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ENTREPRENEURIAL RISK AND RESILIENCE

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<p>Abstract</p> <p>Entrepreneurship is popular despite its great risks. The tremendous number of entrepreneurs makes it important for multiple reasons, for example, the employment effect. For these reasons, the study of entrepreneurship is also important and popular. This thesis studies the risks of entrepreneurship and the resilience of entrepreneurs. Because the risks cannot be avoided in entrepreneurship, it is important to study the risk attitudes of entrepreneurs and the effect risk attitudes have on their success. Risks also make resilience important as it is vital for the entrepreneur to be able to recover quickly from any adverse situations and setbacks that the risks might result.</p> <p>This thesis studies whether entrepreneurs truly are risk seeking as it is often stated and presumed because of the riskiness and low probabilities of success. Because risk attitude measurement is extremely difficult and there is no proper measurement tool, it cannot be concluded that all entrepreneurs are risk seeking or that all risk averse individuals are employed. The thesis suggests that neutral risk attitude is most beneficial for an entrepreneur because it allows the entrepreneur to focus on the things that are worthwhile.</p> <p>This thesis also examines the true resilience of entrepreneurs and the importance of resilience for the success of an entrepreneur. Entrepreneurs are often considered resilient because the nature of entrepreneurship requires ability to survive challenging circumstances and learn from them to be better prepared in the future. Based on the results, it can be concluded that there is no evidence of all entrepreneurs being highly resilient. Resilience is difficult to measure which makes the comparison difficult. Also, resilience does not guarantee success. It increases the probability of becoming an entrepreneur and assists in survival during difficult times.</p> <p>The empirical section of this thesis includes an interview. The results of the interview not only largely support the findings of earlier studies but also presents important findings for the general study of entrepreneurship. Together the literature review and the empirical section suggest that because risk attitudes and resilience are extremely difficult to measure, the future research should not be focused solely on the measurement but rather on how to support and improve entrepreneurs' risk management and resilience.</p>			
Keywords Risk, resilience, entrepreneurship, risk attitude, entrepreneurial decision			
Additional information			

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1 INTRODUCTION

The liberty to make your own choices, pursuing dreams and raising the level of income are some of the multiple reasons people choose to become entrepreneurs. As always, with great power comes great responsibility. Entrepreneurs are inevitably facing a lot of risk, challenges, setbacks and uncertainty while trying to lead the business to success. These factors make entrepreneurship difficult and even scary. Because of the challenging circumstances of entrepreneurship, not everyone has what it takes to write a success story.

Despite the difficult nature of entrepreneurship, it remains an attractive career option for many individuals which makes it an interesting topic to study. Van Praag & Cramer (2001) explain that it's the individual characteristics that determine the entrepreneurs and employees from a population. Entrepreneurs are considered, for example, highly optimistic (Hmieleski & Baron, 2009), less risk averse than others (Cramer, Hartog, Jonker and Van Praag, 2002), growth-oriented and innovative (Vesala, Peura and McElwee, 2007). In addition, entrepreneurs are generally seen as resilient individuals (Ayala & Manzano, 2014; Shadbolt & Olubode-Awosola, 2016) which means they overcome challenges and adapt to situations with ease simply because they must do so to succeed. The research on entrepreneurs' behaviour and attitudes in real life is, however, insufficient for the time being.

The lacking research on entrepreneurs' resilience, risk attitudes and their effects make this study important. Sánchez (2011) concluded the reasons to study entrepreneurship into three points of view: economic, social and academic. Because entrepreneurs are of great significance to the economy not only due to their large quantity but also their financial, development and employment impact, it is important to acquire more knowledge about the reasons people become entrepreneurs, how they are disposed towards the risks and setbacks they constantly face, and ultimately, how they succeed. This knowledge helps in supporting the entrepreneurs who are the individuals that maintain the progress for a better future. The topic is also very timely now because the recent historic events such as COVID-19 pandemic and the war in Ukraine have and still are constantly requiring resilience and adaptation from many of the entrepreneurs.

The main research questions of this thesis are as follows:

How to define and assess risk and resilience?

How are entrepreneurs disposed towards risks and how it affects their success?

Are entrepreneurs truly resilient and what is the role of resilience in entrepreneurship?

This thesis aims to answer these questions with an extensive review of the previous literature and an empirical section which includes a semi-structured interview (see appendix 1.). The interview is conducted for an entrepreneur with the intention to study his approach to risks, situations requiring resilience and the overall role resilience plays in the entrepreneur's career. The target is to clarify the entrepreneur's vision of his capability to survive adverse situations and the disposition towards risks. The answers of the interviewee are compared to the findings from the existing literature of entrepreneurs' resilience and risk attitudes aiming to form better overview of the issues and study whether the literature holds true in real life.

This thesis consists of five main chapters. The sections continue as follows. Chapter 2 defines the most important concepts of this thesis: risk, resilience and entrepreneurship and how to measure resilience and risk. Chapter 3 covers the earlier literature and prior research on entrepreneurs' resilience and risk attitudes as well as their roles in entrepreneurial decision and determining the success of an entrepreneur. Chapter 4 aims to compare the theory to the reality. It presents empirical research in the form of an interview and comparative discussion of the results. Chapter 5 concludes and provides suggestions for future research. In the end, references and appendices are listed.

2 DEFINITIONS AND MEASUREMENTS OF THE MAIN CONCEPTS

2.1 Risk and risk attitude assessment

The definitions for risk have three things in common: 1. Risk affects choices as it is a characteristic of the choice options 2. Risk can be used to order options 3. Risk is related to the variance of the outcomes. This refers to the linear combination of mean and variance of a particular choice which formulates its risk. (Pollatsek & Tversky, 1970). Risk has a central role in the study of behaviour and choices because of these qualities.

The concept of risk is fundamentally based on the theory of choice under uncertainty and expected utility theorem. In the theory of choice under uncertainty, individuals select among actions that have certain consequences depending on the state of the world. Because of uncertainty, not the state of the world nor the consequences of the actions in that specific state are known. Expected utility refers to the allocation of certain utility values to the outcomes, i.e., consequences, to indicate the preferences of the individual. The utilities of different outcomes may be summed to form a utility function. (Arrow, 1965, p. 12-19.)

Similarly, according to Kahneman & Tversky (1979, p. 263) “decision making under risk can be viewed as a choice between prospects or gambles”. However, they noted that people often violate the assumptions of expected utility theory by, for example, underweighting certain outcomes or discarding facts that all the choice options share. Therefore, expected utility theory is not applicable to model decision making under risk. That is why they present an alternative theory of decision making under risk: prospect theory. It is focused on the idea that the change from the reference point plays a more important role than the outcome. In prospect theory, the value function for losses is steeper than that of gains because people experience a greater grief for losses than the pleasure of gaining the exact same amount. (Kahneman & Tversky, 1979.)

Risk preference or risk propensity describes the individual’s willingness or tendency to either take risks or to avoid them (Barbosa, Gerhardt & Kickul, 2007). Usually there are three distinct groups of risk attitudes: risk-averse or risk avoiding, risk-neutral and

risk-loving or risk-seeking (Harris & Wu, 2014). A person who is risk averse prefers a certain outcome over all risky choices with the same expected value (Kahneman & Tversky, 1979). In other words, for a person who is assumed to be risk averse, a riskier lottery is not as preferred as a less risky alternative (Jia, Dyer and Butler, 1999).

Risk aversiveness can be characterized with a situation, where a person is offered a chance to either win or lose an amount h with equal 0.5 probabilities. The individual, being risk-averse, will not take the gamble since the expected utility of the gamble does not exceed the utility of the current wealth:

$$U(W) > 0.5 U(W - h) + 0.5 U(W + h), \quad (1)$$

where $U(W)$ is the total utility of wealth W . The formula can be rewritten to:

$$U(W) - U(W - h) > U(W + h) - U(W), \quad (2)$$

which demonstrates that with equal changes in wealth the loss in utility is greater than the increase in utility. In other words, the change in $U(W)$ is decreasing with wealth for risk averse individuals. (Arrow, 1965, p. 30-31.)

Concavity is representing risk aversiveness (Pratt, 1964). This is the reason why the shape of utility function for risk-averse individuals is concave as presented in figure 1 with blue colour. The shape of the utility function for risk-seeking individual is inverted, i.e., convex, as presented in red in figure 1. The same given increase in the amount of utility from $U(W)_1$ to $U(W)_2$ corresponds to a larger change in compensation W for risk-averse individual and a smaller compensation for risk-seeking individual. The required changes in compensation correspond to the length of the arrows in figure 1. In other words, for risk-seeking individual (red arrow), the required compensation for a given change in utility is much smaller than for a risk-averse individual (blue arrow). Risk neutral individuals are naturally in the middle of risk seeking and risk averse. As a conclusion, risks affect choices according to the shape of the person's utility function that is determined by their risk attitude. Risk

aversiveness and risk seeking thus only describe the shape, i.e., the curvature of the individual's utility function. (Weber, Blais and Betz, 2002.)

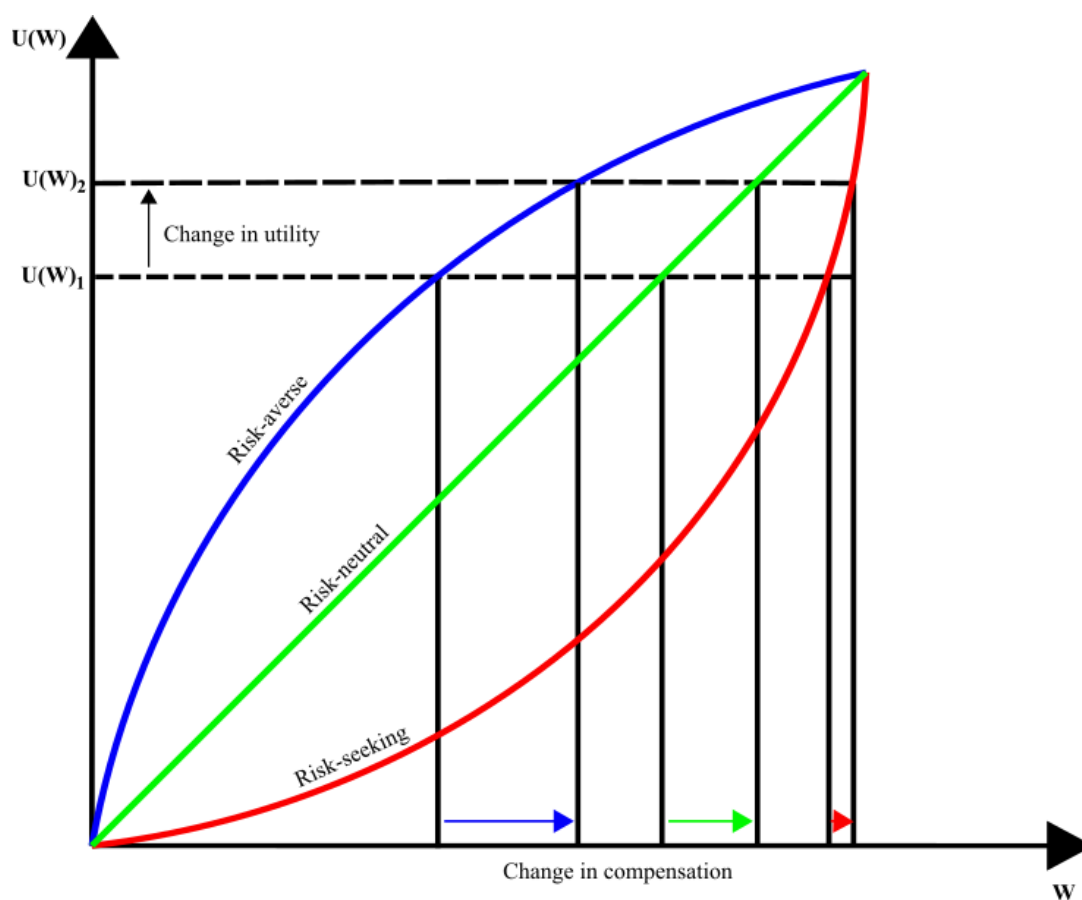


Figure 1. Shapes of utility functions (adapted from Harris & Wu, 2014).

Weber et al. (2002) present factors affecting the risk taking propensity by changing the individual's risk and reward perception. They present that risk taking is influenced by characteristics depending on both the situation, for example the willingness to give answers that are socially acceptable, and the decision maker, for example gender and the lacking tolerance of ambiguity. Masters & Meier (1988) present a stereotype that women are more risk averse. More about the gender differences in chapter 3.1.

A scale measuring the risk attitudes is much needed (Cramer et al., 2002; McCarthy, 2000; Weber et al., 2002). Risk attitudes have frequently been measured with survey questions including, for example, imaginary lotteries because performing experimental studies with real money is expensive and more difficult. A common risk aversion measure can be derived, for example, from a hypothetical lottery situation

where respondents are requested to measure the price they would be willing to pay for a lottery ticket if there are 10 tickets overall and only one prize of 1000 guilders. (Cramer et al., 2002). However, the reliability of these kinds of hypothetical surveys is questionable since those are not incentive compatible (Dohmen et al., 2011).

Pratt (1964) presents the traditional measure for risk aversion, which can be computed from the utility function for money $u(x)$:

$$r(x) = -u''(x)/u'(x) \quad (3)$$

where $r(x)$ = the risk attitude,
 $u(x)$ = the utility function for money and
 $u'(x)$ and $u''(x)$ = 1st and 2nd derivatives of the utility function for money.

Weber et al. (2002) state that this framework by Pratt (1964) for risk attitude conceptualization is questionable since different utility measurement methods seem to result different risk attitudes. They demonstrate the problem with the example of certainty-equivalent method that results in extreme risk attitudes, i.e., higher risk aversion in the case of gains and higher risk seeking in the case of losses. Also, the risk attitudes identified were not consistent in different domains. (Weber et al., 2002.)

Risk attitudes could also be studied with a risk-return framework. In this method, it is assumed that the trade-off between the expected benefit and the perceived risk of a choice option reflects the individual's preferences and therefore his/her risk attitude. The method's results depend on the perceived risks because individuals may either differ in risk attitude even though similarly perceived risks and returns or perceive risks and returns differently even though the risk attitude remains the same. (Weber et al., 2002.) Risk perception is also important as people might, for example, be defined as "being at risk" by someone even though they would not identify themselves with such description (Schoon, 2006, p. 11).

In the economic theory the traditional assumption is that people want to minimize risk (Pollatsek & Tversky, 1970), that is, are risk averse. However, it is acknowledged that the assumption does not always hold true because firstly, gambling is proof that risk aversion is not the only prevailing risk attitude (Arrow, 1965, p. 28) and secondly, the risk attitudes vary depending on the person, the conditions or the time of the situation. Individuals are not permanently, for example, risk averse in multiple domains even though the assessment method of risk attitude is kept the same (Weber et al., 2002). Åstebro, Herz, Nanda & Weber (2014) also explain that the risk preferences measured at a certain point might not be the same when measured again later. Therefore, risk is dependent on the situation, time and the individual.

These differences in risk attitudes in different situations could be explained with, for example, prospect theory's assumption that the preference order of choices is changed as the reference point changes. This is because prospect theory considers the changes rather than the outcome. (Kahneman & Tversky, 1979.) Another maybe even more probable explanation are the differences in risk perceptions in different domains by different individuals because risk attitudes are not stable (Weber et al., 2002).

Risk preferences correspond to the individual's risk attitude. Individual's situation specific risk attitude can therefore be estimated using the conditions of the situation. (Barbosa et al., 2007.) Similarly, according to Schoon (2006, p. 8) central to the notion of risk is that it is associated with the use of previous conditions to predict future possibilities. Therefore, understanding the individuals' attitudes towards risk is highly important as those could be used to understand and even predict individuals' economic behaviour (Dohmen et al., 2011) which in turn is necessary to answer the research questions presented earlier in chapter 1.

2.2 Resilience as a process, a personal feature and an outcome

The word resilience stems from the Latin word *resilire* which means jumping back (Van Der Vegt, Essens, Wahlström and George, 2015). Its academic research began approximately 60 years ago when it was studied why and how many children were able to grow up without suffering from mental illnesses even though they were raised by schizophrenic parents (Coutu, 2002.) The early studies included many kinds of risk

indicators and proved that there are differences between individuals' abilities to recover. Some children were successful in ameliorating their outcomes despite threats during their growth. (Masten et al., 1999.)

Resilience refers to a process of maintaining a positive adaptation regardless of significant adversity (Luthar, Cicchetti and Becker, 2000; Manzano-García & Calvo, 2013). Similarly, Van Der Vegt et al. (2015, p. 975) define resilience as “the ability of systems to absorb and recover from shocks”. Resilient individuals take advantage of positive feelings evoked by humour, comfortableness and optimism to be able to overcome and find a purpose in “stressful encounters” (Tugade & Fredrickson, 2004, p. 320). Coutu (2002) explains brutal experiences can cause an individual to, for example, suffer from depression, but at the same time resilience assists in surviving setbacks and tough times. Connor & Davidson (2003) conclude resilience as the personal qualities that can help survive adversity. Jacelon (1997) provides two alternative identifications for resilience: a variety of traits and a process of responding to changes in environment.

The criticism for resilience generally includes the vagueness of the definitions and terminology, for instance, whether it is a dynamic process or a personal feature (Luthar et al., 2000). Often, resilience is defined as a process or a trait, or it can also be seen as an outcome. Luthar et al. (2000) underline the importance of specifying whether a study is referring to a process or a personal trait because the latter may harmfully indicate that some people are not capable of overcoming adversity. Masten (1994, as cited in Luthar et al., 2000) recommends avoiding the term “resiliency” as it can be ambiguously seen as referring to a characteristic of an individual. There are, however, several definitions describing personal traits, as presented earlier. For example, Coutu (2002, p. 54) considers resilience as a skill, an ability, a reflex or “a way of facing and understanding the world”.

According to Shadbolt & Olubode-Awosola (2016) a resilient individual is flexible, motivated, determined, and optimistic. Truly resilient person accepts the reality, searches for a meaning, and improvises constantly. All these three qualities assist in survival when faced with challenging situations, but one must possess all three to be truly resilient. (Coutu, 2002.) For instance, perseverance, self-reliance, superior

cognitive skills (Jacelon, 1997), tolerance of negative affect, faith and patience (Manzano-García & Calvo, 2013) are also qualities of resilient individuals. Almost all the definitions point to an ongoing process of adapting and surviving in worsened circumstances. These mostly comply with Fergus & Zimmerman's (2005) wishes that resilience should be used to describe a trajectory of healthy development and not a person.

According to Coutu (2002) the qualities of truly resilient individuals apply for resilient organizations as well. Duchek (2020) sums up organizational resilience into three stages: anticipation, coping and adaptation. Resilient businesses can tolerate stress, innovate and alter processes according to changes (Duchek, 2020). The descriptions of resilient businesses and resilient individuals are therefore very similar. It is natural considering the statements of, for example, Shadbolt & Olubode-Awosola (2016) who present that a resilient farm is depending on the resilient qualities of the employees because the business and the individuals making up the business should not be separated but rather seen as a unity.

Rutter (1987) states it is preferable to use the terms "process" and "mechanism" over "variable" or "factor" when speaking of resilience because it should be noted that resilience is not stable and may change as the situations vary. Fergus & Zimmerman (2005) similarly conclude that resilience is not a permanent trait within an individual. Learning and experience affect an individual's resilience as successful overcoming of challenges promotes survival in future adversities. Resilience is also dependent of the type of risk, the individual and the time of exposure to the risk. (Fergus & Zimmerman, 2005.) Coutu (2002) similarly states that individuals can learn to be resilient.

Schoon (2006, p. 8) requires evidence that the adverse circumstances truly affect the individual's life to identify resilience and differ it from a random minor incident. Resilience therefore requires the presence of a true adversity and recovering from it despite all the associated risks (Schoon, 2006, p. 8). According to Fergus & Zimmerman (2005) resilience requires both risks and protective factors because resilience is centred around the thought that individuals have strengths which they utilise to make progress despite the risks. Protective factors can be divided to assets and resources that either remove or diminish the expected correlation between a risk

and the outcome it causes. They list positive factors such as competence and coping skills, and external factors, for example, parental support. (Fergus & Zimmerman, 2005.) Protective resources have been first considered as factors that differentiate individuals better adapting in the face of adversity from those who do not adapt as well. The attention has later shifted from factors to processes (Luthar et al., 2000). Fundamentally resilience is the relationship between protective resources and vulnerability, i.e., risks (Ahern, Kiehl, Sole & Byers, 2006).

Resilience refers to a process comprising of all the environmental influences of which some are risk factors, some are the outcomes of those risks, and some are protective factors. For example, Fergus & Zimmerman (2005) state an individual growing up in a poor environment is exposed to many kinds of risks causing bad outcomes such as poor educational accomplishments, but the individual may have protective factors, for example, very confident nature, which helps avoid getting into trouble. Another example they present is concerning an individual who has an addiction that causes them to be exposed to different risks that are, however, weaker because of education. (Fergus & Zimmerman, 2005.)

There is no widely accepted measure or scale for resilience. Usually, resilience is measured with different likert scale questionnaires. Ahern et al. (2006) traced and assessed instruments to measure resilience. Instruments declared as inappropriate for measuring adults' resilience lacked evidence of credibility to measure specifically adults either at all or at the time of the study. They conclude that only Resilience Scale (RS) is appropriate for measuring adults' resilience since it has been used successfully several times and there is evidence of its reliability and validity. Ahern et al. (2006) additionally conclude that the scale is proven as applicable to a variety of different samples by several studies.

Another promising instrument Ahern et al. (2006) assessed is the Connor-Davidson Resilience Scale (CD-RISC). CD-RISC can distinguish high and low resilience and therefore provides evidence of improving resilience with treatment (Connor & Davidson, 2003). The advantage of the CD-RISC is the fact that it is not designed for any specific population (Manzano-García & Calvo, 2013). It is not applicable to measure adults' resilience according to Ahern et al. (2006) because of its insufficient

usage measuring adults in literature at the time. However, Ayala & Manzano (2014) use CD-RISC to study adults (see chapter 3.2.). This suggests it is more acceptable in measuring adults as well today.

2.3 Entrepreneurship and entrepreneurial choice

The term entrepreneur is often associated with ‘small business owner’ and equivalently entrepreneurship with ‘business start-up’ (Galloway & Mochrie, 2006). The owner-manager of a business is a popular definition for entrepreneur (Brockhaus, 1980). Entrepreneurs are individuals who set up businesses and act as employers of those who are willing to work for them (Blanchflower & Oswald, 1990). In other words, entrepreneurs are initiators of change that are not afraid of risk (Shadbolt & Olubode-Awosola, 2016). Entrepreneurship can, more formally, be described as “the study of the processes of identifying, evaluating, developing and exploiting opportunities, as well as of the resources and conditioners that influence these processes” (Sánchez, 2011, p. 428).

Galloway & Mochrie (2006) divide entrepreneurs into three distinct groups based on whether the firm was founded, bought or inherited. They found that most people become entrepreneurs because of positive reasons such as the desire to work for oneself or willingness to do something one enjoys. The negative reasons for becoming an entrepreneur included, for example, the lack of prospects in previous employment or the simple fact that there were no other options of employment. The negative reasons were highest among the entrepreneurs that had founded a business. (Galloway & Mochrie, 2006.)

Lindquist, Sol & Van Praag (2015) find that a child who has entrepreneur parents or either of the parents is an entrepreneur, is significantly more likely to become an entrepreneur. They explain that entrepreneur parents are approximately 60% more likely to have entrepreneur children so the effect of parents is highly important. The effect applies for adopted children as well and it is even greater for them because the factors happening after the birth matter much more than the factors during the birth. (Lindquist et al., 2015.)

The theories of entrepreneurship often acknowledge three dimensions: risk-taking, growth orientation and innovativeness. It means entrepreneurs bear uncertainty and take calculated risks. They also try to expand the business to maximize profits and constantly search for better innovations. (Vesala et al., 2007.) The risk attitude influences the entrepreneurial intentions because of all the uncertainty associated with it which is why Barbosa et al. (2007) conclude that individuals willing to tolerate high risks are more likely to be interested in entrepreneurship. More about entrepreneurs' risk-taking propensity and growth orientation in chapter 3.1.

The entrepreneurial choice can be put into a mathematical form. According to the formula by Blanchflower & Oswald (1990), individuals choose to become entrepreneurs if the expected benefits of entrepreneurship are no less than the wage of being an employee. The formula includes not only pecuniary, such as income generated by the business, but also non-pecuniary factors such as the utility of being independent and the individual's entrepreneurial abilities. Blanchflower & Oswald (1990) present the following equation for the entrepreneurial choice, i.e., a person becomes an entrepreneur if:

$$i + \int y(w, k, \emptyset) g(\emptyset) d\emptyset \geq w, \quad (4)$$

where

- i = the utility of being independent,
- y = the received net income from self-employment,
- w = wage earned as a worker,
- k = capital,
- \emptyset = entrepreneurial ability and
- $g(\emptyset)$ = the distribution of entrepreneurial ability in the population.

The formula assumes that individuals value independence. It means that, in addition to the amount of wage, the way it is earned is also a determinant of the utility. The wage rate creates a market equilibrium because if it is high, the return from entrepreneurship is low and individuals are not willing to start businesses. This pushes the wages down increasing entrepreneur rewards which encourages people into entrepreneurship. The formula is designed for the choice of either being a worker or

an entrepreneur and it does not include other options such as staying out of the labour force. (Blanchflower & Oswald, 1990.)

Van Praag & Cramer (2001) rather similarly conclude that for the individual to choose entrepreneurship the expected rewards, i.e., associated utility which depend on the abilities of the individual and on risk attitude, must exceed the wage, which is the utility of being employed. The difference is that they require the utility to exceed the wage whereas the formula by Blanchflower & Oswald (1990) require the utility to only be at least as high as the wage. What the two formulas share, is that an individual does not necessarily have to earn more as an entrepreneur compared to the wage of employment because the return from entrepreneurship also includes the non-pecuniary factors, for example entrepreneurial skills.

3 EVIDENCE FROM PREVIOUS LITERATURE

3.1 Entrepreneurs' risk attitudes

Individuals become entrepreneurs primarily because they wish to own a significant share of the business that is based on developing their own idea. This goal will inevitably expose the entrepreneur to typical business risks. (Hall & Woodward, 2008.) As an example, the information entrepreneurs possess is usually unclear, insufficient or changing constantly (Ayala & Manzano, 2014) which complicates decision-making. Entrepreneurs also do not know the reactions of the market or how successful their product or service will be (Markman & Baron, 2003). Åstebro et al. (2014) argue that there is evidence many individuals enter in entrepreneurship persistently even though the expected returns are usually low on average and exhibit high variance caused by the fact that majority of new start-ups fail. Also, Cramer et al. (2002) acknowledge the fact that entrepreneurs' earnings are far more varying and not as certain as for employed individuals. On the other hand, entrepreneurship is also risky because the individuals are not aware of their own entrepreneurial abilities beforehand (Van Praag & Cramer, 2001).

Hall & Woodward (2008) calculate that for a person with standard risk aversion level, the utility from entrepreneurship is usually small or even negative. It can be concluded that because of the risks and low probability of success, the expected utility theory suggests that people should not become entrepreneurs (Åstebro et al., 2014). The risks of entrepreneurship are not diversified nor compensated by a corresponding premium (Vereshchagina & Hopenhayn, 2009). Because of the numerous risks associated with entrepreneurship, many individuals prefer being employed. Despite the risks and low probability of success, entrepreneurship still remains highly intriguing for many, and it is very popular. That is why entrepreneurship and reasons for it has drawn much interest in literature.

Vesala et al. (2007) acknowledge three popular dimensions in the economic theories of entrepreneurship with one of them being the risk-taking dimension. The dimension includes the fundamental assumption that entrepreneurs not only take risks but also maximize profit by bearing the risk of possible failure. Cramer et al. (2002) also

recognize the association of entrepreneurship with risk-taking. Many of the other definitions of entrepreneurship also include risk taking or risk bearing dimension, as presented by, for example, Brockhaus (1980). It has therefore been widely acknowledged that there are a variety of risks associated with entrepreneurship. The risks, however, depend on the skills of the entrepreneur (Macko & Tyszka, 2009). Similarly, Vereshchagina & Hopenhayn (2009) suggest that the success of a business depends on the entrepreneurial assets.

Entrepreneurial risk is divided into three dimensions by Brockhaus (1980, p. 513): “the general risk-taking propensity of a potential entrepreneur, the perceived probability of failure for a specific venture, and the perceived consequences of failure.” Liles (1981, as cited in McCarthy, 2000) presents four categories for the risks entrepreneurs are bearing: 1. Financial, 2. Career, 3. Family and Social and 4. Psychological. For example, entrepreneurs might ruin their future standard of living by making big losses and because they are very committed to their business, it might lead to emotional distress (Brockhaus, 1980) so the categories are affecting each other.

Brockhaus (1980) presents that generally it has been acknowledged that one of the most important factors differentiating the functions of entrepreneurs from those of managers is the risk bearing. This view is supported by Masters & Meier (1988). The degree of risk aversion is therefore generally seen as a determinant of entrepreneurship selection (Cramer et al, 2002; Kan & Tsai, 2006; Van Praag & Cramer, 2001) which is evident considering all the risks associated with entrepreneurship.

Even though the risk-bearing dimension of entrepreneurship is a popular view, there are some counter arguments. For example, Arrow (1965, p. 46) states that an entrepreneur does not have to have a desire or an ability to bear risks to be able to run a business well because there are institutions shifting risks such as insurance companies and the market for common stock. Hall & Woodward (2008, p. 2) state the use of insurance will “weaken the incentives for success”. Schumpeter (1911/1934, as cited in Van Praag & Cramer, 2001) also disagrees with the importance of risk attitude on entrepreneurial intentions and claims that entrepreneurs do not need to bear risk and thus risk attitude does not matter. This view is not supported by other authors, and it seems outdated.

In the earlier literature, such as Brockhaus (1980), it is concluded that risk taking propensity is similar for both entrepreneurs and other population. Also, Blanchflower & Oswald (1990) state that entrepreneurs are not any more likely to bet than other population, meaning entrepreneurs are not different from others in terms of taking risks. The later research disagrees stating that entrepreneurs are generally seen as risk takers (Macko & Tyszka, 2009) or preferring high risks (Barbosa et al., 2007) and similarly, risk aversiveness keeps individuals from entrepreneurship (Van Praag & Cramer, 2001). Therefore, risk averse individuals tend to choose being employed over entrepreneurship (Kan & Tsai, 2006). Cramer et al. (2002) data supports the negative effect of risk aversion on individuals' willingness to become entrepreneurs and suggests that employees are more risk averse than entrepreneurs.

There are also situations where the traditional assumptions do not hold true. The study by Kihlstrom & Laffont (1983) suggests that the generally presumed risk attitudes are reversed if the usage of both the spot labour market and forward labour market are possible. In their study, the forward market refers to a labour market where individuals choose to be workers receiving a wage that is decided in advance by a contract, meaning it is not changed even if the worker's productivity changes. Therefore, if both kinds of labour markets are used, the productivity risks are transferred from the employers, i.e., entrepreneurs to the employees because possible changes in productivity causes different wages. This results in risk averse entrepreneurs and risk neutral employees. (Kihlstrom & Laffont, 1983.)

Vereshchagina & Hopenhayn (2009) present explanations why entrepreneurs might make more risky choices. The reasons include overoptimism, the utility of being your own manager and being less risk averse than non-entrepreneurs. Arrow (1965, p. 29) defines a gambler as a person who trusts that to him or her, the odds are more favourable than they really are. Based on this, it could be concluded that entrepreneurs are gamblers. McCarthy (2000, p. 571) lists "social learning, organisational context and history" as factors affecting the risk-taking tendency. Barbosa et al. (2007) studied the effect of cognition on entrepreneurs' behaviour and conclude that cognitive heuristics and biases such as overconfidence or law of small numbers might be the explanation why entrepreneurs take risks because those make decision-making faster and reduce the perceived risks. They suggest that entrepreneurs are more intuitive than

other population. There is, however, no wide agreement on the matter that entrepreneurs are more prone to take risks than other population (Macko & Tyszka, 2009). This issue will be addressed in more detail later in this chapter.

The wealth of an individual has been acknowledged to affect the entrepreneurial choice. Kan & Tsai (2006) argue that while the individual's wealth is contributing to the choice of becoming entrepreneur, risk aversion is not correlated with wealth which indicates that absolute risk aversion decreases with wealth. This indicates that wealthier individuals are more likely to become entrepreneurs since their risk aversion is lower and the probability of entrepreneurship increases with wealth. Blanchflower & Oswald (1990) research also suggests individuals who have been given or inherit a certain sum of money are more likely to become self-employed. Vereshchagina & Hopenhayn (2009) also agree that wealthier individuals are more likely to become entrepreneurs because the amount of absolute risk is the same for all entrepreneurs, indicating that wealthier entrepreneurs do not need to risk as large fraction of their wealth. Also, wealthier individuals have more funding for investments. They also note that wealthier entrepreneurs are willing to take more risk if it is compensated by premium. Kihlstrom & Laffont (1979) state that initial wealth makes an individual more risk-bearing and therefore entrepreneurs are wealthy even before entrepreneurship.

There are some other factors too affecting the risk attitude of an individual and therefore the entrepreneurial decision. Masters & Meier (1988) state that before 1970s the common belief was that women are more risk averse than men even though in their study men and women scored similar risk-taking propensities. On the other hand, Dohmen et al. (2011) claim that females are less willing to take risks in every context. This view indicates that nowadays men seem more likely to become entrepreneurs because of less risk aversion but there is still some disagreement on the issue whether men and women differ in terms of risk attitudes. Young age is increasing the willingness to become self-employed because young individuals are less experienced and eager to try challenges with smaller probability of success (Miller, 1984). Blanchflower & Oswald (1990) also found some evidence that individuals coming from low unemployment areas are more likely to become entrepreneurs.

It seems that while the ability to bear high risks is encouraging people to become entrepreneurs, the neutral risk attitude increases the probability of success. The analysis by Shadbolt & Olubode-Awosola (2016) suggests that risk neutrality is a feature of the most successful entrepreneurs as those have strong skills and they focus on the business, manage high levels of debt well, i.e., risks, and are favourably disposed towards change. McCarthy (2000) study also suggests risk seeking is not necessarily beneficial for the entrepreneur. While it helps to develop the business, it might drive the entrepreneur to neglect important tasks such as financial planning in the pursuit of growth.

Kihlstrom & Laffont (1979) claim less risk averse individuals seem to run bigger businesses, i.e., utilise more labour. Vereshchagina & Hopenhayn (2009) study indicates that bigger businesses are more likely to succeed which is why growth orientation of entrepreneurs should be studied. This supports the hypothesis that high risk-taking or high risk-aversion might not be as beneficial, at least in terms of the company growth, as being more moderate risk taker.

Piispanen, Paloniemi & Simonen (2018) study suggests that growth orientation is strongly associated with business growth. They state growth orientated entrepreneurs are, no matter their gender, likely to be young, in their study under 40-year-old individuals. Galloway & Mochrie (2006) similarly found no differences in the growth ambitions between men and women but growth orientation was high among entrepreneurs who had owned a business for less than two years. They mention inheritors of businesses are the least and business purchasers are the most growth oriented. This supports the earlier stated finding that young entrepreneurs tend to be less risk-averse, and on the other hand, gender has no major effect on risk taking propensity. On the other hand, Ayala & Manzano (2014) study suggests that the subjective growth of the business is less if the business is run by a man compared to woman. Piispanen et al. (2018) also present that experience of being an entrepreneur-manager decreases growth orientation which they explain by decreasing optimism as experience increases. Other way to explain this could be that entrepreneurs' risk aversion increases with experience.

There is some acknowledged vagueness in conceptualizing the risk attitudes of entrepreneurs in the literature and how they are compared to the rest of the population. Åstebro et al. (2014) argue that since people become entrepreneurs despite the low returns and high risks, the standard theories of risk and return, such as the expected utility model, might not capture the different risk attitudes of entrepreneurs well. This is because the expected utility framework suggests that since individuals become entrepreneurs, they must be risk-loving. That is why they study the entrepreneurial decision from behavioural economics point of view to consider behavioural factors such as biases, for example, overconfidence. (Åstebro et al., 2014.)

Also, risk perception of the observer affects too since if he/she perceives risks very realistically, it might appear that entrepreneurs are taking too courageous risks. The more in control of the situation the entrepreneur feels, the smaller the perceived risk is. (Weber et al., 2002). The sensed control of the situation is also a feature of resilient entrepreneurs (see chapter 3.2.).

Van Praag & Cramer (2001) and Cramer et al. (2002) highlight that because risk attitudes are measured only after individuals have chosen their occupation, it cannot be proved that there exists a causal relationship between entrepreneurship and risk attitude. Åstebro et al. (2014) conclude that there is not enough evidence for the claim that entrepreneurs are less risk-averse and therefore it is merely a suggestion. Macko & Tyszka (2009) study also supports the claim that entrepreneurs are not different from the rest of the population in terms of risk attitudes. It has also been acknowledged that risk attitudes are not stable, and entrepreneurs perceive risk differently when more experience is gained or as the business environment or situation changes with time (Macko & Tyszka, 2009; McCarthy, 2000).

The main findings from the literature review are presented in table 1 with corresponding references. It can be concluded that entrepreneurship is risky and therefore risk attitude influences the entrepreneurial decision, at least according to some of the references. However, there are no methods to measure risk attitudes reliably enough to make valid conclusions or comparison between entrepreneurs and other population. Hence it cannot be guaranteed that there are no risk averse

entrepreneurs or that all entrepreneurs are risk seeking. Risk neutrality seems to be the risk attitude most beneficial for an entrepreneur.

Table 1. Main findings about entrepreneurial risks, risk attitudes and their effect on entrepreneur's success

Findings	References
The association of risks with entrepreneurship is significant	Vesala et al. (2007), Cramer et al. (2002), Brockhaus (1980)
Risk aversion is a determinant of entrepreneurial selection	Cramer et al. (2002), Kan & Tsai (2006), Van Praag & Cramer (2001)
Literature does not agree on entrepreneurs' risk attitudes	Brockhaus (1980), Blanchflower & Oswald (1990), Macko & Tyszka (2009), Barbosa et al. (2007), Van Praag & Cramer (2001), Kan & Tsai (2006), Cramer et al. (2002)
Wealthier individuals are more likely to become entrepreneurs	Kan & Tsai (2006), Blanchflower & Oswald (1990), Vereshchagina & Hopenhayn (2009), Kihlstrom & Laffont (1979)
Neutral risk attitude is beneficial for an entrepreneur	Shadbolt & Olubode-Awosola (2016), McCarthy (2000), Kihlstrom & Laffont (1979)
Risk attitude assessment is difficult	Åstebro et al. (2014), Weber et al., 2002, Van Praag & Cramer (2001), Cramer et al. (2002), Macko & Tyszka (2009), McCarthy (2000)

3.2 Entrepreneurs' resilience presumptions

Entrepreneurs operate in a highly uncertain and risky environment. To be successful, entrepreneurs must adapt to changes and overcome obstacles. Therefore, entrepreneurs are naturally presumed as resilient individuals. Markman, Baron & Balkin (2005) conclude that the nature of entrepreneurship requires coping with a large amount of hard work and risks which is why entrepreneurs are likely to be more persistent than employed individuals. Resilience emerges in the interaction between an entrepreneur and the environment. It is a process of acquiring knowledge and skills to survive the unpredictable future confidently using positive attitude, creativity and optimism. (Ayala & Manzano, 2014.)

As mentioned, (see chapter 2.1.) resilience can refer to a process, a characteristic or an outcome. Associated with entrepreneurship, both the process and individual characteristic types of definitions are used. Korber & McNaughton (2017) define entrepreneurial resilience two ways based on the literature review they conducted. First, as a condition helping an entrepreneur to manage crises and challenges better, and secondly, as a resource firms use when faced with adverse situations. Resilient entrepreneurs can keep the focus on the future, adapt, and overcome difficult circumstances regardless of the challenging and unstable market conditions. They are highly confident and not afraid of mistakes or failure. (Ayala & Manzano, 2014.) Confidence is important for an entrepreneur since it brings a feeling of safety and inspiration while reducing uncertainty. Confident entrepreneurs are also able to maintain positive relationships with their team members, customers and other stakeholders. (Hayward, Forster, Sarasvathy & Fredrickson, 2009.) Thus, entrepreneurs who believe they can manage tough conditions, are more likely to survive adverse situations and therefore be more resilient (Bullough & Renko, 2013).

On the other hand, resilience is not only limited to surviving as an entrepreneur as it also provides support in becoming an entrepreneur. Entrepreneurial intent refers to a conscious decision of starting a new business and resilience promotes it (Bullough, Renko & Myatt, 2014). In other words, resilience helps to start businesses and pursue new ventures (Bullough & Renko, 2013; Bullough et al., 2014).

Ayala & Manzano (2014) acknowledge three dimensions of resilience: hardiness, resourcefulness and optimism. They state these dimensions, and especially resourcefulness, help in predicting the success of an entrepreneur. Hardiness refers to self-control, resourcefulness to the resources and abilities to control the unfavourable situations and optimism refers to the ability to retain a positive attitude. (Ayala & Manzano, 2014.) Markman et al. (2005) study indicates entrepreneurs can be distinguished from non-entrepreneurs based on the perceived control and responsibility for adversities which both can be seen as characteristics of resilient individuals according to the mentioned descriptions. Perceived control for adversity is clearly referring to the dimension of resourcefulness and responsibility for adversity then again can be seen as either accepting reality, hardiness or resourcefulness.

Hayward et al. (2009) list four dimensions of entrepreneurial resilience that help entrepreneurs to set up new ventures: 1. Emotional resilience, 2. Cognitive resilience, 3. Social resilience and 4. Financial resilience. Emotional resilience refers to the coping abilities created by positive emotions such as gratitude and interest (Fredrickson, Tugade, Waugh & Larkin, 2003). Cognitive resilience is the emotional support and social ties that help coping with adversities and protect against future crises (Glymour, Wauve, Fay, Glass & Berkman, 2008). Social resilience is the process in which social systems survive current adversities, learn from them to prepare for the future and build systems of institutions to promote welfare and functioning in the long term to enhance better future well-being (Keck & Sakdapolrak, 2013). Its definitions are very similar to the definition of general resilience. Financial resilience is the capability to attract investors (Fredrickson et al., 2003).

Ayala & Manzano (2014) measured entrepreneurs' resilience using the Spanish version of the CD-RISC (see chapter 2.1.). The CD-RISC aims to assess resilience using a questionnaire consisting of 25 items rated on a 5-point likert scale of 0-4 describing how the respondent has felt during the past month. Number 4 indicates the subject feels the claim is true almost all the time thus having higher resilience and vice versa lower resilience for 0. Maximum score of 100 therefore indicates the highest resilience. (Connor & Davidson, 2003.) The Spanish CD-RISC uses altogether 23 items which are evaluated from strongly disagree (0) to strongly agree (4). There are 9 items measuring hardiness, 7 items measuring resourcefulness and 7 items measuring

optimism. In the study conducted by Ayala & Manzano (2014) the respondents, who were all entrepreneurs in the tourist industry, scored higher than average points. (Ayala & Manzano, 2014.) This supports the claim that entrepreneurs are more resilient compared to other population.

Resilience is often used in literature to explain why some entrepreneurs are more successful than others (Korber & McNaughton, 2017). As the circumstances of entrepreneurship are highly unpredictable and competitive, the entrepreneurs who can tolerate ambiguity and adapt to changing conditions are resilient and thus more likely to succeed and grow the business (Ayala & Manzano, 2014). Markman & Baron (2003) similarly acknowledge resilience as a major factor determining the success of an entrepreneur because they are often faced with uncertainties. They explain that the entrepreneurs that quicker and more persistently overcome adversities are likely to outperform the entrepreneurs with less persistence. Bullough et al. (2014) explain that resilient entrepreneurs can keep focusing on the long-term goals and the actions required to reach those goals even in challenging conditions.

Hayward et al. (2009) present entrepreneurs that have founded a failing business are more resilient in many ways such as social and financial resilience. Those entrepreneurs are therefore more probable to both be willing to start a new venture and to succeed with it. One factor making these entrepreneurs more likely to succeed is that they are more experienced with, for example, finding financing because serial entrepreneurship is considered as an advantage by the investors and previously developed better networks ease the process. On the other hand, emotional resilience might interfere the founding of the subsequent venture because of all the negative emotions caused by the earlier failure. (Hayward, 2009.)

Ayala & Manzano (2014) point out that entrepreneurs' resilience changes when the business environment requires strategy modifications and adapting to situations with the skills developed by positive emotions. Similarly, resilience may strengthen with encouragement from successful entrepreneurs and weaken because of the adversity and therefore it is not a stable characteristic (Bullough & Renko, 2013). Korber & McNaughton (2017) also question the popular view that resilience is a fixed state or a trait and present the need to study how, for example, entrepreneurs change business

models after an adverse situation. Experience increases resilience and people can also learn to be more resilient. Entrepreneurs coming from particularly challenging environment can be expected to be more resilient simply because they have learned to be. (Bullough et al., 2014.)

Ayala & Manzano (2014) claim that the research on the impact of resilience on success is inconclusive. The same is concluded by Markman & Baron (2003). Korber & McNaughton (2017) state entrepreneurial resilience is not inevitably an indication of success. They present a wish that in the future resilience should not be seen as a driver of the success of an entrepreneur but rather the focus should be on the role resilient entrepreneurship plays in creating success and welfare in the long term. They also highlight the importance of considering both the fact that not all entrepreneurs are similar, and that resilience does not have only positive effects. Entrepreneurs differ in, for example, their reasons to become entrepreneurs and the type of the business. The features of resilient individuals might sometimes drive the entrepreneur to hold on to an opportunity when it would be more resilient to change the business model or even close down the business. (Korber & McNaughton, 2017.) Bullough et al. (2014) similarly conclude that high resilience is not a guarantee of success rather it only makes it more probable for an individual to consider becoming an entrepreneur.

Self-efficacy is often related to the concept of resilience. Bullough et al. (2014) claim that individuals who are not only resilient but also confident in their skills, i.e., possess more self-efficacy, are more likely to be interested in entrepreneurship. Confidence, which is often closely related to self-efficacy, supports the creation of entrepreneurial resilience through the positive emotions it engenders. However, higher confidence does not necessarily indicate higher resilience (Hayward et al., 2009).

Optimism is closely related to entrepreneurial resilience. Korber & McNaughton (2017) state that resilience and optimism are often considered synonyms. On the other hand, Ayala & Manzano (2014) claim that optimism is a component of resilience. In their study they used the Spanish version of CD-RISC which assesses optimism with a total of 7 items out of 23 so their claim seems understandable.

Entrepreneurs have generally been considered as highly optimistic, meaning they assume a positive outcome even though there would be no evidence suggesting so (Hmieleski & Baron, 2009). Hall & Woodward (2008) also argue individuals who tend to overestimate the rewards their ideas might generate are likely to be interested in entrepreneurship. Similar finding is also made by Vesala et al. (2007). According to Coutu (2002) optimism increases resilience but only if the sense of reality remains unchanged. Optimism is often considered the same as overconfidence which is one of the main encouragements for market entry (Bernoster, Rietveld, Thurik & Torrès, 2018). This could explain why there are too many people becoming entrepreneurs, as suggested by Cramer et al. (2002) (see chapter 3.1). Entrepreneurial individuals who are likely to be optimistic believe they can be successful and decide to establish a business.

Optimism has multiple benefits for entrepreneurs even though the performance appears to be growing with optimism only up to a certain point. High levels of optimism tend to result in unrealistically high goals and overconfidence which in turn affects strategic decisions negatively. Moderate levels of optimism seem beneficial for entrepreneurs by helping to learn from experience and keep the goals and opportunities more realistic. (Hmieleski & Baron, 2009.) Overconfidence can seriously cloud judgement which is why it has generally been considered the most damaging factor affecting a manager's decision-making (Hayward et al., 2009) and therefore being harmful for the business. On the other hand, highly optimistic entrepreneurs tend to be more persistent when facing adversity, i.e., be more resilient (Markman et al., 2005). Ayala & Manzano (2014) found that the positive effects of optimism on the performance of the business are greater for women compared to men even though men scored higher points for optimism. The long-term benefits of high confidence overpower the possibility of misjudgements (Hayward et al., 2009).

The main findings about entrepreneurial resilience are presented in table 2 along with the references. Resilience is beneficial for an entrepreneur since it not only increases the probabilities of becoming an entrepreneur but also makes it more likely that the entrepreneur will succeed. However, it does not fully guarantee success as an entrepreneur because not all entrepreneurs are similar. Resilience is not stable as it can

strengthen or weaken. Entrepreneurs are presumed as least a little optimistic. However, it is not beneficial to be excessively optimistic, at least according to some references.

Table 2. Main findings about entrepreneurs' resilience and its significance

Findings	References
Resilience promotes entrepreneurial decision	Bullough & Renko (2013), Bullough et al. (2014)
The definitions of resilience include factors that help entrepreneur succeed	Korber & McNaughton (2017), Ayala & Manzano (2014), Bullough & Renko (2013), Hayward et al. (2009)
Resilience indicates the success of an entrepreneur	Korber & McNaughton (2017), Ayala & Manzano (2014), Markman & Baron (2003), Hayward et al. (2009)
Resilience is not stable, and it might differ depending on the situation	Ayala & Manzano (2014), Bullough & Renko (2013), Korber & McNaughton (2017), Bullough et al. (2014)
Resilience should not be considered a guarantee of success	Ayala & Manzano (2014), Markman & Baron (2003), Korber & McNaughton (2017), Bullough et al. (2014)
Entrepreneurs are often presumed as optimistic & optimism is closely associated with resilience	Korber & McNaughton (2017), Ayala & Manzano (2014), Hmieleski & Baron (2009), Hall & Woodward (2008), Vesala et al. (2007)
Optimism seems beneficial to some extent	Korber & McNaughton (2017), Ayala & Manzano (2014), Hayward et al. (2009)

4 OBSERVED RISK ATTITUDE, RESILIENCE AND DISCUSSION

4.1 Interview grounding

This chapter includes the empirical section as the presented theory about entrepreneurs' risk attitudes and resilience is compared to the answers of a selected entrepreneur interviewee. The interview is of a semi-structured form. Semi-structured interview, by definition, has a collection of themes and related questions that are not read verbatim. The questions are addressed according to a tentative order which might change as the interview proceeds. (Adams, 2015). The aim is to discover the entrepreneur's views, feelings and opinions about risks, resilience and their importance for the success of an entrepreneur and compare the answers to the existing literature to form an overall picture of the issue.

The interviewee is an experienced serial entrepreneur. He first became an entrepreneur in 2009 and thus has over 10 years' experience of entrepreneurship. Currently, he is involved in four businesses and operates in the cleantech industry. He has also experience in being both a member and the chairman in the board of directors. The interviewee is Finnish and thus the interview was conducted in Finnish. The included quotations are therefore presented in Finnish to avoid translation errors.

This empirical section only includes the interview of the one chosen individual. It should be noted that not all entrepreneurs are the same and the answers might differ depending on the respondent. Thus, the discussion only represents the opinions and views of the interviewed entrepreneur and might not correspond to the view of some other entrepreneur. Also, as stated earlier, risk attitudes and resilience are not stable indicating that the answers could be different if the interview had been conducted in another time.

4.2 The results and discussion

Theoretically, such as in Blanchflower & Oswald (1990), the entrepreneurial choice has been presented in the form of an equation that naturally includes pecuniary factors, such as wage, but it also includes non-pecuniary factors. These non-pecuniary factors

are, for example, utility of being independent and entrepreneurial abilities. For the interviewee, the reason for becoming an entrepreneur is not the pecuniary factors but rather the freedom entrepreneurship enables and the will to get things done and make a change. By freedom he refers to the entrepreneur's ability to choose one's own battles. An entrepreneur is not able to escape all the problems but they can influence the types and sizes of problems. The interviewed entrepreneur considers his values very important based on his responses.

“... Kaikkihan sanoo aina, että yrittäjyydessä on niin hienoa se vapaus, niin kyllä se ihan oikeasti, se on totta.”

It seems that the non-pecuniary factors have more importance. This is supported by the interviewees claim that if the reason for entrepreneurship is only pecuniary, it is the worst kind of reason. It seems understandable since as stated earlier by, for example, Cramer et al. (2002) the earnings of entrepreneurs vary a lot and are not as certain as for employed individuals. The interviewee states it is important to make profit and in fact, it is the responsibility of the business. Also, it is important to have enough money to pay the salaries to employees and to oneself, but money is not the most important reason, or at least it should not be. The response is reasonable because if one becomes an entrepreneur with only pecuniary motives, great risks must be accepted since the odds of earning a wage higher than from employment are not in favor. It seems possible that entrepreneurs with pecuniary motives are indeed risk-seeking.

“... Kyllä mä niinku ite näen, että jos tätä niinku pelkästään rahan takia yrittää jotaki cleantechiäki tehdä, niin kyllä siitä niinku puuttuu se sielu.”

The positive effect of entrepreneurial parents on the child's entrepreneurial intentions is significant in theory but since neither of the interviewee's parents are entrepreneurs, the phenomena could not be studied here. However, the interviewee pointed out an important matter that the effect of having an entrepreneur as a parent is not necessarily only positive when considering the child's entrepreneurial intentions. According to him, it is possible that having an entrepreneur as a parent decreases the probability of becoming an entrepreneur if the child's overall picture of entrepreneurship appears

negative due to, for example, a parent experiencing a burnout because of entrepreneurship.

The role of risk in entrepreneurship is presented quite differently in the earlier literature compared to modern research. The risk dimension of entrepreneurship is nowadays a widely distinguished issue and most of the modern literature agrees on entrepreneurship being highly risky and the obligation of the entrepreneur to bear the risks. The earlier literature presents opposite views of, for example, Schumpeter (1911/1934, as cited in Van Praag & Cramer, 2001) and Arrow (1965, p. 46) who claim that entrepreneurs do not need to bear risks for different reasons. The interviewee agrees with the modern literature as he also claims entrepreneurship unfortunately is risky, especially for a new business. It is because an entrepreneur is not able to know or forecast everything or prepare oneself or the business for every possibility. That is how he advises the risks should be treated: approvingly. The interviewee states that one simply must trust that all goes as planned and try to be as well prepared as possible.

“... Eihän tää helppoa olis. Jos tämä olis helppoa, niin tätä tekis kaikki.”

Frequently, it has been presented that risk aversiveness prevents individuals from entrepreneurship because of all the risks associated to it. Therefore, entrepreneurs are presumed as risk takers, risk-seekers or gamblers as they voluntarily choose to bear those risks. Similarly, risk aversiveness is considered a characteristic most likely describing an employed individual rather than an entrepreneur. On the other hand, in the earlier literature, the general view is that the risk taking propensity is not different between entrepreneurs and other individuals.

The interviewed entrepreneur describes his stand on risks in a manner that seems very calculating. He states taking risks is inevitable for an entrepreneur but he tries to avoid taking any unnecessary risks. Possible risks should be evaluated and kept in mind at all times. He states entrepreneurship is like playing chess as one has to consider the future at all times when thinking about actions and behavior. He takes risks seriously, weighs them, takes action accordingly and tries to find the best possible solution for the exact time, situation and need. However, he states he is not too frightened of risks, and highlights how one should not be too concentrated on the threats as then it is

possible to forget other important issues. According to the theory, excessive risk seeking is not beneficial, and the interview suggests too much risk aversion is also bad for an entrepreneur. Therefore, the interview supports the theory.

“... Se (yrittäjyys) on vähän niinku shakin peluuta, että sinun pitäs koko ajan kattoa mahdollisimman pitkälle ja miettiä sitä kuviota.”

The interviewed entrepreneur presents an example of observing threats and preparing for the risks which describes his risk attitude. At the start of the COVID-19 pandemic, he noticed it would pose a threat to the business and cautioned the board of directors to ponder the strength of the business in case the pandemic will last long. As a result, some of the recruitments in the business were put on hold by the decision of the board because of the uncertainty of the future. This kind of course of action does not represent the kind of risk-seeking behavior which has been acknowledged as a feature of entrepreneurs in the theory. Rather the interviewee appears as risk neutral which, according to the theory presented, is a feature describing the most successful entrepreneurs.

For example, Barbosa et al. (2007) suggests that entrepreneurs are taking more risks than other population. Their explanation for this is that entrepreneurs are more intuitive than others. Based on the recruitment example, the interviewee appears to trust his instincts to guide his actions. Still, the behavior of the interviewed entrepreneur seems quite calculating and considered rather than impulsive. The interview does not present any support for the claim that entrepreneurs differ from others in terms of risk taking. This provides support for the theory of, for example, Macko & Tyszka (2009) and Åstebro et al. (2014) who claim that there is still not enough evidence to conclude that entrepreneurs differ from the rest of the population in terms of risk attitudes.

The theory suggests risk attitudes are not stable (Macko & Tyszka, 2009; McCarthy, 2000). Therefore, it is possible that the interview could result different answers if conducted another time. However, the interview still provides support for this theory. The interviewee claims his stance on risks has changed, not because of entrepreneurship, but because of the general experience he has gained over the years. The way he sees it, becoming an entrepreneur at too young age, he would not have

been able to evaluate and treat the risks seriously enough which could have resulted in too bold decisions. For example, Miller (1984) similarly states younger individuals are more likely to try challenges with smaller probabilities of success because of the lacking experience.

“... Nuorena ku ei kaikkea ymmärtäny ehkä niitä, niin sitte ei osannu sitä riskiä nähdä, eikä osannu siihen niinku suhtautua.”

Experience affects the desire to grow the business as, according to Piispanen et al. (2018), having experience of entrepreneur-manager position decreases growth orientation. Similarly, the interviewee intends to retain the number of businesses as it currently is. He states he feels it was the right thing to do to establish the latest business but expresses an intent to keep the number of businesses as it is. Piispanen et al. (2018) explain this tendency with decreasing optimism. However, the interviewee justifies this with being busy enough already with the current situation and finds it difficult to justify to himself why he should be involved in yet another company anymore.

Resilience increases the likelihood of becoming an entrepreneur and it is often seen as a characteristic describing entrepreneurs. This is explained by the uncertain nature of entrepreneurship which is requiring resilience constantly to survive and to be successful. Since the interviewee is the founder of several businesses, solely based on this theory, he seems resilient. More reasoning for his resilience follows.

The interviewee describes adverse situations as normal. He states that unfortunately adversities cannot be avoided so they simply must be accepted to be a successful entrepreneur. The interviewee therefore again supports the presumed resilience of the interviewee since, according to Coutu (2002), accepting the reality is a characteristic of a resilient person. Resilience is often considered as a factor explaining the differences in the entrepreneurs' probabilities of succeeding. This is because the conditions of entrepreneurship constantly require resilience and the quicker the adverse situations are left behind, the more likely the entrepreneur will outperform others with less resilience. The interviewee similarly lists that he thinks the best entrepreneurs share the quality of perseverance. According to the interviewee, the quicker the entrepreneur accepts the situation and moves on, the better the performance

will be. He claims if one worries about the past, it is difficult to make new successes in the future. Similarly, Ayala & Manzano (2014) state resilient entrepreneurs can focus on the future.

The earlier presented recruitment example by the interviewee not only reveals his stance on risks but also demonstrates the resilience of the entrepreneur. Suspending the recruitment process in the face of uncertain times represents the acceptance, patience and flexibility of the entrepreneur which are qualities of resilient individuals. In theory, resilience is often seen as a process and the example presented truly illustrates this kind of trajectory. The entrepreneur adapts to the sudden uncertain conditions and operates in a manner seeking to protect the business in the future.

The interviewee also narrates about a situation of noticing a problem deteriorating his working ability which he recognizes as a situation requiring resilience. The situation required perseverance, acceptance of the reality and systematic search: initially for a cause and eventually for a solution. He claims it was the worst ordeal to battle with the kind of health problem that is difficult to detect and relieve. After accepting the situation of something being wrong, with persistent searching the cause was found, and eventually he was able to battle the problem and find the aid for it. Resourcefulness, referring to the resources and abilities to control adverse situations, can be seen as one dimension of resilience. The examples presented truly demonstrate ability to control the situation in the face of an adverse situation such as a pandemic and therefore support the presumed claim that the interviewed entrepreneur is indeed a resilient individual.

Hayward et al. (2009) four dimensions of entrepreneurial resilience helping entrepreneurs to set up new ventures consist of emotional, cognitive, social and financial resilience. The interviewee expresses great gratitude of his colleagues, employees and network which demonstrates both emotional resilience and cognitive resilience. Social resilience, being the process of surviving, learning and preparing for the future seems to apply to the interviewee as well based on the earlier presented examples of preparing and adjusting for the pandemic and surviving deteriorated working ability. Serial entrepreneurs are very likely to attract investors which is why it can be concluded that the interviewee also has financial resilience. Because all the

four dimensions seem to apply to the interviewee, it can be concluded that he has the kind of resilience needed in founding new businesses. This could be one explanation why he is involved in several businesses.

The experience the entrepreneur has gained is a big benefit and has a central role in the defining the risk attitude and the resilience. Another significant advantage for the entrepreneur is the fact that he is a serial entrepreneur. For example, Hayward et al. (2009) have concluded that serial entrepreneurs are more resilient. This is explained, for example, by more willingness to start a new business. Even though the interviewee expresses that today there is no more willingness to pursue new ventures. Serial entrepreneurs are experienced, have wide networks and are more likely to receive financing. Emotional resilience might interfere the founding of another business if the previous business has failed. Since the entrepreneur seems very calculative rather than emotional and the businesses are still in action, it is likely that emotional resilience has not interfered nor is it affecting why he no longer wishes to pursue new businesses.

Resilience can be divided into risks that expose individuals to a possible bad outcome and protective factors individuals use to avoid and survive adversities. The protective factors are often divided into resources and assets depending on whether they reduce or completely remove the probability of a bad outcome caused by certain associated risk. Serial entrepreneurship can be seen as a protective factor in this case because the entrepreneur has built competence, confidence and learned many useful skills during his years of entrepreneurship. These factors have a major role in helping him overcome future challenges and adversities.

The interviewee highlights the importance of the wide networks he has gathered along his career. Networks and supportive individuals are a major external protective factor that help the entrepreneur to be better prepared in the face of adversity in the future. He also encourages everyone to present questions to the older and more experienced individuals as they can best confirm one has taken the right course of action and doing the right things. Building a network is very important and increases resilience.

“... Moneen yrittäjyyteen se verkosto on niinkö aivan kullannarvoinen.”

Innovativeness is an important dimension in entrepreneurship and entrepreneurs are often considered innovative. It is important to search for better and more effective ways to operate to be successful and lower the costs. The interviewed entrepreneur describes how the pandemic forced to make changes in operations to be able to continue the exporting business. Marketing operations were previously focused on face-to-face meetings but those were replaced with online communicating tools as the travelling had to be stopped and people had to stay home. The change had some positive effects as it lowered costs since there was no need to travel anymore. The interviewed entrepreneur believes the business is stronger after surviving the difficult pandemic period. This describes a positive trajectory which is how resilience should be seen according to many researchers such as Fergus & Zimmerman (2005). The theory similarly claims that entrepreneurs who have been through challenging times are expected to be more resilient because the challenging conditions have forced them to learn to be more resilient. The pandemic has truly made today's businesses stronger.

“...Kyllähän se tietenkin on jouduttu aika paljon korjaamaan, tosin nyt tietenkin tämän jälkeen pärjättyämme ollaan vahvempia.”

The study of resilience acknowledges the fact that resilience is not stable as it may strengthen with learning, encouragement or experience, but adversities might deteriorate resilience. Similarly, the interview presents examples of factors affecting the resilience of the entrepreneur. The strengthening factors presented are, for example, the support the entrepreneur has received from others in his network and the earlier experiences of surviving adverse situations. Resilience might be deteriorated because of, for example, the decreased working ability caused by health problems or the challenges because of the pandemic. The interview demonstrates that resilience is truly a sum of several risks and protective factors.

Many researchers highlight that it should be noted that not all entrepreneurs are the same, meaning that all the theory does not necessarily apply to all entrepreneurs. Entrepreneurs differ not only in terms of their personal characteristics but also how they have become entrepreneurs. The interviewed entrepreneur mentions the famous iceberg metaphor. There are more things below the surface not visible to everyone, and the hidden things are even more important.

Optimism and self-efficacy are important factors in the theory of entrepreneurial resilience. Confident entrepreneurs trust their skills and are therefore more likely to be interested in entrepreneurship. The interviewee, as stated earlier, claims that if he had become an entrepreneur at an early age, he would not have been as calculative and thorough decision maker he is today. He claims that he would not have been able to detect all the possible risks and therefore make rash decisions without proper risk analysis. This supports the presumed positive effect of confidence on entrepreneurial intentions. One possible explanation for the assumption of rash decisions might be that in earlier stage of the career the self-presumed entrepreneurial skills would be very high. Therefore, the confidence would be high which then encourages to become an entrepreneur.

Entrepreneurs are often considered to be optimistic in the literature. It has been found that optimism increases the resilience of an entrepreneur but only as long as the sense of reality is not changed. The interviewee reveals that he considers himself as optimistic and tries to keep it that way. He believes there is a chance to make a change and trusts his skills to be able to achieve it. The responses seem to support the theory of performance increasing with resilience since the interviewee claims that being too much of a realist might possibly prevent an entrepreneur from being able to detect all the possibilities or believing in them enough to get things done. On the other hand, he claims realism is also needed to remind oneself to keep in mind the current situation and to assist in evaluating your own actions. It seems that he also believes optimism is beneficial to some extent which again provides support for the theory.

An important finding from the interview is that even though the interviewed entrepreneur is experienced, takes risks cautiously but still accepts them and has a wide network to support him, he feels that one should always be somewhat humble to be successful. He seems resilient and optimistic but claims that it is not beneficial to be excessively trusting of one's own skills and the security of the business. He feels that it is not possible to look after the business too much and states that if an entrepreneur feels too secure, not all threats have been detected. The business must be very successful if the entrepreneur wishes to feel secure.

Finally, the interviewee concludes that entrepreneurship truly is highly challenging. All things affect each other in entrepreneurship. That is why entrepreneurs should be able to consider and see everything in a multidimensional manner. It is beneficial for an entrepreneur to be able to see and think outside the box. Lastly, the interviewee highlights the importance of taking care of the fundamentals of a business: what is your business idea and how do you differ from your competitors.

5 CONCLUSIONS

This thesis aims to answer the research questions presented in chapter 1 which are as follows:

How to define and assess risk and resilience?

How are entrepreneurs disposed towards risks and how it affects their success?

Are entrepreneurs truly resilient and what is the role of resilience in entrepreneurship?

The research conducted for this thesis concludes that entrepreneurship is highly risky which is why risk attitude plays a central role both in the entrepreneurial decision and the success of an entrepreneur. For an entrepreneur, it is beyond doubt important to be able to tolerate risks because those are not avoidable in entrepreneurship. The individuals who can tolerate risks are more likely to be entrepreneurs. This is because risk averse individuals are more likely to choose to be employed by someone else rather than employing themselves.

There is some disagreement on the issue whether entrepreneurs are risk seeking. It appears that many of the current literature's publications agree that there is not enough evidence to conclude that entrepreneurs are more prone to take risks than others. It can neither be concluded that entrepreneurs are not risk averse because the research only suggests that risk aversion makes it more probable that the individual desires to be employed by someone else.

Despite no conclusion about the general risk attitudes of entrepreneurs, it can be concluded based on this thesis that neutral risk attitude is a feature that increases the entrepreneur's probabilities of success. Neutral risk attitude assists the entrepreneur in keeping the focus on the business and on the future of the business. Excessive fear is not beneficial since it can keep the entrepreneur from trying to pursue goals and targets.

The study of risk attitudes is difficult because it is situation specific, unstable and difficult to measure or compare. It seems that risk attitude tends to shift from risk seeking to a more neutral approach with experience and age. Because risk attitude affects the decision making, it is highly advisable to consult more experienced entrepreneurs to avoid making too bold decisions at the beginning of the career or as a young person.

Along with risk tolerance, resilience is also a factor increasing the probability of entrepreneurship. In addition, resilience promotes the survival and success of the entrepreneur because in entrepreneurship, resilience is constantly needed. Therefore, it is an important issue for an entrepreneur who wishes to succeed. It is necessary for an entrepreneur to be able to overcome setbacks quickly and learn from them, i.e., be resilient, to be better prepared in the future by keeping the focus on the important operations.

Experience increases resilience because of learning. On the other hand, adverse situations can weaken resilience. Therefore, resilience should be seen as a positive trajectory of learning and development, as already suggested in literature, rather than as a feature of the entrepreneur or the business.

However, resilience is not a guarantee of success. Rather it assists in being successful. Not all entrepreneurs are similar and, based on this thesis, it cannot be concluded that all entrepreneurs necessarily are resilient or that resilience is only affecting positively. It should be noted that resilience is also situation specific, unstable and difficult to measure which complicates the study of entrepreneurs' resilience.

The results of this thesis suggest that for an entrepreneur to be successful, risk attitude should be neutral, and one should learn and evolve from challenges to be resilient. In addition, it seems beneficial that an entrepreneur is at least a little optimistic and hopeful to further in reaching the goals of the business and the entrepreneur himself. However, it is also important to stay somewhat humble to be able to see the reality.

Because of the difficulties of measurement in both risk attitudes and resilience, future research should focus less on categorizing entrepreneurs into certain classes of risk

attitudes or resilience scales. Measurement and specification are not as important as the skills that benefit entrepreneurs both in that moment and in the future. McCarthy (2000) gives an excellent suggestion to focus more on risk assessment and management. When it comes to risks, the importance of the networks is highlighted as suggested by the empirical section of the thesis. Future research could study the experienced entrepreneurs and how to harness their knowledge into ways of benefitting other entrepreneurs and individuals interested in entrepreneurship. The study of resilience, on the other hand, should rather be focused on issues such as how to increase and even more importantly how to support entrepreneurs' resilience so that they are more prepared for future challenges.

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Appendix 1**OUTLINE OF A SEMI-STRUCTURED INTERVIEW**

1. Haastateltavan esittely
 - Kerrotko itsestäsi, yrittäjähistoriastasi ja nykytilanteesta, mitä teet nyt (pohjatiedot)

2. Ajatuksia teemoista
 - Millaiseksi koet oman suhtautumisesi riskejä kohtaan?
 - Vältätkö riskejä, tykkäätkö riskinotosta vai suhtaudutko niihin neutraalisti? Jos vaihtelee, mikä vaikuttaa suhtautumiseen?
 - Jos otat riskin, etkä saavutakaan toivottua lopputulosta; Miten suhtaudut vastoinkäymisiin?
 - Millaiset asiat auttavat selviytymään vastoinkäymisistä (tapoja, keinoja, luonteenpiirteitä)?

3. Yhdistetään yrittäjyys, riskit ja resilienssi (eli vastoinkäymisistä selviytymisen prosessi ja selviytymistä edesauttavat henkilökohtaiset ominaisuudet)
 - Yrittäjyydestä yleisesti: Miksi päätit ryhtyä yrittäjäksi aikoinaan?
 - Millaiset tekijät edesauttoivat/rohkaisivat yrittäjäksi ryhtymistä?
 - Mitkä asiat yrittäjyydessä motivoi/on etuja?
 - Millaisia tavoitteita sinulla on ollut/on vielä yrittäjänä?
 - Onko jotain ominaisuuksia, jotka yhdistävät yrittäjiä tai lisää todennäköisyyttä ryhtyä yrittäjäksi?
 - Millaiset ominaisuudet auttavat menestymään yrittäjänä?
 - Riskinotosta: Otatko yrittäjänä paljon riskejä? (mitä vaikutuksia, kokemuksen rooli)
 - Koetko saavasi kompensatiota ottamistasi riskeistä?
 - Onko suhtautumisesi riskeihin muuttunut yrittäjyyden myötä? Miten?
 - Olisiko sinulla esimerkkiä yrittäjäurasi varrelta vastoinkäymisestä, jossa sinulta on vaadittu resilienssiä (periksiantamattomuutta, itseluottamusta, sopeutumiskykyä)?

- Kuvailenko tilannetta vähän (mitä fiiliksiä, miten selviydyit, mitä opit)
- Miten näet oman kykysi yrittäjänä selviytyä vastoinkäymisistä tulevaisuudessa? (kokemuksen rooli?)
- Millaiset tekijät edesauttavat yrittäjän selviytymistä vastoinkäymisistä?
- Onko resilienssi kasvanut yrittäjyyden myötä?
- Millaisena näet riskiin suhtautumisen roolin yrittäjyydessä yleisesti?
- Hyötyjä/haittoja jos välttelee riskejä tai vastaavasti pitää riskinotosta?
- Entä resilienssin eli vastoinkäymisistä selviytymisen rooli yrittäjyydessä?

4. Muita ajatuksia tai kommentteja, lisättävää tai vinkkejä?