

# How entrepreneur resilience impacts the utilization of innovation in dealing with adversities like the COVID-19 pandemic in the restaurant industry in the Netherlands.

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## ABSTRACT

*The COVID-19 pandemic is an infectious disease that is a 'existential threat' to society. COVID-19 influences organizations worldwide, obligating entrepreneurs to be resilient and become innovative in thinking about alternative methods for creating revenue. There are only few studies that have looked into the impact of entrepreneur resilience on innovation in dealing with adversities. In this qualitative research, we look into how entrepreneur resilience impacts the utilization of innovation in dealing with adversities like the COVID-19 pandemic by interviewing ten respondents and assess how resilient they are with the CD-Risc 10-scale. Our findings show that there is no direct impact of entrepreneur resilience on the utilization of innovation in dealing with adversities like the COVID-19 pandemic, because the urgency of creating revenue in the 'contain' phase of this pandemic forces entrepreneurs to become innovative and causes entrepreneur resilience to become secondary. This thesis offers insight into the utilization of innovation in a pandemic and how entrepreneur resilience impacts this. A contribution to research on entrepreneur resilience and adversities is offered.*

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## Keywords

Entrepreneur resilience, CD-Risc, Innovation, Adversities, Pandemic, COVID-19, Crisis Management

# 1. INTRODUCTION

The outbreak of the COVID-19 (Coronavirus Disease 2019) pandemic disrupted the global economy and is spreading fast, obligating entrepreneurs to be resilient and become innovative in thinking about alternative methods for creating revenue (MacKenzie, 2020; McKibbin & Fernando, 2020). COVID-19 is a type of extreme adversity that has an impact on people, governments and organizations. Not only the pandemic itself, but especially the measures imposed by governments have major impacts on the operations of organizations. Moreover, given the likelihood of reoccurrence of such adversities due to new viruses and/or mutations, entrepreneurs need to know more about pandemics as adversities and what they can do in the future (Cankurtaran & Beverland, 2020).

Entrepreneurs have to be resilient and innovative in creating new opportunities for earning revenue when facing adversities like this pandemic. Resilience is the ability to cope with adversity (Seligman, 2011). It is “the capacity to maintain, or regain, psychological well-being in the face of challenge. The definition underscores the capacity to flourish, develop and function effectively despite difficult circumstances or events” (Tsenkova, Morozink, Friedman, & Ryff, 2012).

In the last decade, research on resilience has become more important, since people are more aware of the consequences of disasters (Tukamuhabwa, Stevenson, Busby, & Zorzini, 2015). Due to the speed of changes in the economy, society, and technology, resilience is nowadays important in survival, which is considered a critical aspect of business (Horne III, 1997; Ruiz-Martin, López-Paredes, & Wainer, 2018).

There are only few studies that have looked into the impact of entrepreneur resilience on innovation in dealing with adversities (Akgün & Keskin, 2014; Cameron, Moore, Montgomery, & Stewart, 2018). According to Branicki, Sullivan-Taylor, and Livschitz (2018), the relationship between resilience in connection to other concepts like adversities and innovation needs more attention for future research. As stated in previous studies, resilience is necessary to overcome adversities (Ayala & Manzano, 2014; Linnenluecke, 2017; Soo, 2017; Stoner & Gilligan, 2002; Vargas & Rivera, 2019; Vogus & Sutcliffe, 2007). However, how resilience can help in overcoming extreme adversities like pandemics, is not studied sufficiently (Dalton, 2006; Longstaff & Yang, 2008).

With this situation in mind, it is interesting to study how resilient entrepreneurs are utilizing innovation in dealing with the consequences of the pandemic COVID-19. In this research, we look into how proactive the entrepreneurs are in coming up with new, creative opportunities for continuing their operations. Currently, to our best knowledge, there are no studies that directly link entrepreneur resilience and the utilization of innovation during pandemic crises.

This paper will address the following research question: ‘How does entrepreneur resilience impact the utilization of innovation in dealing with adversities like the COVID-19 pandemic in the restaurant industry in the Netherlands?’.

Addressing this question will contribute to filling a theoretical gap that exists about the impact of entrepreneur resilience on the utilization of innovation in dealing with adversities like pandemics.

In this research, the restaurant owners that are interviewed are all owners of Small and Medium Enterprises (SMEs) and are therefore classified as entrepreneurs (Jogaratham, Tse, & Olsen, 1999). The conceptualization of an entrepreneur, in this research, is ‘an actor who innovates by recognizing opportunities; he or she makes moderately risky decisions that leads into actions requiring the efficient use of resources and contributing an added value’ (Filion, 2011). Entrepreneur resilience is the individual resilience of the business owner leading the organization. This qualitative study starts with establishing how resilient each respondent is and afterwards looking into the utilization of innovations of the entrepreneurs in this pandemic crisis.

This paper is structured as follows. First, previous literature on business owner and entrepreneur resilience and dealing with adversities is reviewed. In this theory section, propositions are made about the expectations of the research. Second, the methodology section explains the applied method that is used for the data collection. Then the results will be presented and a discussion is presented about the results of this research. Limitations of this research and contributions are then provided for future research. Last, a conclusion will be given to answer the formulated research question.

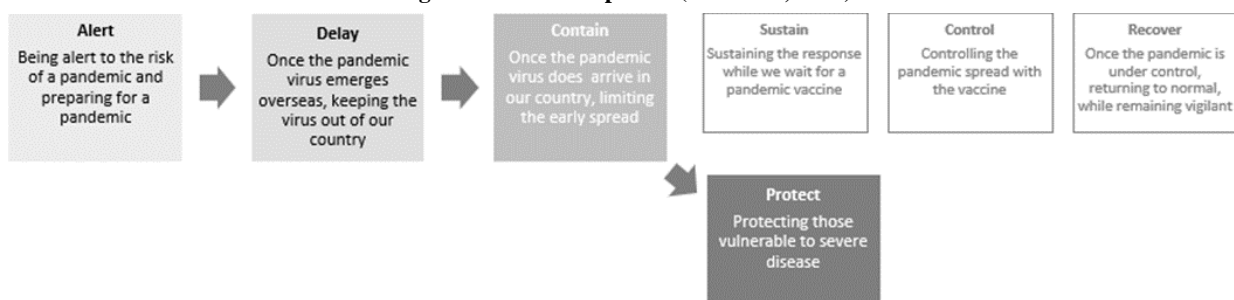
# 2. THEORY

## 2.1 Research context

Pandemics like COVID-19 are infectious diseases that are ‘existential threats’, classified as Future Global Shocks by the United Nations Development Programme (UNDP) of 1994 and by the UN Commission of Human Security (2003) (Rubin, 2011). When in a pandemic the virus spreads among a community, without it being obvious who got it from who, containment becomes impossible and governments will not, on their own, be able to control it (Dalton, 2006). When containment fails, countries must enter the ‘mitigation phase’ of epidemic response, with quarantine and actions such as closing schools, and measures for ‘social distancing’ for the safety of vulnerable individuals that are at risk of not surviving this disease (risk groups) (MacKenzie, 2020; McKibbin & Fernando, 2020).

The phase of ‘mitigation’ is aiming at slowing the spread of COVID-19 down (‘to flatten the curve’), so medical facilities do not get overloaded. Consequently, this ‘mitigation phase’ brings a lot of measures that heavily affect organizations and their operations. These measures are needed and justified to be taken when pandemics happen, since action according to the normal procedures will not be sufficient (Santos, Yip, Thekdi, & Pagsuyoin, 2020; Wæver, 2009; Yu & Aviso, 2020). Mitigation happens in the ‘containment’ phase of the pandemic phases that are shown in Figure 1. This research was done in the containment phase of the COVID-19 pandemic.

Figure 1: Pandemic phases (AHMPPI, 2019)



Since the measures imposed by the government and their consequences can impact organizations drastically, resilience and innovation have a major role in coping with these unique and unexpected circumstances (Masten, 2001; Vogus & Sutcliffe, 2007). In sectors like the entertainment and the catering industry, organizations are not able to continue their operations due to these measures and the consequences. These business owners have to come up with new strategies and new ideas, in order to survive this crisis.

## 2.2 Entrepreneur's resilience and adversity

Resilience is about more than bouncing back to a stable state after an adversity, it is about reacting to the circumstances and eventually not only deal with disruption but create and grow with new opportunities (Bhamra, Dani, & Burnard, 2011; Burnard & Bhamra, 2011; Gittell, 2008; Mallak, 1998; Watanabe, Kishioka, & Nagamatsu, 2004). Adversities like the COVID-19 pandemic can trigger entrepreneurs' creativity and create new ideas and opportunities in organizations.

To conceptualize entrepreneur resilience, we look at several conceptualizations of entrepreneurs resilience, which is the individual resilience of the entrepreneur that is managing the organization. According to Wagnild and Young (1993), resilience is a personal trait, like an emotional stamina, which helps to adapt and overcome misfortune and reducing the negative effects from adversities. Hayes (2016) conceptualized resilience as a "state-like" positive capacity, that is more changeable than pure traits but remains more stable than a psychological state, instead of a personality trait (Luthans, Avolio, Walumbwa, & Li, 2005; Luthans, Vogelgesang, & Lester, 2006; Youssef & Luthans, 2007). In addition, resilience can be conceptualized as a protective mechanism, that varies depending on both the situation as well as the aspect of life that the adversity affects (Rutter, 1987). Druss and Douglas (1988) conceptualize resilience as individuals' facing adversity with optimism and positiveness. Building on previous definitions and taking these differences into account we take a middle ground approach and define 'entrepreneur resilience' as *the capacity of the entrepreneur to bounce back from adversities by creating new opportunities*.

There is strong empirical support for entrepreneur resilience to have effect on firm performance and firm dynamism (Hayes, 2016). According to Ayala and Manzano (2014), "successful entrepreneurs establish their business goals and take timely decisions to achieve those goals in increasingly competitive and uncertain environments". According to London (1993), resilient entrepreneurs are willing to work hard to achieve their goals, to adapt to changes in order to take advantage of the new situation and are able to learn from their mistakes. Looking further into the resilience of the entrepreneur, this definition can be split into two components, where the first is the capacity to absorb strain, and the second is the capacity to recover from difficulties and adjust positively (Carmeli, Friedman, & Tishler, 2013).

Entrepreneur resilience does also have an impact on firm performance in dealing with adversities and facing crises according to existing literature (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017). A resilient entrepreneur is more prone to bounce back from adversities than others and is therefore more successful in guiding an organization through a crisis (Lioussis, Shochet, Millier, & Biggs, 2009; Moenkemeyer, Hoegl, & Weiss, 2012). Moreover, Linnenluecke (2017) claims that to successfully overcome adverse events as an entrepreneur,

resilience is necessary. According to Akgün and Keskin (2014), more resilience leads to better use of innovation which increases firm performance and is therefore crucial in coping with environmental turbulence and adversities.

To overcome adversities, entrepreneur resilience and firm performance are really important in becoming successful and surviving the crisis. The entrepreneurial mindset of the business owner is a strength, which makes an organization more flexible, adaptive, and innovative, especially in SMEs. (Branicki, Sullivan-Taylor, & Livschitz, 2018; Vossen, 1998). According to Brück, Llussá, and Tavares (2011), the resilience of the entrepreneur is an underlying that "extreme events can encourage new business", since habits are disrupted and traditional institutions are weakened, which may lead to a "change in the balance of power in favor of smaller, more flexible organizations". When facing adversities, resilient entrepreneurs have to deal with the consequences and use their flexibility and innovation to turn inconveniences into opportunities by creating new ideas. Moreover, Cooper, Estes, and Allen (2004) state that resilient entrepreneurs, who adapt quickly to change, are better in succeeding.

According to DiMaggio (1988) and Kalantaridis and Fletcher (2012), those who preferred the old status quo can feel threatened by, and fearful of change, since adversities appear to speed up the process of potential change that is unsettling under normal business conditions. When facing adversities, entrepreneur resilience is about 'bouncing back', but there is a difference between adapting to the new situation and being creative (Cameron et al., 2018). Entrepreneur resilience is about becoming creative and use the adversity to create new solutions, not just manage to survive but grow from the experience. A resilient entrepreneur will perform better with his / her firm in coping with the adversity.

The proposition that is conceptualized from this literature is:

P1: *'Entrepreneurs that are more resilient are more successful in coping with adversities like the COVID-19 pandemic'*.

Successful in coping with adversities like COVID-19 means that the entrepreneurs take actions to survive the crisis, with the lowest damage possible.

## 2.3 Innovation and adversity

Previous studies show that resilience is positively correlated with innovative behaviour (Avey, Avolio, & Luthans, 2011; Fandiño, Formiga, & de Menezes, 2019; Sweetman, Luthans, Avey, & Luthans, 2011). An innovation is a new idea, practice or object that offers a relative advantage to the adopter (Inwood, Sharp, Moore, & Stinner, 2009; Rogers, 2010). According to Hamel and Valikangas (2003), innovation is an opportunity of resilience, since it allows organization to continuously anticipate and adjust to a broad range of environmental turbulence. Innovation in organizations is beneficial for improving the performance of organizations, including financial success, profitability and achieving competitive advantage in a dynamic environment (Phan, 2019).

Adversities force organizations to become innovative and think about new possibilities and opportunities. High endurance to uncertainty and a large amount of risk-taking are required in being innovative. Therefore, resilience is significant, since it gives energy to survive in the case of adversities and to come up with new creative ways of doing business in the new environment (Mishra, Bhatnagar, & Gupta, 2013; Phan, 2019; Sweetman et al., 2011). Strategic management and innovation

after a disaster is necessary to create a new culture and perception in dealing with this crisis (Bourletidis & Triantafyllopoulos, 2014). So when facing this extreme adversity, entrepreneurs have to break out of established patterns of thinking, in order to come up with innovative solutions (Cankurtaran & Beverland, 2020).

In the case of the COVID-19 pandemic, organizations are forced to think beyond usual ways of thinking and doing, due to the novelty, complexity and magnitude of the crisis (Cankurtaran & Beverland, 2020). Innovation is necessary for entrepreneurs to continue their operations when all normal operations are not possible anymore due to the measures imposed by the government that caused the restaurants to close. The traditional modes of reasoning that rely on facts and structured experience fall short of addressing the indeterminacy of this crisis (Kolko, 2010). Therefore the creation of new knowledge and insights that can be implemented into new creative and innovative solutions is required. In order to do this successfully, entrepreneurs need to move beyond accepting the old status quo, and “actively look for new points, challenge accepted explanations and infer possible new worlds (Martin & Martin, 2009).

The need for quickly adapting to the ‘new normal’ is high in the case of a pandemic crisis like COVID-19 (Cankurtaran & Beverland, 2020). This ‘new normal’ will require more attention to risk management and scenario planning, involving the development of rapid responses to emergent and fluid challenges. Resilient entrepreneurs that will rise to innovative solutions for their organizations quickly, will eventually be more successful in the future.

The second proposition of this research is:

P2: *‘The more innovative an entrepreneur has become as a consequence of his / her resilience, the better the entrepreneur is in dealing with the consequences of the COVID-19 pandemic’.*

The third and final proposition of this research is the following:

P3: *‘Entrepreneurs that are more resilient, are utilizing innovation more in dealing with the COVID-19 pandemic crisis’.*

### **3. METHODOLOGY**

#### **3.1 Data collection**

Data in this study was collected by (online) semi-structured interviews. The collection was done with ten business owners in the restaurant industry in the Netherlands. The respondents were approached through my personal network and via LinkedIn and Facebook. Due to the limited previous studies into this research topic and the new situation of the COVID-19 pandemic, a qualitative method is chosen over a quantitative method to .

Firstly, all respondents scored themselves on resilience. This was done so that after the interview, the impact of resilience of the interviewees could be compared according to their scores and actions in dealing with the consequences of the COVID-19 pandemic. To answer all the propositions, the resilience of each entrepreneur had to be assessed. For establishing how resilient the respondents were, each respondent started the interview with filling in the official Dutch translation of the type 10 Connor Davidson Resilience Scale (CD-Risc), which can be found in Appendix A (Connor & Davidson, 2003). This CD-Risc 10-scale was used because it is a quick, easy to understand scale that is validated in numerous studies (Burns & Anstey, 2010; Kararmak, 2010; Lamond et al., 2008) and simply scores resilience by adding up the total amount of points of the answers for each question. The official Dutch translation of the CD-Risc type 10-scale was already existing, and approval for the use of this scale was granted. In this scale, resilience is operationalized as the ‘ability to thrive in the face of adversity’ (Campbell-Sills

& Stein, 2007; Connor & Davidson, 2003). Every respondent filled in the CD-Risc type 10-scale, by scoring each of the ten questions from 0 (absolutely not true) to 4 (almost always true). The total resilience of the respondent was then the sum of these answers.

After the respondents filled in this scale, the actual interview was done. To receive as much information as possible from the entrepreneurs, many open questions were used, leaving room for explanation. Questions asked in this interview were about the differences in the companies’ situation prior and during the pandemic COVID-19, and what was done in this situation and why. Moreover, there were questions asked about new ideas, the timing of these ideas and also about permanent changes in the organizations for the future. The complete list of interview questions can be found in Appendix B.

All ten interviews took place in May 2019, in the ‘contain’ phase of the COVID-19 pandemic. The interviews were conducted in a meeting that was either online or physically (with the social distance), dependent on the preference of the respondent. All interviews were conducted in Dutch and were scheduled to last a maximum of one hour, because according to Newcomer, Hatry, and Wholey (2015) this is the upper limit of the optimal interview length for semi-structured interviews. While the literature does not give a consistent answer as to how many interviews are sufficient for qualitative research (Bonde, 2013), we found that there are studies (Baker & Edwards, 2012; Yazan, 2015) that argue that six interviews are the minimum amount acquired for qualitative research. The ten interviews of this research exceeded this amount and gave even more data input.

#### **3.2 Scope**

The scope of this research is limited to restaurant owners in the Netherlands, more specifically in the region of Twente. As mentioned before, the owners of these restaurants have an active role in managing this SMEs, and are therefore considered entrepreneurs in this research. All the respondents are currently facing major changes in their daily operations due to the COVID-19 pandemic and the measures imposed by the government.

The companies’ situations after the COVID-19 pandemic will not be in the scope of this research, due to a limit in time and uncertainty of the continuation of the COVID-19 consequences. The research will regard additional measures taken by the companies in order to cover potential loss in sales of the organizations in the short future, but it does not consider the economic consequences in the long term. All the interviews are conducted prior to the opening of the restaurants, so before the easing of the rules. At the time of the interview, the business owners were looking forward to the point that the restaurants where allowed to be opened again soon.

### **4. FINDINGS**

#### **4.1 Interview findings**

When looking at the consequences of COVID-19 pandemic for the entrepreneurs, we see the major impact it has for their organizations. The restaurant industry was hit heavily by the measures imposed by the government, since these organizations had to close for an unknown period of time. This period eventually turned out to be 2,5 months, while the initial rumors were 3 weeks. The need for resilience and innovation in these organizations was high, since all normal operations were not allowed to continue due to the measures imposed by the government.

To deal with the measures imposed by the government, and still create revenue, the entrepreneurs have to think about new, creative ways of doing business. However, whilst at this moment the restaurants are allowed to be open again, there is still the risk of the pandemic spreading again, which can lead to new measures such as again closing of restaurants. So there is not only a need for being creative, but also for being resilient and flexible. Additionally, the whole COVID-19 situation causes some entrepreneurs to feel insecure and thinking about what ifs, since they have to continue with all these uncertainties (Respondent 3 and 5, 2020). Respondent 2 (2020) stated that at this stage, “it is about working as hard as you can on an organization that you build up in the last ten years, and then to get completely destroyed in a matter of weeks, so you just try to do everything you can”.

Several respondents mention that the “transition into a new way of doing business, that is not about hospitality anymore”, is the hardest change (Respondents 2, 3, 8 and 10, 2020). The entrepreneurs have to be resilient and thus they have to let go of the old status quo. The fact that in this case the business owners are so dependent on the measures imposed by the government, creates struggles for the organizations, since they are not able to blame it on something they created themselves and then continue by figuring a simple way out. The uncertainty about the continuation of the COVID-19 pandemic, causes the business owners to be extra careful, which can be negative in order for them to take risks and become innovative.

## 4.2 Entrepreneur’s resilience and adversity

The first proposition P1, was that *‘Entrepreneurs that are more resilient are more successful in coping with adversities like the COVID-19 pandemic’*. In this subchapter we look into this proposition and find that there is not enough proof to support this proposition.

The responses of the entrepreneurs in dealing with the pandemic crisis are very different. Whilst some entrepreneurs are really resilient and do not come up with any innovations, others score a bit lower on resilience but have expanded their organization quickly with a lot of innovations. These results are shown in Table 1. When looking more precise into the resilience levels of the entrepreneurs, all of them are quite resilient, since they score at least 25 out of 40 on the CD-Risc scale (the higher the total score, the more resilient). However, the actions the entrepreneurs took for coping with the adversity, are very different and cannot be assigned to entrepreneur resilience with the data collected in this research.

In order to be resilient, you have to be able to ‘bounce back’ from adversities, which means you have to let go of the old status quo and create new opportunities. Though the respondents want to deal with the adversity, they mention that moving away from the old status quo is hard (Respondent 8 and 10, 2020). When the government imposed the measures that caused the restaurants to close, the complete purpose of the entrepreneurs’ organizations was not possible anymore. These organizations completely lost their core business and all operations. Normally, their operations are all about hospitality, serving good food and give their customers a nice time. Due to the COVID-19 pandemic, innovations have to create a new stream of revenue in order for these organizations to survive, but “this is a shift to a complete new kind of business, with no prior experience in this sport” (Respondent 7, 2020).

**Table 1: CD-Risc score and innovations for each respondent**

	<b>CD-Risc Score</b>	<b>Innovative behaviour (amount of innovations)</b>	<b>Example</b>
<b>Respondent 1</b>	34	Yes (1)	1,5 meter tables
<b>Respondent 2</b>	28	Yes (10)	Rally tour
<b>Respondent 3</b>	30	Yes (7)	Bike tour with mealbox
<b>Respondent 4</b>	25	Yes (2)	Take-out via a new platform
<b>Respondent 5</b>	33	Yes (2)	Mother’s Day mealbox
<b>Respondent 6</b>	30	Yes (3)	Barbecueplatter
<b>Respondent 7</b>	29	Yes (7)	Foodtruck
<b>Respondent 8</b>	30	Yes (8)	Cocktailservice
<b>Respondent 9</b>	36	No (0)	Not applicable
<b>Respondent 10</b>	33	Yes (3)	Webshop for online orders

Looking at the entrepreneurs’ scores on the CD-Risc scale in Table 1, there cannot be found a clear correlation between the entrepreneur’s resilience level and innovative behaviour. Whilst one business owner, who scores herself the highest of all respondents, 36 out of 40 on resilience, did nothing and closed her business during the measures of the government, other business owners score themselves lower (28 and 30 out of 40), but became way more innovative and created new opportunities. Moreover, the respondent that scored the highest (Respondent 9, 2020 ) stated the following: “If people have to stay at home, and I will order my employees to go to work with public transport, to make three dishes that are not sufficient in quality for take-out and that will not pay the bills, that makes no sense for me to open my business then”. So in the case of this pandemic, a high level of resilience does not necessarily mean you are more successful in dealing with the situation. It might be that in this case of the COVID-19 pandemic, entrepreneur resilience as we know it is not sufficient.

The mindset of business owners in dealing with the adversity is different and can explain the differences in the level of individual resilience as well. Whilst Respondents 1 and 4 (2020) only did one innovation to secure a certain amount of revenue, other respondents tried to be as creative as possible and maximize all opportunities of making money (Respondent 2, 3 and 8, 2020). So the mindset of the entrepreneur and how entrepreneurial they are, is in the beginning of the pandemic more important than the resilience level. Also whether the new ideas fit with the original strategy and vision of the organization matters. Respondents 2 and 3 (2020) state that doing as much as you can, getting creative in order to come up with solutions, is most important. However, while Respondent 3 (2020) says that “being open for the community is more important than just the peaking opening hours”. Respondent 2 (2020) mentions that “having a nice relaxed evening with quality food and drinks is important for our organization, and people know that is our standard”. So these

entrepreneurs are not letting go of their organization's values. Another respondent stated that: "I do not feel like doing all these new things and promotions, because it does not matter if your priority is delivering high quality food" (Respondent 6, 2020). Part of resilience is also wanting to change, and letting go of the old status quo, but this should not be at the expense of the organization's identity.

The expectation was that individuals that score equally on resilience, were more successful in handling the COVID-19 consequences. However, this is not the case when we look at the findings of this research.. Since the disturbance of the pandemic was so extreme, the entrepreneurs took different measures towards their organization's operations. Reasons for this can be the financial consequences and the need of earning money (Respondent 8 and 9, 2020), but also the mindset and experiences of the entrepreneur (Respondent 2 and 5, 2020). We elaborate further on possible motives for these differences in the chapter Discussion.

Considering these results, the proposition P1 that resilient entrepreneurs are more successful in dealing with the pandemic is rejected. The current data does not support this proposition at this phase of dealing with the COVID-19 pandemic.

### 4.3 Innovation and adversity

As stated before, there is a lot of difference between the entrepreneurs and their utilization of innovation (see Table 1). The relationship between becoming more innovative, and being better in dealing with the adversity is positive. The more innovative the entrepreneurs became, the more revenue was created and the better the organizations were operating despite the adversity. The innovations can go from small changes of the old status quo (incremental changes) to completely new ideas (radical changes). A few respondents did not utilize innovation at all or very little, whilst scoring high on the CD-Risc scale (Respondent 1, 5, and 9, 2020). Other respondents utilized innovation a lot in dealing with the consequences of the COVID-19 pandemic (Respondent 2, 3, 7, 8 and 10, 2020).

In the case of an extreme adversity like the COVID-19 pandemic, the need for innovation is high, because all normal operations are shut down by the measures imposed by the government. The interviewees acknowledge this urgency, and mentioned it was either doing new things, or doing nothing with the risk of not surviving this crisis (Respondents 2, 3, 4, 5, 7, 8 and 10, 2020). If the entrepreneurs did not come up with new innovations or solutions to continue their operations, their revenue loss was 100%. With the implementation of new innovations, the average loss of revenue still was around 60-80%, but this was better than earning nothing at all. The fulltime employees still had to be paid, so they can also work on the new innovations, respondents mentioned (Respondent 2, 3, 7, 8 and 10, 2020).

The utilization of innovation is really important in dealing with the adversity, because according to one entrepreneur: "Thinking of new ideas to make money is necessary to pay the bills, so we think about what we are good at and use these qualities in coming up with new creative solutions" (Respondent 8, 2020). Another entrepreneur stated that: "In the beginning when the pandemic happened, we did not know what to expect. Eventually it took so long, that we had to become innovative in order to survive this crisis. This is when we started brainstorming and came up with a lot of new, exciting ideas in order to make money" (Respondent 7, 2020). Respondent 2 (2020) said that "At this moment, we do as much as possible. We have around 80-85% less revenue, so we are working every day to stay creative and organize new things, to make it possible to earn that extra money. It was really

busy in the beginning, but it is also important to keep adjusting. If we would not have done new things every time, we would not have been here anymore". This shows that the utilization of innovation is not only about how many new innovations, but also about when they are introduced.

The reason for not utilizing innovation directly after the measures by the government were imposed is that some entrepreneurs initially thought they did not need to, because the measures were for a short while. A distinction can therefore be made between the entrepreneurs that were prepared and anticipated the situation correctly and the entrepreneurs that underestimated the COVID-19 pandemic as an adversity. Respondent 4 (2020) stated the following: "We noticed that reservations went down in the last weeks that we were open, because our customers were to afraid. This is when we realized we had to start thinking about alternatives. When we had to close due to the measures of the government, we were able to start with the innovation directly". Also respondent 2 and 8 (2020) stated that their innovations were announced before they had to close their business, so they had some steps ahead of the other entrepreneurs. However, some respondents were surprised that they had to close their business, and neglected the urgency of innovation at first, until the need for earning money became too high (Respondent 1 and 7, 2020).

Lee, Hallak, and Sardeshmukh (2016) operationalize innovation in restaurants in five different implementation areas, which are product, service, process, management, and marketing innovation. When facing adversities, the need for innovations can be high in all of these areas. The main innovation types that are utilized by the entrepreneurs in coping with the COVID-19 pandemic are product innovation, process innovation and service innovation. Due to the pandemic and the consequences of the measures imposed by the government, these innovations are necessary in order to continue the organization's operations. The use of marketing innovation is mainly for spreading the word about the other innovations. Respondents 3 and 8 (2020) used marketing innovation to increase the awareness in their region and get more customers by spreading out flyers. Respondents 2 and 7 (2020) used platforms like Facebook and Instagram more to promote their new creative ideas. Examples of the innovations that are utilized by the entrepreneurs are also shown in Table 1.

Looking at the second proposition, P2: *'The more innovative an entrepreneur has become as a consequence of his/her resilience, the better the entrepreneur is in dealing with the consequences of the COVID-19 pandemic'*, it is not sufficiently backed by the data in this research, and can therefore not be accepted. Partly this proposition is true, since the entrepreneurs that were more innovative were better in dealing with the consequences of the COVID-19 pandemic, but whether this is caused by the resilience level of the entrepreneur cannot be backed by the findings of this research.

The third and final proposition of this research, P3: *'Entrepreneurs that are more resilient, are utilizing innovation more in dealing with the COVID-19 pandemic crisis'*. In the case of this extreme adversity, entrepreneurs who are more resilient, are not utilizing innovation more in dealing with the consequences of the COVID-19 pandemic. Consequently, this proposition has to be rejected. There is more nuance to this relationship that can be explained by other factors that play a role in this pandemic, like urgency of creating revenue.

## 5. DISCUSSION

In this thesis, we answered the research question: *'How does entrepreneur resilience impact the utilization of innovation in dealing with adversities like the COVID-19 pandemic in the restaurant industry in the Netherlands?'*. Using the data collected in this research, we focused on the role of entrepreneur resilience and the utilization of innovation in dealing with extreme adversities. By analyzing the results, we gathered information about these topics.

We looked at the impact of entrepreneur resilience on the utilization of innovation, by measuring the resilience of each entrepreneur with the CD-Risc scale and assessing the utilization of innovation from data of the interviews. We found that the relationship between entrepreneur resilience and the utilization of innovation is more nuanced than expected. In the case of an extreme adversity, like the COVID-19 pandemic and its consequences that resulted in the closing of these restaurants, entrepreneur resilience does not take an active role in the first phase, but the urgency of creating revenue does. It is sufficed to say that the utilization of innovation is therefore incredibly important in dealing with the consequences of an extreme adversity like the COVID-19 pandemic.

In the beginning of the 'contain' phase of the pandemic adversity (Figure 1), when organizations are obligated to close due to measures imposed by the government, it does not matter how resilient the entrepreneurs are. At this stage, resilience is not part of the decisions made for the organizations, since the urgency for creating a new stream of revenue forces entrepreneurs to become creative and think of innovations. At this stage, there is no space for entrepreneur resilience to take a big role, since most important is to survive this crisis. In the case of these organizations, survival means creating as much revenue as possible to pay the bills, and if every normal operation is not possible, innovation is the only possibility. So entrepreneur resilience and innovation are important the continuation of the organization's operations, but this is depending on the phase of dealing with the pandemic. When the urgency decreases in the 'sustain' phase, we expect entrepreneur resilience to take on a more active role than in the 'contain' phase.

According to previous studies (Alvarez & Busenitz, 2001; Haefele, Hobson, & Storr, 2020; Holland & Shepherd, 2013), entrepreneurship is really important when facing extreme adversities. Resilience in the literature of entrepreneurship is largely presented as a personality trait (Hayward, Forster, Sarasvathy, & Fredrickson, 2010). However, looking at the results of this study, the entrepreneur resilience is not the most important step in dealing with an extreme adversity like the COVID-19 pandemic. This can be explained by the extremely important need for innovation, which is not a possibility for most entrepreneurs anymore, but a must in order to earn money. The entrepreneur's resilience becomes secondary to the urgency of new innovations to create revenue to continue the organization's operations in the long-term.

It can be expected that to recover from the adversity in the long term, so when the measures imposed by the government are eased and the organization's operations can return to normal in the 'sustain', 'control' and 'recover' phase of the pandemic (Figure 1), entrepreneur resilience becomes more important since the urgency for innovation has decreased then. Thus, the importance of entrepreneur resilience will increase when the necessity of just responding quickly to survive the crisis expires. This can already be the case in the next few months, but when their might be a change of a relapse which causes the government to impose new measures, this can change again. Extensive

research will be necessary to say more about the continuance of entrepreneur resilience in the next phases of this pandemic.

Another reason why it cannot be claimed that entrepreneur resilience does impact the utilization of innovation in the case of the COVID-19 pandemic, is that in the situation of a pandemic, other factors are playing a role too. For example the health considerations of the entrepreneurs and whether they are part of a risk group. Individuals that are part of a risk group have greater change of not surviving an infectious disease like COVID-19 (Covid & Team, 2020; Jordan, Adab, & Cheng, 2020). How resilient an entrepreneur is does not matter, if it can be dangerous for the individual to go outside and run a business. Also the fear of getting sick or infecting others can influence the decisions of the entrepreneur, just as the feeling of responsibility for their employees. Entrepreneur resilience is important, but the decisions made in dealing with this pandemic might be caused by the cautious and careful attitude towards the virus and a considerate outweighing of the possibilities. Medical considerations might outweigh the entrepreneur's resilience. Therefore, these factors should be taken into consideration in future research about this topic, to rule out other factors that might influence the impact of entrepreneur resilience on the utilization of innovation.

A different explanation can also be given on why entrepreneur resilience does not have to impact the utilization of innovation. All organizations are in different financial situations, and therefore every entrepreneur has their own reasons for dealing with the COVID-19 pandemic. Financially, it might not be attractive to come up with innovations, if the costs are outweighing the revenue. Some entrepreneurs started with the innovations without calculating if this would be financially responsible. Others decided that eventually the numbers would not add up, so innovation was not possible at this point.

What could be helpful in seeing how resilient the business owners are and how innovative, would be to do a second round of interviews, and evaluating how everything was developed in 6 months of after the pandemic. Then it would be visible if their innovations have worked, how they handled the situations and to see how companies got back to the old status quo or acquired a new status quo. Of course, this is insecure as well, since the situation in 6 months might still be dependent on the COVID-19 measures, if there is still no vaccine yet. Once the pandemic is over, the real impact on the organizations can be checked. Then it would be useful to check multiple resilient restaurant owners and see whether they did sufficiently cope with the COVID-19 pandemic and how they would do it in the future.

## 6. LIMITATIONS AND CONTRIBUTIONS

This research has several limitations. First, this study was performed with a small sample size of ten interviewees, which might only indicate a general tendency. Therefore, it is not possible to generalize the findings, as that would lead to biased conclusions. However, conducting a larger study to better prove the propositions' results was out of the scope and time for this thesis. Future research should involve larger sample sizes.

Besides this, not all interviews were conducted in the same way, since some were physical and some were online. This can be a potential limitation, because literature shows that people can give different answers in these situations (Janghorban, Roudsari, & Taghipour, 2014; Lo Iacono, Symonds, & Brown, 2016).

Looking at the specific sector and extreme complications for the restaurant business, this study's generalizability is also limited to entrepreneurs that are operating in similar organizations. This qualitative study was meant to study this specific issue in the restaurant sector, so generalizability was not an expected attribute (Leung, 2015). However, future research could test our propositions for entrepreneurs in other business sectors and countries to provide more generalizability for this topic, which might be valuable for future pandemics.

Another limitation of this research is the use of the CD-Risc 10-scale. Differences between the entrepreneurs' resilience level could be more easily recognized when using the CD-Risc 25-scale. For future research, the CD-Risc 25-scale could give more insights in specific aspects of the entrepreneur's resilience and can help in finding more specific relationships between entrepreneur resilience and the utilization of innovation.

Additionally, future should try to exclude as many other variables that may influence the relationship between entrepreneur resilience and utilization of innovation. This means for instance that financial aspects and behind motives should be similar for the respondents. This way it can be ensured that the impact observed, can be appointed to the adversity and resilience level of the entrepreneur.

As stated before, for future research the longitudinal effect of the COVID-19 pandemic and the entrepreneur resilience could be investigated as well. In this thesis, only the 'contain' face was taken into account, because of the limited time available. However, it might be really interesting for future pandemics to look at the longitudinal effect of COVID-19.

This research provides a foundation for more research into the effects of entrepreneur resilience on the utilization of innovation in dealing with adversities like the COVID-19 pandemic. Since pandemics and their consequences are so rare, it is important to think and evaluate unusual ways of doing business and consider the implications for the future. This thesis presents more insights into the actions of entrepreneurs in dealing with adversities like the COVID-19 pandemic as well, which can be helpful for future pandemic crises.

Another contribution of this thesis is the importance of the utilization of innovation in coping with extreme adversities like pandemics. Our findings show that in order for the organization's operations to continue in the long-term, the utilization of innovation in the beginning is crucial to create a new stream of revenue that supports the organization in surviving the crisis.

## 7. CONCLUSION

In this thesis qualitative data has been collected by a literature review and interviews with ten entrepreneurs that are business owners of SMEs in the restaurant industry in the Netherlands. The aim was to identify how entrepreneur resilience impacts the utilization of innovation in dealing with adversities like the COVID-19 pandemic.

Considering the findings of this research, no clear answer can be given to the research question. In this research, there is no evidence that shows that there is a direct impact of entrepreneur resilience on the utilization of innovation in dealing with adversities like the COVID-19 pandemic. The motive for this is that the utilization of innovation was necessary for organizations to survive, and the utilization of innovation can therefore not be assigned to the resilience of the entrepreneur managing the organization in this phase of dealing with the pandemic.

However, this thesis shows the importance for the utilization of innovation in the first phase of dealing with the COVID-19 pandemic. Because of this extreme adversity, normal operations of the organizations are shut down, thus becoming creative and innovative is urgent to create revenue and survive this crisis.

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## 10. APPENDIX

### 10.1 Appendix A: CD-Risc Scale

#### Connor-Davidson Resilience Scale 10<sup>DUTCH</sup> (CD-RISC-10<sup>DUTCH</sup>) ©

Zet bij elke vraag een kruisje in het vakje dat het beste aangeeft in hoeverre u eens bent met de stelling  
– het gaat om de afgelopen **maand**.

Als een bepaalde situatie zich niet recent heeft voorgedaan, geef dan antwoord hoe u denkt dat u zich gevoeld zou hebben.

	Helemaal niet waar (0)	Zelden waar (1)	Soms waar (2)	Vaak waar (3)	Bijna altijd waar (4)
1. Ik ben in staat om me aan te passen als er veranderingen optreden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Ik kan goed omgaan met alles wat op mijn pad komt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Ik probeer de humoristische kant te zien als ik met problemen word geconfronteerd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Het hoofd bieden aan stressvolle situaties kan me sterker maken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Ik heb de neiging om weer op te veren na ziekte, blessures of andere moeilijke situaties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Ik geloof dat ik mijn doelen kan bereiken, zelfs als er obstakels zijn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Als ik onder druk sta, blijf ik mijn doel voor ogen houden en helder nadenken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Ik laat me niet snel uit het veld slaan bij tegenslagen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Ik zie mezelf al seen sterke person bij het omgaan met de uitdagingen en moeilijkheden in het leven.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Ik kan omgaan met onplezierige gevoelens als verdriet, angst en boosheid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Connor and Davidson (2003).

### 10.2 Appendix B: Interview questions

1. Wanneer bent u gesloten? → When did you close your restaurant?
2. Wat is de grootste verandering sinds het coronavirus? → What is the biggest change since the coronavirus happened?
3. Hoe erg is uw omzet veranderd? → How much has your turnover changed?
4. Wat doet u anders dan normaal? → What are you doing differently than normal?
5. Wat is nieuw? Innovaties? → What is new? Innovations?
6. Hoe bent u op dit idee gekomen? → How did you come up with this idea?
7. (Waarom heeft u eerst niet bezorgd en later wel?) → (Why did you not deliver at home at first and later you did?)
8. Wilt u nog meer nieuwe dingen doen? → Are you planning on doing more new things?
9. Hoe bent u omgegaan met uw personeel, zowel vaste als oproepkrachten? → What did you do with your staff, both the regular employees and the on-call workers?
10. Als u straks weer open mag, wat blijft er dan permanent anders? → When you are allowed to open the restaurant again, what will stay different permanently?
11. Hoe gaat u om met de nieuwe maatregelen straks als u weer open mag 1 juni? → How are you handling the new measures if you are allowed to open the restaurant again on the 1<sup>st</sup> of June?