MASTER THESIS

The resilience of small companies, in the professional services industry, during COVID-19.

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Abstract

Due to the COVID-19 pandemic, many (small) entrepreneurs found themselves having to be resilient. However, little to no research has investigated what the main factors aiding the resilience of small companies, in the professional services industry, are during COVID-19, thus this thesis. The thesis has focused upon small entrepreneurs in Twente, the Netherlands. Fifteen semi-structured interviews were conducted with small entrepreneurs from this area. Resulting from these interviews it was found that factors deemed relevant to resilience in prior literature were found to be relevant once more. Reaffirming that prior literature also is applicable on COVID-19. Apart from this, small entrepreneurs seemed to face a combination of new challenges and challenges seen during prior adversity. Entrepreneurs tackled these challenges with actions they took pre-emptively as well as actions taken on the spot. Overall, the main factors aiding small companies' resilience during COVID-19 are alike to what previous literature has found, despite there being some new challenges resulting from COVID-19.

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1. Introduction

In recent years resilience was found to be an increasingly important factor for all companies. Resilience, or the ability to adapt to adversity, entails more than only preventing bankruptcy (Ayala & Manzano, 2014; Rutter, 1985). Managing adverse conditions correctly could even lead to growth and new opportunities. Due to the COVID-19 pandemic, the adversity this thesis focuses on, companies all around the world were faced with conditions that may have previously been unimaginable, testing the resilience of many. Small enterprises were also hit by COVID. In previous studies, they were however found to be more vulnerable due to limited resources (Jorge, Ileana, Castro-Zuluaga Carlos, & Mateo, 2020). This whilst small (and medium) enterprises, or SME's, are vital to economies, for example employing about two-thirds of the European workforce in 2018 (European Commission, 2019).

At the moment, the subject of resilience and SMEs has been researched by differing researchers. The COVID-19 pandemic has however created an opportunity to analyse how different companies deal with similar conditions. Although earlier research has focused on what factors are relevant for the resilience of (small) companies, little to no research has focused on this during COVID-19. This thesis aims to fill this gap by looking at what the main factors of importance are in the resilience of small companies, in the professional services industry, during COVID-19. The research question belonging to this is listed below.

What are the main factors aiding the resilience of small companies, in the professional services industry, during COVID-19?

By interviewing the entrepreneurs owning small companies on their experiences, an overview of important factors for them can be created. These interviews were conducted to be able to compare the results and findings of these interviews to what has earlier been mentioned in the literature regarding resilience, and resilience and small companies. Through this comparison potential differences between the way entrepreneurs were resilient during COVID-19, with the data from the interviews, and how entrepreneurs were resilient outside of COVID-19, with the currently available literature, became clear. Although the main findings are in line with previous literature, some new challenges resulting from COVID-19 became apparent. Furthermore, a distinction, which was not explicitly used in previous literature, between the ways entrepreneurs were resilient, was made. This thesis further reaffirms the current literature, also under conditions of COVID-19.

Within this thesis, the focus is on entrepreneurs with a small company in the region of Twente in the Netherlands. These were chosen to see whether they found themselves to be resilient, and more specifically during COVID-19. Due to the interviews taking place amid the COVID-19 pandemic (Q4 2020) everything the entrepreneurs discussed still relates to recent events or ongoing events. This was also seen in the results where entrepreneurs discussed the actions they had taken or are currently taking to deal with COVID-19. Whether these actions will help the entrepreneur in the long run, is not yet known.

2. Theoretical framework

Within this chapter, the literature will be used to create an overview of the current literature relating to resilience and small companies. First of all, resilience itself will be discussed. Herein aspects of this term relevant to this thesis will be further discussed. Following this, resilience and it's effect on SME's will be discussed. Hereafter, resilient characteristics found in earlier literature are discussed. Lastly discussing the characteristics of professional service firms.

2.1 Resilience and related concepts

Resilience is a term that has been discussed in numerous fields of research. The term seems to have originated from the field of ecology around the early 1970s. Later on, more fields of research started to take note of and use the term. Examples are physics, scientific methodology, manufacturing and climate change (Fisher, Maritz, & Lobo, 2016; Hedner, Abouzeedan, & Klofsten, 2011). As the term is of relevance in all these different fields of research, there is a wide variety of papers available on this topic. Solely searching "resilience" in the Scopus database results in 116,607 results. When limiting these results to 2020 there still are about 16,275 results, which mostly relate to the fields of social and environmental science.

Focusing the search of "resilience" more specifically on the field of social sciences and business, management and accounting, the annual number of papers seems to have been steadily increasing over the past years. However, when limiting these results to only show publications related to small companies, only about 170 of the initial 32.000 remain. Thus, literature regarding SME's was also sought, which resulted in about 600 out of the original 32.000 remaining. The same goes for COVID-19 where about 1.200 publications remain. When combining COVID-19 with SME, only about a hundred results remain. This indicates that despite the topic being well researched, the COVID-19 pandemic has opened up new research opportunities to be explored.

The term resilience can in a general way be described as the ability to adapt to adversity (Ayala & Manzano, 2014; Rutter, 1985). This definition is based on the articles of Ayala & Manzano (2014) and Rutter (1985) and the other definitions shown in the table below.

Table 1, Definitions of Resilience

D (1) · · ·

Source	Definition				
(Vogus &	"We define resilience as the maintenance of positive adjustment under				
Sutcliffe, 2007,	challenging conditions such that the organization emerges from those				
p. 3418)	conditions strengthened and more resourceful."				
(Hedner et al.,	"Resilient is a word in English, Spanish, French, and German that				
2011, p. 1)	relates to the ability to recover. "				
(Duchek, 2018,	"Resilience generally indicates how well a system resists threats and				
p. 431)	how quickly it returns to its initial state after a disturbance."				
(Bergström &	"Defining in all theories of resilience, the capacity to absorb and/or				
Dekker, 2014, p.	adapt to disturbance or stress."				
1)					
(Holling, 1973,	"But there is another property, termed resilience, that is a measure of the				
p. 14)	persistence of systems and of their ability to absorb change and				
	disturbance and still maintain the same relationships between				
	populations or state variables."				

2.1.1 Entrepreneurial resilience

Entrepreneurial resilience can be seen as a specification or dimension of the general term of resilience, with SME resilience being a further specification. The definition of entrepreneurial resilience given by Ayala & Manzano (2014) namely "Resilience is the capacity an entrepreneur has in order to overcome particularly difficult circumstances." (p. 2) is used in this thesis. A search on Scopus for "entrepreneurial resilience" results in 227 results, which may indicate that this subject has received relatively little attention. In recent years, the subject has however received increasing attention, based on the amounts of papers per year in Scopus. It should be mentioned that differing interpretations of entrepreneurial resilience exist (Korber & McNaughton, 2018). These range on differing levels for example the personal, organizational level or even socio-economic systems (Korber & McNaughton, 2018). This thesis focuses on the individual and organizational levels. Furthermore, one could also see entrepreneurial resilience similar to individual resilience. As Korber & McNaughton (2018) discussed the individual does affect entrepreneurial resilience. However, entrepreneurial resilience also entails parts of the company like the present capital or target market. So, if entrepreneurial resilience is defined as individual resilience, not all aspects will be considered.

Entrepreneurial resilience seems to consist of multiple factors or characteristics (Ayala & Manzano, 2014; Hedner et al., 2011; Vogus & Sutcliffe, 2007). Examples of these factors or characteristics will be divided into two groups, one relating to the entrepreneur's own resilience "individual resilience", and the other relating to the other factors. Resilience factors relating to the entrepreneur's own resilience can be the ability to make realistic plans, their resourcefulness, hardiness and optimism and their ability to manage stress and conflicts (Ayala & Manzano, 2014; Bullough & Renko, 2013; Hedner et al., 2011). Apart from the entrepreneurs themselves there also are other, external, factors like relationships that give care, support, trust and encouragement, the (entrepreneurial)community culture and resourcefulness (Ayala & Manzano, 2014; Hedner et al., 2011; Huggings & Thompson, 2015). Resourcefulness was mentioned in both due to it referring to the entrepreneur's resources (for example liquidity) as well as their skills and capabilities. All things considered, entrepreneurial resilience seems to heavily depend upon the entrepreneur as well as the external environment.

Resilience is of importance within organizations, De Vries & Shields (2005), (as cited in Hedner et al., 2011) mention that it is a key trait of an entrepreneur. Further, the resilience of a company/SME enables the entrepreneur to look forward during adverse times and bounce back afterwards (Ayala & Manzano, 2014). Alike to what was discussed in the previous paragraphs this both refers to the entrepreneur themselves as well as external factors aiding in this resilience. This as both the entrepreneur themselves as well as external factors can aid in their resilience, and one could see resilience as a combination of both. Because of the seeming importance of entrepreneurial resilience, and the little current research, the topic holds relevance to be further investigated. Within this thesis, the definition of entrepreneurial resilience given by Ayala & Manzano (2014) namely "Resilience is the capacity an entrepreneur has in order to overcome particularly difficult circumstances." (p. 2) will be used, more specifically the thesis will focus on the circumstances created by COVID-19. Although this definition does not cover all aspects of entrepreneurial resilience or SME resilience, Vogus & Sutcliffe (2007) for example mention the importance of how resilient an organization is designed, it does cover the main areas of importance within this thesis.

2.1.2 SME resilience

Apart from entrepreneurial resilience, SME resilience is another term that is deemed relevant. SME resilience is defined as the capacity an SME has in order to overcome particularly difficult circumstances. This definition is based on the definition given by Ayala & Manzano (2014) for entrepreneurial resilience. This was done as although there is some literature

regarding SME resilience, see for example (Carias, Borges, Labaka, Arrizabalaga, & Hernantes, 2020; Jorge et al., 2020), these often do not give much in the form of definitions, which may be due to it being a relatively new area of research. In chapter 2.2. the effects of resilience on SME's will be further discussed. As discussed priorly this chapter is focused on the broader term of SME resilience rather than small company or enterprise resilience as there is a limited amount of research available on these topics.

SME resilience is a concept seemingly relevant to the success of a company. It is related to the ability of an entrepreneur to deal with adverse conditions like discussed in the previous paragraph (Ayala & Manzano, 2014). A more resilient entrepreneur is deemed to be able to handle these adverse conditions better than a less resilient entrepreneur, resulting in more favourable outcomes for the SME (Ayala & Manzano, 2014; Bullough & Renko, 2013). Furthermore, Branicki, Sullivan-Taylor, & Livschitz (2018) found SME resilience to be linked with both organizational resilience as well as entrepreneurial resilience. They found the entrepreneurial resilience of the entrepreneur themselves to both, directly and indirectly, affect the SME's resilience.

2.1.3 Sources of resilience and pre-emptive sources of resilience

Apart from the differing types of resilience discussed prior, a division regarding resilience, in general, is made in this thesis. Two types of resilience will be distinguished, preemptive sources of resilience and sources of resilience. Although this distinction is not explicitly mentioned in literature it became apparent in the findings of this thesis, thus it was used. The reason for this distinction not to be found explicitly in literature may be that other, in that case, more relevant distinctions were made. With sources of and pre-emptive sources of resilience a distinction is made between counter measurements entrepreneurs and their companies took when they were confronted with adversity, and counter measurements entrepreneurs and their companies took before being aware of the future adversity. In the following paragraphs, these will be further clarified.

As discussed before, sources of resilience are actions the entrepreneur and their company took when they were confronted with adversity. These actions are often focused upon the adversity the entrepreneur/company has encountered at that moment and is aimed specifically at fixing that adversity. An example of this in literature is small tourist firms having to deal with an animal disease in their area, leading to a sharp decline in visitors (Irvine & Anderson, 2004). Here certain companies for example replaced their animals with animals not susceptible to the disease (Irvine & Anderson, 2004).

Pre-emptive sources of resilience relate to counter measurements entrepreneurs and their companies took before encountering and being aware of, adversity. These actions tend to not be focused on a specific type of future adversity a company may encounter but are more general. An example of a paper reporting a source of resilience that would be considered pre-emptive in this thesis is the paper written by Oh & Teo (2006). In this paper, they discussed how organizations who pro-actively invested in IT also build their resilience, as they would later have more options to respond to adversity and be resilient. Furthermore, Ma, Xiao, & Yin (2018) already discussed different phases of resilience, also including the anticipate & plan phase, which would fit the pre-emptive resilience.

2.2 Resilience and its effect on SMEs

In previous paragraphs, definitions of resilience were discussed. Apart from these definitions, the following paragraphs will discuss how small companies being resilient (or not) affects the small companies, starting with what causes companies to have to be resilient, what are potential actions taken by the companies and lastly what consequences are related to this. Literature regarding SME's was also used. This due to there being limited research regarding small companies alone.

Resilience is often triggered by an event that (could) negatively impact the company. Within the literature, different papers discussed these cases in the context of SME's. Oftenmentioned causes for adversity within SME's triggering resilience are economic downturns or recessions (Pal, Torstensson, & Mattila, 2014; Smallbone, Deakins, Battisti, & Kitching, 2012). Apart from economic downturns, other aspects can have an influence, for example, the outbreak of animal diseases, cyber threats or climate change (Carias et al., 2020; Irvine & Anderson, 2004; Jorge et al., 2020). These factors mostly are external threats, however Doern, Williams, & Vorley (2019) do mention internal threats too. It seems that many different factors can cause SMEs to have to be resilient. Some may however be more relevant to certain SME's than others. Causing firms to always be at risk of having to deal with an unexpected event or adversity.

Although many of the previously mentioned events are hard or impossible to influence as a small company, there are actions a small company can take. These will be discussed in this paragraph. Most literature relates to pre-crisis planning or the response after the crisis (Doern et al., 2019). Doern et al. (2019) also mention that more research could focus on how entrepreneurs can learn from these crises. This is also a part of dealing with the crisis. On a more practical note, differing papers mention the often limited (financial) resources of SME's,

making combating crises harder for them (Carias et al., 2020; Jorge et al., 2020; Smallbone et al., 2012). Although SMEs may be limited in this area, they were also found to use flexibility as an important method for resilience (Irvine & Anderson, 2004; Pal et al., 2014; Smallbone et al., 2012). On the one hand, the limited size of SMEs, and thus small companies too, may be a disadvantage, they seem to have however found other ways of being resilient by for example using their size to be more flexible.

Furthermore, the impact of the adverse events and the response to them is discussed. Earlier on it was already mentioned that Doern et al. (2019) found most research to focus on the pre-and post-crisis and more research could be done on how SMEs could for example learn from these events. Jorge et al. (2020) did however find that SMEs seemed to learn from earlier crises. Furthermore, it was discussed that crisis both had a positive effect on the SMEs ability to achieve their objectives, as well as a negative effect (Smallbone et al., 2012). Apart from reaching objectives, or learning, the main goal of being resilient usually is to survive the crisis. Irvine & Anderson (2004) found that some small companies were able to mitigate the main implications of a crisis, with their response. However, some companies were also found to have closed down after a crisis (Smallbone et al., 2012). This shows how diverse the implications of a crisis and being resilient are. On the one hand, a company can gain advantages, for example through faster achieving their goals whilst there also is the risk of for example closure.

As discussed above, the reasons for, response to and effects of having to be resilient can differ for companies. This thesis has focused on entrepreneurs being resilient during COVID-19. One could argue this to be an external threat, which also has had internal consequences. As for the actions entrepreneurs took to mitigate this threat no specific focus was present. Furthermore, no specific focus regarding the effects was present either. The thesis did however focus on entrepreneurs still in business, companies that went bankrupt were not considered.

2.3 Resilient characteristics

Apart from the earlier discussed types of resilience and implications of resilience these paragraphs will discuss common attributes of resilience. Furthermore, figure 1 will visually represent the discussed attributes. First off, resourcefulness, hardiness and optimism are common factors found to contribute to an entrepreneur's resilience, and thus their company too (Fatoki, 2018; Fisher et al., 2016; Manzano-García & Ayala Calvo, 2013). Due to these three factors being commonly found in literature each of the factors' definitions will be given. When referring to optimism the ability to maintain positive during adverse conditions is meant (Ayala

& Manzano, 2014). Resourcefulness relates to the capabilities, skills and resources the entrepreneur has to combat the adverse situation (Ayala & Manzano, 2014). Lastly, hardiness relates to the control an entrepreneur has over themselves(Ayala & Manzano, 2014). This entails that they are less easily frustrated when faced with adverse conditions and instead work to achieve their targets (Kobasa, 1979).

Apart from the previously discussed factors, other factors were found in literature. Wong & Mei (2010) (as cited in Bhamra, Dani, & Burnard, 2011) argued flexibility, motivation, perseverance, and optimism to be important due to the entrepreneur running the SME having a large impact on it. Apart from this differing papers mention other aspects like pro-activeness to be

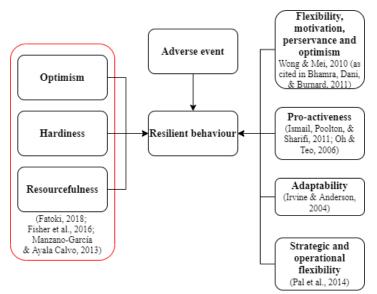


Figure 1, Visual representation of resilient characteristics

relevant as it helps seize new opportunities (Ismail, Poolton, & Sharifi, 2011; Oh & Teo, 2006). Others also mention adaptability (Irvine & Anderson, 2004) or strategic and operational flexibility (Pal et al., 2014). Concerning this Ates & Bititci (2011) found that on the one hand paying attention to long-term vision may help improve (SME) resilience, whilst they also found that SMEs often do not do this. In conclusion, differing aspects seem to affect resilience, however, resourcefulness, hardiness and optimism seem to be factors most commonly found, apart from this, certain more specific factors affecting resilience have also been found.

2.4 Characteristics of professional service firms

Lastly, the characteristics of professional service firms will be discussed in relation to their resilience. First the product will be discussed, thereafter some characteristics of professional service firms will be discussed. The product delivered by (professional) service firms can usually be characterised by five characteristics. These are customer participation, simultaneity, heterogeneity, intangibility and perishability (Sampson & Froehle, 2006). However, Sampson & Froehle (2006) do mention, these can be considered as "symptoms" and are not present in all (professional) service firms. Based upon these characteristics a few implications regarding the resilience of (professional) service firms, become apparent. Even during non-adverse times (professional) service firms struggle with these characteristics, with

firms for example having to use reservation systems or having to offer discounts to more efficiently utilize their time, as they often are unable to maintain a stock (Sampson & Froehle, 2006). If adversity were to present itself these companies may struggle even more with these, potentially resulting in problems.

Apart from the characteristics of the product, some characteristics of the companies themselves will also be discussed. Often (small) professional service firms are argued to have lower capital intensity and more knowledge intensity (Brandon-Jones, Lewis, Verma, & Walsman, 2016; Von Nordenflycht, 2010). However, it was also found that larger professional service firms have started investing more in ICT, for example knowledge management systems, thus increasing the capital investment and lowering the knowledge intensity (Brandon-Jones et al., 2016). However, for small professional service firms, the low capital investment may offer them a way of being more resilient and flexible, in dealing with adversity. As they are bound to fewer assets. The knowledge intensity of these firms may however cause challenges related to authority as well as employee retention (Von Nordenflycht, 2010). During adversity, these challenges may be further emphasized.

3. Methodology

Within this thesis, the goal is to find out what the main factors are aiding in the resilience of small companies, in the professional services industry, during COVID-19. This specific topic has not yet had a lot of attention from researchers. Because of the lack of previous research, the data collection had to allow for a broad range of answers, in order not to exclude any possibilities. Data had to be collected as there were no existing databases regarding this topic either Based upon the previous observations the research is of qualitative nature and interviews were conducted to gather data. A qualitative approach was chosen as a qualitative approach usually is preferred when finding out motives and thoughts behind certain concepts (Milena, Dainora, & Alin, 2008; Rowley, 2012). Which is what this thesis aims to do, regarding the entrepreneurs and their resilience during COVID-19. Interviews were chosen to be able to gain an in-depth insight into the way entrepreneurs found themselves to be resilient. This was done so in the end a more thorough analysis could be made regarding the possible differences between entrepreneurs, or prior literature and the interview findings. The ability to ask open questions and get an immediate elaboration on answers were among the other factors to choose interviews.

3.1 Selection and recruitment of interviewees

To gain clear and as unbiased as possible results selecting the right cases for interviews is of importance. Within quantitative research, random selection is usually used to achieve unbiased results, but this research is qualitative. The selection process was executed according to the steps offered in the paper of (Robinson, 2014). Firstly the "sample universe" has been defined, this is the population eligible to be part of the sample, this selection will be further discussed in the next paragraph (Robinson, 2014). Secondly, the sample size has been chosen (Robinson, 2014). The sample size has been determined based on the goal of the paper. Although no singular advice is given for sample sizes in qualitative research/interviews some recommendations are given. Smith, Flowers, & Larkin (2009) (as cited in Robinson, 2014) mention a sample size between 3 and 16 for an Interpretive Phenomenological Analysis. Guest, Bunce, & Johnson (2006) found that after 12 interviews the amount of novel information sharply declined, although they did mention their results may have depended on certain factors, thus limiting generalizability. Combining these two findings, this research has aimed to gather around 15-20 interviews, to achieve data saturation and achieved 15.

After determining the sample universe and sample size, thirdly the strategy to select the actual sample is selected (Robinson, 2014). An often-used method in quantitative research is

random case selection. This method may work in quantitative research but may have its drawback in qualitative research where the samples usually are smaller (Seawnght & Gerring, 2008). Robinson (2014) also mentions that the term "random sampling" is often used incorrectly for non-random samples. As a fully random sample could have its drawback there are some alternatives. A stratified sample is a sample that is aimed at a specifically chosen sub-group (Flyvbjerg, 2006; Robinson, 2014). Within this sub-group multiple groups are defined whereof each group will be assigned a number of, in this case, interviews (Flyvbjerg, 2006; Robinson, 2014). A less strict version of stratified sampling is quota sampling (Robinson, 2014). Quota sampling does not have an exact amount of cases assigned to groups but puts a quota with a minimum amount of cases on each group (Robinson, 2014).

Lastly, after selecting the sampling strategy, Robinson (2014) discusses sourcing the sample. Different methods are discussed for sourcing the sample like study advertising and snowball sampling. Apart from the sourcing strategy, the concept of self-selection bias is discussed, which is the concept that research may be biased due to the factors that make participants participate voluntary in research (Robinson, 2014). Robinson (2014) mentions that this is unavoidable as forcing participants to partake is not an ethical way of doing research.

Based on the previously discussed methods of sourcing interviewees, the methods used to source interviewees within this thesis will be discussed. First, the interviewees were found by using a local entrepreneurs' association (MKB-Twente). This could have led to bias as the MKB-Twente association is aimed specifically at medium to small businesses (SMEs) in Twente, and some companies may feel more inclined to join an entrepreneur's association than others. From the MKB-Twente association membership registry, each last business per letter of the alphabet was chosen to be approached. If the business did not seem to be run by the entrepreneur/owner himself, i.e., companies listed on the stock exchange, the second last business was chosen. This process was repeated if the business did not want to take part in an interview (i.e., number three, or four were then approached). In table 2, an overview of the interviewed entrepreneurs/businesses is given. The entrepreneurs were initially contacted through an email, explaining how they were found and what the intentions behind the interview are. Additionally, it was clarified that they are not obligated to partake in the interview. If entrepreneurs responded that they were willing to partake, possible dates were discussed and a more thorough informed consent form was sent (appendix B), informed consent was also discussed before the interview.

Table 2, Entrepreneurs who took part in an interview, along with some characteristics.

*The first four letters of the SBI, are the same as NACE REV2, with a few exceptions (CBS, 2021). **Starting year of the entrepreneur interviewed in the company (due to takeovers).

No.	SBI/NACE REV2*	Location	Employees	Sex	Starting
					Year**
1.	88993 – Local welfare work	Enschede	1	F	2006
2.	7112 – Engineers and other technical	Enschede	25	Μ	2010
10.	design and advice	Losser	1	F	2014
3.	70221 - Organisational consultancy	Haaksberg	1	М	2012
	agencies	en			
11.		Enschede	1	F	2002
13.		Enschede	7	М	2018
14.		Enschede	2	М	2015
9.	70221, 6201 – Software development and	Vasse	1	М	2006
	publishing				
5.	7311 – Advertisement agencies, 6201	Enschede	12	М	2010
4.	7320 – Market and opinion researching	Enschede	5-10	М	2009
15.	agencies	Hengelo	1	F	2001
6.	70222 – Consultancy regarding	Delden	3	Μ	1991
12.	management and business operation (no	Enschede	3	F	2012
	PR and organisational consultancy				
	agencies)				
8.	70222, 85592 – Company education and	Borne	1	Μ	2013
	training				
7.	6209 – Other service activities relating to	Enschede	40	Μ	2001
	information technology				

3.2 Structuring the interviews

As previously discussed, this thesis is of qualitative nature, and data was gathered through interviews based on random sampling, although the sampling was not fully random (i.e. bias through the entrepreneurs association) like Robinson (2014) also discussed. Interviews can be conducted in differing ways, common examples are structured interviews, unstructured interviews and semi-structured interviews (Doody & Noonan, 2013; Rowley, 2012). Each of

these types of interviews has its advantages and disadvantages. Structured interviews can come across as a survey due to the limited space for elaboration whilst unstructured interviews can be more difficult to conduct and analyse due to the wide range of answers possible (Doody & Noonan, 2013; Rowley, 2012). The semi-structured interview lies between these two interview types. Whilst it offers room for elaboration it does maintain some structure through the use of multiple questions and sub-questions (Doody & Noonan, 2013; Rowley, 2012). Within this thesis, semi-structured interviews have been used. This because they allow for gaining in-depth insights whilst maintaining structure and being more appropriate for novice researchers (Doody & Noonan, 2013; Rowley, 2012). The interview protocol can be read in appendix A.

Before conducting the semi-structured interviews mentioned in the previous paragraph preparations had to be made. Firstly, the interview protocol was drawn up. The interview protocol consists of both interview questions but also all other aspects which need to be mentioned in the interview, i.e. asking for consent to record and discussing the goal of the interview (Jacob & Furgerson, 2012). The main part of the interview protocol consists of the interview questions. Asking the right questions at the right time of the interview is of importance to get reliable and valid results. Not only the content of the questions is of importance, but also the order of the questions is important (Doody & Noonan, 2013; Jacob & Furgerson, 2012). Starting with more simple questions, like the interviewee's background helps with making the interviewee feel comfortable, later on, more difficult questions can be asked (Doody & Noonan, 2013; Jacob & Furgerson, 2012). In general, questions should be openended and neutral (Doody & Noonan, 2013; Jacob & Furgerson, 2012). Furthermore, it is important not to use jargon or complicated wording as the interviewee may not understand the questions (Rowley, 2012).

Apart from asking the right question at the right time, there are multiple approaches of deciding upon the content of the questions. Rowley (2012) mentions that one way of deciding upon the content of an interview question is to consider the questions asked during interviews by previous researchers. Apart from this, questions can also be formulated through the use of the knowledge of the researcher (Rowley, 2012). Examples of more in-depth interview questions are "What distinguishes you from other entrepreneurs, and what do you have in common?", "What do you consider as key traits/characteristics used to tackle a negative event?" and "How would you describe yourself in relation to your activities within the business?". In appendix A, an overview of the interview had to be considered. Before the interview, the general structure and format of the interview should be discussed (Doody & Noonan, 2013). Apart from

this ethics should be discussed and consent should be asked for the possible recording of the interview (Doody & Noonan, 2013; Jacob & Furgerson, 2012). Furthermore, it should be clear that the interviewee can take some time to answer questions and that responses will be anonymized (Doody & Noonan, 2013). These were all incorporated in the interview, as can be seen in appendix A.

When conducting the interview numerous factors need to be considered. First of all the location of the interview is of importance, the location should allow the interviewee to freely discuss any topics he or she wants (Doody & Noonan, 2013). Secondly, the types of questions affect the results of the interview, as discussed in the previous paragraph. Despite questions in the interview protocol the interviewer should still be willing to make revisions to the interview protocol during the interview, in order to gain more in-depth information (Jacob & Furgerson, 2012). Furthermore, the interviewer him or herself may affect the results of the interview (Doody & Noonan, 2013). An example of the interviewer influencing the interviewee by saying "Good" can be read in Hildum & Brown (1955). Lastly using the previously mentioned interview protocol will ensure no parts of the interview are forgotten (Jacob & Furgerson, 2012). The interviews themselves were conducted through digital means except for one faceto-face interview. Due to the coronavirus, the number of face-to-face interviews was kept to a minimum. Furthermore, the interviewees' preferences were decisive in this regardless of the current situation of the coronavirus, the recruitment emails were however based upon an online interview. Also, the online interviews were aimed to be through a tool familiar to the interviewee.

3.3 Data analysis

After conducting the interviews, the interviews had to be analysed. Analysing interviews can be done in multiple ways but prior to analysing the interview, the interview needed to be transcribed. The transcription process can be done with recordings or notes made during the interviews (Rowley, 2012). To ensure data quality, this should be done as soon as possible (Rowley, 2012). After transcribing the interview, the interview can be coded. The first step in coding is to get familiar with the data, assuming the data has already been organized (Burnard, 1991; Rowley, 2012). By getting familiar with the data general themes within the interview can become apparent for later use (Burnard, 1991; Rowley, 2012).

After transcribing the data, and getting familiar with it the initial coding can be done (Burnard, 1991; Rowley, 2012). Burnard (1991) talks about identifying general themes within the text, Rowley (2012) wrote that the interview questions in a semi-structured interview could

be the initial themes. After writing down the initial themes/coding more codes can be further specified (Burnard, 1991; Rowley, 2012). Burnard (1991) uses an approach where the interview is re-read and sub-themes/open codes are written down as needed, whilst Rowley (2012) predefines sub-themes and codes the data based on that. Although the sources seem to conflict on this point, they still seem to be quite similar, Burnard (1991) seems to write everything down whilst Rowley (2012) uses mental notes. Depending on the size of the transcript the method of Burnard, 1991 may be preferred if there is a lot to be remembered, but this is a subjective choice.

Lastly, after the data has been coded, all categories can be revised to for example combine very similar categories, or put single categories as a sub-category of another category (Burnard, 1991; Rowley, 2012). Hereafter, another researcher(s) could be invited to assess/check the coding scheme (Burnard, 1991; Rowley, 2012). Burnard (1991), also mentions that parts of the coding scheme could be shared with interviewees to further check the coding scheme. Lastly the data will have to be reported, when reporting one could use quotes to illustrate the contents of a certain category, but it is important not to overdo this (Burnard, 1991; Rowley, 2012). When reporting the data based on what was agreed upon with the interviewees, pseudonymization was done. Furthermore, any video or audio recordings were deleted after processing the data.

Alike to what was written in the previous paragraph, the interviews have initially been transcribed. This was done following recordings made during the interviews, except for one interview where notes were used. After transcribing the interviews all transcriptions were pseudonymised, editing any reference to the entrepreneurs or their companies. Hereafter the pseudonymised transcriptions were loaded into Atlas.ti 9, which is a software program assisting in for example coding texts. Herein an initial code structure was made upon the interview questions, marking the sections relating to these questions. Hereafter the coding process was repeated, this time creating codes that specifically related to what was said in a part of the interview. This was done per question, so first question A was done for all interviewees, followed by B etc. This was done to have more consistency in the coding. This resulted in many codes. With Atlas.ti's function to make a visual representation of all codes, codes relating to the same questions were initially clustered. Hereafter sub-themes were starting to be discovered and written down. This resulted in certain codes relating to different questions being combined as they had very similar contents. Together with received feedback on the codes, multiple revisions were made resulting in a final overview of the codes. During the writing of the results section, parts of the codes were used. This selection was made to show common factors in entrepreneurs their resilience, and what challenges they had experienced due to COVID-19.

3.4 Reliability, validity and epistemology

Lastly, reliability and validity will be discussed, alongside the role of the researcher in this thesis. First of all, reliability will be discussed. To assure a higher level of reliability certain actions were taken. As discussed above, an interview protocol was used to assure interview questions were asked in a similar order, and in the case of the term resilience, a definition was also pre-emptively written down. In general, this protocol was followed. However, there may have been some internal differences between the interviewees. During two interviews there were for example some technical problems disrupting the interview. Apart from this, little differences were detected whilst conducting the interviews. All interviews were conducted by the same person and through digital means, except for one being non-digital. During the process of converting the interviews into transcriptions and eventually codes, all interviews were not checked by a peer. Before using a quote of an interviewee in the report itself, the quote was checked from the audio recording of the interview.

Regarding the validity, a few remarks have to be made. First of all, during the transcription process, a form of random sampling was used. However, an entrepreneurship association's, aimed at medium to small businesses in Twente, membership registry was used for this. This may have resulted in a bias towards members of entrepreneurship associations and the region of Twente. Furthermore, a self-selection bias seems to be present. As can be seen in table 2, almost all interviewees were acting as some sort of consultant. None, for example, primarily sold physical goods as their main way of generating income. Apart from this, COVID-19 support packages offered by countries also differed, making the results less generalizable to other countries than the Netherlands.

Lastly, the researcher may have affected the results. Differing measures were taken to limit the effect of the researcher on the research. One of them is the earlier discussed interview protocol. Furthermore, the research is aimed at entrepreneurs in Twente. The researcher is not from this region themselves, lowering the chance of any of the (potential)interviewees being influenced in their choices, due to ties unrelated to the research. Even though certain measures were taken a bias may still have formed. This could for example be due to literature read prior to analysing the data or due to subconscious preferences.

4. Findings

As a result of the interviews conducted five challenges during COVID-19, split between two categories were distinguished. Each of these five will be discussed in this chapter. The two categories are sources of resilience and pre-emptive sources of resilience. What this entails will be further explained later on. For each of the challenges during COVID-19 at first, an introduction will be given. This introduction will be followed up by quotes from the interviewee accompanied by an explanation of how it is deemed relevant. Lastly, commonly found (pre-emptive) sources of resilience will be discussed.

4.1 Challenges tackled with sources of resilience

As discussed in the previous paragraph a distinction between two categories was made. First of the category challenges tackled with sources of resilience will be discussed. Within this category challenges tackled with sources of resilience at the very moment, an entrepreneur experiences adversity (due to COVID-19) will be discussed. Within this category, three main sources were distinguished among the challenges, faith in competencies, the actionability of the entrepreneur and creativity in dealing with adverse situations. The paragraphs are ordered by the challenges of increased digitalization, changing demand and waiting due to future uncertainty.

Each of the challenges is explained before their respective paragraph, the sources will be explained in this paragraph. The source of resilience faith in competencies relates to entrepreneurs being able to tackle challenges through the faith they have in the competencies of, for example, themselves, their company, or their employees. The actionability of the entrepreneur was also found to be a source of resilience for the entrepreneurs. Through entrepreneurs taking immediate actions, they were able to avert increased hardship or even turn the current situation around. Lastly, creativity in dealing with adverse situations was found to also be a source of resilience. This due to the entrepreneurs finding a creative way of dealing with their challenges, for example by creatively approaching them.

4.1.1 Challenges due to increased digitalization

The following paragraphs relate to challenges entrepreneurs faced during COVID-19 which related to an increased amount of digitalization. All aspects regarding digitalization are considered, one could think of working remotely, using video conferencing, increased use of digital documents over physical documents and in general the increased use of the internet. Due

to COVID-19, many activities were done digitally, which in turn created challenges for the entrepreneurs and their businesses as can be seen below.

Due to COVID-19, one entrepreneur had to make the switch from physical to digital meetings. Because of this however, the entrepreneur was able to faster expand their company. Previously the entrepreneur would physically visit many of their customers to, for example, discuss their wishes. With the rapid adoption of digital conferencing, they saved time on travelling to and from the customer. In turn, this allowed them to remove part of the geographical limits they had set for themselves and allowed them to expand at an increased rate furthermore, they were also able to serve customers faster. Through the entrepreneur acting upon this large change of having to meet digitally, they were able to turn around this potential adversity to something which allowed them to grow. By breaking with their self-imposed "mindfucks" they are now able to strengthen the company, also after the COVID-19 crisis is over. The quote below was given after the question whether the changes COVID-19 had brought upon them (digital meetings) was positive. "Yes, and now we have become active in other parts of the Netherlands at an increased pace. Our company was called [the name included Netherlands] but in reality, we were focusing too much on the eastern part of the Netherlands, and now we have started to expand towards the rest of the Netherlands at an increased pace." (Interviewee 13) Later on in the interview, the entrepreneur more explicitly mentioned the effect of the adverse situation, COVID-19, on their business when a summary was given on the difference between them and their competitors, and whether covid helped them improve "Yes, it did help us to put aside our own barriers, that we had created, those were all mindfucks we had made up and that just were not true. But you talk to people who say how you should do it, and you trust that if you start, but that, of course, is nonsense." (Interviewee 13).

As discussed in the previous example, videoconferencing among other digital means were rapidly adopted during the outbreak of COVID-19. Which in turn led to an increase in internet usage. One of the entrepreneurs interviewed provides internet connections for companies. Although they initially analysed what impact customers going bankrupt would have on their business, they later realized the growth resulting from COVID-19, and the growth, in general, required action. They found that in comparison to the market they were not growing fast enough. By approaching the threat differently, they were able to detect another threat that could have had larger implications over time if it were not dealt with. Although the initially perceived adversity of having customers go bankrupt was deemed less relevant, the entrepreneur was able to through this creative approach, prevent future adversity. This as they

may now take action to be better situated in their market in the future. The quote below was part of the response to the question of whether there had been impactful events for their company. "Due to corona, we have taken a look at A. which damage we could have if many stakeholders were to go bankrupt, a kind of worst-case scenario. Then we also looked at how are we currently doing at this moment. Well, it is going nicely, furthermore, we have sped up a bit as everyone needs internet for their employees working from home. The need for our product is increasing. Then we thought of that the entire market is going to increase. And what we ourselves need to do, we have said a few months ago, we actually need to start growing far more rapidly than what we have done until now." (Interviewee 7).

4.1.2 Challenges resulting from changing demand

The COVID-19 pandemic did not only affect digitalization but demand in many differing markets was also affected. This could be due to the usual products offered requiring physical presence of the parties involved, or restrictions relating to the usual product offered being imposed by the government. Some of the examples given below relate to for example coaching and consulting. Below two examples will be discussed.

First of all, an entrepreneur discussed how COVID-19 caused one of their main activities (coaching sessions) to be out of demand. Because of this, they had to find a new way to generate income. Due to the entrepreneur having a wide range of knowledge and them being able to do more than what they previously did they were able to find new activities to generate an income. Furthermore, the entrepreneur had faith in their capabilities to do more than what they had previously done. By taking this action of switching to another activity to generate income the entrepreneur was not only able to avert the current adversity but may have also strengthened their company for the future. This as they now realized how they could offer more than what they had previously offered "Nowadays, we make use of way more way different activities, as we both have already been working for 20 years or so. And in those 20 years, we have gathered more than that single trick of coaching or guiding a brainstorm session. It was very easy to sell those single sessions, but now it appears that you can do way more and that results in longer-term assignments and creates more value for the customer. . . . The knowledge and expertise that we needed, which enabled it, but it also has increased the awareness that we can offer more than we always did." (Interviewee 14).

Another interviewee discussed how prior to COVID-19 they would have activities like speaking at congresses or giving trainings to people, which due to COVID-19, were all cancelled. This resulted in them doing more long(er)-term assignments. Them being forced to

do more of these long(er)-term assignments also made them realize that they could do more than previously thought. In the example below the entrepreneur describes how they were initially hired by a company to do work for a certain department. Hereafter they were asked for another function which, they had no specific knowledge of. The entrepreneur described that through both the employees of the company hiring them, as well as their self-knowledge they did accept the offer. In the end, all parties were satisfied with the result. Here it shows that the entrepreneur was able to combat the adversity by both having faith in their competencies as well as them knowing themselves and being willing to try something else "I started at company X as a project manager of department A [not as an employee but as an assignment]. Hereafter I was asked to fulfil function B, then I said, I am a social worker and I have no knowledge of part of function B. But that appeared not to be a problem, as at department B, they do have a lot of people with knowledge of the part of function B and I have knowledge of project management. And you know if you just have a lot of people who are good at the content surrounding you, you apparently can do such a project. Everyone was very satisfied. But I did find it exciting to take that step, then you exit your comfort zone, and you start doing that exploration and start talking to people, so I think putting yourself in a vulnerable spot also is important if you are flexible." (Interviewee 1).

4.1.3 Challenges related to waiting due to future uncertainty

Apart from demand changes and increased digitalization COVID-19 also brought a lot of uncertainty with it. Governments nor entrepreneurs knew what the situation in for example a half-year or even two months was going to be. This uncertainty may have made it harder for entrepreneurs to plan for the (near) future. During the interviews, some entrepreneurs also discussed this uncertainty and having to deal with it.

The first example relates to an entrepreneur who discussed the waiting situation due to COVID-19 in general. They discussed that although initially a lot of entrepreneurs needed a little time to plan and undertake action, some kept standing still a little too long. They found that it would be better to undertake action than to keep waiting till something would change. For this, they also used an analogy of a rabbit looking into the headlights of a car. If the rabbit kept doing this for too long it would have been hurt or killed. Furthermore, the entrepreneur also discussed how taking action may be needed to ensure future profitability (assuming the company would survive the adversity). *"I think that real entrepreneurs, that is a category of putting your shoulders underneath it [Dutch saying for carrying on, doing the hard work] and those that are complaining, it does not help to stop and be sad, that is the same if you look at*

the catering industry [during COVID-19], of course at some point you need to do the math to see if it is worthwhile to do takeaways or delivery options or if that does not make sense financially, but sometimes you need to show yourself and make sure people do not forget you by the time that restaurants are open again." (Interviewee 11). In the quote above the entrepreneur already discussed how they felt that one should carry on in times of adversity, and not stop too long and complain. Later on, the entrepreneur further clarified this. "Sitting and looking, oh what is happening now, this cannot happen to me [as a response to an adverse event]... Of course, covid surprised us all, nobody asked for that. But you cannot sit and stare ... Yes, I think we did all have that for a little while, and for the one that took a little longer than for the other, that can take a week or a few weeks but then you continue on. I think that I have seen that myself, one keeps looking at the headlights of a car like a rabbit a bit longer, some have been looking at the headlights a bit too long instead of walking away from the lights." (Interviewee 11).

During COVID-19 the future uncertainty related to many aspects. One of the entrepreneurs discussed how their company, in general, was able to quickly adapt to changes. They had a creative group of employees which allowed them to quickly come up with new and creative ideas to deal with a situation. Later on in the interview, the entrepreneur also discussed this as one of the key factors in dealing with COVID-19. Through the entrepreneur having this creative group of employees they were able to come up with solutions to the adversity COVID-19 has thrown at them. Furthermore, the entrepreneur did mention this being a risk too due to them doing too many different things at one time. By having the faith in the competencies of their employees they may be able to more easily tackle adversity as their employees will be willing to adapt as well as help find a solution. "We of course all are creative here. We all have an innovation plan so putting through changes is rather easy here. It is more that we should not put through so many changes, as here it is one euro in, 20 ideas out. How do we maintain that we are not acting in many different areas at the same time. That has mostly been difficult to create more structure and an overview in." (Interviewee 5).

Another entrepreneur, who was still building their business, found that their customers were waiting or delaying their orders as a result of COVID-19 and the uncertainty surrounding it. Because of this, their anticipated turnover was not met. During the COVID-19 period, they had limited work to work on because of this. In this period they instead focused on further building their business. Through this, they were able to strengthen their business when their customers would have the confidence to put in their orders again. This gives a nice example of how the entrepreneur was able to creatively deal with the period wherein they had less work

than anticipated. Instead of waiting until they were able to generate an income again, they actively started building their business. Through doing they may have a stronger company, or product offering when potential customers are willing to invest again "*There also were customers who at the beginning of the year were about to switch over [to their product], those said we wait for a while as we do not know how covid affects us, and they stopped all investments. . . . We have had the opportunity to think about what our entrances are and what we can deliver as a service altogether [after discussing that they had been less active]. That caused us to discuss [cooperation] with those assessment companies. . . . So, regarding that [after an example related to the assessment companies] covid, has it brought us turnover no, did it cost us turnover no, it delayed turnover to a later period. We notice that we are starting to catch up, apart from that we have strengthened in the width [of the company]." (Interviewee 9).*

4.2 Challenges tackled with pre-emptive sources of resilience

As said earlier, the results are divided into two categories, in the following paragraphs, the challenges tackled with pre-emptive sources of resilience will be discussed. These relate to actions the entrepreneurs took pre-emptively, thus prior to any adversity presenting itself, to allow them to be more resilient if this were to be required. The factors discussed relate to the management of risk and the awareness of strategic advantages and utilizing them. The paragraphs are once more ordered by the challenges, these to related to financing and changing working conditions.

In each of the paragraphs the challenges will be further explained, in this paragraph the factors of pre-emptive resilience are explained. The management of risk was a factor seemingly affecting the entrepreneur's resilience. By managing these risks, for example through a financial buffer, challenges presented by COVID-19 either had less of an impact or were more easily dealt with. The awareness of strategic advantages and utilizations of those was another factor found to aid in the entrepreneurs their resilience. Here entrepreneurs utilized the strategic advantages they already had to deal with the adversity. An example of this was an entrepreneur having highly educated employees allowing them to help find out how to combat challenges that present themselves.

4.2.1 Challenges related to financing

The COVID-19 pandemic brought financial worries to many differing entrepreneurs. Many entrepreneurs experienced for example a decrease in income or had to shut (parts of) their business down entirely for a certain amount of time. This does not only affect their business but also their suppliers. In the following paragraphs the way entrepreneurs dealt with these financial challenges will be discussed.

First off, one of the entrepreneurs discussed how they would always have (also outside of COVID-19) a half-year financial buffer, as part of their risk management. Through having this buffer, they were able to ensure continuity during adversity. In the example the entrepreneur referred to a customer going bankrupt, leaving bills to be paid. However, they also discussed this as a way of decreasing the financial impact of COVID-19 later on in the interview. Furthermore, by having this financial buffer they may be able to be more prepared for the time after COVID-19 and pre-emptively invest in what they may need by then. One could however argue that this way of everting adversity mostly combats it's consequences and does not help prevent it itself *"Last year we have had a bankruptcy of a customer, which caused a substantial bill left to be paid, that, of course, is quite a let-down. . . . We have always said we need to assure that we have at least half a year of buffer. . . . That has always been my train of thought. We have always built towards that and has been proven last year when the customer went bankrupt and now with covid. We have been slowed down by it but are able to invest to be ready when covid is over and we will be able to continue on." (Interviewee 12).*

Apart from building a financial buffer, another entrepreneur discussed their way of being resilient. They ensured that they were never fully reliant upon a single assignment. Allowing them to continue even if an assignment were to be stopped suddenly. In the quote below they discussed this regarding a prior assignment that had been cancelled a relatively long time ago. At this point they already had this philosophy of not being reliant upon a single assignment, allowing them to cancel it. Later on, they also discussed that COVID-19 probably would have a limited effect on them, also due to their way of approaching risk management. They anticipated some customers to potentially be more reluctant to spend money on services like theirs but did not expect it to affect them too much. Due to the company never being fully reliant on a single assignment the entrepreneur also found them to have a stronger negotiation position towards customers as they could more easily turn down offers. Being less reliant on assignments and having diversified their income may have also allowed them to more easily do investments, as they were prepared for the potential negative consequences *"Independency I do not know if it is a property, but I am someone who always wants to operate from an independent*

position. . . . I am not dependent on such a decision [referring to an earlier assignment they cancelled], and I would like to keep it that way, if I come across some adversity. . . . Independence is what I find important. Diversification is what I always try to advise people. That is a bit of risk management causing you not to be dependent on a project. Allowing you to be independent and say then I will cancel it [referring back to the project]." (Interviewee 6).

Due to COVID-19, many companies had to have their office staff work from home. One of the entrepreneurs discussed that a part of their way of being resilient was to not have a lot of fixed assets. Of course, it should be considered that this may be more viable for certain companies than others. The entrepreneur discussed that they had an office space but that was about it. If needed they could even terminate their rent and continue elsewhere. Through having this freedom, the company may more easily assure the future existence of the company, as during heavy financial hardship they would be able to more easily downsize. It should also be mentioned that this was not their main way of being resilient. It can be seen more as an additional tool that would be available to the company if needed "*You know, what you see now* [referring to working from home due to covid], we all take our MacBook and move somewhere else. We for example could cancel the rent and continue on somewhere else in a smaller form." (Interviewee 5).

Apart from the financial challenges entrepreneurs themselves had experienced, customers who had financial challenges because of COVID-19 also impacted the interviewed entrepreneur's companies. One of the entrepreneurs discussed how they gave struggling customers a payment break. This was part of their strategy to focus upon their main activities and become better at them. Here they went for the long-term gains rather than the short-term gain, where they could have demanded the money from the customers immediately. Through the entrepreneur focusing on becoming better at their main activities, they may in the long term grow further, due to them for example having a good reputation. The entrepreneur themselves also mentioned this and how they focused on improving quality, effectivity and efficiency in the company "Yes, we did that [when summarizing their focus on a specific market] daily you have that choice, as an entrepreneur you constantly see chances. And eventually, you have to turn 180 degrees in against your own entrepreneurial urge and be very patient, focused disciplined maintain that what works.... We are however constantly improving and developing our formula, we also let everyone devote 20% of their time to formula optimization and organisational improvement. You mainly need to think about quality, effectivity, and efficiency. Those are very nice things, that you actually do, it is important not to let yourself be distracted and hang on to that what works." (Interviewee 4).

Lastly, an entrepreneur discussed how they would often face periods of high demand followed by periods of very low demand. To combat this, they introduced a subscription-based service. This allowed them to spread the workload more evenly over the entire year and assure turnover during the low-demand periods. When COVID-19 first arose many projects were cancelled. The entrepreneur said that in that period these subscriptions were their saving as a lot of projects were cancelled, which previously would have left them with little to no income. By having the subscription-based service they still had an income and were able to stay in contact with their customers. Furthermore, it allowed them to plan their expenses better as they had a guaranteed income, also outside of COVID-19. Taking this action of starting a subscription-based service in the end not only made them more resilient but also helped them better plan their entire business. This demonstrates how certain actions to increase resilience may also have short term benefits to the company, regardless of adversity. In response to being asked why they started the subscription-based service they responded with the following "Yes, the realization that with projects, the income really went up and down. There are 6 weeks of school holidays, say July till half August.... After the 11th of July nobody took any decisions anymore, and starting dates were moved to September. . . . To fill in those gaps we thought we really need to do something, then we started with a subscription structure, which has the advantage that, normally at the start of a new year you have to see what your turnover is going to be.... Now we have our subscription-based structure, and that increases monthly, which means at the first of January I have a guaranteed turnover for the next year. (Interviewee 12).

4.2.2 Challenges resulting from changing working conditions

Apart from the previously discussed financial impact of COVID-19, COVID-19 resulted in changed working conditions for many companies and entrepreneurs. Adapting to these changes, like working from home and increased digitalization can be challenging for companies due to the short amount of time available to implement it. Below a few of those examples will be discussed.

One of the changes in working conditions which has also been discussed previously is the increased speed of digitalization. One company found that in general, they had to be able to more flexibly and quickly be able to deliver their service. Especially during COVID-19 as due to many companies having employees working from home, they needed more data [the company provided data connections for businesses] to work with. The entrepreneur found themselves to be ready for this market change by pre-emptively investing in digitalization. Before COVID-19 they already had someone work on these things to allow them to deliver

their product more flexibly to their customer. Had they not done these preparations COVID-19 could have caused an increase in orders they may not have been able to handle in time, possibly resulting in less satisfied customers or customers leaving for the competition "We have a few people who are hard at work with further professionalising our organization and a very important process in that is automatization/digitalization of our processes, but also of our service. . . . With the digitalization we are able to offer connectivity on demand . . . we should be able to deliver very flexibly and very quickly, then our product itself is further digitalized. Luckily, we have someone with a background in that, I think that that will be a core-figure in our company, all companies will become a digital company in a few years." (Interviewee 7).

Working from home due to COVID-19 does not only leave a digital challenge to be solved, it also creates a challenge regarding the autonomy of the employees. As many employees had to work from home this entrepreneur found that this also creates a challenge whether these employees can work autonomously and handle this freedom. This entrepreneur found that as their company mainly has highly educated employees this was less of a problem for them. In addition to that, their organizational structure already was, prior to COVID-19, not as directive and more cooperative. Due to these prior choices, of giving employees more freedom as well as hiring employees that can handle this the entrepreneur was better prepared for the freedom that arose from COVID-19 and working from home. However, one could argue that the choice of having highly educated employees partially was inevitable as those simply were needed for the services the company offers. By being better prepared the company may have been able to better retain its quality as well as productivity. Apart from this, the entrepreneur also mentioned that having highly educated employees helped them to better respond to adversity. The first quote relates to them experiencing a demand drop, before COVID-19 and how they dealt with that. "Those are two things, that is looking forward and do a fast analysis, where is the potential, where are the chances and the second is acting upon that with the organization. I cannot do that alone, you need to cooperate with the people in your organization and together start asking your network and doing acquisition." (Interviewee 2). Later on in the interview, the effects of the earlier decision of having highly educated employees was discussed again. "You know, those are highly educated people, you can offer them some more freedom. You can give them some responsibility, that is what I already referred to in the beginning [of the interview], I find it important to put that responsibility lower in the organization. I am not a director that says, you should listen and if you do not then I will fire you. Also, your own responsibility is included in that, of course, I will confront you if you do not keep your promise or do not deliver." (Interviewee 2).

Interviewee 8 discussed the decision-making process of entrepreneurs more broadly. Although it did not specifically relate to COVID-19, it does relate to what other entrepreneurs said regarding this. They discussed this based upon the model of Bateson. The entrepreneur told how based upon the environment a company positions itself in things like vision, mission and goals are then formulated. Which in turn affects the other parts of the model namely, identity, values, knowledge, skills and behaviour. If the company or entrepreneur targets an environment that does not fit them, they may see problems arising in for example values or skills. An example (self-made up, not from the entrepreneur) of this could be the building industry moving towards prefab building. Suddenly, the builders had to work with more precise margins, as the prefabricated building parts could not be adjusted. Here problems may have arisen on the behaviour or skills part, as they were not used to this. By targeting the right environment and understanding how possible problems could arise future adversity may be limited or at least faster understood. Some of the actions discussed here could be argued to have resulted from the entrepreneur targeting a certain environment, or market. The previous example is a nice example of this. As the entrepreneur targeted a certain market, they started hiring highly educated employees. This in turn gave them the skills to, later on, be resilient during COVID-19. Potentially opening debate whether some actions are purposefully taken, or there were no other options naturally resulting in entrepreneurs taking certain strategic decisions.

4.3 Commonly used (pre-emptive) sources of resilience

Based upon the previous paragraphs a few commonalities were detected in the way the entrepreneurs were resilient. These commonalities relate to what kind of actions the entrepreneurs took. Three common sources of resilience were found namely, faith in competencies, actionability and creativity. Two common pre-emptive sources of resilience were found which are, risk management and the utilization of strategic advantages. These will be further explained in the following paragraphs.

First of all, the three commonly found sources of resilience will be discussed. Faith in competencies was found to be a common part of the way entrepreneurs were resilient. This often related to the entrepreneur for example believing in their capability or the capabilities of their employees to tackle a challenge. In turn, this often resulted in entrepreneurs taking chances, towards the unknown, allowing them to combat the experienced challenge. Furthermore, actionability was another often discussed way of being resilient. Here entrepreneurs for example discussed how they realized they had to act and acted. Through

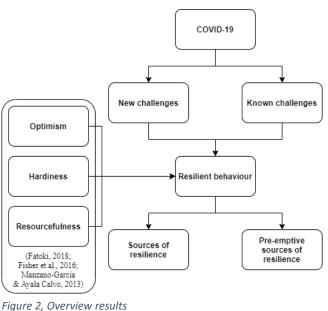
taking action they found they had evaded more hardship. Lastly, creativity in dealing with the adverse situation was found to be commonly used as a source of resilience. Here entrepreneurs often found another way of looking at a challenge. By looking at the challenge differently, the entrepreneurs for example were able to prevent future adversity or even turn the challenge into an opportunity.

Apart from the sources of resilience, the two commonly found pre-emptive sources of resilience, risk management and the utilization of strategic advantages, will be discussed in this paragraph. First of all, risk management was a commonly found pre-emptive source of resilience. Entrepreneurs discussed how they would take actions like maintaining a financial buffer to manage their risks in case of adversity. By doing this they either limited the effects of the challenges/adversity they encountered or had the resources to cover for any losses made due to it. Apart from risk management, entrepreneurs also utilized their strategic advantages. One entrepreneur for example used their highly educated staff, to help find solutions to the challenges the company had encountered. By utilizing the strategic advantages, entrepreneurs were able to adapt to the adversity whilst also maintaining their strategy, and not having to make large changes.

5. Discussion

This thesis has aimed to find the main factors aiding in the resilience of small companies, in the professional services industry, during COVID-19. This was done based upon literature to find factors that have earlier been found to be of importance. Apart from literature, interviews were used to find out how entrepreneurs were resilient during COVID-19. Through comparing the data gathered through the interviews and literature, it became apparent that the important factors of resilience named in literature still apply, also during COVID-19. Despite this, there was an interesting division in the data, with one part relating to pre-emptive sources of resilience, something which has not been specifically discussed very often in literature. Lastly, the challenges entrepreneurs encountered during the adversity of COVID-19 partially were different from previously reported adversity, whilst some were very similar. An overview of the results can be found in figure 2.

Although the first finding, related to the entrepreneurs discussing similar factors affecting their resilience, was previously found in literature, it still is relevant to discuss. As a result of the interviews, different factors affecting the resilience of entrepreneurs were found. Examples are faith in competencies, the actionability of the entrepreneur and the management of risk. Each of these are relatable to three often mentioned factors in literature contributing to resilience,



namely resourcefulness, hardiness and optimism (Fatoki, 2018; Fisher et al., 2016; Manzano-García & Ayala Calvo, 2013). Some refer to this less directly than others; faith in competencies for example relates rather directly to optimism and resourcefulness, whilst risk management more indirectly contributes to resourcefulness and hardiness. Apart from these three factors named in literature diverse other factors were found. One, for example, is pro-activity, which is similar to the actionability found in this thesis. These findings further reinforce the findings of previous authors. Apart from this they also show that these previous findings also seem to be applicable to small companies during COVID-19.

Apart from the factors affecting resilience found in this thesis seemingly being similar to previous literature, something new was found. A division between the factors entrepreneurs found themselves to be resilient was made. Sources of resilience and pre-emptive sources of resilience. The second one, pre-emptive sources of resilience, did not seem to be specifically reported very often in previous literature. When looking at some of the currently available literature some factors which could be called "pre-emptive" were found. An example is a paper written by Oh & Teo (2006) where they discuss companies pro-actively investing in IT to, later on, be more resilient. Furthermore, Ma et al. (2018) discussed an anticipate & plan phase for resilience, which would fit the pre-emptive sources of resilience discussed here.

Even though entrepreneurs used the same traits to tackle adversity as found in previous literature, the adversity or challenges they faced did differ. In prior literature adversity usually resulted from aspects like an economic downturn (Pal et al., 2014; Smallbone et al., 2012). Furthermore, other, more similar, aspects have been mentioned in research, like the outbreak of an animal disease (Irvine & Anderson, 2004). Or even cyber threats and climate change (Carias et al., 2020; Jorge et al., 2020). Some of the challenges resulting from COVID-19 are similar to the challenges created from these previously named adverse events. The challenge of changing demand, or financing could for example also have appeared during an economic downturn. On the other hand, the challenges of increased digitalization, despite it being a global trend over the past years, can be considered as new. The challenge of waiting due to future uncertainty may have presented itself previously in a lesser form, for example during the outbreak of an animal disease where counter measurement also may have been taken, but not on the scale and longevity as was seen during COVID-19.

Overall, the adversity COVID-19 has brought upon the entrepreneurs seems partially dissimilar to what entrepreneurs may have previously experienced. Even though the adversity the entrepreneurs experienced was partially new, they still used the same factors in aiding their resilience as what was found in earlier pre-COVID-19 literature. In the results, an interesting distinction became visible though. Part of how entrepreneurs were resilient was made up at the time of the adversity, whilst others were already made up prior to COVID-19. This separation between sources and pre-emptive sources of resilience has not been made as explicitly in prior research. This could be due to COVID-19 making this separation clearer, or prior research may have prioritized another way of separating their findings.

When reading the above results, one should consider a few limitations. First of all, interviewees were sought through the local SME organization of Twente, a region in the

Netherlands. This may have led to a bias towards companies in this area, as well as companies that became members of the SME organization. Furthermore, a strong self-selection bias seems to be present. Almost all interviewees offer a kind of consultancy service, none of them for example primarily sell physical goods. Apart from this one could consider the fact that the interviews were taken over the course of about 2 months, in these two months the situation regarding COVID-19 did, however, evolve potentially affecting the answers the interviewees gave. Lastly, as the interviews were conducted during COVID-19, it is unknown whether the resilience strategies the entrepreneurs discussed actually helped them.

Apart from the above, the sample size of 15 used in the research could be further expanded in future research. If this were to be done methods like quotation sampling could be used to reduce the effects of self-selection bias, as was experienced in this thesis. Furthermore, future research could improve by interviewing entrepreneurs from different geographical areas, as support packages offered by the government vary between countries. Not only did the support packages differ from country to country the countermeasures against COVID-19 also differed, which may influence the challenges entrepreneurs face. Lastly, other research may improve upon this research by having their coding and transcribing process checked by another researcher, which was not done in this thesis.

The conclusions drawn in the previous paragraph offer some opportunities for future research. First of all, this thesis discovered a few of the new challenges companies have faced during COVID-19. More extensive research may allow for more of these new challenges to be discovered. Finding these new challenges could aid in researching how (small) companies can be resilient in future scenarios. Apart from this, conducting similar research into the resilience of entrepreneurs during COVID-19, and the challenges they experienced, in different countries may also aid in comparing the countries. This could relate to what support packages governments offered or which economies seem more resilient to this kind of adversity.

Apart from the challenges experienced because of the adversity of COVID-19, the found division between pre-emptive sources of resilience and sources of resilience may be worth further investigating. Although literature may have long before noticed this division, reporting on it more explicitly may uncover new concepts. It could be argued that the literature regarding risk management also is related to companies pre-emptively building resilience. Furthermore, practitioners may be able to more easily see how they can pre-emptively combat future adversity. Lastly, research could be carried out to see whether the prior literature regarding resilience also holds up in other geographical as well as economical areas.

Based upon the findings there are a few recommendations for practice. First of all, many differing ways of entrepreneurs being resilient during COVID-19 were found. However, each entrepreneur had their way of being resilient. Although this may not be a problem if it suffices in tackling the challenges adversity has thrown at them, practitioners may consider other methods described in this thesis to support this. Furthermore, the finding that the common factors found in previous literature of optimism, hardiness and resourcefulness still seem relevant during COVID-19 may provide another starting point for them thinking of different ways of being resilient.

Apart from the prior, the challenges found in this thesis relating to COVID-19 may allow practitioners to better prepare for a similar future scenario. Herein it should be considered that the scope of this thesis was limited, and more challenges may exist. Furthermore, the thesis also offers examples of how entrepreneurs have combated this adversity. Herein the distinction made between pre-emptive sources of resilience and sources of resilience may also offer some insights into actions that could be taken at this moment to assure future resilience. On the other hand, it may also show how at the moment a challenge presents itself one could tackle the adversity.

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Appendix A, Interview Protocol

Please note, the explanation why each question was asked was added after conducting the interviews. Thus it is written in italics.

Interview Questions

Please note that Y means Yes, so this question will be asked if the previous questions were answered with "yes" or anything resembling yes. N means No. Sub questions will be marked with an A-Z or Y/N and indent.

Please note that the questions drawn up relating to the entrepreneurial identity and resilience have been partially based on the theories mentioned in the theoretical framework part in this thesis, for references please see that part of the thesis.

General Questions

The general questions that will be asked in the first phase of the interview have not been listed. These will depend upon the information that was found before the interview and the company itself. Questions could be related to the companies branch or turnover and other related aspects. Furthermore. Questions could be asked regarding the entrepreneur for example, whether the entrepreneur founded the company or his or her prior education. But again, these could differ based upon the company and the information previously available.

Could you give me some general information regarding you and your business?

Duration of being an entrepreneur?

Although some general useful information was gathered from these questions, they also had the function of helping the entrepreneur get accustomed to the interview.

Entrepreneurial Identity

Initially, the thesis also focused upon entrepreneurial identity, thus these questions. Some questions however still served a purpose as it gave room for more explanation of motive and thoughts behind the way some entrepreneurs operated their business.

Would you consider yourself as an entrepreneur?

Here the goal was to find out whether the entrepreneur even saw themselves as an entrepreneur, to follow up upon with the below questions.

Y1. As what kind of entrepreneur do you see yourself?

By giving the entrepreneur a lot of freedom in answering this question, their first thoughts on this topic may be given. However, some entrepreneurs required additional explanation.

Y2. Could you describe what characteristics/traits define you as an entrepreneur?

To find out what makes them unique separates them from others, sometimes also partially explained how they were resilient.

Y2A. Are there other (groups of) people with similar characteristics or traits?

How unique is what they have previously told? And this also functioned as a way of getting a more elaborated answer.

Y3. What distinguishes you from other entrepreneurs, and what do you have in common?

Similar to the last question. However, also offered the opportunity to give new aspects of their identity.

N1. What makes you consider yourself not to be an entrepreneur?

Find out what they feel makes them different from other entrepreneurs.

N2. How would you describe yourself in relation to your activities within the business?

If they are no entrepreneur, what are they then? With what groups do they identify?

N2A. What characteristics or traits would you attribute to yourself?

Find out what makes them unique.

N2AA. Are there other (groups of) people with similar characteristics or traits?

Similar to question Y2A.

N3. What distinguishes you from entrepreneurs, and what do you have in common?

Although this may have been partially answered in question N1, it gave room for further thought regarding the topic, giving more details about why they think they are no entrepreneur. Also helps them compare to other entrepreneurs, and still find out their differences and commonalities.

N3A. If given an answer further explaining why they're not an entrepreneur without any personal traits, ask the below question.

What groups in society are similar or dissimilar to you, and why?

In case the entrepreneur did not want to compare themselves to other entrepreneurs, this was a way of finding out more about their identity.

Resilience

(Small introduction)

Sudden events can occur and have a (big) impact on businesses, a few examples could be the coronavirus, a new competitor or important customers/suppliers quitting among many other things. The next questions will relate to these kinds of events.

A small explanation was given to assure the entrepreneur's definition/interpretation was like that of the interviewer. Also made sure the entrepreneurs knew what the interviewer meant.

Have you experienced any events impacting your business, and what happened?

Find out previous experiences with adversity, the entrepreneur may have had. At the moment of conducting the interviews the thesis did not specifically focus on COVID-19, however almost all entrepreneurs discussed COVID-19 regardless.

Y1. What actions have you taken to mitigate the negative effects of the event?

What actions were taken to be resilient during their adversity?

Y1A. How did you come to the right action to mitigate the event?

What was their train of thought? This also allowed them to refer back to some of the identity questions asked priorly, which allowed for an insight into how these two seemingly related to one another.

Y1AA.Later on, did you come across any other possible actions you could have taken to mitigate the event?

Were they happy with the actions they took? Or did they find them to have flaws and have better alternatives available. May also result in them discussing their learning process regarding resilience.

Y1AAY. What caused you not to find this option earlier?

What went wrong earlier? And why?

Y2. What was needed/helped to tackle this?

What were key aspects present in their company allowing them to be resilient? This helped make a distinction between what affected their resilience in case of adversity.

Y3. Have there been events affecting multiple companies (including yours)?

Introductory question to further go into comparing companies and resilience approaches.

Y3Y. If there were any, what were the key difference in companies their approach to tackling this event?

What were successful approaches or not? But more importantly, why did approaches differ, which allowed to also further discuss question Y2.

Y4. Have there been changes regarding the previous over time, and is so what changed?*

Find out if and if so how the entrepreneur's approach to being resilient may have changed.

N1. Although the events I mentioned may have quite a big impact, some seemingly smaller events may have similar effects, for example, a power outage.

Backup question, to see how they handle adverse events in general. And help the entrepreneur think of an event to still get answers to the questions above.

If able to come up with events \rightarrow Continue with Y1. of resilience.

If not able to come up with events \rightarrow First try to guide the interviewee a bit more, otherwise ask questions of resilience Y1-3. in a hypothetical fashion with examples.

Last resort, will introduce more bias as the interviewer may come up with and adverse events potentially relevant to the entrepreneur. Also makes the other questions hypothetical, which may be less useful as the entrepreneur may start thinking of things in advance, without the pressure of time and money on their shoulders. This was however never needed during the interviews.

*Added whilst conducting the interviews.

Appendix B, Information Document for Interviewees

The first one is the Dutch version, this version was the only one sent as all interviewees replied in Dutch. The English version has however been included after it. The research question among other aspects may not match the thesis due to later changes to the thesis.

Informatie m.b.t. het onderzoek "The entrepreneurial identity and it's effect on the entrepreneur's perception of resilience."

Deze informatie zal voorafgaand aan het interview besproken worden. Hierbij zal ook besproken worden of u (deels)akkoord gaat met het onderstaande.

Doel van het onderzoek

Het bovengenoemde onderzoek wordt uitgevoerd met het doel om te achterhalen of en zo ja hoe, de identiteit van een ondernemer invloed heeft op zijn of haar beeld van/blik op veerkracht. Onderzoek hiernaar kan van belang zijn omdat veerkracht vaak wordt gezien als een belangrijke eigenschap van ondernemers. Door te achterhalen of de identiteit van een ondernemer ook relateert aan zijn of haar veerkrachtigheid kunnen ondernemers hier zelf bijvoorbeeld beter op inspelen. Dit onderzoek wordt uitgevoerd om allereerst de huidige literatuur op dit onderwerp aan te vullen en daarnaast in het kader van mijn scriptie voor de master business administration (specialisatie ondernemerschap, innovatie & strategie).

Methode

Om tot een conclusie te komen zal er gedurende het onderzoek gebruik gemaakt worden van interviews. Gedurende een interview zullen er vragen gesteld worden met betrekking tot zowel de ondernemers-identiteit en zijn of haar beeld van/blik op veerkracht. Met de antwoorden op deze vragen uit verschillende interviews zal er een conclusie getrokken worden.

Rechten

Allereerst is deelname aan het onderzoek volledig vrijwillig. Dit betekent dat u op geen enkele manier verplicht bent deel te nemen aan het onderzoek. Gedurende het onderzoek kan er op elk moment zonder opgaaf van reden gestopt worden met het onderzoek. Ook kunnen specifieke vragen overgeslagen worden/niet worden beantwoord. Om de uitwerking van het onderzoek te vergemakkelijken, zal er gevraagd worden of het interview opgenomen mag worden. Hierbij kan de geïnterviewde er ook voor kiezen om het interview niet op te laten nemen.

Vertrouwelijkheid gegevens

Naar aanleiding van het interview zal er data gegenereerd worden. Deze data kan bestaan uit zowel audio opnamen als schriftelijke uitwerkingen van het interview en uiteindelijk ook onderdelen van het rapport. Waar mogelijk zullen gegevens gepseudonimiseerd worden, wat inhoudt dat alle herleidbare informatie (bijvoorbeeld een naam) veranderd zal worden naar bijvoorbeeld een nummer. Alleen de uitvoerder van het onderzoek (Remco Noordam) weet dan welk nummer waarbij hoort. Aangezien eventuele audio opname niet gepseudonimiseerd kunnen worden, zullen deze beveiligd opgeslagen worden. Na afronding van het onderzoek zullen deze gegevens vernietigd worden. Tussentijds zullen de audio opnamen enkel gebruikt worden voor het uitwerken van de schriftelijke versie van het interview en eventueel ter

controle van het uitvoeren van de interviews door een medewerker van de universiteit van Twente.

De conclusies getrokken uit de interviews zullen worden verwerkt in het rapport. Dit rapport wordt mogelijk door de universiteit Twente gepubliceerd op hun scriptie site (thesis.utwente.nl). Het rapport zal echter geen direct herleidbare informatie m.b.t. de geïnterviewde persoon bevatten.

Voor- en nadelen

Er zijn geen voor- en of nadelen van het onderzoek bekend voor de deelnemers.

Contactgegevens

Mocht u contact willen opnemen met mij (Remco Noordam) dan kan dit via de volgende contactgegevens:

Gedurende het onderzoek:

Email: r.p.[achternaam] at student.utwente.nl (email is uitgespeld om spam, te vermijden)

Na afloop van het onderzoek:

Email: [voornaam][achternaam] at gmail.com

Mocht u het uiteindelijke rapport van het onderzoek willen ontvangen dan kunt u dit altijd aangeven.

Information regarding the research "The entrepreneurial identity and it's effect on the entrepreneur's perception of resilience."

As all interviewees responded in Dutch, this version was never sent.

This information will be discussed prior to the interview. Then it will also be discussed whether you (partially)agree with the below.

Aim of the research

The research named above is executed in or to find out if, and if so how, the identity of an entrepreneur influences his or her view of/on resilience. Research regarding this topic can be of importance as resilience is often seen as an important characteristic of entrepreneurs. By finding out whether the identity of an entrepreneur relates to his or her resilience, entrepreneurs may be able to make better use of this. This research will be conducted to add to the current literature regarding this subject and apart from that as my thesis for the master business administration (specialisation entrepreneurship, innovation & strategy).

Method

To come to a conclusion, interviews will be used during the research. During the interview questions will be asked in relation to both the entrepreneur's entrepreneurial identity as well as his or her view of/on resilience. With the answers to these questions asked in the differing interviews, a conclusion will be drawn up.

Confidentiality data

As a result of the interview, data will be generated. This data can exist both out of audio recordings as well as written transcripts of the interview and ultimately also parts of the report. Where possible data will be pseudonymized, which entails that all relatable information, (in example a name) will be changed to for example a number. Only the person responsible for carrying out the research (Remco Noordam) will know which number relates to what. As potential audio recordings cannot be pseudonymized, they will instead be stored in a secure location. After completing the research, these data will be destroyed. In between, these recordings will only be used for creating a written version of the interview, and possibly as a control of the execution of the interviews by an employee of the university of Twente.

Conclusions drawn from the interviews will be incorporated into the report. This report will possibly be published by the university of Twente on their thesis site (thesis.utwente.nl). The report will however not include any directly relatable information regarding the interviewed person.

Pro's- and con's

No pro's- and or con's are known to be present for the participants.

Contact details

If you want to contact me (Remco Noordam) this is possible via the following contact details:

During the research:

Email: r.p.[last name] at student.utwente.nl (email spelled out to avoid spam, when put online)

After the research:

Email: [first name][last name] at gmail.com

If you would like to receive the final report, you can notify me of this at any time.