support staff. Concerning these different parts of an organisation, the operating core consists of organisational members that produce the products and services of an organisation (Mintzberg, 1980). In addition, the strategic apex concerns the top management of an organisation, including their personal employees. Related to these two parts of an organisation, the middle

line connects the top management with the operating core. Next, there is the technostructure as well as the support staff. Whereas to the technostructure organisational members belong that influence the activities in the operating core (e.g. planners, schedulers), employees that provide indirect support to the rest of the organisation (e.g. HR, logistics) belong to the support staff (Mintzberg, 1980).

Moreover, Mintzberg (1980) states five different coordination mechanisms organisations can make use of. These are mutual adjustment (i.e. face-to-face communication), direct supervision as well as the standardization of work processes, outputs and skills. In order to design the organisational structure, Mintzberg (1980) introduced eight design parameters which influence the division and coordination of work and presumably also the OIC of SMEs. This will be motivated more in detail in the following section.

Mintzberg's design parameters are job specialization, formalization of behaviour, training and indoctrination, unit grouping, unit size, planning and control systems, liaison devices and decentralization. In order to further study the relationship between organisational structure and OIC of SMEs, Mintzberg's (1980) design parameters job specialization, formalization of behaviour, unit grouping and decentralization can be compared with the descriptions of work specialization, formalization, departmentalization and decentralization to be found under the paragraph 2.2.2. Related to the other design parameters of Mintzberg (1980), the parameter unit size determines the number of people belonging to an organisational unit (e.g. department or team). The next parameter, referred to training and indoctrination, determines the extent to which skills and knowledge of organisational members have been standardized through educational programs. In addition, the parameter planning and control systems addresses the extent to which organisational outputs are standardized. With regard to the design parameter liaison devices, this parameter determines the degree to which mutual adjustment across units is encouraged by organisations.

According to Mintzberg (1980), so-called contingency factors (i.e. age and size of the organisation, the technical system as well as the environment and other power factors (e.g. number of shareholders present in an organisation) influence the usage of the design parameters. Therefore, there should be a close fit between these contingency factors and the design parameters.

Resulting from this link between the contingency factors and the design parameters, Mintzberg (1980) distinguished between different types of organisational structures organisations can choose from. These organisational structures normally rely on one of the

mentioned coordination mechanisms and tend to focus on one of the five parts of an organisation. To summarize with this background information on Mintzberg's theory on organisational structure, it can be distinguished between the simple structure, the machine bureaucracy, the professional bureaucracy, the divisionalized form and the adhocracy structure (Mintzberg, 1980).

2.3.3 Elaboration on Mintzberg's design parameters

In the following paragraphs, Mintzberg's (1980) eight design parameters will be motivated in more detail. In addition, a selection will be made which of these design parameters will be used for the purpose of this research.

2.3.3.1 Job specialization

According to Mintzberg (1980), job specialization is the key determinant of the division of labour and can be defined as '*the number of tasks and the breadth of each in a given position (horizontal job specialization) and the incumbent's control over these tasks (vertical job specialization) (p.325)*'. Here, horizontal job specialization defines what organisational members actually have to do (i.e. the number and breadth of tasks) while vertical job specialization relates to the regulatory capacity organisational members have in order to perform their tasks. Referring to Srivastava and Agrawal (2010), wider divisions of labour are essential in order to stimulate corporate entrepreneurship within organisations. This implies that the number and breadth of tasks (i.e. horizontal job specialization) of organisational members should include activities that are related to the identification of entrepreneurial opportunities (e.g. R&D). Otherwise, it can be said that, by excluding organisational members from entrepreneurial activities, the probability to identify entrepreneurial opportunities will be limited (Goold and Campbell, 1987; Camillus, 1982; Bossak and Nagashima, 1997). Therefore, the parameter job specialization will be used as the first independent variable in order to study the relationship between organisational structure and the OIC of SMEs.

2.3.3.2 Formalization of behaviour

Secondly, the parameter 'formalization of behaviour' can be defined by the extent to which '*work processes are standardized, through rules, procedures, policy manuals, job descriptions, work instructions, and so on*' (Mintzberg, 1980, p. 325). According to Srivastava and Agrawal (2010), it is important that organisational members feel free to experiment in order to be creative and take risks. This implies that too many fixed rules and procedures presumably prevent organisational members from thinking outside the box.

Instead, it is important that, referring to Schuler (1986), organisations have flexible policies and procedures in order to stimulate corporate entrepreneurship. On the other hand, Foss et al. (2015) figured out that formalization can also be seen as an enabler for the identification of opportunities. This means that due to formalized work processes, organisational members have a clear understanding what needs to be done in order to increase the probabilities to identify new opportunities. For example, job descriptions might prescribe that organisational members proactively have to search for new ideas and opportunities. Based on these different perspectives of whether formalization can be seen as an enabler or as an obstacle of opportunity identification, it can be expected that the parameter '*formalization of behaviour*' somehow relates to the OIC of SMEs. Therefore, this parameter will be used as the second independent variable for the purpose of this research.

2.3.3.3 Training and indoctrination

The third design parameter of Mintzberg (1980) is called training and indoctrination. This parameter determines the extent to which skills and knowledge of organisational members are standardized through educational programs. Referring to the dimension of OIC '*prior knowledge about the target market*', Ardichvili and Cardozo (2000) argue that for instance market training might potentially increase this knowledge and by this also the capabilities of organisational members to identify new opportunities. However, contrasting to the two previous parameters, this parameter is not mentioned in literature as a central element of organisational structure (Robbins et al., 2014; Ahmady, Mehrpour, Nikooravesh, 2016). Therefore, this parameter is less suitable for the purpose of this research to further study the relationship between organisational structure and the capabilities of SMEs to identify new opportunities.

2.3.3.4 Unit grouping

In addition, the parameter unit grouping can be defined as "*the bases by which positions are clustered into units*" (Mintzberg, 1980, p. 325). Within literature, this is often also referred to departmentalization (Robbins et al., 2014). As already addressed earlier, it is possible to cluster positions into units based on products, geographical areas, customers, functions and processes (i.e. work activities). Concerning unit grouping it is assumed that flat hierarchies are more suitable than tall hierarchies as it is, referring to Pinchot and Pellman (1999), often the case that in steeper hierarchies organisational members become frustrated when the need to ask for permission is high and best ideas are rejected. Moreover, it is argued, referring to Jaworski and Kohli (1993), that interdepartmental conflicts inhibit the exchange about

knowledge about the target market and to respond quickly. Since the amount and quality of communication is associated to corporate entrepreneurship (Zahra, 1991), this implies that it is important, in terms of sharing knowledge between departments, that boundaries between organisational units are kept flexible (Hornsby, Naffziger, Kuratko & Montagno, 1990, 1993). Here, Jaworski and Kohli (1993) assumed that interdepartmental connectedness positively influences the information dissemination necessary to identify new opportunities. To their great surprise, their findings indicate no relation. As a consequence, they requested future research in order to investigate this finding. Therefore, the parameter '*unit grouping*' will be used as the third independent variable in order to study the relationship between organisational structure and the capabilities of SMEs to identify new opportunities.

2.3.3.5 Unit size

Next, the parameter 'unit size' can be defined as '*the number of positions, or subunits, that are grouped into a single unit*' (Mintzberg, 1980, p. 325). Here, it might be the case that the parameter '*unit size*' influences both the communication quality as well as the flexibility of organisational units which are considered to be important elements of organisations in order to promote corporate entrepreneurship (Zahra, 1991; van Wyk & Adonisi, 2012). According to Zahra (1991), communication is helpful in order to introduce new ideas and to identify entrepreneurial opportunities. As a consequence of too large unit sizes, it might be that the interaction and communication between organisational members necessary to identify new opportunities is weakened. The same counts for the flexibility of an organisational unit. Here, it might be the case that large unit sizes also increase the information flows. This means that it would take longer to share knowledge and information among unit members which is necessary in order to identify new opportunities. Since limited research addresses the relation between unit size and the OIC of SMEs, this parameter will be used as the fourth independent variable for the purpose of this research. Here, it is assumed that large unit sizes negatively relate to the OIC of SMEs.

2.3.3.6 Planning and control systems

Mintzberg's sixth design parameter addresses the design of lateral linkages and is referred to as planning and control systems. This parameter can be defined as '*the extent to which outputs are standardized in the organisation*' (Mintzberg, 1980, p. 325). Here, it can be distinguished between action planning and performance control. Whereas related to action planning it is prescribed what organisational members have to do, performance control gives them more latitude to execute the work as it does not matter how organisational objectives

will be achieved (Mintzberg, 1980). Based on literature, this parameter is, however, not considered to be a central element of organisational structure (Robbins et al., 2014; Ahmady et al., 2016). In addition, it is argued by Ignatiadis (2007) that organisations should not focus too much on control systems when conducting flexible practices necessary to promote corporate entrepreneurship. Resulting from this, this design parameter will not be used for the purpose of this research.

2.3.3.7 Liaison devices

The next parameter of Mintzberg is called liaison devices which relates to the design of lateral linkages. Here, the basic idea of liaison devices is to connect organisational units with each other which also implies the transfer and sharing of knowledge (De Clercq, Dimov, Thongpapanl, 2015). Mintzberg (1980) defined liaison devices as the extent to which organisations encourage mutual adjustment across organisational units. In order to make this definition more accessible for the purpose of this research, the following definition will be used: *‘liaison devices can be defined as the extent to which an organisation encourages knowledge sharing across organisational units’*. Some scholars provide plausible arguments that sharing knowledge about the target market is positively related to the identification of entrepreneurial opportunities in organisations (Shane, 2000; Ardichvili et al., 2003; De Clercq et al., 2015; Zahra, 1991). Therefore, it is essential for organisations to identify ways in which the sharing of knowledge about the target market can be promoted in order to stimulate the identification of opportunities (De Clercq et al., 2015). One option in order to enable the exchange of knowledge between organisational units might be the implementation of liaison devices or roles. Therefore, this parameter will be used as the fifth independent variable in order to further study the relationship between organisational structure and the OIC of SMEs.

2.3.3.8 Decentralization

Finally, Mintzberg (1980) states the parameter decentralization which concerns the design of decision-making systems. This parameter can be defined as *‘the extent to which power over decision making in the organisation is dispersed among its members’* (Mintzberg, 1980, p. 326). Here, it can be distinguished between horizontal and vertical decentralization. Whereas, according to Mintzberg (1980), horizontal decentralization addresses the extent to which decision-making power flows informally outside the chain of line authority (e.g. to analysts or support staff), vertical decentralization concerns the extent to which formal decision-making power is delegated down the organisational hierarchy. Some scholars argue that decentralization is positively related to corporate entrepreneurship as it gives organisational

members more discretion and autonomy necessary to identify opportunities (Zahra, 1991; Foss et al., 2015; Srivastava and Agrawal, 2010). Referring to Foss et al. (2015), decentralization is more likely in organisations with flat structures. Furthermore, they also argue that decentralization enhances knowledge sharing which is, referring to the previous paragraphs, an enabler for corporate entrepreneurship. Therefore, it is assumed that the extent of regulatory capacity (i.e. decision-making power) relates to the OIC of SMEs. In addition, Foss et al. (2015) provide plausible arguments that the probability to identify new opportunities is higher when a high level of decentralization is in place. As a result, this parameter will be used as the sixth independent variable for the purpose of this research.

2.4 Conceptual model

Resulting from the theoretical background of this research, it is assumed that the variables job specialization, formalization of behaviour, unit grouping, unit size, liaison devices and decentralization relate to the OIC of SMEs. Here, referring to the elaborations of the parameters above, there are plausible arguments provided that decentralization and liaison devices positively influence the OIC of SMEs (Foss et al., 2015; De Clercq et al., 2015). On the other hand, it is assumed that large unit sizes negatively relate to the OIC of SMEs. Related to the other design parameters, this direction is rather unclear. Concerning these parameters (i.e. job specialization, formalization of behaviour and unit grouping), the researcher takes a neutral position while it is assumed that they either positively or negatively relate to the dependent variable. As a result, the following conceptual framework will be used for the purpose of this research.

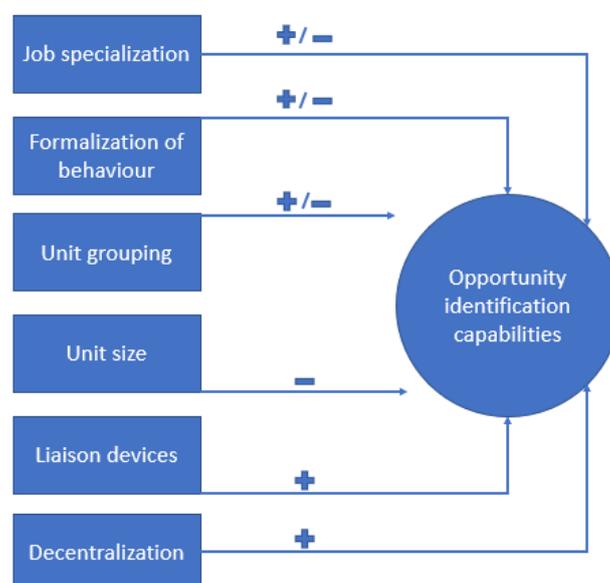


Figure 1: Conceptual model

3. Research methodology

The following sections will outline how the research was conducted in order to find answers to the above stated research questions. Therefore, the research strategy, the method for data collection, the case description, the operationalization of the central concepts of this research as well as the method for data analysis will be addressed. Finally, both the quality of the research as well as ethical considerations will be outlined.

3.1 Research strategy

Qualitative research methods are used in order to understand the underlying assumptions of a social phenomenon (Flick, 2002). Here, the focus is on the “why” which means that qualitative research approaches rely on the experiences of human beings. In order to collect and analyse the data from human beings, the researcher is closely engaged in the research process (e.g. in semi-structured interviews) while he takes a position of neutrality. Throughout the research process, detailed information needs to be gathered from a commonly smaller group of people. Although this implies that the generalizability of the information is limited, rich understandings of a social phenomenon can still be gained. In addition, qualitative research is, referring to Yin (1994), a useful approach in the early stages of exploratory research.

These pre-conditions also applied for the purpose of this research to better study the relation between organisational structure and OIC of SMEs. Therefore, experiences and insights of organisational members have been gathered as in its core organisational structure is about social interactions with regard to the coordination and division of activities. In addition, it might also be that organisational structure is too complex to survey as quantitative studies using classic aspects of structure (e.g. specialization, formalization or decentralization) presumably provide unclear results¹. As a result, qualitative research seemed to be more suitable than quantitative research which also corresponds with the request of Srivastava and Agrawal (2010) that more qualitative research should be conducted in order to gather better insights which aspects, like for example organisational structure, influence corporate entrepreneurship. In order to do so, a multiple case study was conducted. With the aid of semi-structured interviews, an in-depth understanding about the relation between

¹ A similar thought has been proposed by dr. ir. L.J. Lekkerkerk in an article submission to the Journal of Organization Design in June 2016

organisational structure and OIC could be gathered. However, this will be more motivated in the following paragraphs.

3.2 Method for data collection

Due to the qualitative focus of this research, semi-structured interviews were the main data source for the purpose of this research. According to Flick (2002), semi-structured interviews provide insightful information about the beliefs and attitudes of individuals about a social phenomenon. In addition, semi-structured interviews allow for changing the sequence of questions in response to the experiences and interests of the respondents (Kvale & Brinkmann, 2009). Contrasting to structured interviews, semi-structured interviews make it possible for the researcher to ask follow-up questions in case questions need to be more explored or answers need more clarification (Barriball & While, 1994). Moreover, when structured interviews are chosen as the method for data collection, the implicit assumption is made by the researcher that the interviewees have a common understanding about the research questions (Denzin, 1989 as cited by Barriball & White, 1994). As a consequence, semi-structured interviews were more suitable for the purpose of this research compared to structured interviews.

Due to the short time frame for this research project, eleven semi-structured interviews were conducted. Therefore, an interview protocol was prepared on the basis of the literature review outlined in the previous chapter. Besides general guidelines, this interview protocol also contained the introduction and the ending of the interviews. In addition, the interview protocol also contained the interview questions that were used in order to test the central concepts of this research. In order to test the organisational structure of the cases, the interview questions were formulated on the basis of the selected parameters of Mintzberg. Concerning the OIC of the cases, the aspects described under 2.1.4 formed the basis for the formulation of the respective research questions. Nevertheless, the operationalization of the central concepts will be addressed more in detail under 3.4. The complete interview protocol can be found in Appendix 1.

3.3 Case description

For the purpose of this research, a multiple case study was conducted. Besides the positive implications on the external validity of this research, a multiple case study enabled the researcher to understand the differences and similarities between the cases. As a consequence, four different SMEs have been analysed in order to test the relation between organisational

structure and the OIC of SMEs. Here, a SME can be defined as an organisation that employs between 1 and 249 employees (Eurostat, 2019). However, since it was assumed that organisational structure for micro enterprises (i.e. less than 10 employees) is not that relevant, the researcher only focused on small and medium sized enterprises with 10 to 249 employees. The four different cases were selected with the aid of the non-random probability technique called purposive sampling. This enabled the researcher to include only those cases that seemed to be suitable for the purpose of this research (Flick, 2002). Due to time issues, many organisations rejected to participate in this research. As a result, the researcher focused on his own network in order to find cases and data sources that were willing to participate in this research. In order to find suitable interviewees for the purpose of this research, LinkedIn has been used. With the aid of the researcher’s contacts, one to two additional interviewees per case could be found. This enabled the researcher to get a deeper understanding per case about the complex concepts underlying this research. Below, a table can be found that provides additional information about the interviewees that participated in this research. Since all cases and interviewees wanted to be treated anonymously, fictive names for the cases and data sources were given.

| Interview number | Company | Function interviewee | Nickname interviewee | Interview date | Interview duration |
|------------------|---------|----------------------|----------------------|----------------|--------------------|
| 1 | A | Managing Partner | Managing Partner-A | May 17, 2019 | 40 min. |
| 2 | A | Operations Manager | Operations Manager-A | May 17, 2019 | 46 min. |
| 3 | B | Key Account | Key Account-B | May 7, 2019 | 21 min. |
| 4 | B | Key Account | Key Account-BII | May 7, 2019 | 42 min. |
| 5 | B | Sales Director | Sales Director-B | May 7, 2019 | 41 min. |
| 6 | C | Customs Broker | Customs Broker-C | May 21, 2019 | 35 min. |
| 7 | C | Customs Broker | Customs Broker-CII | June 1, 2019 | 47 min. |
| 8 | C | Managing Partner | Managing Partner-C | May 21, 2019 | 24 min. |
| 9 | D | Controller | Controller-D | May 10, 2019 | 41 min. |
| 10 | D | Internal Auditor | Internal Auditor-D | May 10, 2019 | 55 min. |
| 11 | D | Sales | Sales-D | June 4, 2019 | 109 min. |

Table 1: Overview of respondents

3.4 Operationalization

In order to be prepared for these semi-structured interviews, an interview protocol was made. Therefore, the central concepts of this research were operationalised with the aid of existing literature into underlying dimensions and indicators. Here, the indicators dealt as starting points in order to phrase the interview questions that were necessary to measure the central concepts underlying this research. For example, one of the central concepts for the purpose of this research was the dependent variable OIC. As outlined in the previous chapter, this central

concept can be broken down into the dimensions *'prior knowledge about the target market'*, *'business networks'* and *'entrepreneurial orientation'*. These are general words which did not add value for the purpose of this research. Therefore, indicators were developed that relate these dimensions to the central concept of OIC. This was done with the aid of existing literature. For example, Shane (2000) argues that knowledge about both existing markets and how to serve these as well as about customer problems seem to influence OIC of SMEs. In addition, it is argued that prior entrepreneurial experience (Alsos & Kaikkonen, 2004) as well as an organisational context that enables employees to gather and assimilate entrepreneurial information (Wang et al., 2013) also seem to have an influence on the central concept of OIC. As a result, the indicators *'knowledge about existing markets and how to serve them'*, *'knowledge about customer problems'*, *'prior entrepreneurial experience'*, and *'organisational context that enables employees to gather and assimilate entrepreneurial information'* were phrased. Based on these indicators, interview questions were formulated in order to gather insights about the particular concept of this research. With regard to the indicator *'knowledge about customer problems'*, such a question was: *"Could you tell me something about what you as an organisation do with customer feedback?"*. Although this is just an example, it shows how dimensions and indicators underlying the central concepts of this research were developed with the aid of existing literature. As a consequence, a detailed overview of the operationalization of the central concepts underlying this research can be found below. The respective interview questions per concept can be found in the interview protocol in Appendix 1.

| Concept/ variable | Dimensions | Indicators |
|-----------------------------|---|---|
| 1. OIC | 1.1 Prior knowledge about the target market | 1.1.1 Knowledge about existing markets and how to serve them 1.1.2 Knowledge about customer problems 1.1.3 Organisational context that enables employees to gather and assimilate entrepreneurial information 1.1.4 Prior entrepreneurial experience |
| | 1.2 Business networks | 1.2.1 Engagement with customers, suppliers and other business partners 1.2.2 Participation in professional forums |
| | 1.3 Entrepreneurial orientation | 1.3.1 Innovativeness 1.3.2 Proactiveness 1.3.3 Risk taking 1.3.4 Competitive aggressiveness 1.3.5 Autonomy |
| 2. Organisational structure | 2.1 Job specialization | 2.1.1 Number and breadth of tasks 2.1.2 Control over job activities |
| | 2.2 Formalization of behaviour | 2.2.1 Degree of standardization of work activities 2.2.2 Compliance with rules, regulations and procedures |
| | 2.3 Unit grouping | 2.3.1 Interdepartmental connectedness |

| | | |
|--|----------------------|--|
| | | 2.3.2 Interdepartmental conflict |
| | 2.4 Unit size | 2.4.1 Communication quality |
| | | 2.4.2 Flexibility |
| | 2.5 Liaison devices | 2.5.1 Ease of information transfer and sharing |
| | 2.6 Decentralization | 2.6.1 Decision making power |

Table 2: Operationalization of central concepts

3.5 Method for data analysis

Once the interviews have been conducted and transcribed, they needed to be analysed. Here, the transcriptions provided the input for the analysis process in order to make sense out of the data (Boeije, 2002). Due to the operationalization of the central concepts into specific interview questions, it was possible that the same interview questions could be asked to the different interviewees. However, in order to make sense out of all this information from the interview transcripts, it was necessary to identify patterns from which explanations with regard to the research question could be drawn. Therefore, the individual interviews were first of all read. While reading the different interviews, text passages were labelled with an open code on the basis of the indicators from the operationalization (Boeije, 2002). Here, the coding software Atlas.ti was used. An example of a coded text passage can be found in Appendix 2.

Once the open codes were given for the first interview, the respective codes were reviewed while those codes with the same meaning were merged in a higher-level code. These higher-level codes were phrased on the basis of the dimensions of the operationalization. This process has been repeated for all interviews. Both the higher-level codes as well as the open codes can be found in Appendix 3 including information about their frequencies.

Afterwards, the data sources per case have been compared in order to find out whether the data sources interpreted the interview questions in the same way and whether similarities and differences across data sources can be identified (Boeije, 2002). As a consequence, the central concepts per case have been analysed as well as their relation. This process was facilitated with the ‘quotation manager’ and the ‘report-function’ of Atlas.ti. This means that it was possible to create reports that only contained information about the central concepts of a particular case. For example, it was possible to receive from the data sources of Company A only those codes that were related to the parameter ‘*decentralization*’. This analysis was repeated for all four cases. Next, the different cases were compared based on the findings of the central concepts (Boeije, 2002). Here, the researcher reviewed whether the findings of the cases were similar or different to each other. As a result, similarities and patterns could be identified from which conclusions with regard to the research questions could be drawn.

3.6 Quality of this research

According to Gibbert, Ruigrok and Wicki (2008), there are four commonly used criteria to assess the quality of field research. These are internal validity, construct validity, external validity and reliability. In the following paragraphs, it will be outlined how these aspects were treated in this research.

Referring to Gibbert et al. (2008), internal validity relates to the causal relationships between variables and results. This means that both plausible causal arguments as well as logical reasoning should be powerful enough in order to be able to defend the research results. Due to the qualitative nature of this research and the use of semi-structured interviews, it could be ensured that all interviewees received the same interview questions. In addition, back-up questions were asked in order to further clarify aspects that were addressed by the interviewees. As a result, patterns from the interviews were observed which provided the basis to draw plausible causal arguments that were necessary in order to come to the research results. In addition, a research framework was formulated that demonstrated the relation between the variables underlying this research.

Secondly, construct validity relates to the quality of the operationalization of the central concepts underlying this research (Gibbert et al, 2008). In order to increase the construct validity of this research, a chain of evidence was established that *“allows readers to reconstruct how the researcher went from the initial research questions to the final conclusions”* (Yin, 1994, p. 102). Therefore, the central concepts of this research were broken down into dimensions and indicators. Based on the indicators, interview questions were phrased that helped to measure the central concepts of this research.

Next, external validity refers to the degree to which the study's results can be generalized beyond the immediate case study (Gibbert et al., 2008). Although the generalizability is limited in this research due to the small sample size, it might still provide good starting points for theory development in other research settings besides this one (Eisenhardt, 1989). In addition, a rationale for the case study selection is provided that allows the reader to appreciate the taken sampling choices by the researcher (Cook & Campbell, 1979).

Moreover, reliability relates to the extent to which the results of this research can be reproduced when undertaking the same steps again (Gibbert et al., 2008). Here, especially transparency and replication play an important role. In order to enhance transparency, it can

be said that all interviews were recorded and transcribed. Related to the replication, a database was established with the aid of the coding software Atlas.ti. This database consists of all interview transcripts and codes that allow for retrieval for other investigators and facilitate the replication of this research (Yin, 1994).

In order to further increase the trustworthiness of the research results, the researcher made use of what is called peer debriefing. According to Lincoln and Guba (1985), the purpose of debriefing is to uncover presumed biases, statements and assumptions of the researcher. Therefore, this research setting allowed that both the researcher's supervisor as well as fellow students regularly looked into the researcher's work and provided feedback in order to increase the quality of this research.

3.7 Ethical considerations

Throughout the whole research process, the researcher always took into account ethical considerations. According to Bell and Bryman (2007), there are eleven commonly used ethics principles that should be taken into consideration when conducting research. These principles are harm to participants, dignity, informed consent, privacy, confidentiality, anonymity, deception, affiliation, honesty and transparency, reciprocity and misrepresentation. All of these principles were taken into consideration. In the following paragraph it will be motivated how.

First of all, the interviewees and their dignity were not harmed in any point in time. This means that the interviewees were not forced to give a particular answer while it was up to the interviewees what to share with the interviewer and what not. Since semi-structured interviews were conducted, the researcher was transparent and honest about the goal and the purpose of the research. Therefore, interviewees were not deceived in order to facilitate behaviour that is misleading. In addition, the researcher asked for permission of the interviewees to record the interview. Here, the interviewees were not set under pressure, enabling them to decide on their own whether they agree with recording the interview or not. Next, the interviewer provided the possibility to the interviewees to sign confidentiality and anonymity agreements. During the interviews, it was possible for the interviewees to withdraw at any point in time. Moreover, the data was collected and interpreted in a careful and appropriate way while it was made possible for the interviewees to access the results of this research afterwards. Finally, privacy was ensured by making the data only accessible to the researcher. This means that the data is protected on the researcher's laptop which can only be accessed by entering a password.

4. Results

This chapter will outline the results of this research. Therefore, general information about the cases will first of all be presented. Afterwards, both the OIC and organisational structure as well as their relation will be addressed per case. Finally, the sub-questions of this research will successively be answered.

4.1 Company A

Company A is operating in the aviation industry. In this industry Company A offers road feeder services. This means that air freight is transported to the destinations of well-known airlines. Besides air freight it is also possible for Company A to transport high value freight and pharmaceutical freight. Therefore, Company A owns approximately 40 units that are on the road 24/7 throughout the year. Moreover, Company A employs 50 employees. The organisational chart looks as follows.

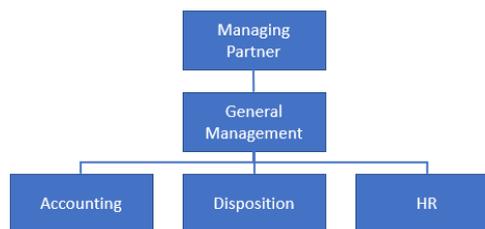


Figure 2: Organisational chart Company A

4.1.1 OIC of Company A

Concerning the OIC of Company A, it can be said that this organisation is entrepreneurially oriented (Managing Partner-A, p.c., May 17, 2019; Operations Manager, p.c., May 17, 2019). This is necessary as Company A cannot compete with competitors from East Europe based on the price. Instead, Company A needs to proactively focus on quality and customer service. Therefore, Company A focuses on automatization and digitalization in order to quickly provide information to the company's customers about particular transports (Managing Partner-A, p.c., May 17, 2019). For example, Company A developed an App in order to improve the information flow with its customers. Furthermore, being able to serve niche markets and to offer services that other competitors cannot offer, like for instance high and pharmaceutical freight services, this requires *“to be up to date in terms of technology and to push new innovations”* (Operations Manager-A, p.c., May 17, 2019). As a consequence of this example, it can be concluded that Company A in general emphasizes new innovations and technological leadership. Here, especially the engagement with customers and business

partners seems to be valuable in order to increase the OIC. This means that the exchange with customers is important for Company A in order to gather information about the requirements of the customers in terms of certificates and new technologies. Without meeting these requirements, Company A would not be able to serve particular customers (Operations Manager-A, p.c., May 17, 2019). Moreover, additional strategic partners help with developing new systems that enable Company A with the aid of artificial intelligence to increase the information quality both internally as well as for the company's customers. In addition, Company A provides an organisational context that enables employees to gather and assimilate information about new opportunities (Operations Manager, p.c., May 17, 2019). This means that official channels are short while it is always possible to discuss particular topics in person. Next, Company A schedules each week a meeting in order to discuss new ideas and opportunities together. As a result, the OIC of Company A can be classified as rather high.

4.1.2 Organisational structure of Company A

With regard to the organisational structure of Company A, Managing Partner-A outlined (p.c., May 17, 2019) that company A has a flat structure with short information flows and without clear departmental boundaries. Due to the size of Company A, it is desired that every employee is able to act in place of any colleague (Operations Manager-A, p.c., May 17, 2019). This number and breadth of tasks gives an indication that the job specialization is limited since organisational members of Company A seem to conduct a large variety of activities. In addition, it seems that the behaviour of organisational members is also not too formalized. According to Operations Manager-A (p.c., May 17, 2019), there is some degree of standardization at Company A because otherwise the shift work cannot be performed. However, the performance of the organisational members is not evaluated based on the compliance with rules, regulations and procedures. This means that, referring to Operations Manager-A (p.c., May 17, 2019), there is still enough creative latitude for employees in order to also identify new opportunities. Therefore, every organisational member has a certain degree of decision-making power which, according to Managing Partner-A (p.c., May 17, 2019), stimulates the capabilities of the organisational members to identify new opportunities and ideas. Operations Manager-A (p.c., May 17, 2019) described the decentralization at Company A suitable with the statement *“that one does not need to overcome any obstacles. It is always said: once you have an idea, realize that idea. If it does not work out, we have bad luck at this point”*. As a result, the decentralization at Company A can be classified as rather

high. Due to the small unit sizes, it also seems that the organisational departments are closely connected as all organisational members have close interactions with each other (Managing Partner-A, p.c., May 17, 2019). As stated by Operations Manager-A (p.c., May 17, 2019) this is also *“a major advantage of flat hierarchies that everyone knows what is going on and that things can directly be discussed”*. In addition, decisions can quickly be taken *“without having a discussion of about 3 weeks”* (Operations Manager-A, p.c., May 17, 2019). This also implies that the communication quality is good since organisational members of different departments, regardless of their position, can easily talk with each other. This ease of information exchange is also promoted by the fact that every organisational member, besides the management, sits together in an open-plan office (Operations Manager-A, p.c., May 17, 2019).

4.1.3 Relation between organisational structure and the OIC of Company A

At company A, *“every organisational member knows from A to Z the whole process”* (Managing Partner-A, p.c., May 17, 2019) which enables them to identify parts of the process that need to be changed or improved. With regard to the identification of new opportunities, there are no pre-determined standards that reduce the possibilities of organisational members to deviate from procedures and to try new things out (Operations Manager-A, p.c., May 17, 2019). In addition, every organisational member has some degree of decision-making power that gives them latitude and encouragement to identify and pursue new opportunities (Managing Partner-A, p.c., May 17, 2019). Moreover, the interdepartmental connectedness and flat hierarchy at Company A ensures that new ideas and opportunities can directly be discussed (Operations Manager-A, p.c., May 17, 2019). Illustrated by the words of Managing Partner-A (p.c., May 17, 2019) *“we are also very flexible which is our competitive advantage. Since we are so flexible, we can quickly act towards changes”*, new opportunities and ideas can quickly be introduced. Here, regular meetings and short official channels ensure that information necessary to identify new opportunities do not get lost (Operations Manager-A, p.c., May 17, 2019).

4.2 Company B

Company B is a family business with 26 employees. This company produces, ripens and sells cheese to carefully selected partners such as cheese shops, delicatessens, restaurants, airports and retailers. Below, the organisational chart can be seen. Here, the business owner is in charge of both the organisation as well as of the marketing activities.

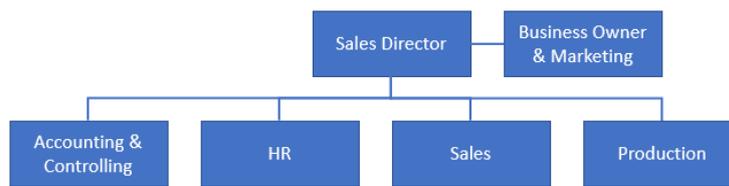


Figure 3: Organisational chart Company B

4.2.1 OIC of Company B

Similar to Company A, Company B also seems to be entrepreneurially oriented. According to Sales Director-B (p.c., May 7, 2019), the goal of Company B is to be the smallest world brand. Therefore, it is crucial to be innovative and inspire the company's customers and consumers. As a result, Company B developed biodegradable packaging units or introduced new cheeses with new flavours (e.g. with mustard). These are examples of actions to which, referring to Sales Director-B (p.c., May 7, 2019), the competition responded to. Furthermore, Sales Director-B outlined that it is important that organisational members need to understand the entrepreneurial orientation of the organisation as this helps the organisation to inspire the employees and provide input for new opportunities. As Sales Director-B stated (p.c., May 7, 2019), *"we want to inspire all the employees [...]. So, when they have a good idea, we will not reward them with money, but we will reward them with developing it and bring it to the market"*. Therefore, it is important that organisational members especially value customer feedback as *"real innovation is driven by what consumers want"* (Sales Director-B, p.c., May 7, 2019). This means that Company B is in close interaction with their customers. Here, especially the salespeople have to listen carefully to the market, collect information from the market and feed the organisation with information with what is going on in the outside world (Sales Director-B, p.c., May 7, 2019; Key Account-B, p.c., May 7, 2019; Key-Account-BII, p.c., May 7, 2019). As a result, Sales Director-B stated (p.c., May 7, 2019) with regard to the role of the salespeople that *"the better they are able to feed the organisation with trends and all that kind of things, the quicker the organisation can respond to it and make an innovation"*. On the other hand, it often also goes the other way around. This means that a new product idea is introduced to one of the few selected customers of Company B with the request to test it in a particular region. If this test is successful, the product will normally be launched on a broader scale (Key Account-B, p.c., May 7, 2019). These new ideas or alterations to be made are discussed every two weeks in a meeting with the marketing director, the production director and the Sales Director-B in order to agree upon which

developments should be focused on (e.g. vegetarian or lactose free cheese) (Sales Director-B, p.c., May 7, 2019). In comparison to Company A, the OIC of Company B can also be classified as rather high. Nevertheless, it seems that Company A has found new services for new markets whereas Company B seems to focus on new products for existing markets and customers. Based on this analysis of the data, the OIC of Company B can be considered to be smaller than the OIC of Company A.

4.2.2 Organisational structure of Company B

The organisational structure of Company B can also be described as a flat hierarchy with short official channels (Key Account-B, p.c., May 7, 2019). For example, Key Account-BII (p.c., May 7, 2019) stated that *“you do not have to cross different layers or different managers. You can just sit together with five people and brainstorm on how to make it work”*. Next, the work at Company B is to some extent specialized and formalized. Whereas the salespeople perceive less control over their job activities and less compliance with rules and procedures, this is different for the production department. According to Sales Director-B (p.c., May 7, 2019), *“the guys from the production do not go outside. They do not speak with customers, they are not on seminars, they are not on fairs, they have not the input”*. Therefore, their job seems to be rather specialized and formalized. On the other hand, the salespeople have their budget and can independently decide what to do with it. Here, they do not need to comply with any regulations or standards, referring to Key Account-B (p.c., May 7, 2019), they can just try new things out. This means that Company B is also to some extent decentralized as especially the salespeople are able to take decisions without the approval of their supervisors. However, the salespeople are always dependent on the production as they finally have to produce the new products. Here, it regularly comes to conflicts as *“sales fights for their customers and production fights for their efficiency”* (Sales Director-B, p.c., May 7, 2019). Although both parties usually find a compromise, there seems to be an ongoing discussion whether sales or production is leading in Company B (Key Account-B, p.c., May 7, 2019). In order to reduce the probability for these interdepartmental conflicts, it is therefore important that each party (i.e. sales and production) is able to clearly communicate what is required from the other party and why it might be beneficial for the whole organisation (Sales Director-B, p.c., May 7, 2019). If this is clear, new ideas at Company B can be implemented quickly (Key Account-B, p.c., May 7, 2019). At this stage, the ease of information transfer and sharing is also beneficial for the implementation of new ideas at Company B. Due to the limited size of Company B and its small units, it is possible to talk to every organisational member face-to-face. For

example, Sales Director-B (p.c., May 7, 2019) outlined that he approximately talks one hour per week with every employee addressing questions such as “*what are we doing, how is business going, what kind of opportunities do we see, what do we need?*”. As a result, organisational members at Company B can directly interact with the organisation’s management, participate in decision making and perceive less emphasis on direct supervision and the compliance with rules and regulations.

4.2.3 Relation between organisational structure and the OIC of Company B

Due to the higher job specialization and formalization of behaviour of the production employees, Company B seems to depend on the salespeople to identify new opportunities. Due to their wide number and breadth of tasks and their low compliance with standards and regulations, they are able to feed the organisation with new information that is necessary to identify and develop new innovations (Sales Director-B, p.c., May 7, 2019). Here, and similar to Company A, the decentralization at Company B seems to contribute to the OIC as organisational members are encouraged to actively think about new opportunities while they also have the necessary latitude in order to pursue them (Key Account-B, p.c., May 7, 2019). On the other hand, interdepartmental conflicts seem to inhibit the OIC of Company B. As a consequence, “*the most spectacular ideas*” (Sales Director-B, p.c., May 7, 2019) can sometimes not be realized due to contradicting goals between the sales and the production department. In order to reduce this inhibition, liaison devices in the form of meetings are scheduled on a regular basis. Illustrated by the words of Sales Director-B (p.c., May 7, 2019) “*there we share these kinds of ideas. Then we look into it and discuss it whether it is possible to develop it or what kind of alterations do we have to make*”, these meetings between the production, sales and the business owner are aimed at sharing new ideas and opportunities and how they can be realized.

4.3 Company C

Company C is a customs agency with 35 employees. This company is responsible for international customs clearances for trading companies and forwarders. The organisational chart looks as follows.



Figure 4: Organisational chart Company C

4.3.1 OIC of Company C

Contrasting to the previous two cases, the OIC of Company C seem to be limited. This is due to the following reasons. With regard to the entrepreneurial orientation of Company C, Managing Partner-C said (p.c., May 21, 2019) *“we are a SME with 35 employees and we do not have the ambitions to grow anymore. We are happy with what we have now”*. This is an interesting finding showing that without the willingness and the higher management support, the role of organisational structure in relation to OIC is minor. Furthermore, he outlined that although Company C would have the contacts to expand the business, they just want to focus on customs clearances and be specialized in that business. Therefore, Company C does not emphasize new innovations and developments. As a result, both in-house research about new trends and developments as well as meetings to discuss new ideas are not conducted (Managing Partner-C, p.c., May 21, 2019). In addition, Company C also does not participate in professional forums that could help to increase the OIC (Managing Partner-C, p.c., May 21, 2019). Basically, Company C just incorporates the specifications of the customs authority. Based on this, it can be concluded that the OIC of Company C are rather limited.

4.3.2 Organisational structure of Company C

Concerning the organisational structure of Company C, it can first of all be said that the number and breadth of tasks at this organisation is limited. In the words of Managing-Partner-C (p.c., May 21, 2019) *“we do not do anything else besides customs clearances”*. This gives an indication that the job specialization is high. Moreover, it seems that the activities at Company C are also formalized to a high degree as, referring to Customs Broker-C (p.c., May 21, 2019), *“it is not possible to change the process of a customs clearance due to the compliance with legal rules”*. This means that the activities at Company C are standardized to a high degree as organisational members need to follow the rules set by the customs authority. However, it is possible for organisational members at Company C to prioritise their work activities and to some extent also take their own decisions without the approval of the management. According to Managing Partner-C (p.c., May 21, 2019), this decision-making power is given until a financial boundary is reached. Above that boundary, everything is decided by the management. Furthermore, it can be said that the organisational units are closely connected with each other which is also due to the small size of Company C. This means that it is possible to talk to everyone face-to-face in order to discuss certain things (Managing Partner-C, p.c., May 21, 2019). In addition, new information or regulatory changes of the customs authority are also shared quickly at Company C as many organisational

members also sit in the same office (Customs Broker-C, p.c., May 21, 2019). Due to these described circumstances, the organisational structure of Company C can be characterised by a high degree of job specialization and formalization of behaviour as well as by short communication channels.

4.3.3 Relation between organisational structure and the OIC of Company C

In general, the interdepartmental connectedness, the communication quality and the ease to exchange information internally is high at Company C. Although these aspects presumably influence the OIC of SMEs, the high job specialization and formalization of behaviour analysed at Company C eventually seem to inhibit the capabilities to identify new opportunities. Illustrated by the words of Customs Broker-CII (p.c., June 1, 2019) ‘*new opportunities are not possible for us since we have to comply with the process and are just specialized on customs clearances*’, the limited number and breadth of tasks and the high compliance with rules, regulations and procedures prevents that organisational members ‘*take the right path and not the left path because it is prescribed to take the left path*’ (Customs Broker-CII, p.c., June 1, 2019). Here, the limited decentralization at Company C also inhibits that organisational members decide without the approval of their supervisors what to focus on and what to prioritise. As a consequence, the parameters ‘job specialization’ and ‘formalization of behaviour’ seem to have the greatest influence on the OIC of Company C followed by the parameter ‘decentralization’.

4.4 Company D

Company D employs 90 employees and is a European system provider for door and gate solutions as well as loading systems for the private and industrial use. The organisational chart looks as follows.



Figure 5: Organisational Chart Company D

4.4.1 OIC of Company D

With regard to the OIC of Company D, Internal Auditor-D (p.c., May 10, 2019), Controller-D (p.c., May 10, 2019) and Sales-D (p.c., June 4, 2019) outlined that Company D is operating in an industry in which the innovation potential is limited. Here, it is, referring to Internal

Auditor-D (p.c., May 10, 2019), often the case that new requirements (e.g. fire protection standards) are introduced by the government. In addition, Company D is less engaged with suppliers or other business partners due to its high vertical integration. In the words of Internal Auditor-D (p.c., May 10, 2019), *“not many innovation ideas or impulses for innovations are coming from our suppliers”*. Nevertheless, Company D employs a product innovation officer who is engaged full-time with the identification of new opportunities and innovations. According to Internal Auditor-D (p.c., May 10, 2019), it is important that the company’s products are constantly developed further as this is necessary in order to justify the company’s reputation and its price level compared to competitors from Eastern Europe. In addition, Company D also has a hall *“in which competitive products are built-on, disassembled, assembled and tested in order to get insights how they function and what the competition is doing”* (Internal Auditor-D, p.c., May 10, 2019). Moreover, Company D also conducts on a regular basis a ‘Product Innovation Day’ in which new insights about target markets and current topics are discussed with a limited number of people. Next, Company D conducts both field as well as desk research about competitors and regularly buys market research in order to gather insights about target markets, customer preferences and (potential) opportunities (Sales-D, p.c., June 4, 2019). As a result, it can be concluded that Company D in general emphasizes new innovations and R&D. Nevertheless, the OIC of Company D could be better as it is, according to Internal Auditor-D (p.c., May 10, 2019), not possible for every employee to actively share new ideas and opportunities while the management also encourages this only to a certain extent (Controller-D, p.c., May 10, 2019). Illustrated by the words of Internal Auditor-D (p.c., May 10, 2019) *“this would be a large area in which you can let off steam”*, this seems to hinder that Company D can reach its maximum OIC. Therefore, the OIC of Company A and B seem to be greater than the OIC of Company D. However, Company D has greater OIC than Company C since Company D proactively tries to identify new opportunities which seems not to be the case at Company C.

4.4.2 Organisational structure of Company D

Related to the organisational structure of Company D, it can first of all be said that not every employee has the possibility to get insights into other organisational units. For example, the controlling department is, referring to Internal Auditor-D (p.c., May 10, 2019), not involved in product innovation activities. In addition, it is the case that organisational members at Company D have a reporting obligation to the management in order to outline whether milestones were achieved (Sales-D, p.c., June 4, 2019). On the other hand, it is possible to a

certain extent to perform additional activities besides the ones that lead to the achievement of the milestones. This number and breadth of tasks as well as the extent to which organisational members at Company D have control over their tasks gives an indication that the job specialization is moderate. Moreover, Controller-D (p.c., May 10, 2019) outlined that for example the controlling department is responsible *‘for the generation of recurring reports’* besides new, less standardised, activities. According to Controller-D (p.c., May 10, 2019), these reports need to comply with fixed rules and regulations. However, these compliance with rules and regulations is less strict in other organisational units while organisational members in general are also given some degrees of freedom in order to conduct their activities (Sales-D, p.c., June 4, 2019). As a result, the behaviour of organisational members is to some extent formalized. Concerning to the decentralization at Company D, it can be said that, although there are business events that require the approval of the management, organisational members can take decisions to a certain extent without the approval of their supervisors or the management (Sales-D, p.c., June 4, 2019). This also means that organisational members are able to prioritise their activities on their own. In the words of Controller-D *‘I do not have the impression to work at a company where somebody is looking down from above with a binocular telling the employees that they able to do everything but cannot take decisions on their own’* (p.c., May 10, 2019). Therefore, every organisational member seems to have some decision-making power to a certain extent. Related to the unit grouping of Company D, it was mentioned that the communication channels are direct and that it is no problem to talk to colleagues of other organisational units (Internal Auditor-D, p.c., May 10, 2019). However, it was remarkable that all respondents outlined that they do not have insights in other departments and also do not know which objectives they have. Although product managers seem to be in direct contact with sales, there is, referring to Internal Auditor-D (p.c., May 10, 2019), no corporate suggestion scheme that enables organisational members to share their thoughts about new opportunities. This means also that there are no clear liaison devices that enable the exchange of information between organisational units. As a result, it can be concluded that especially the interdepartmental connectedness at Company C seems to be developable.

4.4.3 Relation between organisational structure and the OIC of Company D

Similar to the relation found in the previous cases, job specialization and formalization of behaviour also seem to influence the OIC of Company D. Although organisational members need to achieve determined milestones, they have control own how to achieve them. In

addition, they also have the possibility to perform additional activities besides the core activities. Illustrated by the words of Sales-D (p.c., June 4, 2019) ‘‘I could not have the ideas that I had so far if I would be embedded in a fixed structure’’, these moderate levels of job specialization and formalization of behaviour enable organisational members to try out new things. Moreover, the moderate decision-making power that organisational members enjoy also seem to contribute to the OIC of Company D. This means that, for example, projects necessary to pursue new opportunities can be initiated without the approval of the supervisors (Sales-D, p.c., June 4, 2019). On the other hand, parallel to Company B, the limited interdepartmental connectedness and exchange of information between organisational units seem to inhibit the capabilities of Company D to identify new opportunities. As the words of Sales-D (p.c., June 4, 2019) show ‘‘I believe I could be more creative if I would know more’’, the OIC of Company D could be higher if the organisational units would be better connected with each other. As a consequence, this also implies that liaison devices are missing that provide the input from other organisational units in order to identify new opportunities.

The following figure is a visual representation of the written data about the cases. Here, the visualization represents the OIC as well as the organisational structure of the cases.

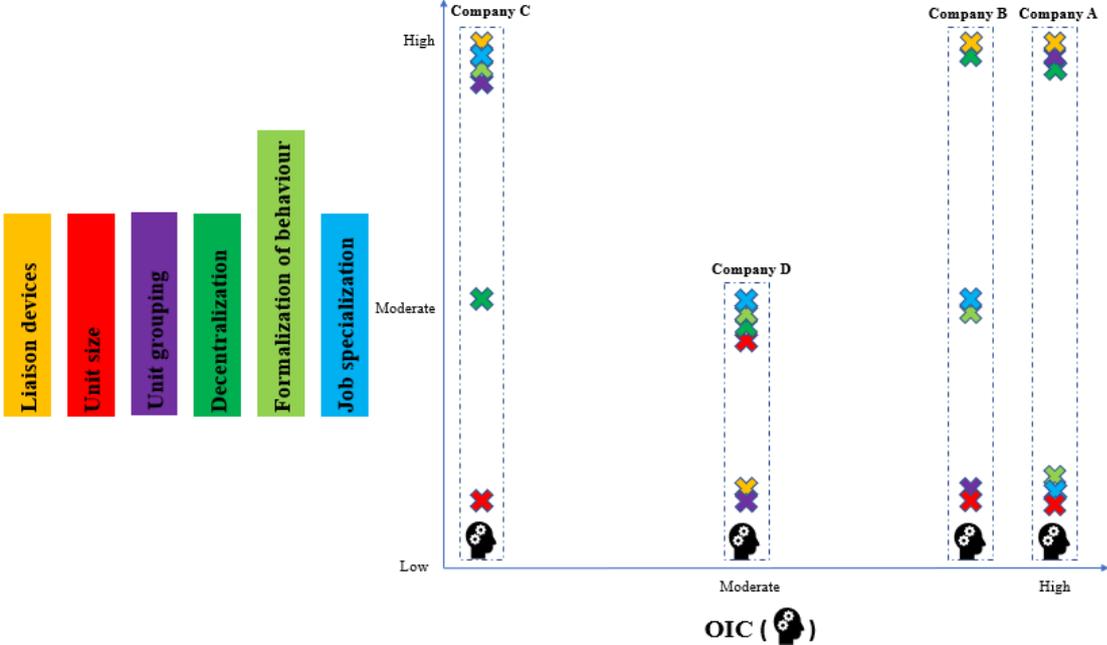


Figure 6: Intercompany comparison

4.5 Answers to sub-research questions

In the following paragraphs the relation between the individual parameters and the OIC will be outlined. As a consequence, the sub-research questions of this study will be answered successively.

4.5.1 Relation between job specialization and the OIC of SMEs

Based on the analysis of the data, it can be said that high levels of job specialization negatively relate to the OIC of SMEs. This means the lower the number and breadth of tasks and the control over job activities, the lower the OIC. This is due to the following reasons. Based on the indicator '*number and breadth of tasks*', it was considered as important by several interviewees (e.g. Sales Director-B, Managing Partner-A, Internal Auditor-D) that organisational members have a wide number and breadth of tasks. This means that it is important that they know the whole process of the value chain. In the words of Managing Partner-A (p.c., May 17, 2019) '*that's why I find it personally so important that organisational members know everything about the whole process as this enables them to provide suggestions for improvement*'. For example, Company B also inspires its organisational members to go through the production as '*strange eyes always help to see your process in a different way*' (Sales Director-B, p.c., May 7, 2019). This means that they get an overall understanding of the whole organisation, the respective processes and the value chain which seems to be beneficial in order to identify new opportunities. This also corresponds with what Key Account-B said as he experiences a lot of variety in his activities. According to Key Account-B (p.c., May 7, 2019), he perceives so much by walking for example through restaurants or food markets that can be related to the production of cheese, enabling him to identify new opportunities. On the other hand, Company C, for example, is just specialized in customs clearances while this process does not provide opportunities to learn and develop from other jobs. Therefore, they probably will not identify opportunities that fall outside this scope. This also corresponds with their limited OIC as described in the previous paragraph. As a result, SMEs with a large number and breadth of tasks seems to be better capable of identifying new opportunities than SMEs with a high job specialization.

In addition, it also seems that the control over job activities plays an important role with regard to the OIC of SMEs. Here, it is important that organisational members have some control over their job activities and also some latitude how to conduct them. For example, at Company B it is the case that the key accounts receive a budget that they can invest at their own discretion. Illustrated by the words of Key Account-B2 (p.c., May 7, 2019) '*I think you feel more like an entrepreneur if you work like this*', this gives them latitude in order to try new things out or to invest in (potential) opportunities. As a consequence, this means that organisational members with a high control over job activities seem to be better capable of identifying new opportunities than organisational members with less control.

4.5.2 Relation between formalization of behaviour and the OIC of SMEs

Secondly, it can be said that formalization of behaviour is also negatively related to the OIC of SMEs. This means that the higher the degree of standardization of work activities and the compliance with rules, regulations and procedures, the lower the capabilities of SMEs to identify new opportunities. This follows from the analysis of the data due to the following reasons. Concerning the degree of standardization of work activities, it was mentioned by Operations Manager-A (p.c., May 17, 2019), Sales Director-B (p.c., May 7, 2019) and Controller-D (p.c., May 10, 2019) that some standardization is important in order to establish a basic structure. Otherwise, *“an organisation cannot function if everyone is just doing whatever he feels like”* (Operations Manager-A, p.c., May 17, 2019). However, a high degree of standardization also provides a line of approach that determines how organisational members have to conduct their work activities in order to achieve satisfactory results. As a result, every activity is predetermined which implies that organisational members do not have the capacity anymore to think out of the box with regard to new opportunities (Sales-D, p.c., June 4, 2019). In the words of Operations Manager-A (p.c., May 17, 2019) *“one the one hand it is nice if organisational members are working to capacity, on the other hand this condition might result in the fact that innovation power gets lost”*. Therefore, it should be possible for an organisational member to deviate from standards in order to have the possibility to give attention to new opportunities (Controller-D, p.c., May 10, 2019).

Illustrated by the words of Sales-D (p.c., June 4, 2019) *“this whole regulation in the sense of where to make crosses inhibits to think out of the box”*, the same argumentation also implies for the compliance with rules, regulations and procedures. If it is not possible for an organisational member to deviate from rules, regulations or procedures, he will also not have the possibility to look beyond his activities for new opportunities. For example, customs broker at Company C need to comply with the rules and regulations of the customs authority. As a consequence, it is difficult for them to deviate from the rules and regulations prescribed in a customs clearance in order to give attention to new opportunities outside these boundaries. This means that Company C is inhibited in their way of working which also implies that it is difficult for them to offer, for example, new services that contradict with the regulations prescribed by customs authority. Therefore, it should be possible for organisational members to deviate from standards and predetermined rules, regulations and procedures in order to be able to try new things out and seize new opportunities.

4.5.3 Relation between decentralization and the OIC of SMEs

Moreover, the analysis of the data also indicated that decentralization is positively related to the OIC of SMEs. Referring to Operations Manager-A (p.c., May 17, 2019), decentralization helps to *“encourage employees to think along and to feel as part of the organisation”*. This also corresponds with what Internal Auditor-D (p.c., May 10, 2019) said that *“the higher the discretion, the higher the willingness or the awareness to actively identify opportunities”*. This means that it should be possible for organisational members to independently take decisions and participate in decision-making in order to pursue opportunities. This also implies that organisational members should not be blamed in case they pursued an opportunity which did not become a success. Referring to Sales Director-B (p.c., May 7, 2019), it is part of the opportunity identification process to make mistakes and learn from them. However, mistakes should never be made twice.

In addition, it is of relevance with regard to the relation between decentralization and the OIC of SMEs that the organisational members understand the entrepreneurial orientation of an organisation. Using the words of Sales Director-B (p.c., May 7, 2019) *“when you are a small company it is important that all the people understand in what kind of direction we want to develop. If they understand that, it really helps them to give them input on the ideas that are suitable for the direction we want to go”*. This means that once organisational members understand the entrepreneurial orientation of an organisation, they might have a better understanding about which opportunities should be pursued. This also corresponds with the idea of Managing Partner-A (p.c., May 17, 2010) that organisational members with a certain degree of autonomy are able to provide feedback about what should be done better or differently. This ability of organisational members to decide and prioritise themselves is limited at Company C as organisational members only have autonomy until a financial boundary is reached. As a consequence, they are limited in their ability to decide and prioritise themselves what to focus on which also implies the identification of new opportunities. Based on the interpretation of the data, it can therefore be concluded that decentralized SMEs are better capable of identifying new opportunities than centralized SMEs.

4.5.4 Relation between unit grouping and the OIC of SMEs

Next, it can be said that throughout the research process it was mentioned that a flat hierarchy is suitable for the opportunity identification of SMEs (e.g. Managing Partner-A, p.c., May 17, 2019; Key Account-B, p.c., May 7, 2019). As a result, organisational members in a flat

hierarchy do not have to overcome any obstacles in order to pursue an opportunity. Instead, it is, referring to Operations Manager-A (p.c., May 17, 2019), an advantage of a flat hierarchy that decisions can directly be discussed and taken. Here, it is furthermore also important that organisational units are well connected with each other. This also implies that the goals of the different organisational units should be in harmony with each other as this seems to be a potential barrier for SMEs to identify and pursue new opportunities. For example, Company B gave the impression that the production and sales unit sometimes follow different interests. Whereas the production unit seems to focus on efficiency goals, the sales unit focuses on the needs of the customers. As a consequence, it was not possible for Sales Director-B to introduce a new snacking concept which, according to him (p.c., May 7, 2019), is unique for the world and the company's customers but did not correspond with the goals of the production unit. This example also corresponds with the unit grouping at Company D where it is, according to Internal Auditor-D (p.c., May 10, 2019), not possible to actively share new ideas and opportunities with other organisational units. These examples show that it is important that organisational units go along with each other as, referring to Sales-D (p.c., June 4, 2019), *“the innovation power lies in the group instead of the individual if everyone contributes information so that something can grow”*. This interdepartmental connectedness is also important for the information sharing between organisational units. Therefore, a flat hierarchy is, referring to Operations Manager-A (p.c., May 17, 2019) more suitable than a tall strategy as *“a flat hierarchy ensures that information coming from below do not get lost”*. In comparison, Operations Manager-A (p.c., May 17, 2019) argued that in tall structures information often needs to be discussed at different points in the organisation until it reaches the unit it was intended for. However, this bears the risk that important information in the end gets lost. In addition, Key Account-BII (p.c., May 7, 2019) shared this viewpoint that in tall structures business opportunities need to cross through different layers. Here, you also bear the risk that if the management or your supervisor changes, *“your idea is going to be killed”* (Key Account-BII, p.c., May 7, 2019). As a result, it can be concluded that unit grouping positively relates with the OIC of SMEs. This means that the higher interdepartmental connectedness and the lower interdepartmental conflicts, the better the capabilities of SMEs to identify new opportunities. Here, especially a flat hierarchy seems to be suitable. In the words of Controller-D (p.c., May 10, 2019), *“the more open the corporate culture, the more you feel like a great team, this is in my opinion the largest lever for the identification of opportunities”*.

4.5.5 Relation between unit size and the OIC of SMEs

Concerning the parameter '*unit size*' it was remarkable that the interviewees did not share the same opinion about how this parameter relates to the OIC of SMEs. On the one hand, it was argued that this depends on the leadership of an organisational unit. In the words of Internal Auditor-D (p.c., May 10, 2019), '*it does not matter whether a department is small or large, instead it is ultimately about whether an employee has a complete overview of the value chain*'. This means that, according to Internal Auditor-D (p.c., May 10, 2019), a low job specialization and a low formalization of behaviour is more important concerning the OIC of SMEs than the unit size. In addition, Operations Manager-A (p.c., May 17, 2019), took the view that with regard to the relation between unit size and the OIC of SMEs the communication quality is essential. Here, the tendency is that smaller organisational units are more suitable in order to share information that can help to identify opportunities than larger units. For example, Controller-D (p.c., May 10, 2019) outlined that '*if a department becomes too large and too complex, this complicates the communication as it is also not always possible to talk to everyone*'. This argument also corresponds with the opinion of Customs Broker-C (p.c., May 21, 2019) that '*in a large organisational unit the one side does not really know what the other side is currently doing*'.

Furthermore, the unit size also seems to have consequences for the flexibility of an organisation. According to Managing Partner-C (p.c., May 21, 2019), this is something that especially large organisations experience. Here, Operations Manager-A (p.c., May 17, 2019) exaggeratedly described the organisational structure of large organisations with the words '*there is a head of department, a team leader, the team leader of the team leader and a different hierarchy until particular things will be discussed*'. As a result, this hinders the willingness of organisational members to pursue innovations, have ideas and express their ideas since, referring to Operations Manager-A (p.c., May 17, 2019), they have the impression that nobody pays attention to it. Managing Partner-A (p.c., May 17, 2019) illustrated this limited flexibility of large organisations compared to smaller organisations with a comparison between a speedboat and the AIDA ship. Whereas it takes some time for the AIDA ship to change the course, a speed boat can quickly go either right or wrong. Referring to Operations Manager-A (p.c., May 17, 2019), this is an advantage of smaller organisations that decisions can quickly be made in order to react on changes necessary for the identification of new opportunities.

Next, Sales Director-B (p.c., May 7, 2019) also associated large organisations with a lot of reporting obligations. Here, he argued that reporting always means looking back to the past and report what happened there. However, it is, referring to him, more advisable to look in the future in order to be able to identify new opportunities. Therefore, it can be concluded that there is a tendency that large unit sizes seem to have negative consequences for the OIC of SMEs as it worsens both the communication quality as well as the flexibility of an organisation. In the words of Managing Partner-A (p.c., May 17, 2019), *‘the larger the organisation, the more people it employs, the more departments there are, then one goes from a speedboat, to larger boat until one has reached the AIDA ship’*.

4.5.6 Relation between liaison devices and the OIC of SMEs

In general, it was remarkable that the smaller cases (i.e. Company A, B and C) explicitly stated that establishing a liaison position would not improve the information transfer between organisational units due to their limited company size and their short official channels (Operations Manager-A, p.c., May 17, 2019; Key Account-B, p.c., May 7, 2019; Managing Partner-C, p.c., May 21, 2019). Nevertheless, other liaison devices seem to play an important role with regard to the OIC of SMEs. Here, especially formal and informal meetings play an important role in order to exchange information between organisational units on common interests. During these meetings it is possible to discuss if new markets or customers exist and which ideas are worth to be developed further (Operations Manager-A, p.c., May 17, 2019; Sales Director-B, p.c., May 7, 2019). According to Internal Auditor-D (p.c., May 10, 2019), this information sharing also gives other organisational members something to think about. Moreover, it is also important to have the possibility to conduct informal meetings that are compared to formal meetings not scheduled on a regular basis. Referring to Operations Manager-A (p.c., May 17, 2019), this possibility is ensured in a flat hierarchy as new ideas and opportunities can directly be discussed with the management of the organisation due to the short official channels. Here, it is also beneficial that the organisational context allows for a direct communication and exchange of information. For example, an open-plan office enables, referring to Operations Manager-A (p.c., May 17, 2019), that (potential) innovations can directly be discussed. Based on the analysis of the data, it can be concluded that liaison devices seem to positively relate to the OIC of SMEs since a well-functioning information exchange enables SMEs to quickly identify new opportunities. In the words of Controller-D (p.c., May 10, 2019), *‘the easier it is to share data and information with each other and the more often this is done, the more possibilities arise from that’*.

5. Conclusion

The aim of this chapter is to answer the main research question of this study: ‘*What is the relation between job specialization, formalization of behaviour, unit grouping, unit size, liaison devices, decentralization and the ability of SMEs to identify new ideas for new products, processes, practices or services?*’.

Based on the analysis of the data presented in the previous chapter, it was remarkable that a high job specialization has a profound negative influence on the OIC of SMEs. Here, especially the cases with higher OIC benefitted from the condition that organisational members performed a wide number and breadth of tasks and had control over their tasks. As a consequence, it can be concluded that a high job specialization inhibits organisational members to get an understanding about the whole value chain which means that the probability decreases that organisational members identify new opportunities at the beginning or at the end of the value chain that are not necessarily directly related to their core activities.

Secondly, the described relation in the paragraph above is similar to the relation between formalization of behaviour and the OIC of SMEs. Together with the parameter ‘*job specialization*’, the parameter ‘*formalization of behaviour*’ is based on the analysis of the data one of the two largest inhibitions of the capabilities of SMEs to identify new opportunities. Here, three out of four cases indicated that a high degree of standardization and regulation inhibit organisational members to think out of the box, pay attention to new opportunities and maximize their innovation power. Therefore, it can be concluded that a high formalization of behaviour negatively relates to the OIC of SMEs.

Next the analysis of the data showed that decentralization encourages organisational members to actively search for new opportunities as they have the decision-making power to try out new things and bring the organisation forward. However, if both job specialization as well as formalization of behaviour are high, the latitude of organisational members to experiment, be creative and take risks is limited. This means that organisational members can to a certain extent take decisions and prioritise their work activities while they are eventually too much embedded in a fixed structure in order to be able to identify new opportunities. Therefore, it can be concluded that in general decentralization positively relates to the OIC of SMEs while high levels of job specialization and formalization of behaviour may inhibit this relation. As a consequence, the influence of the parameters ‘*job specialization*’ and

'formalization of behaviour' on the OIC of SMEs seems to be higher than the influence of decentralization.

Moreover, it can also be concluded that unit grouping and interdepartmental connectedness positively relate to the capabilities of SMEs to identify new opportunities. Based on the analysis of the data, flat structures seem to be suitable therefore as they ensure that organisational members do not need to overcome any obstacles in order to pursue an opportunity and that information, compared to tall structures, do not get lost in some point of the organisation. In addition, interdepartmental connectedness contributes to the dissemination of information necessary to identify new opportunities. For example, salespeople cannot introduce a new product without the consultation with the production. Therefore, it can be concluded that high interdepartmental connectedness contributes to the OIC of SMEs whereas interdepartmental conflicts may inhibit these capabilities.

With regard to the parameter *'unit size'*, the analysis of the data indicated that there is a tendency that larger unit sizes negatively relate to the OIC of SMEs. Here, larger unit sizes seem to negatively influence both the communication quality within an organisational unit as well as its flexibility. This means that within larger organisational units it becomes more difficult to share information that might promote the identification of new opportunities. In addition, it seems that larger organisational units are limited in their ability to quickly react on (potential) opportunities as this usually firstly needs to be discussed with higher positions of the organisational unit.

Finally, it can be concluded that liaison devices positively relate to the OIC of SMEs. Although a liaison role seems not to promote the OIC of SMEs, especially formal and informal meetings play an important role in order to promote the information exchange between different organisational units. In addition, the organisational context should also enable organisational members to directly discuss new opportunities with other parties of the organisation. Again, a flat structure seems to be suitable therefore.

As a consequence, and with regard to the main research question of this study, it can be concluded that job specialization, formalization of behaviour and unit size are negatively related to the ability of SMEs to identify new goods, services, raw materials, markets and organizing methods (i.e. their OIC) whereas unit grouping, decentralization and liaison devices positively relate to the OIC of SMEs. Here, especially the parameters *'job specialization'* and *'formalization of behaviour'* seem to profoundly influence the capabilities of SMEs to identify new opportunities.

6. Discussion

In this chapter, it will be critically reflected on the theoretical and managerial implications of this research. In addition, the limitations of this research as well as directions for future research will be addressed. Finally, a personal reflection will be provided.

6.1 Contribution to research

According to Choi and Shepherd (2004) and Shane (2001), the realization of opportunities is an important means in order to create value for organisations and their owners. Although scholars argue that organisational structure influences the entrepreneurial opportunity identification (Drucker, 1985; Covin & Slevin, 1988; Damanpour, 1991), limited empirical research exists which structural parameters relate to the OIC of organisations (Foss et al., 2015; Suddaby et al., 2015; Zahra, 1991). Therefore, this research contributes to a better understanding about the relation between organisational structure and the OIC of SMEs.

As assumed, and parallel to the findings of Srivastava and Agrawal (2010), OIC are highest at low levels of job specialization. Nevertheless, while presenting their findings, Srivastava and Agrawal (2010) do not provide an explanation why supportive job designs positively relate to corporate entrepreneurship. Therefore, this research contributes to literature by providing a first explanation why low levels of job specialization positively influence the capabilities of organisations to identify new opportunities. In addition, the research results of this study indicated that high levels of formalization of behaviour are negatively related to the OIC of SMEs. These findings contradict with the findings of Foss et al. (2015) who state that high levels of formalization enable organisational members to identify new opportunities as it is pre-determined what needs to be done in order to increase the probabilities to identify opportunities. However, if that is the case, an organisation seems to be too dependent on the regulations given by an individual or a small group of people in higher positions. As a consequence, and again corresponding to the findings of Srivastava and Agrawal (2010), this inhibits that organisational members can think out of the box and have latitude in order to be able to experiment, be creative and take risks. Again, whereas Srivastava and Agrawal (2010) only state that organisations should establish freedom to employees to manage their own work, this research provides a first explanation how that can be done and why that is important.

Moreover, and corresponding to the findings of Foss et al. (2015), high levels of decentralization positively relate to the ability of organisations to identify new opportunities

as it gives them ‘*the discretion they need to transform opportunities into sources of value*’ (Foss et al., 2015, p.52). Furthermore, this research indicates that interdepartmental connectedness positively relates to the ability of SMEs to identify new opportunities. Parallel to the findings and explanation of Jaworski and Kohli (1993), this means that interdepartmental conflicts inhibit the communication across organisational units, thereby lowering the OIC of SMEs. On the other hand, the findings of Jaworski and Kohli (1993) showed that interdepartmental connectedness does not influence the information dissemination of organisations. At the same time, they were surprised by this result, therefore requesting additional research on this aspect. Based on the analysis of the data, this research showed contradicting results as it was considered to be important by the data sources to receive input and information from other organisational units in order to increase the capabilities to identify new opportunities.

In addition, this study contributes to research by having analysed the relation between unit size and the OIC of SMEs. Since limited research exists that examines the relation between the parameter ‘*unit size*’ and the OIC of SMEs, this research contributes to literature by providing a tendency that larger unit sizes negatively influence the communication quality and flexibility of organisational units necessary to identify new opportunities. Next, and parallel to the findings of De Clercq et al. (2015), liaison devices enable the information exchange across organisational units and advance the capabilities of SMEs to identify new opportunities.

Finally, the findings of this research also have theoretical implications for the discovery – creation debate within the entrepreneurship literature. Whereas a considerable body of scholars focus on personal factors with regard to the identification of opportunities (Park, 2005; Smith et al., 2009; Corbett, 2007), this research provides plausible arguments that due to the complexity of entrepreneurial opportunities (Tripsas & Gavetti, 2000) it is difficult to identify and pursue them alone. Corresponding to the findings of Wang et al. (2013), this means that SMEs that depend on a single entrepreneur might face difficulties in identifying, initiating and achieving new opportunities without the engagement and cooperation of the organisational members. As a consequence, and corresponding to the argument of Foss et al. (2015), the discovery perspective might therefore also benefit from the positive influence of the organisational structure. Therefore, the contrast between both perspectives may be overemphasized.

Below, a summarizing table can be seen that visualizes the contribution of this research and whether the individual parameters correspond or contradict with the findings in existing literature.

| Parameter | Contribution to research |
|-----------------------------------|---|
| Job specialization | Correspondence with the findings of Srivastava and Agrawal (2010). Whereas they do not provide an explanation why supportive job designs positively relate to corporate entrepreneurship, this research provides a first explanation why low levels of job specialization positively influence the capabilities of organisations to identify new opportunities |
| Formalization of behaviour | Contradiction with the findings of Foss et al. (2015) but correspondence with the findings of Srivastava and Agrawal (2010). High levels of formalization inhibit the OIC of SMEs. Whereas Srivastava and Agrawal (2010) only state that organisations should establish freedom to employees to manage their own work, this research provides a first explanation how that can be done and why that is important. |
| Decentralization | Corresponding to the findings of Foss et al. (2015), high levels of decentralization positively relate to the ability of organisations to identify new opportunities as it gives them <i>“the discretion they need to transform opportunities into sources of value”</i> (Foss et al., 2015, p.52) |
| Unit grouping | Correspondence with the findings of Jaworski and Kohli (1993) that interdepartmental conflicts inhibit the communication exchange across organisational units. However, contradiction with Jaworski’s and Kohli’s (1993) findings that interdepartmental connectedness does not influence the information dissemination of organisations. |
| Unit size | Due to limited research on this parameter, contribution to research by providing a tendency that larger unit sizes negatively influence the communication quality and flexibility of organisational units necessary to identify new opportunities. |
| Liaison devices | Correspondence with the findings of De Clercq et al. (2015) that liaison devices enables the information exchange across organisational units and advance the OIC of SMEs. |

Table 3: Contribution to research

6.2 Managerial implications

The results of this research suggest that organisational structure is an important aspect for SMEs to consider with regard to the identification of new opportunities. From a practical perspective, this also has managerial implications. With regard to the parameter *‘job specialization’*, it was mentioned that organisational members should understand the whole process of the value chain and also have some control over their activities in order to be able to try new things out. Inspired by the suggestions of Srivastava and Agrawal (2010) and the insights gathered during the interviews, SMEs can ensure this wider division of labour by regular job rotations and the establishment of milestones. Here, organisational members should be given latitude in how to achieve the set milestones, thereby enabling them to also pay attention to new opportunities. Secondly, it was mentioned that standardization and regulations inhibit the OIC of SMEs. Therefore, SMEs should try to digitalize and autotomize activities and work processes that require a high degree of standardization in order to enable organisational members to shift the focus on other activities that potentially lead to the identification of new opportunities.

Moreover, and corresponding to the findings of Foss et al. (2015), decentralization encourages the OIC of SMEs. Therefore, again inspired by the suggestions of Srivastava and Agrawal (2010), SMEs could offer financial and non-financial rewards in order to encourage entrepreneurial behaviour that leads to the identification of new opportunities. Next, SMEs could provide financial grants in order to develop particular projects that seem to be promising (Srivastava & Agrawal, 2010). Furthermore, interdepartmental connectedness and liaison devices are, based on the analysis of the data, positively related to the capabilities of organisations to identify new opportunities. In order to promote the information dissemination between organisational units necessary to identify new opportunities, SMEs have different options how to use liaison devices. Whereas due to the size of SMEs a liaison role does not seem to be necessary, it would be an option, for example, to install an intranet where new opportunities can regularly be shared and discussed across organisational units. In addition, SMEs could regularly schedule meetings in which members from different organisational groups participate and talk about (potential) new opportunities. In this connection, it is potentially also of managerial relevance that organisational units should be kept small as this, based on the analysis of the data, increases the flexibility and the communication quality necessary to identify new opportunities. Here, it is of managerial relevance to consider the establishment of an open-plan office as this ensures that information flows are short and that spatial barriers are minimized.

Below, a table can be seen that summarizes the recommendations for managers with regard to the individual parameters.

| Parameter | Recommendations |
|--|---|
| Job specialization | Regular job rotations and establishment of milestones. However, give organisational members freedom in how to achieve the set milestones. |
| Formalization of behaviour | Digitalize and automatize standardized work activities so that organisational members are not inhibited anymore by standards and regulations, thereby providing latitude to experiment, be creative and take risks. |
| Decentralization | Empower employees and create an environment of safety and freedom in order to stimulate entrepreneurial behaviour. Encourage this by offering financial and non-financial rewards and provide financial grants for promising opportunities. |
| Unit grouping & liaison devices | Connect organisational units by establishing liaison devices such as an intranet or regular meetings, thereby enabling organisational units to regularly share and discuss (potential) opportunities with each other. |
| Unit size | Establish open-plan office in order to increase the communication quality and flexibility of organisational units necessary to identify new opportunities. |

Table 4: Six recommendations for an entrepreneurial organisation

6.3 Limitations and directions for future research

An underlying limitation of this research concerns the construct validity which relates to the quality of the operationalization of the central concept ‘OIC’. In this connection, it was

perceived as difficult by the researcher to operationalize the concept 'OIC' as it seems to be the case that limited appropriate literature exists that examines this concept. Therefore, the operationalization of this concept may not have taken into account relevant underlying nuances. However, the operationalization in this research of the concept 'OIC' might provide a good starting point for future research in order to further investigate this concept.

Secondly, although this research provides good starting points in explaining the relation between the central concepts underlying this research, the focus was on '*what are the relations between the individual parameters and the OIC of SMEs*' instead of '*why these relations are in place*'. Since this question arises after the completion of this research, future research is required in order to investigate whether there are overarching aspects with explanatory power that could explain why the selected parameters influence the OIC of SMEs.

Due to the short time frame, a general limitation of this research is that the external validity is limited. This applies for both the data sources per case as well as for the number of interviews conducted for this research. With regard to the limited number of data sources per case and corresponding to the argument of Foss et al. (2015), entrepreneurial activities are not necessarily dispersed across all organisational members per organisation. This implies, for example, that controller differently perceive and identify opportunities than salespeople do. Although relevant findings could have been identified with regard to the research questions of this study, an avenue for future research is provided by involving more data sources per case in order to get a more critical and insightful view on their organisational structure and their OIC. In addition, since only eleven interviews in total were conducted, data saturation for all parameters has not been achieved. For example, although the analysis of the data concerning the relation between the parameter '*unit size*' and the OIC of SMEs showed a clear tendency, the data sources had different opinions about whether unit size influences the OIC of SMEs or not. As a result, it would be desirable to further study this relationship in the future in order to increase the explanatory power.

In general, additional research is certainly necessary in order to further study the relationship between organisational structure and the OIC of SMEs. Here, it would, for example, be interesting to consider other contingency factors that might influence the relation between organisational structure and the OIC of SMEs. For example, higher management support or willingness for entrepreneurial behaviour.

6.4 Personal reflection

This research has broadened my horizon in every respect. To aggregate this on the most important points, I learned how to operationalize difficult concepts such as ‘OIC’, that the quality of interviews is vital instead of the quantity or that Dutch people are less attached to deadlines than, for example, Germans are. Especially, the last aspect took me a while to realize. Moreover, I experienced that using a coding software such as Atlas.ti simplifies the analysis of data since such a program enables the researcher to filter codes and receive reports that contain only the data that was asked for. Furthermore, I experienced that the quality of interviews may vary a lot. On the one hand, I conducted an interview that was absolutely useless for the purpose of this research since the interviewee did not feel like getting interviewed at all and just gave minimalistic answers. On the other hand, I conducted interviews that really add value to this research. However, I learned for myself that it is important to schedule more interviews than actually needed. In general, I experienced this research more difficult and time-consuming than expected as it took me a while to get a clear grasp of the complex concept of ‘OIC’.

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Appendix 1 – Interview protocol

Guidelines: First of all, it is important that the interviewer is friendly and empathic. Before the initial interview will be started, the researcher should introduce himself and explain to the interviewee the purpose of this research. Here, it should be acknowledged that the insights of the interviewee add value for the purpose of this research. In addition, it should be asked at this stage of the interview whether the interviewee agrees that the interview will be recorded, allowing the researcher to transcribe the interview afterwards. Once these formalities have been discussed, some general questions about the interviewees background will first of all be asked in order to warm him up and let him feel comfortable before more complex questions will be asked. Throughout the interview, the interviewer will ask the below stated interview questions. Some of them deal also deal as back-up questions in case the researcher thinks that not enough information concerning a particular concept has not been delivered yet. During the interview, the interviewer will listen carefully and stimulate the flow of information by probing techniques such as humming, giving positive comments or reflecting on the interviewee's answers. Finally, the interview will be closed by reflecting on the interviewee's key messages while it will again be acknowledged that the interview was an important part for the purpose of this research.

Introduction: “Guten Tag, Herr/ Frau XY, vielen Dank im Voraus, dass Sie sich die Zeit für ein Interview mit mir nehmen. Mein Name ist Florian Wirtz und ich bin Masterstudent an der Radboud Universität in Nimwegen. Dort studiere ich Business Administration mit der Spezialisierung “Organisational Design and Development”. Zurzeit schreibe ich meine Masterarbeit über die Innovations- und Entwicklungsmöglichkeiten von SMEs unter dem Einfluss der Organisationsstruktur. Hierbei überprüfe ich insbesondere inwiefern die Parameter Job-Spezialisierung, Formalisierung, Abteilungsgröße, abteilungsübergreifende Verbundenheit und Dezentralisierung der Entscheidungsvollmacht einen Einfluss auf die Chancenerkennung haben. In diesem Zusammenhang ist es nötig, dass ich Interviews durchführe, weshalb ich sehr glücklich darüber bin, dass Sie mir die Möglichkeit bieten. Wenn es für Sie keine Probleme darstellt, würde ich das Interview gerne aufnehmen, sodass ich es im Nachhinein transkribieren kann. Dies ermöglicht mir eine bessere Analyse und Interpretation der Informationen. Wäre das in Ordnung für Sie? Grundsätzlich ist es auch überhaupt kein Problem das Interview zu anonymisieren. Haben Sie ansonsten noch weitere Fragen bevor wir mit dem Interview beginnen?”

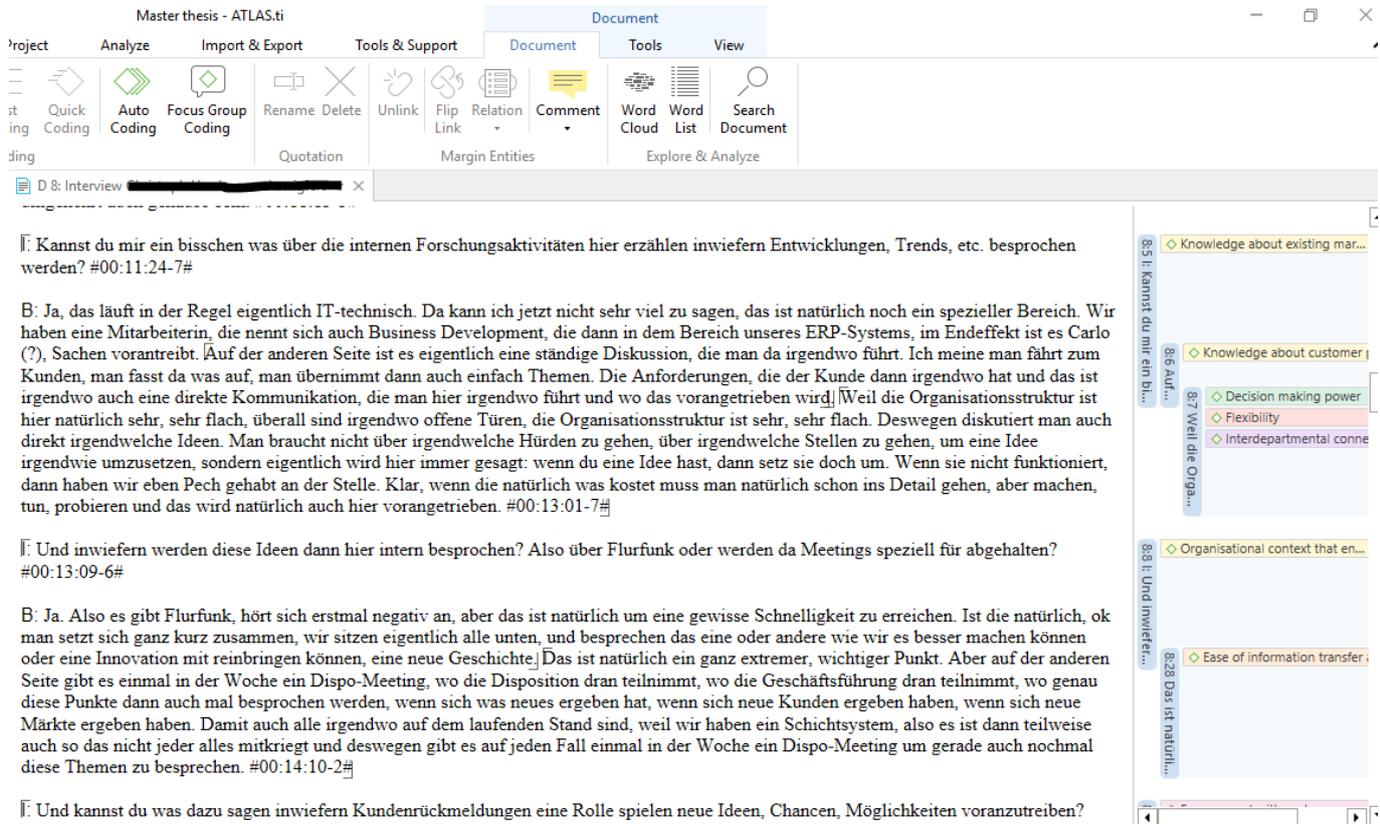
Ending: “Vielen lieben Dank Herr/ Frau XY, das war meine letzte Frage. Zusammenfassend haben Sie mir wichtige Einblicke und Aussagen generiert, die mir bei der Ausarbeitung meiner Masterarbeit weiterhelfen werden. Ich hoffe es war auch für Sie interessant. Sollten Sie an der finalen Ausarbeitung meiner Masterarbeit interessiert sein, so lassen Sie es mich doch bitte wissen damit ich Ihnen diese zukommen lassen kann. Wenn Sie keine weiteren Rückfragen an mich haben, wären wir dann jetzt fertig. Vielen lieben Dank nochmal und für Ihre Zukunft alles Gute!”

Interview questions:

| Concept/ variable | Dimensions | Indicators | Interview questions |
|----------------------|---|--|--|
| 1. OIC | 1.1 Prior knowledge about the target market | 1.1.1 Knowledge about existing markets and how to serve them | 1.1.1.1 Could you tell me something about the in-house research you conduct at this organisation in order to gather knowledge about e.g. customer preferences, trends and market developments? |
| | | 1.1.2 Knowledge about customer problems | 1.1.2.1 Could you tell me something about what you as an organisation do with customer feedback? |
| | | 1.1.3 Organisational context that enables employees to gather and assimilate entrepreneurial information | 1.1.3.1 Could you tell me something about the means (e.g. meetings, newsletters, etc.) you have at this organisation in order to discuss new trends and developments in the market? |
| | | 1.1.4 Prior entrepreneurial experience | Back-up question: Which prior entrepreneurial experience do you have and how much does this help you with the identification of opportunities? |
| | 1.2 Business networks | 1.2.1 Engagement with customers, suppliers and other business partners | 1.2.1.1 Could you tell me something about the extent to which the engagement with e.g. customers, suppliers or other business partners provide new ideas or opportunities in the last couple of years? |
| | | 1.2.2 Participation in professional forums | 1.2.2.1 Could you tell me something about your participation in conferences, seminars or workshops in the last couple of years? 1.2.2.2 To what extent did this participation stimulate your ideas about new ideas and opportunities? |
| | 1.3 Entrepreneurial orientation | 1.3.1 Innovativeness | 1.3.1.1 Could you tell me something about the new ideas and opportunities this firm experienced over the last couple of years? 1.3.1.2 To what extent do top managers encourage thinking about new opportunities? |
| | | 1.3.2 Proactiveness | 1.3.2.1 To what extent did this organisation initiate actions in the last couple of years to which the competition then responded? |
| | | 1.3.3 Risk taking | 1.3.3.1 To what extent emphasizes this organisation R&D, technological leadership and innovations? Do you have any concrete examples for this? |
| | | 1.3.4 Competitive aggressiveness | Back-up question: To what extent do this organisation adopt an aggressive posture in order to achieve the organisational objectives? |
| | | 1.3.5 Autonomy | |

| | | | |
|-----------------------------|--------------------------------|---|---|
| 2. Organisational structure | 2.1 Job specialization | 2.1.1 Number and breadth of tasks 2.1.2 Control over job activities | 2.1.1.1 Could you tell me something about the variety of activities in your job? 2.1.1.2 Could you tell me something about the extent to which your job provides opportunities to learn and develop from other jobs? 2.1.2.1 Could you tell me something about the control you have over the work that is performed by you? |
| | 2.2 Formalization of behaviour | 2.2.1 Degree of standardization of work activities 2.2.2 Compliance with rules, regulations and procedures | 2.2.1.1 Could you tell me something about the extent to which your job activities are standardized? 2.2.2.1 Could you tell me something about your experiences to what extent you can make your own decisions without checking with anybody else? 2.2.2.2 Could you tell me something about your experiences to what extent your performance is evaluated based on the compliance with rules, regulations and procedures? 2.2.2.3 Could you tell me about situations you experienced over the last couple of years in this organisation in which organisational members were constantly being watched to follow the rules, regulations and procedures? |
| | 2.3 Unit grouping | 2.3.1 Interdepartmental connectedness 2.3.2 Interdepartmental conflict | 2.3.1.1 Could you tell me something about the number and types of organisational units at this organisation? 2.3.1.2 To what extent do you feel that the goals of the different organisational units (i.e. teams, departments, etc.) are in harmony with each other? 2.3.1.3 Could you tell me something about the possibilities to talk with organisational members from other organisational units? 2.3.2.1 Could you tell me something about interdepartmental conflicts you experienced in this organisation over the last couple of years? |
| | 2.4 Unit size | 2.4.1 Communication quality 2.4.2 Flexibility | 2.4.1.1 To what extent is it possible to talk face-to-face with other members of the organisational unit you are belonging to (i.e. department or team) regardless the rank or the position? 2.4.1.2 Could you tell me something about situations that you experienced over the last couple of years in this organisation in which new ideas could not be successfully introduced due to a lack of communication? 2.4.2.1 Could you tell me something about how quickly new ideas were implemented in this organisational unit (i.e. team or department) over the last couple of years? |
| | 2.5 Liaison devices | 2.5.1 Ease of information transfer and sharing | 2.5.1.1 Could you tell me something about how the sharing and transfer of knowledge between organisational units (i.e. departments or teams) is ensured in this organisation? 2.5.1.2 To what extent are you accessible to colleagues in other organisational units? Back-up question: Could you tell me something about how technical people in this organisation share information about technology for new products with other organisational units? |
| | 2.6 Decentralization | 2.6.1 Decision making power | 2.6.1.1 Could you tell me something about the extent to which you can take your own decisions without the approval of your supervisor? 2.6.1.2 To what extent are you able to prioritize your work activities? 2.6.1.3 Could you tell me something about situations you experienced over the last couple of years in this organisation in which people got discouraged since they took their own decisions? |

Appendix 2 – Example of coded text passage



The screenshot shows the ATLAS.ti software interface. The main window displays a text passage from a document titled "D & Interview". The text is as follows:

F: Kannst du mir ein bisschen was über die internen Forschungsaktivitäten hier erzählen inwiefern Entwicklungen, Trends, etc. besprochen werden? #00:11:24-7#

B: Ja, das läuft in der Regel eigentlich IT-technisch. Da kann ich jetzt nicht sehr viel zu sagen, das ist natürlich noch ein spezieller Bereich. Wir haben eine Mitarbeiterin, die nennt sich auch Business Development, die dann in dem Bereich unseres ERP-Systems, im Endeffekt ist es Carlo (?), Sachen vorantreibt. Auf der anderen Seite ist es eigentlich eine ständige Diskussion, die man da irgendwo führt. Ich meine man fährt zum Kunden, man fasst da was auf, man übernimmt dann auch einfach Themen. Die Anforderungen, die der Kunde dann irgendwo hat und das ist irgendwo auch eine direkte Kommunikation, die man hier irgendwo führt und wo das vorangetrieben wird. Weil die Organisationsstruktur ist hier natürlich sehr, sehr flach, überall sind irgendwo offene Türen, die Organisationsstruktur ist sehr, sehr flach. Deswegen diskutiert man auch direkt irgendwelche Ideen. Man braucht nicht über irgendwelche Hürden zu gehen, über irgendwelche Stellen zu gehen, um eine Idee irgendwie umzusetzen, sondern eigentlich wird hier immer gesagt: wenn du eine Idee hast, dann setz sie doch um. Wenn sie nicht funktioniert, dann haben wir eben Pech gehabt an der Stelle. Klar, wenn die natürlich was kostet muss man natürlich schon ins Detail gehen, aber machen, tun, probieren und das wird natürlich auch hier vorangetrieben. #00:13:01-7#

F: Und inwiefern werden diese Ideen dann hier intern besprochen? Also über Flurfunk oder werden da Meetings speziell für abgehalten? #00:13:09-6#

B: Ja. Also es gibt Flurfunk, hört sich erstmal negativ an, aber das ist natürlich um eine gewisse Schnelligkeit zu erreichen. Ist die natürlich, ok man setzt sich ganz kurz zusammen, wir sitzen eigentlich alle unten, und besprechen das eine oder andere wie wir es besser machen können oder eine Innovation mit reinbringen können, eine neue Geschichte. Das ist natürlich ein ganz extremer, wichtiger Punkt. Aber auf der anderen Seite gibt es einmal in der Woche ein Dispo-Meeting, wo die Disposition dran teilnimmt, wo die Geschäftsführung dran teilnimmt, wo genau diese Punkte dann auch mal besprochen werden, wenn sich was neues ergeben hat, wenn sich neue Kunden ergeben haben, wenn sich neue Märkte ergeben haben. Damit auch alle irgendwo auf dem laufenden Stand sind, weil wir haben ein Schichtsystem, also es ist dann teilweise auch so das nicht jeder alles mitkriegt und deswegen gibt es auf jeden Fall einmal in der Woche ein Dispo-Meeting um gerade auch nochmal diese Themen zu besprechen. #00:14:10-2#

F: Und kannst du was dazu sagen inwiefern Kundenrückmeldungen eine Rolle spielen neue Ideen, Chancen, Möglichkeiten voranzutreiben?

The right-hand sidebar of the software shows a list of codes with their corresponding text segments:

- 8:5 i: Kennt du mir ein bi... (Knowledge about existing mar...)
- 8:6 Auf... (Knowledge about customer...)
- 8:7 Weil die Orga... (Decision making power, Flexibility, Interdepartmental conne...)
- 8:8 i: Und inwiefer... (Organisational context that en...)
- 8:28 Das ist natufl... (Ease of information transfer...)

Appendix 3 – Code Scheme

| Group | Code | Frequency |
|--|--|-----------|
| Prior knowledge about the target market | ● Knowledge about existing markets and how to serve them | 13 |
| | ● Knowledge about customer problems | 14 |
| | ● Organisational context that enables employees to gather and assimilate entrepreneurial information | 14 |
| | ● Prior entrepreneurial experience | 3 |
| Business networks | ● Engagement with customers, suppliers and other business partners | 16 |
| | ● Participation in professional forums | 15 |
| Entrepreneurial orientation | ● Innovativeness | 33 |
| | ● Proactiveness | 27 |
| | ● Risk taking | 8 |
| Job specialization | ● Number and breadth of tasks | 33 |
| | ● Control over job activities | 27 |
| Formalization of behaviour | ● Degree of standardization of work activities | 37 |
| | ● Compliance with rules, regulations and procedures | 20 |
| Unit grouping | ● Interdepartmental connectedness | 52 |
| | ● Interdepartmental conflict | 9 |
| Unit size | ● Communication quality | 18 |
| | ● Flexibility | 21 |
| Liaison devices | ● Ease of information transfer and sharing | 40 |
| Decentralization | ● Decision making power | 38 |