

**Intuition or Rationality:  
An Exploratory Study on  
Serial Entrepreneurs' Decision-Making  
Processes**

por

Elisabete Maria Faria Cardoso Castro

Dissertação de Mestrado em Economia e Gestão de Recursos Humanos

Orientada por: Professora Doutora Teresa Proença

Faculdade de Economia da Universidade do Porto

2013

# Biography

Elisabete Maria Faria Cardoso Castro was born in Porto, Portugal, on July 7th, 1981. In 2008, she graduated in Law, from the Law School of the University of Porto, with a final grade of 15 marks. In 2011, after a rewarding Internship as a Trainee Lawyer, she became a Master student of Human Resources Management in the School of Economics and Business of Porto, within which she concluded the curricular program with 17 marks.

While attending her Master Degree, she had the opportunity to undertake a challenging Internship at Sonae, within the ‘Call for Solutions’ Program, and she was invited to collaborate with two research projects in the School of Economics and Business of Porto.

She has recently been admitted to the European Master in Law and Economics Program, where she will have the opportunity to study in Bologna, Hamburg and Aix-en-Provence.

# Acknowledgments

I would like to start by acknowledging Prof. Teresa Proença, my dissertation supervisor, for her crucial guidance and support throughout the production of this work. I would also like to thank Professor António Oliveira, for his ever-present enthusiasm with this project, and my fellow colleagues and Professors from the research project which consubstantiated the birth of this project for their collaboration and suggestions.

My friends were essential throughout this project, and therefore they cannot be forgotten here. Their constant efforts in making me believe there was a world outside this dissertation during all these months of preparation, their patience when they had to listen to my lack of further conversation topics and their enthusiasm in collaborating with me whenever I just needed to breath some fresh air were fundamental for my sanity and capable conclusion of this endeavour.

I am deeply grateful to my father for all his support and patience, and I must address a very special gratitude note to my sister, who acted as a relentless and much appreciated ‘co-supervisor’ and who was absolutely indefatigable in supporting me every step of the way.

# Abstract

This study aims to deepen the existent knowledge on serial entrepreneurs' decision-making processes, attempting to establish whether they emphasise mainly intuitive, rational or integrative aspects on their entrepreneurial decisions. It also intends to explore the presence and relevance of the representativeness heuristic and the overconfidence bias in the interviewees' discourses, as these have been considered fundamental to understand entrepreneurial behaviour throughout literature in the field. For these purposes a sample of 14 Portuguese serial entrepreneurs was interviewed, and the results of those interviews were presented and discussed. This study has allowed us to conclude that serial entrepreneurs engage in entrepreneurial decisions through decision-making processes which are mainly integrative, with emotional aspects demonstrating to have a clear prevalence over strictly rational ones, and that the representativeness heuristic and the overconfidence bias have a relevant and recurrent effect on serial entrepreneurs' decisions to start new ventures.

# Resumo

Este estudo tem como objectivo aprofundar o conhecimento existente sobre os processos de tomada de decisão dos empreendedores em série, tentando estabelecer se eles valorizam aspectos eminentemente emotivos, racionais ou integrativos nas suas decisões empreendedoras. Este estudo pretende também explorar a presença e relevância da heurística da representatividade e do viés do excesso de confiança, que a literatura da área considera fundamentais para a compreensão do comportamento dos empreendedores. Com estes objectivos, uma amostra de 14 empreendedores em série Portugueses foi sujeita a entrevistas, e os resultados dessas entrevistas são aqui apresentados e discutidos. Este estudo permitiu-nos concluir que os empreendedores em série tomam as suas decisões através de processos de tomada de decisão eminentemente integrativos, com os aspectos emocionais a demonstrar uma clara prevalência sobre os puramente racionais, e que a heurística da representatividade e o viés do excesso de confiança têm um efeito relevante e recorrente nas decisões de iniciar novos negócios dos empreendedores em série.

# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Literature Review</b>	<b>4</b>
2.1	Concerning entrepreneurs . . . . .	4
2.1.1	Different types of entrepreneurs . . . . .	5
2.1.2	Entrepreneurial traits and behaviours . . . . .	6
2.2	Concerning serial entrepreneurs . . . . .	8
2.2.1	Serial entrepreneurs' behaviour . . . . .	10
2.3	Decision-making processes . . . . .	11
2.3.1	Rational decision-making theories . . . . .	12
2.3.2	Nonrational decision-making theories . . . . .	15
2.3.3	Integrative decision-making theories . . . . .	19
2.4	Research objectives and questions . . . . .	22
<b>3</b>	<b>Methodology</b>	<b>24</b>
<b>4</b>	<b>Results</b>	<b>28</b>
4.1	Sample characterisation . . . . .	28
4.2	Results . . . . .	31
4.2.1	Business Duration . . . . .	31
4.2.2	New Businesses Detection . . . . .	33
4.2.3	Consideration of Alternatives . . . . .	36
4.2.4	Required Amount of Time to Decide . . . . .	37
4.2.5	Doubts over the Decision . . . . .	38
4.2.6	Difficulties to Decide . . . . .	39

4.2.7	Skills Self-Evaluation . . . . .	39
4.2.8	External Resources Usage . . . . .	41
4.2.9	Relevance of Risk and Uncertainty . . . . .	43
4.2.10	Relevance of Emotions and Instincts . . . . .	45
4.2.11	Self-Perceptions on Rationality and Intuition . . . . .	47
4.2.12	Being an entrepreneur . . . . .	50
<b>5</b>	<b>Discussion</b>	<b>53</b>
<b>6</b>	<b>Final Conclusions</b>	<b>64</b>
6.1	Conclusions . . . . .	64
6.2	Study Limitations . . . . .	65
6.3	Suggestions for Future Research . . . . .	66
	<b>Appendix</b>	<b>71</b>
	<b>References</b>	<b>71</b>

# List of Tables

3.1	Analysis dimensions and their corresponding interview questions . . . . .	26
4.1	Sample Characterisation: Age . . . . .	28
4.2	Sample Characterisation: Gender . . . . .	29
4.3	Sample Characterisation: Academic Background . . . . .	29
4.4	Sample Characterisation: Number of Ventures . . . . .	30
4.5	Sample Characterisation: Areas of Business . . . . .	30
4.6	Average Business Endurance per Subject . . . . .	32



# List of Figures

2.1	Kahneman’s thinking processes model. Source: Kahneman (2003). . . . .	20
2.2	Epstein, Pacini, Denes-Raj, and Heier’s thinking processes model. Source: Epstein et al. (1996). . . . .	21

# Chapter 1

## Introduction

Entrepreneurs have been subject to very different and broad studies. Some of them include, for instance, attempts to define their inherent characteristics and motivations (Shane, Locke, & Collins, 2003), the connections between entrepreneurial experience and success expectations (Li, Schulze, & Li, 2009; Chen, 2013), the reasons and conditions through which only some people (and not all others) find it profitable to explore certain business opportunities (Tang, Kacmar, & Busenitz, 2012) and the different ways these entrepreneurial opportunities are explored and developed (Shane & Venkataraman, 2000).

Defining what constitutes entrepreneurship has been an especially popular subject of academic discussion. Sobel (2008), for example, questions whether private citizens who set up little businesses at their homes should be compared, in entrepreneurial terms, to people like Bill Gates, for instance. If not, what distinguishes such different perspectives on entrepreneurial activity, and how can literature establish the frontiers between them (Sobel, 2008)?

In Hindle's (2008) opinion, entrepreneurship is constituted by the specific set of skills that entrepreneurs possess, and Shane and Venkataraman (2000) emphasise the aspects of discovering and exploiting opportunities as the core of entrepreneurship. These authors also defend that the act of undertaking ventures rests on the existence of entrepreneurship-driven individuals and the existence and/or detection of profitable business niches. However, despite all these efforts, developing a conceptual framework suitable for the explanation

and prediction of all the events that effectively occur in entrepreneurship has not yet been accomplished (Shane & Venkataraman, 2000).

Most of these perspectives on entrepreneurship cannot be separated from the person who undertakes such actions: the entrepreneur. In fact, Westhead and Wright (1998) state that entrepreneurs should be considered the unit of analysis when it comes to entrepreneurship's nature and contributions studies. Following this line of thought, this study will be particularly focusing on a specific set of entrepreneurs - serial entrepreneurs - and their specific decision-making processes, with the intent to positively contribute to academic knowledge on the field.

Even though serial entrepreneurs have not been thoroughly studied to this date, as far as we were able to establish, they represent a very relevant phenomenon in the comprehensive field of entrepreneurship. Hyytinen and Ilmakunnas (2007) state that these entrepreneurs represent almost 30% of all transitions from wage employees to entrepreneurship, and Plehn-Dujowich (2010) refers that in Europe the percentage of serial entrepreneurs (among all entrepreneurs) is about 18 to 30%, rounding 12,5% in America. In countries like the United Kingdom, for instance, 19 to 25% of entrepreneurs are serial (Westhead, Ucbasaran, Wright, & Binks, 2005), whereas in Finland their percentage reaches approximately 30% (Hyytinen & Ilmakunnas, 2007). In fact, a great number of new firms worldwide are owned by serial entrepreneurs (Westhead et al., 2005). Despite these numbers, knowledge on what makes an entrepreneur serial is still scarce (Hessels, Grilo, Thurik, & Zwan, 2011).

As such, studying serial entrepreneurs makes it possible to enhance the field's knowledge on their specific behaviour, as their activity is by definition a very dynamic one, inserted in an equally dynamic environment (Eisenhauer, 1995; Krabuanrat & Phelps, 1998; Baron, 2008; Amaral, Baptista, & Lima, 2011). To understand the processes through which serial entrepreneurs decide to continue their entrepreneurial careers, from their own perspectives, and to explore whether they resort to certain heuristics and biases in their decisions can produce valuable insights on better understanding this issue (Wright, Robbie, & Ennew, 1997).

This study is thus aligned with relevant literature in the field, and desirably intends to further contribute to it. It will be divided into 6 chapters: the first chapter will introduce the subject under research and elaborate on its relevance to its corresponding field of knowledge. The second chapter will perform a literature review on what is most relevant regarding the fundamental issues in this work: serial entrepreneurs and decision-making processes. The third chapter will focus on the chosen methodology to carry out this study, and in the fourth and fifth chapters results will be respectively presented and discussed. Final conclusions pertaining this research will be drawn in the sixth chapter, which will also comprehend the study's limitations and suggestions regarding future research on the subject.

# Chapter 2

## Literature Review

### 2.1 Concerning entrepreneurs

First and foremost, serial entrepreneurs are entrepreneurs. What is an entrepreneur? According to Nueno (1994), the noun '*entrepreneur*' comes from the French, where it is written exactly the same way, and it was introduced by Richard Cantillon, in 1755, to identify those who took on the responsibility to start and finish a venture. Today, this qualification is applicable, in the author's opinion, to people who demonstrate a particular predisposition or talent to unveil business opportunities and to affect personal or other people's resources to pursue them. The author even states that it's remarkable to observe how so many entrepreneurs have been able to start businesses using no personal funds, convincing others to do so instead.

In Sobel's (2008) opinion, the expression '*entrepreneur*' primarily comes from a thirteenth-century French verb, '*entreprendre*', which means 'to do something', and the utilisation of '*entrepreneur*' as a noun only occurred around the sixteenth century, referring to those who undertook business ventures and who were willing to abide with the personal and economical risks that are inherent to new businesses (Sobel, 2008). This author conceives the entrepreneur as an agent of change, whose entrepreneurial learning processes are paramount for the systematic market functioning, and inclusively states the advantages of business failure, which include the available resources' reutilisation in more profitable ways (Sobel, 2008).

According to Hindle (2008), an entrepreneur ultimately generates value by redirecting economic resources that were originally directed towards lesser profitable areas to higher profitable ones (also, Parente, Costa, Santos, & Chaves, 2011).

For Amaral et al. (2011) it is relevant to study the entrepreneur, and not merely his ventures, because people often become entrepreneurs by acquiring already established firms and because they often do not settle for owning only one business (at a time - as portfolio entrepreneurs - or consecutively - as serial entrepreneurs).

### **2.1.1 Different types of entrepreneurs**

Literature differentiates between novice, serial and portfolio entrepreneurs (Plehn-Dujowich, 2010), when it comes to their behaviours, perceptions and psychological characteristics. Plehn-Dujowich (2010) defines entrepreneurs as divided into two groups: novice and habitual entrepreneurs. Habitual entrepreneurs can be either serial (also named 'sequential') or portfolio entrepreneurs, and the main difference between them is that the former start ventures consecutively, and the latter do so simultaneously (following this main categorisation, also Ucbasaran, Westhead, Wright, & Flores, 2010). Novice entrepreneurs, on the other hand, are the ones who start ventures for the first time and who, by definition, have no prior experience in firm founding (Hyytinen & Ilmakunnas, 2007).

Literature, however, has not focused enough on the eventual differences that habitual entrepreneurs may reveal among themselves, often considering them a homogenous group (Westhead & Wright, 1998; Westhead et al., 2005). In fact, there has not been enough comparative exploration between novice, serial and portfolio entrepreneurs altogether (Westhead et al., 2005).

When it comes to serial and portfolio entrepreneurs, for instance, Westhead and Wright (1998) find relevant differences between them with regard to their age, work experience, funding sources, attitudes towards entrepreneurship or the prevalence of entrepreneurship traditions in the family. However, the same authors find no evidence of substantial

disparities when comparing the performance levels of habitual and novice entrepreneurs (Westhead & Wright, 1998). When subject to business failure, serial entrepreneurs tend to stay as over-optimistic as ever (Ucbasaran, Westhead, & Wright, 2011), which means that portfolio entrepreneurs can be a better choice than serial ones when it comes to decide who to financially support, as they show higher tendencies of learning from failure (Ucbasaran et al., 2011).

### **2.1.2 Entrepreneurial traits and behaviours**

Entrepreneurial skills were until recently regarded as something innate to entrepreneurs, or at least learned at a very young age (Hindle, 2008). The traditional image of the entrepreneur revolves around someone full of ideas and optimism, but lacking the financial resources to pull them through (Hindle, 2008). So, it becomes relevant to ask what specific characteristics make some individuals decide to pursue and explore (or not) the market opportunities they detect. A set of individual traits appears to be fundamental here - for instance, Shane and Venkataraman (2000) argue that individuals showing higher levels of self-efficacy and a predominant internal locus of control are more prone to explore business opportunities. Serial entrepreneurs' ability to process information, for instance, is considered to be more effective than the one performed by novice entrepreneurs (Westhead, Ucbasaran, & Wright, 2004), which makes it expectable for serial entrepreneurs to present higher levels of innovation and creativity than novice ones (Westhead et al., 2004).

The focus on the entrepreneur's traits and characteristics has in fact been the subject of much research (Gartner, 1989; Nielsen & Sarasvathy, 2011), as it was understood that the entrepreneur was the cause of entrepreneurship (Gartner, 1989). However, questioning who entrepreneurs really are and the analysis of their traits has not led to any global definitions on entrepreneurs or to any better knowledge or understanding of entrepreneurship, proving to be scarce on its own to explain this phenomenon (Gartner, 1989).

According to Gartner (1989), the trait perspective assumes that the entrepreneur has an unchangeable set of personality characteristics, so much so that once people begin an entrepreneurial career, they will never voluntarily leave it. That perspective, in Gartner's

(1989) opinion, is what justifies that so much research has focused on entrepreneurs who have stopped acting as such sometimes many years ago. This is why Gartner (1989) questions whether these entrepreneurs should be considered as such in current studies. In his opinion, entrepreneurs' behaviours, and not their traits, should be the primary focus of the study of entrepreneurship (Gartner, 1989).

Even though, as Gompers, Kovner, Lerner, and Scharfstein (2010) and Amaral et al. (2011) support, entrepreneurs' perceived skills have a fundamental influence on their behaviour, and are therefore a relevant source of information for the entrepreneurial field, Gartner (1989) provides an interesting metaphor to explain why entrepreneurial studies should rather focus on behaviours. In fact, if you consider a baseball team, and try to distinguish the desired personality traits of perfect players, you may end up with a selection of people who possess all the relevant characteristics of good baseball players (in terms of locus of control, need for certainty or tolerance for ambiguity), but who can't actually play baseball, as the sport itself entails a series of procedures and behaviours that those people may not possess. The same can be said about entrepreneurs, even though sometimes it is quite difficult to empirically distinguish between trait and behavioural aspects (Gartner, 1989).

As was previously demonstrated, research on entrepreneurs' characteristics has basically been dominated by two fundamental approaches: the traits and the behaviours perspectives. When it comes to serial entrepreneurs, the same two approaches are applicable. The one that examines traits and characteristics of serial entrepreneurs has been much more favoured by scholars, and issues like specific and general human capital (Westhead et al., 2004; Nielsen & Sarasvathy, 2011; Amaral et al., 2011), entrepreneurial motivation (Eccles & Wigfield, 2002; Shane et al., 2003) and the demographic characteristics of serial entrepreneurs (Amaral & Baptista, 2007; Hessels et al., 2011) have long been explored. Serial entrepreneurs' behaviour, however, seems to be lacking the same degree of scholar attention, as far as we have been able to observe. This work will therefore focus on serial entrepreneurs' behaviour, namely on their decisions to create new ventures and act the way they do. Some literature has accounted for the beneficial aspects that can derive from behavioural studies such as this: Parker (2013), for instance, supports that studying serial



entrepreneurs' behaviour can help to predict the success probability of future ventures, and consequently help the financial resources suppliers (private lenders, banks, etc.) decide whether to support a new venture project by that entrepreneur or not.

## **2.2 Concerning serial entrepreneurs**

Even though its importance and relevance to knowledge is thus stated, serial entrepreneurship still does not have a complete body of theory of its own (Plehn-Dujowich, 2010). In fact, not enough is known about the people who develop their careers around opening and closing businesses, and many misconceptions still hover over them. Even today entrepreneurship theories assume that firms are only opened by novice entrepreneurs and that when a firm fails that means that the entrepreneur will leave entrepreneurship (Plehn-Dujowich, 2010). But serial entrepreneurship comprehends events like forced exit due to firm failure and voluntary closings (Hyytinen & Ilmakunnas, 2007), which can namely be due to the recognition of better market opportunities that the entrepreneur may desire to explore (Plehn-Dujowich, 2010). These aspects make serial entrepreneurship a much wider field of knowledge than one might assume.

It is interesting to notice that the idea that low performances or even failed ventures are sufficient by themselves to make entrepreneurs quit their entrepreneurial experience seems not to be accurate (Nielsen & Sarasvathy, 2011), as some studies (namely Stam, Audretsch, & Meijaard, 2008) show that a relevant percentage of individuals with past negative entrepreneurial experience reveals a distinct tendency to venture themselves again in new entrepreneurial projects.

For Plehn-Dujowich (2010), an entrepreneur has three possible choices when it concerns his/her future entrepreneurial career: to keep exploring his/her current venture, to close it to pursue a new one, or to close it to enter the labour market as a wage employee. Plehn-Dujowich (2010) supports that highly skilled entrepreneurs are more likely to become serial entrepreneurs, as they tend to consecutively open and close low revenue businesses until they discover a highly profitable one. Differently, entrepreneurs who reveal

lower entrepreneurial skills will close businesses that do not provide them the outcome they expected to return to the labour market, thus never becoming serial entrepreneurs.

Reinforcing misconceptions, literature still provides distinct definitions of what might a serial entrepreneur be. Hyytinen and Ilmakunnas (2007), for instance, specify that it is not mandatory for serial entrepreneurs to establish new firms to become so, as serial entrepreneurship can also assume others forms, such as the exploitation of markets where the entrepreneurs' products are not yet commercialised (Hyytinen & Ilmakunnas, 2007). In this line, Wright et al. (1997) state that serial entrepreneurship can also occur in the form of a re-acquisition of a previously sold venture or through a management buy-in - which consists on the acquisition of the management position(s) by an outside manager (or team) - or management buy-out - where the buyer (the entrepreneur) assumes the firm's management responsibilities as a consequence of its acquisition. An interesting example of this is given to us by Mann (2006), referring to his initiative to introduce his products into new markets, where its technology could be used in different ways. For him, these new markets exploitation were fundamental for his company to remain solid and independent (Mann, 2006).

As far as this work is concerned, however, the practicing serial entrepreneurs' definition (or, as Hessels et al. (2011) also refer to them, 'revolving door' entrepreneurs) will support itself on the one provided by Westhead et al. (2005, p. 111), which states that serial entrepreneurs are "*individuals who have sold/closed a business in which they had a minority or majority ownership stake, and they currently have a minority or majority stake in a single independent business that is either new, purchased or inherited*", but confine itself to a perspective where serial entrepreneurs are considered as such only when they fund new ventures, and not where they acquire businesses through other ways (namely by purchasing or inheriting them).

### **2.2.1 Serial entrepreneurs' behaviour**

Serial entrepreneurs' defining behaviour (leaving an ongoing venture and starting a new one) can be due to a desire to exit a current venture, originated either by the realisation that its opportunities and advantages have disappeared or the aspiration to explore new possibilities that have been perceived in its exterior (Wright et al., 1997; Hayward, Forster, Sarasvathy, & Fredrickson, 2010). Westhead and Wright (1998) have shown that serial entrepreneurs tend to start their first venture very early in their lives, and that they are often born in families with an entrepreneurial background. Serial entrepreneurs often use previously acquired knowledge and techniques, trying to apply them to new businesses, instead of acquiring new ones (Westhead et al., 2004).

Stam et al. (2008) focus on the reasons why entrepreneurs become serial, i.e., why entrepreneurs start new ventures after exiting a previous one. Their research shows that previous entrepreneurial experience increases the probability of re-entering entrepreneurship (Stam et al., 2008; Amaral et al., 2011) and that a majority of former entrepreneurs still reveal entrepreneurial preferences (Stam et al., 2008). This attitude towards their life and career can be seen as the main trigger for serial entrepreneurs' behaviour (Westhead et al., 2004).

Research by Hessels et al. (2011) reveals that individuals who have exited an entrepreneurial venture within one year show a higher tendency of re-entering entrepreneurship than those who have never been entrepreneurs. When it comes to former entrepreneurs, it is interesting to notice that those with a vaster entrepreneurial career take less time to reenter entrepreneurship after exiting a venture than the ones with less experience in the area (Amaral et al., 2011). All of the above corroborates the idea that entrepreneurship shows a lingering effect on people (Stam et al., 2008). And why does that happen? Wright et al. (1997) support that previous ventures can have positive and negative effects: some positive effects may be the reputation, expertise or contacts' networks they acquire and develop, and negative effects can comprehend a decrease in the motivation to work hard or to take risks in future ventures.

Then why do serial entrepreneurs endeavour in their entrepreneurial careers, even when they experience negative effects? Stam et al. (2008) support that it makes no sense to re-enter entrepreneurship after leaving a venture, when taking the logic of economic models into consideration. According to the same authors, no one who had had a negative entrepreneurial experience would ever re-enter entrepreneurship (and therefore become a serial entrepreneur, if he wasn't one already), because that person would have already gathered enough information to allow him to understand that his entrepreneurial skills were not enough or not adequate to pursue that career, that he would learn nothing more from new projects and/or that he was not fit for entrepreneurship (Stam et al., 2008). In fact, Townsend, Busenitz, and Arthurs (2010) also find it interesting that so many entrepreneurs decide to start new ventures when their chances of being successful are so scarce. So why do serial entrepreneurs decide to venture themselves in new projects, regardless of the previous ones' results? In the next chapter we will introduce different currents of thought on this matter.

## **2.3 Decision-making processes**

What differentiates entrepreneurs' decision processes, thus making this a relevant field of study for this dissertation? According to Holland, Reutzell, Chandler, and White (2009), who base their opinion on a significant number of studies on cognitive mechanisms, entrepreneurs may indeed have different thinking processes than other people. These decision-making processes present conceptual difficulties of their own, being, as Qing and Ling (2010) support, often complicated to predict or even to comprehend. As such, literature has long been focusing on the processes through which decision makers come to their decisions, and three main streams or currents in the matter are perceptible in literature: theories that focus on rational decision-making processes, theories that emphasise the intuitive aspects of decisions and theories that contemplate these two opposite aspects of decision-making as complementary. We will be approaching all three of them over the next pages.

### **2.3.1 Rational decision-making theories**

There are several relevant contributions to literature when it comes to rational decision-making. Rationality is often viewed as a fundamental characteristic of human beings, one that distinguishes us from other animals and constitutes a triumph of humanity (Shafir & LeBoeuf, 2002). When it comes to entrepreneurial decision-making, Plehn-Dujowich (2010), for instance, considers that individuals make their choices based on conditions of economic rationality - and as such, they consider the advantages and disadvantages of starting a new firm, keeping the same one or choosing wage employment. Regarding this matter, Nielsen and Sarasvathy (2011) support that entrepreneurs with successful businesses will continue their entrepreneurial careers whereas entrepreneurs behind unsuccessful ventures will wonder on whether they should become employees in the labour market. According to Plehn-Dujowich (2010), highly skilled entrepreneurs will decide to maintain their entrepreneurial careers, consecutively opening and closing new businesses until they discover one which exceeds their minimum profit threshold they have determined for themselves and which they consider of sufficient quality to maintain (Plehn-Dujowich, 2010).

According to Gigenrenzer (2001), rational theories aim to establish the best courses of action to be adopted by agents who possess all the relevant informations in every circumstance. However, these theories present some problems: first of all, they define what a rational decision is in different ways, which is considered to be at the same time their main weakness and their major strength (Gigenrenzer, 2001). We will now briefly present some of the most relevant rational decision-making theories: utility theory, the expected utility theory and the subjective expected utility theory.

#### **Utility theory**

Utility theory is one of the most well-known theories when it comes to rational choices. According to Fishburn (1968, p. 335), the utility theory focuses on people's decisions, choices and preferences, considering their "*judgments of preferability, worth, value, goodness (...)*", thus aiming to rationally define a way for the decision maker to pursue his

preferences with consistency and logic: if someone prefers A to B, and B to C, he should naturally prefer A to C (Fishburn, 1968). However, if the individual's preferences do not meet the expectations of this rational path of choice, utility theory states that the decision maker should reconsider his preferences, in order to make the contradiction(s) disappear (Fishburn, 1968). In this author's opinion, preference judgments are fundamentally difficult due to two main factors, which can happen simultaneously: multidimensionality (which occurs when one of the options is better than the other because of certain aspects, but at the same time worse because of others) and uncertainty (about the consequences of alternative decisions) (Fishburn, 1968).

Despite of its difficulty to be used in practice, as the measurement of utilities can be very hard to make, utility theory is still used every day - in fact, when anyone tries to find the best solution for a problem with multiple dimensions, considering all its perceived advantages and disadvantages, he or she is using one version of utility theory (Fishburn, 1968).

### **Expected utility theory**

When it comes to making decisions in risky situations, the expected utility theory is still considered to be the main framework in the analysis of costs and benefits that a given solution presents (Buchholz & Schymura, 2012). According to it, people make their decisions based on the consideration that even the most insignificant increases in wealth represent an utility increase, which is progressively more important as people's possessions are fewer (Bernoulli, 1954). It has been shown, however, that people often do not act according to the expected utility theory, as it can produce results contrary to what would be expected (Buchholz & Schymura, 2012).

Kahneman (2003) considers that the expected utility theory's assumption that decision agents weigh possible outcomes by comparing their different utilities is wrong. For Kahneman (2003), that concept of expected utility does not explain empirical evidence that shows that decision makers decide whether to assume risk-seeking or risk-aversion attitudes in reference to a turning point. That reference point would act as the defining

moment where people's behaviours would change from risk-aversion to risk-seeking - because the expected utility from that point on would outgrow the possible disadvantages of the risk-taking situation. The problem with the expected utility theory, in Kahneman (2003) perspective, is that it does not contemplate the existence of that reference point.

This author also supports that the prevalence of the expected utility theory as the main model of decision-making under risk can be explained due to the connection between utility and wealth it establishes - and to consider wealth as a utility is a rational trait, which is consistent with this theory's notion that economic agents are strictly rational (Kahneman, 2003).

### **Subjective expected utility theory**

Another example of a rational choice theory is the subjective expected utility theory. According to it, to choose between the existent alternatives (in all matters, like, for instance, deciding on which car or spouse to choose), the decision agent should determine all the possible outcomes that could derive from every available option he has. One possible criticism to this is that utilities derive from preexistent preferences, and not the opposite, as this theory suggests (Gigenrenzer, 2001).

As we have seen before, rational decision-making theories assume that economic agents are omniscient, i.e., that they are in possession of all the information and resources they need to make their decisions (Gigenrenzer, 2001). However, McVea (2009) draws attention to the fact that possibilities and consequences cannot be entirely predicted in nowadays life, due to its constant mutability. In fact, in most cases decision makers are not fully aware of all available opportunities and their eventual outcomes at any given moment (McVea, 2009).

These purely rational perspectives on decision-making base themselves on conditions of economic rationality, and they have encountered some opposition along the way - they have namely been criticised as being "*empirically unfounded and psychologically unrealistic*" (Gigenrenzer, 2001, p. 3305). It is now widely acknowledged that, contrary to what would be expected, people often do not follow patterns of strategic (or rational)

decision-making, even when the outcomes of their actions are specified (W. Li & Suji-rapinyokul, 2010; Starcke & Brand, 2012). So, the question remains: what lies underneath entrepreneurial decisions?

### **2.3.2 Nonrational decision-making theories**

According to Gigenrenzer (2001), nonrational theories are a varied group of decision-making theories intended to overcome the limitations that classic rational theories demonstrate. They should not be mistaken with irrational decision-making theories - when literature speaks of nonrational theories, it is referring to a category of theories and not to a category of outcomes. Nonrational theories assume that decision agents dwell with emotions and with limited amounts of time, knowledge, memory and other resources, which does not necessarily imply that the outcomes of their decisions will be disastrous (Gigenrenzer, 2001).

Nonrational theories challenge the perspective that decision makers are omniscient, admitting that the information they possess is often insufficient and that future events are mainly unpredictable (Gigenrenzer, 2001). In fact, approaches that try to overcome strictly rational theories, making way to the intuitive ones, have been growing in number and importance, as it has been repeatedly stated that intuitions and emotions have a fundamental part to play when it comes to decision-making (Tversky & Kahneman, 1974; Elster, 1998; Mellers, Schwartz, & Ritov, 1999; Baron, 2008; Böhm & Brun, 2008; Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008; Podoynitsyna, Van der Bij, & Song, 2012).

Albeit it is often associated with lower performance levels, intuitive thinking can be relevant and precise (Mellers et al., 1999; Kahneman, 2003). Even though it is not the ideal way of dealing with logical analysis and abstract connections, intuitive thinking is known to be adaptable to different circumstances (Epstein et al., 1996), and as such it becomes extremely relevant in contexts of uncertainty or ambiguity (Busenitz & Barney, 1997; Sarasvathy & Berglund, 2010). When one finds oneself in situations where information is not complete (Westhead et al., 2004), choices based on intuition are a valid and effective process to determine courses of action (as Zeelenberg et al. (2008) and Sarasvathy and



Berglund (2010) also support) and that they do not necessarily reflect a problem in human decision-making, but rather a demonstration of intelligence that should be cherished and encouraged (March, 1978).

In fact, emotions play a substantial role in decision-making, and some literature actually considers decision-making to be an emotional process itself (Zeelenberg et al., 2008). In Gigenrenzer's (2001) opinion, even falling in love, for instance, is an emotional process that ensures commitment to the chosen partner in a much more effective way that would a rational perspective that merely evaluated the advantages and disadvantages of such a partner and who was logically willing to abandon him (or any other that followed) when a better partner would appear.

The relevance of intuitive thinking for behavioural studies is precisely attributed to its inconsistency with the assumption that economic agents are purely rational (Kahneman, 2003; Böhm & Brun, 2008; Ariely, 2008; Rogerson, Gottlieb, Handelsman, Knapp, & Younggren, 2011). In fact, behavioural economics studies have long shown that human decision-making processes often diverge from the strictly rational path (for instance, Kahneman & Tversky, 1979; Shafir & LeBoeuf, 2002; Zeelenberg et al., 2008; Hartley & Phelps, 2012), often focusing on intuitive mechanisms, such as heuristics or biases, to help decisions to be made (Krabuanrat & Phelps, 1998; Shiloh, Salton, & Sharabi, 2002; Starcke & Brand, 2012). According to Westhead et al. (2004, p. 4), "*heuristics are simplifying strategies that individuals use to make strategic decisions, especially in complex situations, where less complete information is available*" (in the same line, Busenitz & Barney, 1997; Shiloh et al., 2002). As such, heuristic thinking provides decision makers with a framework that can be relevant in the decision-making process (Krabuanrat & Phelps, 1998; Westhead et al., 2004).

For Busenitz and Barney (1997), without biases and heuristics many entrepreneurial decisions would never be made, as the businesses' windows of opportunity would often disappear before all the information became available for more rational decision-making to be put into action. In fact, in highly uncertain and/or ambiguous situations, where more comprehensive and cautious decision-making is not possible, too expensive or time-

consuming, biases and heuristics offer a deviation from strictly rational paths of decision and can represent a valid way to reach adequate solutions in a quick and efficient way (Busenitz & Barney, 1997; Krabuanrat & Phelps, 1998; Holland et al., 2009; Hartley & Phelps, 2012; Starcke & Brand, 2012; Shepherd, Haynie, & McMullen, 2012). For Epstein et al. (1996), heuristic information processing is the result of the correct functioning of an adaptive and organised system that these authors refer to as the experiential system (and which will be further developed in the upcoming pages).

Literature has studied many heuristics and biases (Romanycia and Pelletier (1985), for instance, provide a relevant although necessarily incomplete list of them). According to Kort and Vermeulen (2008) and Townsend et al. (2010), some of them have received special attention from scholars, for their status as critical to understand entrepreneurial behaviour: the representativeness heuristic and the overconfidence bias. Busenitz and Barney (1997), for instance, chose to study the representativeness heuristic and the overconfidence bias, respectively, because of its comprehensive usage and its presence in many heuristics. Considering their importance and coverage in literature, the representativeness heuristic and the overconfidence bias were selected to be a relevant aspect in this study. It is therefore relevant to distinguish between heuristics and biases in this context: whilst heuristics are defined, as we have seen above, as simplifying cognitive strategies that help decision makers in making their decisions under complex situations (Busenitz & Barney, 1997; Westhead et al., 2004), biases serve as the identifiers or tags of their implicit heuristics (Gilovich & Griffin, 2002), and are put into action by the disregard for probabilities and the utilisation of prototypes (Starcke & Brand, 2012).

### **The representativeness heuristic**

Representativeness is used when individuals make decisions based upon a slim amount of available information on the subject (Shiloh et al., 2002; Kort & Vermeulen, 2008). Decision-makers who resort to representativeness display a tendency to focus on a few characteristics or aspects of the situation at hand and generalise their assumptions from those pieces of information (Busenitz & Barney, 1997; Kort & Vermeulen, 2008).

The stereotypical thinking performed through the representativeness heuristic is often resorted to by entrepreneurs (Shafir & LeBoeuf, 2002), and its main indicators are *insensitivity to predictability* and *the law of small numbers* (Kort & Vermeulen, 2008). Insensitivity to predictability implies that the decision makers display a low concern with the consequences of the possible alternatives and that he makes his decisions based on the success expectations he attributes to his choice of path (Kort & Vermeulen, 2008). The law of small numbers, on the other hand, assumes that the decision maker draws conclusions from small amounts of information and is not greatly concerned with thoroughly searching for more information or alternatives (Kort & Vermeulen, 2008). When decision-makers are concerned about gathering much information, considering the possible alternatives they have to a specific course of action (and their corresponding outcomes) or seeking their peers' advice before they make their decisions, they are less prone to use the representativeness heuristic (Kort & Vermeulen, 2008).

### **The overconfidence bias**

The overconfidence bias is often associated with entrepreneurs (Busenitz & Barney, 1997), moreover if they are serial ones (Hayward et al., 2010). Overconfidence is present when decision makers overestimate their chances of systematically making the right decisions (Busenitz & Barney, 1997; Kort & Vermeulen, 2008), and it is very important when decision makers want other people to also become engaged in their courses of action, making it easier to implement their decisions (Busenitz & Barney, 1997).

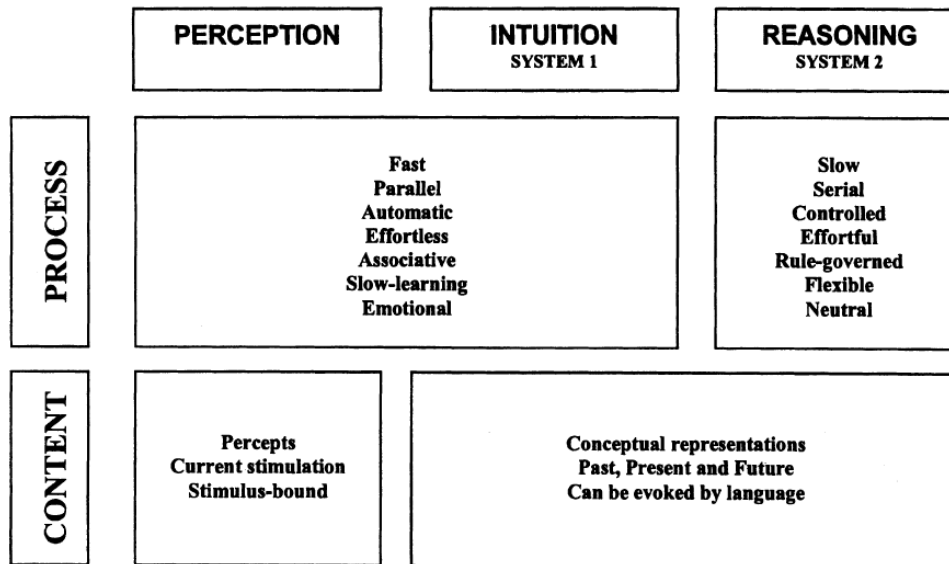
Kort and Vermeulen (2008) support that entrepreneurs reveal that they resort to the overconfidence bias when they dwell in a volatile environment and, despite of that, choose not to explore other options or more information. These intensified levels of confidence in their initial impressions on given issues make them increasingly resistant to subsequent information they may acquire (Busenitz & Barney, 1997), and empirically reveal themselves to be fundamental when it comes to decision-making (Townsend et al., 2010). When decision makers are overconfident, they often implement their decisions before all the information regarding that specific decision is known, and despite of all the uncertainties surrounding it - namely whether that course of action is the correct one or if that way of pursuing it is the best (Busenitz & Barney, 1997; Townsend et al., 2010).

According to Kort and Vermeulen (2008), there are two relevant dimensions to overconfidence: *optimistic overconfidence* and *overestimation of one's own knowledge*. The first refers to the amount of doubt the decision maker manifests regarding his decisions, whilst the latter refers to the connection between the decision maker's inherent doubts and his need of retrieving enough information on the subject (Kort & Vermeulen, 2008). Both dimensions can be asserted through the decision makers' discourse and language - in fact, they can unwillingly manifest high levels of overconfidence in their decision-making abilities, which may be unfounded (Kort & Vermeulen, 2008).

### **2.3.3 Integrative decision-making theories**

Some theories on decision-making tend to present integrative models on how decisions are actually made (Kahneman, 2003; Kahneman & Frederick, 2007; Starcke & Brand, 2012). As we have seen before, some conceptual models emphasise that people make decisions resorting to either rational or intuitive perspectives, depending on the specific circumstances of each case or individual tendencies. Even though the rational agent model assumes that decisions are made in a context where all the factors, risks, opportunities and possible outcomes are known, evidence has shown that this is almost never true (Kahneman, 2003). In fact, research has shown that choices exclusively commanded by rational principles are rare and occur in abnormal situations (Kahneman, 2003). For instance, nowadays the idea that some aspects of the decision (and not others) are instantly perceived and taken into consideration by the decision maker is commonly accepted in Psychology; when brought to the field of decision-making, however, this concept raises serious doubts on whether the decision maker is a strictly rational agent (Kahneman, 2003).

Following the perspective that decisions incorporate elements from both rational and nonrational theories, Kahneman (2003) proposes a model where three cognitive systems are present: perception, intuition (System 1) and reasoning (System 2). Here we will explore the models of intuitive and reasoning thinking, applying them to entrepreneurial decision-making and integrating them with further knowledge in the area. Figure 2.1 depicts Kahneman's (2003) model.



**Figure 2.1:** Kahneman’s thinking processes model. Source: Kahneman (2003).

As we can see in Figure 2.1, system S1 corresponds to intuitive thinking, whose operations are “*fast, automatic, effortless, associative, and often emotionally charged; they are also governed by habit, and are therefore difficult to control or modify*” (Kahneman, 2003, p. 1451). When it comes to System 2, the author defines its operations as “*slower, serial, effortful, and deliberately controlled (...) relatively flexible and potentially rule-governed*” (Kahneman, 2003, p. 1451).

Shiloh et al. (2002) and Starcke and Brand (2012) also support this binary theory, referring to a rational-analytical system, with the characteristics of Kahneman’s (2003) system 2, and an intuitive-experiential system, similar to Kahneman’s (2003) system 1 (Shiloh et al., 2002; Starcke & Brand, 2012). Even though they differ in their designations, the characteristics that the different authors attribute to the two systems are similar. As Kahneman (2003), these authors therefore support that people use both rationality and intuition in order to make decisions (Starcke & Brand, 2012). If a certain decision has to be made in a scenario of high uncertainty, which is ever present when it comes to decide on opening new ventures (Eisenhauer, 1995; Townsend et al., 2010), strategic mathematical

choices are not a possibility, and the intuitive-experiential system can be prevalent in the decision-making process.

For Kahneman (2003), intuition and reason are two different possibilities to be explored when it comes to problem solving, and so rational theories should not discard intuitive processes without further consideration. In this author’s opinion, people don’t normally think thoroughly about their judgments and choices, and the rational system does not control judgments in a comprehensive way (Kahneman, 2003). Focusing on the long term as it does, rational thinking neglects that life is lived today. In fact, (Kahneman, 2003) considers that theories that separate utilities and emotions in decision-making are unrealistic and may moreover advise choices that will not deliver the expected maximum utility results.

Epstein et al. (1996) also understand that information processing can happen in two independent yet communicative systems (a rational one and an experiential one), which they characterise in Figure 2.2.

Experiential system	Rational system
1. Holistic	1. Analytic
2. Automatic, effortless	2. Intentional, effortful
3. Affective: Pleasure–pain oriented (what feels good)	3. Logical: Reason oriented (what is rational)
4. Associationistic connections	4. Logical connections
5. Behavior mediated by “vibes” from past events	5. Behavioral mediated by conscious appraisal of events
6. Encodes reality in concrete images, metaphors, and narratives	6. Encodes reality in abstract symbols, words, and numbers
7. More rapid processing: oriented toward immediate action	7. Slower processing: oriented toward delayed action
8. Slower and more resistant to change: Change with repetitive or intense experience	8. Changes more rapidly and easily: changes with strength of argument and new evidence
9. More crudely differentiated: Broad generalization gradient; stereotypical thinking	9. More highly differentiated
10. More crudely integrated: Dissociative, emotional complexes; context-specific processing	10. More highly integrated: Context-general principles
11. Experienced passively and preconsciously: we are seized by our emotions	11. Experienced actively and consciously: We are in control of our thoughts
12. Self-evidently valid: “Experiencing is believing”	12. Requires justification via logic and evidence

**Figure 2.2:** Epstein et al.’s thinking processes model. Source: Epstein et al. (1996).

Epstein et al. (1996) support that human behaviour is guided by these two systems acting in collaboration, and that when they disagree with each other, one may show a prevalence over the other, depending on factors such as individual differences, the emotional involvement implied in case and the association between that task and the person's reaction to similar ones (for instance, mathematical problems are usually solved using rational thinking strategies, whereas emotional problems are dealt with with intuition and affect) (also, Shiloh et al., 2002). People's level of confidence in each of the two systems may differ, according to Epstein et al. (1996), which may help to explain the specific patterns of individuals' decision-making processes.

## **2.4 Research objectives and questions**

As we have been able to see, serial entrepreneurs, by definition, close businesses and consecutively enter into new ones (Westhead et al., 2004). This study aims to elaborate on how they make these decisions to leave current businesses and start new ones, and whether those decisions are based on eminently rational or intuitive decision-making processes, with a special interest on the eventual manifestation of the representativeness heuristic and the overconfidence bias. These heuristics and biases are among the most common and relevant (Busenitz & Barney, 1997; Kort & Vermeulen, 2008), but their prevalence and importance towards the study of serial entrepreneurs still lacks homogenous acceptance throughout literature. This research aims to at least partly fill this gap, as it believes these aspects are fundamental to understand the phenomena at hand.

Therefore, and summarising what was stated above, the main objective of this research is to study serial entrepreneurs' decision-making processes. This is approached from the perspective of the following research questions:

1. Do serial entrepreneurs decide to engage in new ventures through mainly intuitive or rational decision-making processes?

2. Are there any aspects common to the majority of serial entrepreneurs decision-making processes (for instance, quickness and easiness to make decisions to start new ventures)?
3. Are the representativeness heuristic and the overconfidence bias prevalent in the serial entrepreneurs' decision-making processes?

As Busenitz and Barney (1997) and Sarasvathy and Berglund (2010) suggest, entrepreneurship can be regarded as decision-making itself, as decisions and their subsequent behaviours are what actually define entrepreneurship. The connection between serial entrepreneurs and their patterns of decision-making has not yet been thoroughly explored (Kort & Vermeulen, 2008), and this study aims to contribute (at least partly) to enlarge that aspect of literature on the subject.



# Chapter 3

## Methodology

This was a qualitative investigation, as it intended to illustrate and interpret individual situations, as opposed to aiming to provide general explanations on entrepreneurial phenomena, which would be the objective of a quantitative approach (Mahoney & Goertz, 2006). In fact, this type of study cannot be generalised to large populations, as its results are specific to the studied individuals and do not produce general rules that can be applicable to all other subjects (again, Mahoney & Goertz, 2006).

Furthermore, this investigation assumes an exploratory nature, as it intends to allow us to understand the connections among the different ideas found in the interviewees speeches, enabling the establishment of new assumptions and ideas (Bardin, 2009). It will be carried out resorting to semi-structured interviews, directed to the serial entrepreneurs' career paths and experience and their perspectives on the way they make decisions.

Interviews were the chosen research method as they are a privileged means to access people's private thoughts and considerations, as they freely express what they have "*lived, felt and thought about something*" (Bardin, 2009, p. 89). Due to the manifest impossibility to interview every serial entrepreneur in Portugal, the researcher resorted to a convenience sample of entrepreneurs, which was built according to the snowball sampling method (Trotter II, 2012; Ruiz Espejo, 2013). This referral sampling was thus initially constituted by personal connections who were known to possess the characteristics required for this study, who were then asked to indicate others with resembling characteristics, which

constituted a second level of potential interviewees. In line with Bernard (2000), this procedure was kept until no new names were provided. The same author supports that this methodology is useful when people with the required characteristics are unknown or hard to find (Bernard, 2000), which was the case at hand. In an attempt to overcome this difficulty, several Portuguese National Agencies connected to Entrepreneurship were also contacted, but no answers or contacts were provided by them.

All interviews were conducted in person, at a place of the interviewees' preference, and all the interviewees accepted to have them recorded for posterior transcription and analysis. The interview guide can be seen in Appendix 1, and it bases itself on Table 3.1, which explains how the several dimensions this study aims to explore will be addressed by each interview question.

Analysis Dimension		Interview Script Question	Source
Classification as Serial Entrepreneur	Number of created businesses	Question 2: How many entrepreneurial projects have you created?	Plehn-Dujowich (2010)
	Establishing that the entrepreneur has left one business to open the subsequent	Question 3a: How did you detect the last business opportunity you became involved with? Question 3b: What were the relevant factors for your decision?	Ucbasaran et al. (2010)
Decision-Making Processes	Rational Theories	Utility Theory	Fishburn (1968)
		Expected Utility Theory Subjective Expected Utility Theory	Buchholz and Schymura (2012) Bernoulli (1954)
	Nonrational Theories	Intuitive Thinking	Gigenrenzer (2001) Böhm and Brun (2008)
		Heuristics and Biases	Busenitz and Barney (1997) Sarasvathy and Berglund (2010) Kort and Vermeulen (2008)
Integrative Theories	Decisions incorporate elements from both rational and nonrational theories	Question 9: How relevant were the risk and uncertainty that can be associated with new businesses' creation when you decided to create your first business? And the subsequent ones? Question 10: What influence did your emotions and feelings have towards your decision to start new ventures?	Starcke and Brand (2012) Kahneman and Frederick (2007) Kahneman (2003) Epstein et al. (1996)
	Presence of three cognitive systems: perception, intuition (System 1) and rationality (System 2)	Question 11: There are those who consider that entrepreneurs are either eminently rational or eminently emotional. Do you agree? How would you classify yourself?	
Representativeness and Overconfidence	Representativeness Heuristic	Insensitivity to Predictability	Kort and Vermeulen (2008)
		Law of Small Numbers	Busenitz and Barney (1997)
	Overconfidence Bias	Optimistic Overconfidence Overestimation of One's Own Knowledge	Questions 6a, 8, 9 and 10 Questions 6b: Did you have any doubts about it? Why? Questions 7: Did you evaluate whether you possessed the necessary competencies to accomplish this new project?

**Table 3.1:** Analysis dimensions and their corresponding interview questions

Upon transcription of the interviews, each of them was analysed resorting to content analysis techniques. According to Bardin (2009), the raw product that results of the interviews' transcription must be treated through an encoding process. For that purpose, the register unit chosen was the sentence, and the context unit chosen was the paragraph. Bardin (2009) explains that the register unit constitutes the signification unit to be coded, which corresponds to the portion of the message which is to be considered the reference for content understanding. The context unit represents the comprehension unit, the part of the message that presents the adequate dimensions to enable a thorough apprehension of the register unit's exact meaning (Bardin, 2009). In qualitative research the correct comprehension of meaning is paramount, as isolated or infrequent elements often appear in the analysis - as such, the mere presence of some items in the interviewees' speeches, even though not statistically relevant, can prove to be fundamental in understanding their thoughts on the subject (Mahoney & Goertz, 2006; Bardin, 2009).

The same author supports that categorisation is a two-step process that comprehends inventory (where the relevant elements contained in the message are isolated) and classification (where those elements are organised according to their similarities towards a specific category) (Bardin, 2009). In the inventory phase, the researcher collected the main elements of the interviewees' discourses, which were then categorised into 12 main categories (business duration, new businesses detection, consideration of alternatives, required amount of time to decide, doubts over the decision, difficulties to decide, skills self-evaluation, external resources usage, relevance of risk and uncertainty, relevance of emotions and instincts, self-perceptions on rationality and intuition and being an entrepreneur), which will be explored throughout the following chapters. These categories represent classes of elements gathered under a generic title which intends to sum up their common characteristics (Bardin, 2009).

# Chapter 4

## Results

In this chapter results derived from the performed interviews will be presented.

### 4.1 Sample characterisation

As stated before, this study is based on a sample composed of 14 serial entrepreneurs, whose ages were comprehended between 31 and 59 years old. Four age intervals were created to separate the interviewees according to this aspect, which resulted in Table 4.1.

Age	Number of Subjects
35 or Less	2
36 to 45	6
46 to 55	5
Over 56	1

**Table 4.1:** Sample Characterisation: Age

The sample's gender distribution consists of Table 4.2.

Gender	Number of Subjects
Female	2
Male	14

**Table 4.2:** Sample Characterisation: Gender

The interviewees' academic background was also inquired, and the corresponding results can be found in Table 4.3.

Academic Background	Number of Subjects
High School Degree	0
College Degree	8
Master's Degree / MBA	3
PhD	3

**Table 4.3:** Sample Characterisation: Academic Background

As serial entrepreneurs need to have created at least two businesses consecutively to be considered as such, according to the working definition of serial entrepreneurs provided by Westhead et al. (2004) that we adopted in the present work, interviewees were also inquired about the number of ventures they had already created and closed. It was interesting to realise that the two younger entrepreneurs, aged 35 or less, had already opened at least four businesses, which is in line with the idea that serial entrepreneurs start their careers very soon in their lives (Westhead & Wright, 1998).

What was furthermore interesting to ascertain was that two interviewees (the ones with the highest number of created ventures, with at least 25 and 40 ventures each) were not fully aware of exactly how many businesses had they created already, as they were often short-term businesses that ended soon after their creation. The fact that these entrepreneurs had such extensive entrepreneurial careers can help to explain this aspect. In these cases, the researcher chose to opt for the minimum number of businesses that the entrepreneurs

were certain to have created for sample characterisation purposes. The number of created ventures is thus stated in Table 4.4.

Number of Created Ventures	Number of Subjects
2 to 5	9
6 to 9	1
10 to 15	2
More than 15	2

**Table 4.4:** Sample Characterisation: Number of Ventures

The entrepreneurs were also inquired about the types of businesses they created, as to appreciate whether they had explored different areas of business or whether they had stayed in the same throughout their entrepreneurial careers. It is important to state that not all the entrepreneurs provided a complete account of all the businesses they had created, which means that these results may not express the complete array of explored business areas. The obtained results are presented in Table 4.5.

Business Areas	Number of Businesses	Number of Subjects	Average: Number of Businesses per Subject
Consulting	18	9	2
Commerce	29	9	3.22
Textile	1	1	1
Real Estate	8	3	2.67
Computers and Technology	7	4	1.75
Human Training and Development	5	2	2.5
Media / Information	1	1	1
Agriculture	1	1	1
Hotels and Event Management	3	2	1.5

**Table 4.5:** Sample Characterisation: Areas of Business

## 4.2 Results

In the content analysis phase, twelve main categories concerning decision-making processes and the prevalence of the representativeness heuristic and the overconfidence bias arose from the interviewees' speeches. They will now be presented and subsequently discussed.

### 4.2.1 Business Duration

When it comes to the duration of businesses, the 14 interviewees revealed very different patterns of business maintenance, with some of them maintaining some of their businesses for long periods of time (one of the interviewees kept one of his ventures for 10 years, for instance) and others keeping them for very short periods (one interviewee kept one business for merely two months, for instance). In order to be able to compare an average time of businesses' endurance, averages concerning each serial entrepreneur were calculated, by dividing the sum of months (or years) in which they maintained each of their businesses by the numbers of businesses owned. It is important to notice that most of the interviewees did not remember exactly the amount of time they had committed to each business, and that the following results refer only to the ones they remembered or those that they provided an average of business length themselves. Results can be found on Table 4.6.

Considering all the interviewees, the average length of each business rounds 3.6 years, i.e., a little more than three and a half years. For some of the subjects, that is "*about the amount of time one needs to understand a few things*" (subject A). It is however interesting to notice that, among the interviewees who kept creating ventures within the same business area, the average length of each business is 5.7 years, which is considerably higher than the global average.

Six out of the 14 interviewees (42.86%) revealed a clear detachment from the length of their businesses, which they did not consider to be a relevant aspect. However, none of the interviewees who restrained their entrepreneurial experience to the same business area displayed any signs of this detachment, knowing exactly how many years they had stayed



Subjects	Number of Businesses	Average Business Endurance (in years)
A	5	2.4
B	2	7
C	10	0.63
D	3	3.67
E	2	6.13
F	40	3.08
G	10	3
H	5	2.12
I	4	1.54
J	5	3.5
K	2	5.5
L	25	1.5
M	7	4.71
N	2	6

**Table 4.6:** Average Business Endurance per Subject

with each business. It was also interesting to notice that the female entrepreneurs revealed higher rates of business duration (slightly exceeding six years per business, in average) than the average of all entrepreneurs.

The most referenced reasons for leaving their previous businesses presented by the interviewees were having problems with their partners (28.57%) and realising that those businesses were no longer profitable enough or had lost their utility (28.57%). Some other reasons were the lack of the businesses' growth potential (14.29%), the entrepreneurs' feelings that they were not adding any more value to the business or that they were not devoting themselves enough to it (14.29%), that they had already learned what they had to learn from those specific businesses (7.14%) or their desire to explore new businesses (7.14%).

## 4.2.2 New Businesses Detection

When inquired on how these serial entrepreneurs detected the new businesses opportunities they became involved with, the array of answers that emerged from the interviewees' responses was quite vast, as will be subsequently presented. An important aspect to be stated here is that some entrepreneurs gave more than one explanation for the way they detected new businesses, which is due to the fact that, as serial entrepreneurs, they may naturally have identified different business opportunities in different ways.

Even though several opinions on the matter were manifested, half (50%) of the interviewees revealed that the most relevant aspect for them in this context was the urge to create new businesses that could, in the interviewees' opinion, add value or make a substantial difference to what already existed in the field. Creating new things, or offering different utilisations for pre-existent objects, services or technologies, was the main driver for opportunities detection for the inquired serial entrepreneurs. With a percentage of 42.86% of answers, these serial entrepreneurs also revealed a strong desire to create ventures which would fulfill them personal and professionally, which contributed to their well-being and enabled the interviewees to identify themselves with.

Detecting new business opportunities by chance or good luck was also an important aspect raised by this study. Actually, 35.71% of the interviewees mentioned the relevance of coincidences in detecting new businesses (subject K, for instance), or hearing about new potential businesses from friends who had heard about them somewhere else (as in subject J's case). The entrepreneurs' own bad luck was also focused as an important way of detecting new businesses: in fact, 14.29% of the interviewees state that sometimes their failed businesses created new business opportunities, by drawing the entrepreneurs' gaze elsewhere. One interesting example of this was given to us by subject H, who was leaving a partnership due to that business' poor results. When he heard that his former partner was going to dismiss a series of employees with a vast knowledge in a specific area, subject H ended up creating a new company in that area, exploring a different field of business (which he had never intended to do in the first place) with tremendous results.

The challenge of starting new businesses by itself was a very relevant aspect in business detection for 4 interviewees (28.57%), being mentioned 12 times during the course of those 4 interviews. Three (75%) of the four interviewees who mention this aspect belong to the 46 to 55 years old age segment. One of the subjects stated that he always chose new businesses for the challenge they represented (subject C). Subject G, for instance, reported to having detected his last business because *“it was a challenge, and I like challenges”*.

Business opportunities brought to these serial entrepreneurs by potential partners were also a relevant source for new businesses detection for 28.57% of the interviewees, and the feelings these prospective business partners inspire in the interviewees were regarded as the main references for deciding whether to engage into businesses with them or not. In this sense, subject J, who has founded five ventures with different partners over the years, states that *“it has a lot to do with people”* and *“there are a lot of businesses out there to be made. (...) The Arabic people, for instance, rely on their sense of smell. And I am a bit like them. If I’m not comfortable with the partners, I will not do business with them, regardless of the potential profits that business could entail”*. Regarding this, subject L points out that *“it is a little like what happens with singers. At the beginning of their careers they sing their own songs, and once they become known people start knocking on their doors offering them their own songs, like “I made this for you, do you want to sing it”? This is more or less what happens to me, nowadays”*.

Life experience was another relevant aspect in business detection. Four interviewees (28.57%) mentioned the importance of evaluating opportunities on the basis of their previous experiences. Subject L says *“it is a matter of experience (...) opportunities are more matured now because we have created others before and know how they are likely to turn out”*. The same subject stated, however, that experience was not always good, as it sometimes made him hesitate before proposed opportunities. We will elaborate on this aspect in subsection 4.2.4. Subject A reinforced the learning aspects of experience, and that *“the interesting part of this is the path we walk, and it changes our perspective”*. Subject F, on the other hand, supported that experience taught him not to invest in businesses he was not fully comfortable with.

Two interviewees (14.29%) stated that they detected new opportunities within their areas of knowledge and experience, by identifying new and different ways of exploring them. Subject D, who had already created two businesses in the area, decided to create a third one as he saw that that market “*was not saturated yet*”.

Lastly, with only 7.14% of answers each, aspects like creating companies to sell unanticipated by-products of other businesses (subject C), wanting to see businesses grow from scratch (subject K), desiring to have bigger ventures (again, subject K) and, interestingly, detecting opportunities by their potential financial outcomes (subject J) were the least relevant aspects for these serial entrepreneurs when it came to business detection. Subject G, a serial entrepreneur with a vast experience of over ten businesses in various fields of business, stated that new businesses detection depended on the activity sector one wished to enter at any given point, which represents a percentage of 7.14% of answers as well.

Different groups of interviewees manifested distinct sets of business detection methods. When it comes to gender differences, the two female interviewees stated that they chose to create new businesses that enhanced their well-being and offered them the chance to be personal and professionally fulfilled, while the male interviewees divided their scope among the several opinions presented before.

In terms of age differences, the distinct methods of business detection were visible: in fact, interviewees aged less than 35 years old, for instance, demonstrated a homogenous tendency to start new ventures that allowed them to try new things, add value and make a difference to what existed in the market. Interviewees in the next age segment, aged 36 to 45 years old, mainly detected new businesses through the well-being and fulfillment they could provide them (66.67%) and through the knowledge they derived from their life experience (50%). Older interviewees (aged 46 to 55) revealed that they mainly started businesses they are challenged by (60%), that they came to know by chance or luck (60%), and that were brought to them by other people (40%). Finally, the entrepreneur aged 55 or higher stated to mainly open new businesses due to the potential economic revenue they could deliver, being the only one to support this perspective. As was clearly demonstrated here, the differences between “why” (which implies motivations) and “how” (which con-

substantiates methods) these serial entrepreneurs detected their new businesses were not always observed by them.

When considering the number of previously opened ventures, it was also interesting to notice the differences these entrepreneurs displayed in terms of business detection justifications. In fact, entrepreneurs who had created 2 to 5 businesses had mainly done so due to their need and will to experiment new things and add value to what already existed in the market. Entrepreneurs with 6 to 9 ventures in their entrepreneurial path stated to have found most of them by chance or luck, and those who had already created 10 to 15 businesses stated that these opportunities were pursued because of the challenge they represented for them. Finally, entrepreneurs with more than 15 businesses expressed their tendency to detect them through the assets their life experience had provided them with.

### **4.2.3 Consideration of Alternatives**

Thirteen interviewees referred to this aspect, and ten of them revealed that they always considered the different alternatives to each specific business (76.93%). These ten interviewees presented a set of different reasons for this, however: whereas two of them (correspondent to 14.29 % of the total 14 interviewees) found it relevant to consider alternatives to make sure that they were investing in a venture that offered something different from its competitors, one other (7.14%) considered that this attitude was crucial for him to be aware of possible business course alterations, and another one (7.14%) believed that aspects like potential return of investment, required time and investment, personal ability to be successful and risk had to be considered regarding each available business alternative. A big percentage of interviewees (42.86%), however, did not elaborate on the reasons why they considered different alternatives before starting new businesses.

The three subjects who revealed that they did not consider the existing alternatives to each venture they decided to engage themselves in, who constituted 21.43% of all interviewees, presented some reasons for their behaviour as well. In fact, one of them supported that he did not consider alternatives because that line of business were the only thing he knew how to work with, and a second one based his behaviour on the consideration

that, if he invested the required time to consider the alternatives, he could lose valuable business opportunities. The final one supported that to consider existing alternatives was “*an investor’s perspective, not an entrepreneur’s one*”, as entrepreneurs “*create businesses they believe in*”. In this entrepreneur’s opinion, entrepreneurs simply do not consider different options because they only focus their attention on businesses they believe in.

#### **4.2.4 Required Amount of Time to Decide**

When asked whether the interviewees considered they required much time to make their decisions, a very large percentage of them (85.71%, which corresponds to 12 interviewees) was quite assertive in answering that they did not. However, the remaining 14.29% (two interviewees) also did not say that they required a long time to make their decisions (in fact, not one of the interviewees expressed that opinion). Instead, they supported that those decisions did not take them any time at all, as they “*always had the following business in mind*” (subject A) and that their decisions “*were immediate*” whenever new business opportunities appeared (subject B).

Many interviewees supported that decisions could not take too long to be made, as “*when it is time to move forward, one has to decide immediately*” and that to take too much time to decide “*is a flaw of non-entrepreneurs. It is the quality of people who perform great project analysis, but who never open any ventures, because they are always waiting for the next study, the next simulation and the next scenery which will allow them to justify what has no justification*” (subject C). In the same line, subject L supported that “*if we think too much about the opportunities we are presented with we may end up losing them*” and that “*when we are too analytical, we lose our momentum*”.

Some examples on the interviewees’ positions are subsequently presented. Subject J, for instance, is clear to state that “*when I don’t decide immediately, it’s because I’m not really that interested*”. Subject I decided to engage on his last venture on a night out with his friends, over drinks, and subject K confessed that “*from the moment I had my first lunch with my future partner, my decision became clear in my head*”. Even though subject G also stated not to take too long to decide, he reported that the time it took him

to decide depended on the area of business he was getting involved with - engineering projects, for instance, would require much more planning and consideration, due to the specificities of the field. Finally, subject L attributed the ability of developing and growing as an entrepreneur to the capability of making those decisions quickly.

#### **4.2.5 Doubts over the Decision**

The aspect of whether the entrepreneurs had doubts over their decisions of starting new businesses also revealed great homogeneity among the interviewees. In fact, eleven out of the twelve interviewees who focused on that issue revealed having no doubts concerning their decisions (91.67% of respondents, corresponding to 78.57% of the total interviewees). These entrepreneurs presented different reasons for this, even though many of them did not offer any explanations on the subject: subject C, for instance, supported that he had no doubts once he realised that his future partners were also certain of that project; subjects I and E were clear and determined to say they had no doubts whatsoever; and subjects D, H and N supported that doubts sometimes came to them, but only after their decisions were made and implemented. Subject H said: *“the first few months are always complicated... And when we have sleepless nights over businesses difficulties, we wonder “why the hell did I get into this?””*. Subject D supports: *“doubts only appear during the business itself. Only then do we question ourselves whether we should have done things differently, and hire that person, and not hire the other one, and if we spent too much...”*. Subject N stated: *“Doubts I only have today, but I get over them quickly... one or two nights at the most”*.

The only interviewee who revealed that sometimes his decisions caused him to have doubts supported that having doubts was both the advantage and the disadvantage of experience, which he believed not to be as paramount as it is often considered. In his opinion, *“experience is not everything... I think it’s not, as it sometimes makes us lose that impetus we had when we were younger. Before it was much more instinct and willpower, and I think things worked regardless of experience precisely because of that”*.

#### **4.2.6 Difficulties to Decide**

The inquired entrepreneurs' opinions were also very homogenous when it came to clarifying whether they found deciding on creating new ventures to be difficult or not. In fact, 12 out of the 14 interviewees (85.71%) considered that these decisions were easy to make. Only one entrepreneur elaborated on the answer, stating that the decision was not difficult as it was merely the reflection of a process that was coming to its end (subject D). All the other entrepreneurs simply stated that entrepreneurial decisions were easy to make, adding no considerations to their answer.

On the other side of the spectrum, only two of the 14 interviewees (14.29%) considered these decisions to be hard to make, mainly due to conflicting emotions of letting go of good things, even when they intended to pursue better ones. Illustrating this, subject A stated that *“there are some things that make us linger in businesses we have to close, while others are pushing us in other directions. It is a bit like relationships, you know? It is hard to abandon that relationship, because we have a past, and it wasn't all bad, and we worked hard on it... But then there is something else there, that we really want to do, and we need to change”*.

The fact that these decisions are solitary, that there are no certainties concerning their accuracy and the increasing awareness of the difficulties that are inherent to business creation were also factors these subjects pointed out. Subject G, who also considered these decisions to be difficult to make, leaned on the economic conditions and current circumstances to justify his answer. In his opinion, it was surprising to see how so many new businesses opened every day, when considering today's economic environment. This entrepreneur's main concern was that people were opening new businesses in an attempt to escape unemployment, with sometimes tragic consequences.

#### **4.2.7 Skills Self-Evaluation**

The interviewees were asked whether they considered their skills and competencies to be sufficient to have an entrepreneurial career, and their responses were also quite varied



in this context. In fact, nine interviewees (64.29%) believed that their skills were enough to pursue entrepreneurial careers, whereas two (14.29%) considered that their skills were not sufficient for doing so. The remaining three interviewees (21.43%) admitted not to know, as that issue had never come to their minds. Regarding this aspect, subject F stated: *“I never thought about that... Things just happened, I never stopped to consider whether I had the required skills to do this... It just happened!”*. Subject A, who also shared this perspective, admitted never to have thought about that, because if he had, he would not have initiated an entrepreneurial career. *“If I had done a SWOT analysis at that moment, I would have done nothing like this. Because it is much more like a dream and a deep inner will, it is a much more emotional than rational thing. If I had questioned myself about that then, I would have just stood still”*.

Two of the interviewees who considered they had the required skills to pursue an entrepreneurial career and one who believed not to have them also considered this issue to be unimportant. Subject E, who believed not to have the required competencies to be a serial entrepreneur, stated: *“I believe in myself and in my capabilities... And above all I only have to commit myself to what I am doing to accomplish my objectives”*.

In fact, a total of six entrepreneurs (42.86%), regardless of their considerations on having or not having sufficient skills to become entrepreneurs, considered this aspect to be of secondary importance. In fact, four of these six entrepreneurs (28.57%) considered that believing in their own capabilities was the most relevant aspect pertaining this issue. Two of these entrepreneurs (14.29%) believed that these competencies, when not enough, could be developed through formal teaching (in universities, for example, *“because that is where you learn”* (subject C)), and one other believed that these competencies were acquired through entrepreneurial experience. One of these six interviewees who admitted not to consider the skills aspect relevant firmly believed that, as he had been successful throughout his entrepreneurial career, that surely meant he had the required skills to lead an entrepreneurial career. In his words, *“if you want me to tell you, I don’t know if I have the required skills even today. But things have been turning out O.K., so I assume I have them. So far that has never been important to me”*.

#### 4.2.8 External Resources Usage

This research considers an ‘external resource’ to be any kind of support or instrument that the entrepreneurs resort to outside their own capabilities and skills. Some possible examples of physical and human external resources (namely business plans or market studies and significant others’ advices, respectively) were provided to the interviewees, to clarify the aim of the corresponding question.

The interviewees’ responses on this matter varied according to the following: whilst 10 out of the 14 interviewees (71.43%) declared to resort to external resources to support their decisions, the remaining four interviewees (28.57%) stated that they did not. Reasons and justifications for both behaviours will follow.

Within the group of 10 entrepreneurs who declared to resort to external elements to substantiate their decisions, two of them (14.29% of the total pool of interviewees) used both types of external resources (physical and human), three (21.43%) resorted only to physical instruments and five (35.71%) leaned on other people’s advice (mainly their spouses and close relatives) to help them decide.

Moreover, despite declaring to use external resources as a means to instruct their decisions, four entrepreneurs (28.57%) considered these instruments not to be all that relevant in their decisions. In fact, external resources were used by these entrepreneurs only to provide them with some factual support to decisions that were already made and/or to corroborate previous opinions on the specific businesses. One of these four interviewees even stated that, even if these instruments advised against firm opening, that would not change his decision, and only one other considered that these external resources constituted better guarantees of business success. In this context, subject J stated: *“Yes, I want to see all of that [referring to physical instruments], but the basis of it all is this: we either believe in the business, or we do not”*. The same subject continues: *“I either like the business, or I don’t. Or I don’t feel like it... These things... These things are always about feelings”*. In this aspect, subject L, who also resorted to external physical instruments to back his decisions, said that *“Market studies only work backwards. They never look forward, because economy and life are not always the same. No matter how much data*

*you have, there is always this going into the unknown. Technical aspects are used only to help us support or dismiss businesses”. In the same line of thought, subject K stated that “more than any study, it was the feeling that this business could become something, that it could be a possible path”. Subject K also supported: “we can’t base our decisions in studies which only exist on paper.. There has to be some feeling! There has to be some risk! No risk, no gain!”.*

The group of four interviewees who declared not to use outside physical or human resources to support their decisions, which corresponds, as we have seen before, to 28.57% of the total pool of interviewees, presented several explanations for their behaviour as well. In fact, three of them (21.43%) declared that they did not need to resort to these external instruments because they trusted their emotions and perceptions on the business opportunities they came across. Referring to this aspect, subject B supported that *“If you don’t believe it can be done, it’s pointless”*. Subject I stated that his impulses were all he needed, and subject A believed that outside instruments *“do not reveal market opportunities, those things are not written anywhere”*, and as such he considered that they provided no guarantees that its conclusions were accurate. In his opinion, external resources did not offer any advantages for starting businesses, on the contrary: they implied costs that businesses at the moment of their creation could not afford.

Subject D provided two alternative explanations for his lack of need to resort to external instruments: in his perspective, opening and closing businesses were strictly individual processes (*“sometimes even selfish”*) and resorting to external instruments to help on decision-making would mainly depend on the investment to be made (*“if they were larger investments, I don’t know, over 500.000€, for example, I would have to ask someone for money, and that would probably imply a business plan. We are no longer in the Portuguese Discoveries period, when Portugal’s greatest business contract was made without a business plan”*).

## 4.2.9 Relevance of Risk and Uncertainty

This issue was addressed in two different aspects: one that concerned the entrepreneurs' attitudes towards risk and uncertainty, and another which referred to their entrepreneurial careers and on whether those perceptions and attitudes towards risk had changed or evolved over time.

Pertaining the interviewees' attitudes towards risk and uncertainty, three main groups of opinions were extracted from their answers. In fact, three entrepreneurs (21.43%) found risk and uncertainty to be an appealing aspect of being an entrepreneur, whereas two (14.29%) found them to be a repellent feature they had to deal with. The remaining nine entrepreneurs (64.29%) revealed that risk and uncertainty were irrelevant factors for them when it came to decide on opening new ventures.

The three entrepreneurs who considered risk to be attractive also shared a common inclination towards starting new businesses that contributed to their personal and professional fulfillment and well-being, whereas the two entrepreneurs who declared risk to be repulsive both supported that they detected new businesses due to the insights they retrieved from their life experience.

Among the entrepreneurs who declared to face uncertainty and risk with indifference, four of them (who correspond to 28.57% of all respondents) supported that taking risks was unavoidable when one pursued an entrepreneurial career, which was why they must not be a major concern. Subject I supported that *"we had to take risks if we wanted to be known in the market"*, and subject K stated that risk and uncertainty *"meant absolutely nothing for me at that moment. Sometimes in life we have to make decisions, I would say, without much rationality. When you see that that is the way, you move forward"*.

Within the same group, three other entrepreneurs (21.43%) emphasised the need to believe that their new ventures would be successful. Subject A, for example, supported that *"we have to believe that things will turn out ok, and to glue an image in our minds of it going well"*. All the other perspectives on risk and uncertainty were supported by one entrepreneur each (which means that each corresponds to 7.14% of all answers), and

they contemplated the need to be ready to face adversities and to make all the efforts for the business to thrive (subject A), the fact that risk and uncertainty were irrelevant if the entrepreneur in question (subject C) did not end up losing the money he needs to survive on that business, the idea that real risk would only exist if the entrepreneur just remained where he was, not venturing himself on consecutive businesses (subject D), the thought that risk was irrelevant just as long as one continued to learn from experience (subject E) and finally the prospect that entrepreneurs should seek to derive pleasure from what they were doing, irrespective of the risk or uncertainty that venture might constitute (subject G).

Four entrepreneurs (among which one who regarded risk and uncertainty as a negative factor and three who considered risk to be irrelevant), corresponding to 28.57% of the interviewees, mentioned the aspect of honouring their compromises with staff, sponsors and suppliers to be quite relevant in terms of risk perception. In fact, even when they discarded risk and uncertainty's relevance, the necessity to live up to those obligations was an important factor to be considered.

Pertaining to their general opinions on risk and uncertainty, two entrepreneurs offered interesting ideas. Subject F, for instance, defended that the ability to take risks was what ultimately defined an entrepreneur, as *“it's not about intelligence, it's not about work capacity; it's about risk, the ability to assume risks. That's the most fundamental element”*. He also supported that entrepreneurs only risked more because they expected to gain more from that, as what entrepreneurs *“have is a much steeper risk-income curve”*. Subject H, on the other hand, was convinced that entrepreneurs tended to create broader businesses in order to fight risk and uncertainty.

Eight of the 14 interviewees (57.14%) referred to the issue of the possible changes that their perspectives on risk and uncertainty could have suffered due to their entrepreneurial careers' evolution. Among these, six entrepreneurs (correspondent to 42.86% of all interviewees) assumed that they tended to risk more in their business creation decisions when they were younger and more inexperienced, and only two (14.29%) assumed to risk increasingly more as their entrepreneurial careers evolved.

Among the entrepreneurs who declared to risk more at the beginning of their entrepreneurial careers, two of them (14.29%) supported that they became more aware of the existence of risk as their careers evolved, and two other (14.29%) emphasised that they were more prepared to handle risk as they became more experienced. One entrepreneur mentioned that he was *“much more rational in risk evaluation today, and that has to do with my mental sanity and my personal well-being”* (subject G).

#### **4.2.10 Relevance of Emotions and Instincts**

The relevance these entrepreneurs attributed to their emotions and instincts was naturally one fundamental part of this research. In fact, all of the 14 interviewees considered emotions and feelings to be very important in their decision-making towards the creation of new ventures. Five of them (35.71%) stated that emotions and feelings were the most relevant elements in their decision-making, as they were the trigger for decisions to be made. Subject L illustrated: *“emotions are still the main decisive factor. The fact that you like the business... Even if the numbers [that come out of market studies] are outstanding, if a ‘click’ doesn’t happen, if you don’t fall in love with the business, nothing will happen”*. He continued: *“everything can be right and we will not advance, or everything may be wrong and we go ahead with it anyway. The final decision is emotional, absolutely emotional”*.

The interviewees expressed their considerations on the relevance of emotions and instincts in very interesting ways. Subject G, for instance, stated that he did not possess *“the coldness to separate the emotional from the rational: there’s an element of seduction that projects have that’s probably more relevant to me than it should be”*. Subject D emphasised that *“emotions and instincts are extremely important”*, and subject J supported that *“they’re important... most of all, if I don’t feel right about them, I won’t get in for sure”*.

Two of the interviewees (14.29%) stated that emotions were always present, and could not be ignored: subject H, who considered himself to be ultimately rational (as will be presented in the next point), was clear to say that *“there’s always that gut feeling that tells you if something will work out. You know you’re creating some kind of magic there,*

*that there's some magic behind it all, and that instinct acts every day. Sometimes it does not matter if you're going to make a lot of money with it or not, there are other equally important things". Subject C supports that "it's a matter of passion...so it's always there".*

Two other entrepreneurs (14.29%) admitted that final decisions were not related to the project itself. *"When you have to decide whether to go ahead with the project, it's yes or no, go or no go, it has nothing to do with the project. It's always a bit of madness", subject C supported. In the same line, subject J stated that "in these things there are always some feelings. Because after all the analysis we make, there is always a gut feeling, and we either go or we don't. Sometimes we crash".*

Despite the fact that all these entrepreneurs, one way or the other, ended up admitting to the relevance of intuitions and emotions on their decision-making moments, half of the interviewees hesitated before addressing this issue. In fact, seven of them (50%), who in some cases displayed clear tendencies towards intuitive aspects throughout their discourses, apparently found it difficult to admit to the relevance of intuition in their entrepreneurial decisions. For instance, when inquired about these aspects, subject J replied *"Well, I think... I think it's big [their relevance]. Well, if I have negative feelings towards it, I won't enter it for sure... If I start to think too much... If I start to feel my body twitching all over, man... it's because... it's because... well, it's because something is missing, even if I have all the information I need".*

One interviewee, focusing not specifically on the decision-making process, but on the prosecution of the business itself, revealed that emotions were also fundamental to make entrepreneurs remain attached to their current businesses. *"It's important for us to continue to fight. Even if we make it to the end of the day and see that we made zero profit, but still we created job posts and prevented people from going to unemployment... that's pure pleasure".*

#### 4.2.11 Self-Perceptions on Rationality and Intuition

When inquired about whether they considered themselves to be eminently rational or emotional when it came to making entrepreneurial decisions, seven interviewees (50%) revealed that they were eminently rational in their decision-making processes, six (42.86%) considered themselves to be eminently emotional, and one (7.14%) regarded himself as being “*in the middle*”, giving rationality and intuition the same relevance in his decisions. Once again, several entrepreneurs gave more than one explanation to their considerations, which explains the following results.

Within the group of entrepreneurs who believed to be eminently rational, we found the two female entrepreneurs, 80% of the interviewees who have maintained their entrepreneurial careers within only one business area and 80% of the interviewees with 9 businesses or less. The most conveyed reason for them to consider themselves as such was believing that reason balanced their emotions, and it was advanced by three entrepreneurs (21.43%). Subject J, for instance, supported that “*I’m very rational when it comes to investing in new businesses, even though I have very little patience for silliness and waste of time*”, and that he did not “*get involved in any business only because emotionally I feel “oh, this is awesome”... I have to have good feelings about it, no doubt, but only emotion is not enough*”. Subject M stated that “*we have to control our instincts and emotions and be practical. We have to be rational and our emotions and instincts have to be weighted, otherwise it can be a disaster*”.

Secondly, the interviewees explained that they considered themselves to be eminently rational because their decisions were always supported on concrete facts, and not on emotions (14.29%), and that their first concern when deciding on opening new ventures was to perform cost-benefit analysis on the potential outcomes of their businesses (14.29%). This latter explanation was solely provided by the two female interviewees.

Two other interviewees within this group of fundamentally rational decision makers, correspondent to 14.29% of all the answers, stated that “*we can’t say that it’s all emotion, can we? There has to be a lot of work... Probably 95% of it all is work. But the rest... I don’t know... I don’t think we can say that it’s all emotion*” (subject E). Frequent signs of



hesitation were present in the interviewees' discourses, and possible explanations for their meaning will be subsequently discussed. One entrepreneur (7.14%) believed that emotions were mainly secondary, and that they were only considered after the rational aspects were studied, and one other (also corresponding to 7.14% of the total answers) supported that he was mainly rational in his decision-making because he had bills to pay and commitments he needed to correspond to.

These seven interviewees who declared to be fundamentally rational in their decision-making revealed other common tendencies among themselves. In fact, all of them assumed to be quick when it came to making decisions, six (85.71%, correspondent to 42.86% of all responses) reported never to have had any doubts or difficulties when it came to making entrepreneurial decisions (one of these entrepreneurs actually stated, at some point, that he *"had no doubts, or even time to consider them. Only after do we question whether we should have done things this way, hire other people..."*), five (71.43%, correspondent to 35.71% of all the interviewees) supported that risk and uncertainty were irrelevant when it came to decide whether to open new ventures or not, three (42.86%, correspondent to 21.43% of all responses) did not explore existing alternatives to business opportunities they detected and two (28.57%, correspondent to 14.29% of the interviewees) did not resort to external resources of any kind to help them decide.

Among the six entrepreneurs who considered themselves to be fundamentally emotional in their decision-making processes, two entrepreneurs, representing 14.29% of all answers, supported that perceptions and emotions were what really mattered, and that there was no need to rationalise them. Subject F, for instance, said that *"the difference between rational and emotional entrepreneurs is this: the first almost make formulas, look at them and decide whether to get involved with the business or not. Emotional ones realise that opportunities are there, close their eyes, and just decide. I'm more like that"*.

The oldest interviewee, all the interviewees with 10 businesses or more, all the entrepreneurs who have devoted themselves to at least one activity in the human training and development area and 75% of those who have developed at least one business in the computers and technology area integrate the group of entrepreneurs self-classified as

eminently emotional.

Two entrepreneurs from this group (14.29%) supported that, regardless of their tendency to follow their instincts, some things had to be rationalised and “*considered in a more structured way*” (subject A). Two other interviewees (14.29%) manifested a firm belief believed that, despite what they might say, rational entrepreneurs simply did not exist. Subject C elaborated on this: “*They say that they are rational, but they’re not. All entrepreneurs are eminently emotional, even the so-called rational. I’ll say it again: what makes you click and decide to open any business is emotion. That click that makes you decide to move forward has no underlying rationality of any kind. Anyone who opens any business is crazy*”.

Finally, subject A assumed two other perspectives (which correspond to 7.14% of opinions each) on why he considered himself to be mainly emotional: he supported that there were not enough concrete elements upon which to make those decisions when it was time to decide, and that if he were more rational he would not have begun an entrepreneurial career.

The entrepreneur who considered himself to be 50% emotional and 50% rational supported his consideration on the notion that he needed to “*control his madness*”, as rationality must balance intuition (similarly to what have supported three of the self-perceived rational entrepreneurs). In his words, “*we feel things, don’t we? What happens is that we are often afraid to move forward. As such, the rational aspects come into action to help us to evaluate whether the opportunities are good or not*”. However, this entrepreneur also believed that this same rationality could end up retracting people’s decisions: “*the problem is that, if we keep on evaluating things permanently, we will end up doing nothing*”.

Other considerations emerged from this question’s analysis. In fact, three entrepreneurs (out of the total 14, corresponding to 21.43% of the interviewees’ opinions) supported that emotion and reason were two non-separable realities, “*two faces of the same coin*” (subject D), as “*one can’t exist without the other*” (subject G). Two entrepreneurs (14.29%) underlined the rational basis that they believed that emotions rest upon, focusing on the nature of emotions and instincts, which “*are not a consequence of inspiration, but rather a*

*consequence of experience, of actual events that passed and left information and knowledge behind” (subject M). Concerning this aspect, subject F believed that “instinct is like a sixth sense. It results from rational things, which I cannot rationalise. In a way, instinct is the weighted average of all the rational factors I possess”.*

Two other interesting contributions were made by different entrepreneurs, each of them representing 7.14% of the total opinions. One of the interviewees believed that whether one considered himself to be eminently rational or emotional in his decision-making process depended on the their academic background area. This entrepreneur offered the example of engineers, who he believed to be fundamentally rational entrepreneurs, as they based their decisions on *“much planning, investment and the financial aspects”*. The other relevant contribution concerned the existence of an entrepreneurial instinct, which, in the interviewee’s words, *“can be studied, taught, worked on and developed... but it won’t be learned through market studies or business plans”*.

#### **4.2.12 Being an entrepreneur**

Several interesting elements arose from this investigation, and even though they did not belong to any particular category within the previously explored set, they were altogether too relevant to neglect or dismiss from this project. Despite not directly connected to the core objectives of this investigation, these elements revealed fundamental aspects of these serial entrepreneurs’ visions of themselves, their activity and their contribution to society’s development.

Four of the 14 interviewees (28.57%), for instance, had left well-paid regular jobs to devote themselves to an entrepreneurial career that they had no experience whatsoever in - among them, we could find the two entrepreneurs aged 35 or less and all the interviewees with a Masters or a MBA degree. Subject B, for instance, gave up on a university teaching career, which he could at the time balance with his entrepreneurial career, but which he chose not to follow it as he would *“divide his focus”*.

Three serial entrepreneurs (21.43%) were very clear to state that not everyone could become an entrepreneur, contrary to what they believed to be the current propaganda around entrepreneurship and business creation. Subject H, for instance, colourfully supported that *“the current entrepreneurship wave in Portugal is a very bad thing. It’s a trend, the entrepreneur is like the surfer: he is the cool guy who has the surfboard (or the company) in high-school”*. However, they all agreed that this ‘being-an-entrepreneur’ current fashion clouded people’s notion of risk, *“which is fundamental for people to be rigorous and critic during the project planning phase. Nowadays everything seems easy, everyone can create a new company, everyone can create a new app, and that is annulling people’s perception of risk, which can be disastrous”* (subject H).

Two interviewees (14.29%) also mentioned the aspect of being entrepreneurs more than they were managers - that is, that they preferred to create new businesses than to manage them once they were stable in the market, *“because if we are focusing on everyday management affairs, we cannot devote ourselves to more disruptive activities of creation and innovation”* (subject H).

Two other interviewees (also correspondent to 14.29% of all responses) focused on the reasons why they were unsuccessful in previous businesses, attributing that lack of success to their overconfidence issues. Subject M said that *“past successes are not a guarantee of future success, it’s not because all went well in the past that it will go on like that in the future”*, and subject M reinforced that *“it’s a mistake, because we think that once we are successful in one business, we’ll be successful in them all: that is a lie. Businesses imply time and devotion, and when we don’t give them to them... they fail”*. The same subjects also expressed their conviction that lack of success is a better teacher than success itself: *“good things are nothing else than what we were expecting; bad things make us think “where have I failed?””* (subject J).

One interviewee expressed some concern over his belief that businesses nowadays are being opened for the wrong reasons. *“People are trying to find alternatives to unemployment, and that’s not a good sign (...) what matters is that it is a conscious decision, and not a decision based on current difficulties and needs”* (subject G). Another entrepreneur

focused on the aspect that being an entrepreneur makes people less desirable for wage employment, as *“one becomes desirable only for general management positions”*. As such, he believes that *“it’s important to realise that being an entrepreneur separates you from the traditional employment market”*.

Finally, one last entrepreneur offered his perspective on what should an entrepreneur be, supporting that entrepreneurs should only be considered as such when they are serial. In his words, entrepreneurs are those who *“create, expand, sell and start other businesses”*, and not those who *“start a single company and keep it until the end”*.

# Chapter 5

## Discussion

In this chapter the previously presented results will be discussed. In addition, the research questions will be subject to debate according to the investigation findings.

The emotional connection to current and previous businesses revealed itself to be a subject of minor relevance for our sample of serial entrepreneurs, as it was seldom mentioned throughout the interviewees' speeches. These entrepreneurs kept their businesses for very variable amounts of time, and a large percentage of them (42.86%, as shown above) demonstrated notorious indifference regarding their previous businesses duration. In fact, two interviewees (corresponding to 14.29% of all interviewed entrepreneurs) did not even know exactly how many ventures they had already had. Not having that information in mind (which is more comprehensible when entrepreneurs have long entrepreneurial careers, which was not always the case) may be due to several factors: it may indeed reveal a certain lack of emotional connection to their businesses or simply signify that these entrepreneurs live in the present, without much regard for nostalgia or what is left behind (Zinchenko, 2012). This somewhat unpredictable yet notorious detachment from the number and duration of their previous businesses revealed by such a considerable portion of interviewees represents an interesting aspect to bear in mind.

What is nevertheless relevant is that this detachment was not common to all categories of entrepreneurs. In fact, those who had maintained their business creation within a single business area showed deeper signs of (emotional?) connection to their businesses, as

they endeavoured in them much longer (5.66 years per business in average, which is considerably higher than the average 3.66 years of all entrepreneurs) and knew exactly how much time they had maintained each business. It was also interesting to notice that these entrepreneurs who had never left their business areas of choice were the ones who had the lowest number of ventures in their trajectories, as none of them had had more than three ventures since the beginning of their entrepreneurial careers.

When referring to the detection of new business opportunities by our interviewees, it was possible to ascertain the high percentage of individuals who favoured starting new businesses with the intent of making a difference to what the market already possessed (50% of the interviewees) and who engaged in new ventures as a means to seeking their personal fulfillment (42.86%), which emphasised both rational and emotional aspects of new venture creation. It was also very interesting to the researcher to realise that many interviewees focused on "why" they had opened their new businesses, emphasising motivational aspects of opening new ventures - this tendency was clear with the two female entrepreneurs, for instance -, rather than on "how" they detected new business opportunities, which was the question at hand. This may signify that these serial entrepreneurs disregard these theoretical differences when it comes to opening new businesses, often creating new ventures that they find important to their personal well-being and development, and not necessarily engaging in previously existent businesses which could be objectively detected.

When trying to establish a connection between business detection methods and justifications and the entrepreneurs' age, it became clear that new businesses detection evolved from the desire to experiment new things (within the younger entrepreneurs) to the need to be personal and professionally fulfilled by those businesses (within the subsequent age segment) and to business detection by accident, luck or other people's proposals (in the next age segment). Interestingly, only one entrepreneur (the oldest) focused on the potential economic revenue that new businesses could signify, which may reveal a pattern that evolves from eminently emotional aspects of business detection (like the desire to try new things and to be fulfilled by them, among the younger entrepreneurs) to more rational ones (like the expected economic outcomes). Once again, these aspects cannot be generalised for all serial entrepreneurs, but they were an interesting aspect that arose from this research.

The fact that the oldest entrepreneur was the only one who raised the issue of potential economic revenue as what caught his attention in new businesses detection was quite curious to notice. Such a low incidence on potential revenue as being critical to new business detection and involvement by these entrepreneurs was somewhat unexpected, and it reveals that strict economic aspects are not the main factor for these entrepreneurs when they decide to venture themselves in new businesses. In fact, and as was observed, emotions play a substantial role in this matter, which is in line with what Mellers et al. (1999), Baron (2008), Townsend et al. (2010), Welpe, Spörrle, Grichnik, Michl, and Audretsch (2012) and Podoynitsyna et al. (2012) support, and our interviewee's considerations may represent a strong inclination towards the prevalence of emotions over pure economic rationality when it comes to detecting new businesses.

When it came to express whether these serial entrepreneurs evaluated or considered different alternatives to the businesses they detected and intended to get involved with, a very expressive part of them (ten interviewees, correspondent to 71.43% of all responses) revealed that they did consider existing alternatives prior to starting new businesses, for several reasons. The fact that so many of the interviewed entrepreneurs reveal this tendency to consider the available alternatives, paying attention to what is likely (or predictable) to happen with each one, indicates that the representativeness heuristic, in its element of insensitivity to predictability, may not be present in this aspect of the interviewees' speeches. As we have seen before, insensitivity to predictability implies that decision makers do not even consider the existence of alternatives, or, if they do, they disregard them, maintaining their preference over others which could offer better chances of success (Kort & Vermeulen, 2008). The reasons these entrepreneurs offered to support their behaviour of considering different alternatives were mainly rational as well (making sure their products or services were different from their competitor's, for instance), which reveals a tendency to rational decision-making in this aspect.

What nevertheless is pertinent here is the fact that 60% of the entrepreneurs who assumed to consider different alternatives did not present any reasons for their attitude. This lack of justification for their behaviour may signify that these entrepreneurs simply



believe this is the normal way of acting (which would therefore not require any further clarifications) or the correct answer to give to such a question, which raises questions on whether they really do consider business alternatives or they just believe they should answer in this manner. It is also relevant to state that this study did not directly inquire on the specific alternatives each of the entrepreneurs considered, as that was not its main scope, and that entrepreneurs did not elaborate on that.

One other interesting aspect arose pertaining this subject: one entrepreneur, who affirmed not to consider alternatives to businesses he detected, considered that evaluating different alternatives to a specific business was “*an investor’s perspective, not an entrepreneur’s one*”, because, in his opinion, entrepreneurs only created ventures “*they believe in*”. This justification raises relevant questions on the differences between investors and entrepreneurs, and on their perceptions of what constitutes each other’s activity or characteristic behaviour. This specific entrepreneur supported that different options were not considered by entrepreneurs because their main reason to start new businesses was their belief in them. This entrepreneur’s perspective on how entrepreneurs decide to embark in new ventures shows a clear tendency for emotional thinking over strictly rational thinking, in line with what has been previously shown. Interestingly enough, and despite of all of the above, this entrepreneur assumed to be eminently rational, simply justifying his position with “*we can’t say it’s all emotion, can we?*”.

The large percentage of interviewees (85.71%) who assumed to need a very limited amount of time in order to make their decisions on opening new ventures can be a strong indicator of overconfidence, mainly as an overestimation of one’s own knowledge (Kort & Vermeulen, 2008). These entrepreneurs also display numerous examples of intuitive elements in their discourses on the matter as well: one of the interviewees was clear to admit that, if his decision was not immediate, that meant he was not interested. This quickness in decision-making is not consistent with the evaluation of possible alternatives or with rational decision-making processes, which, as we have seen before, imply certain lengths of time and some effort, as they are governed by rational rules (Kahneman, 2003).

It was interesting to notice that ten interviewees who considered themselves to be very quick in making their entrepreneurial decisions also stated to consider the possible alternatives they had to the businesses they created. This reveals some inconsistency, as other opportunities' evaluation would tend to be a somewhat lengthy process. One entrepreneur considered that requiring significant lengths of time to decide whether to open new ventures is a "*flaw of a non-entrepreneur*", as he believed that people who lingered on their decisions pertaining new businesses' opening ended up never engaging in any new ventures. This raises interesting considerations on what this specific entrepreneur understands to be the characteristic entrepreneurial behaviour.

Similarly, the fact that so many of the interviewees revealed a clear lack of self-doubt over their decision-making abilities and competencies, which can be associated with the previous aspect, may also represent a strong indicator of overconfidence, on both of its dimensions - optimistic overconfidence and overestimation of one's own knowledge (Kort & Vermeulen, 2008; Townsend et al., 2010), specifically when considering the present uncertain economic scenarios they face (Townsend et al., 2010). Overconfidence may in fact play an extremely relevant part here, as these decisions to enter into new ventures, which will have relevant effects in the entrepreneurs' lives, are often founded on the perceptions of their own knowledge about the business and its consequences (Hayward et al., 2010; Fast, Sivanathan, Mayer, & Galinsky, 2012). A perfect example of this overconfidence is given to us by the entrepreneur who, while supporting that he doesn't not waste much time considering whether he has the necessary skills or not, simply assumes he has them because he has had many successful businesses throughout his career.

When 42.86% of the interviewees reveal a certain carelessness over the importance of having entrepreneurial skills to initiate such a career, and some of them even admit never to have thought about this aspect, this constitutes a certain pattern that can be associated with emotional decision-making. In fact, Kahneman (2003) supports that intuitive thinking is fast, eminently charged with emotions and automatic, which could help to explain why these serial entrepreneurs need not to consider their skills to decide on entrepreneurial matters and not even suspect that they may have made bad decisions. One of the subjects interestingly illustrates this aspect when he supports that being an entrepreneur is a will

that comes from within, something much more emotional than rational. When analysed in a combined way, these two aspects (the lack of importance attributed to having the necessary skills to enter an entrepreneurial career and the confidence on their abilities to make the best decisions when it comes to starting new businesses) reveal a clear tendency towards Kahneman's (2003) system 1 decision-making process.

Consistently with the considerations we made about these serial entrepreneurs' perceptions on their entrepreneurial skills, the interviewees also clearly manifested that they do not have major doubts regarding their entrepreneurial decisions. In fact, only one entrepreneur revealed to have questions over his decisions on a regular basis. This aspect can reveal overconfidence as well, mainly in the overestimation of one's own knowledge perspective (Kort & Vermeulen, 2008; Hayward et al., 2010), as these entrepreneurs trust the decisions they make irrespectively of taking much time to decide or considering their skills to make such decisions, as seen above. The fact that these entrepreneurs sometimes have doubts over their decisions only after they have made them also indicates a tendency to make these decisions in an eminently emotional manner, only considering their eventual outcomes or risks after they are made (Zeelenberg et al., 2008).

When it came to evaluate the difficulties they experienced when deciding, a very large percentage of these entrepreneurs (85.71%) clearly affirmed not to experience difficulties when deciding to venture themselves into new ventures. It was interesting to verify that the one entrepreneur who revealed to have doubts over his decisions did not consider them difficult to make, which is somewhat of a contradiction. It is also intriguing to notice that the subjects who considered deciding on opening new businesses to be difficult were also the ones who did not answer the question on whether those decisions implied any doubts. The fact that they did not answer these questions, when seen in context of their respective interviews, can signify a certain discomfort in addressing such issues, which would be incompatible with the optimistic overconfidence element of the overconfidence bias (Kort & Vermeulen, 2008), if proven to be true.

In Kahneman's (2003) theoretical construction, the level of effort the decision-makers need to apply when engaging in specific mental processes is the most indicative aspect of

whether it is to be attributed to eminently intuitive mental processes or to more rational ones. When these entrepreneurs assume their tendency to consider decision-making at business creation level to be eminently easy and free of doubts, they tend to identify themselves with more intuitive thinking patterns, consistent with Kahneman's (2003) system 1.

By definition, entrepreneurs are subject to uncertain circumstances in the exercise of their activity, as they have no way of predicting whether their businesses will be successful or not (Tversky & Kahneman, 1974). If, considering their specific circumstances, they choose not to search for relevant and sufficient information, they may suffer from an overconfidence bias, which can result from their assumption that their judgments and opinions are better than they really are (Kort & Vermeulen, 2008). In our study, most of the interviewed entrepreneurs revealed that they did resort to external resources, as they considered them useful in their decision-making processes. These entrepreneurs' need to resort to outside information or external council before making their decisions is directly linked to their unlikelihood of resorting to the representativeness heuristic (Kort & Vermeulen, 2008), whereas the remaining four interviewees (28.57%) may suffer from it. These four entrepreneurs possess some other common characteristics which may help to support this assumption: in fact, three of them share a similar inclination towards opening businesses that create new products and make a difference to what already exists in the market, the same quickness, lack of doubts or difficulties regarding entrepreneurial decisions, and a notorious detachment from the inherent risks of creating new ventures. When seen combined, these aspects may reveal a clear tendency towards overconfidence, on one hand, and representativeness, on the other, as these entrepreneurs trust their own judgments even when they lack external elements to support them, demonstrating to have no doubts over their unsupported decisions (Kort & Vermeulen, 2008).

What was furthermore interesting to observe was that even the entrepreneurs who declared to use external resources (namely physical, as business plans or market studies), as they relied upon them as an auxiliary means to their decision-making, did not consider them the most important element of their decisions, often focusing on emotional aspects to justify them, which is in line with what Baron (2008) supports. In fact, these serial entrepreneurs even supported that, most of the times, their decisions were made prior to

those external resources ever being considered, and that they were mainly based on their inner feelings (as one entrepreneur said, “*we either believe in the business, or we don’t*”). This can be an indicator that these entrepreneurs, who (rationally) believe they require external elements to support their decisions, are nevertheless eminently emotional when it comes to actually making entrepreneurial decisions.

It is our belief that, even though literature supports that, by resorting to external resources, these entrepreneurs may reveal a tendency not to resort to the representativeness heuristic, they do in fact resort to it, as they fundamentally require external resources to make themselves believe that they are supporting their decisions on factual elements. However, the reality these entrepreneurs revealed was that these elements were not relevant for their decision-making, in the end, as emotional aspects played a bigger part on their decision than these rational ones. As we have seen in the previous chapter, some entrepreneurs clearly assumed that, even if all the external elements told them that a specific business was a viable and good choice, they would often not pursue it (and vice-versa).

As such, it is this researcher’s belief that the representativeness heuristic may be relevant for explaining these serial entrepreneurs’ behaviour, as they in fact do not to make use of more information to make their decisions than the one they already possess and they generalise their opinions based solely on their beliefs. This is supported by the law of small numbers present in the representativeness heuristic (Kort & Vermeulen, 2008). This attitude may also consubstantiate the presence of the overconfidence bias, as these serial entrepreneurs believe in their own judgments and opinions enough not to require (or in the end use, even when they resort to it) external assistance of any kind.

When inquired about the role that risk and uncertainty played when these entrepreneurs had to make decisions on founding new ventures, 64.29% of the interviewees stated that risk and uncertainty were an irrelevant factor when it came to making these entrepreneurial decisions, and one of them even supported that the ability to take risks was what truly distinguished entrepreneurs as such. This is consistent with the idea that entrepreneurs act out mainly in terms of their emotions and feelings towards new businesses (Podoyntsyna et al., 2012; Zeelenberg et al., 2008). Several entrepreneurs regard risk and uncertainty

as unavoidable and an inherent part of being an entrepreneur, whereas others focus on the relevance of honouring their compromises with staff and suppliers as the main risky element they have to deal with.

The lack of relevance attributed to these aspects makes us believe that these entrepreneurs possess high levels of overconfidence, which is in line with what literature supports (Hayward et al., 2010; Podoynitsyna et al., 2012). This overconfidence may however suffer some decrease over time, as a high percentage of entrepreneurs who referred to their personal perspective on risk and uncertainty's evolution (75%) revealed that they took greater risks when they were younger and less experienced.

One entrepreneur performs an interesting connection between his perspective on risk and uncertainty and the relevance that intuition has on his decision-making, which we believe to summarise this aspect perfectly. This interviewee decisively stated that risk and uncertainty "*meant absolutely nothing*" for him when it came to making entrepreneurial decisions, as "*sometimes in life we have to make decisions (...) without much rationality*". This lack of concern over the inherent risks that beginning new ventures entails is a clear sign that intuition and emotions represent an enormous part of this entrepreneur's decision-making. This result can in fact be extended to the majority of the interviewees, as 64.29% of them expressed the same disregard for these aspects. What can also be understood as an emotional element to decision-making is the entrepreneurs' belief that their businesses will be successful, even if they do not base their beliefs on reliable external information - in fact, all the entrepreneurs who manifest this belief state that they do not resort to external resources of any kind.

When it came to evaluate the relevance of instincts and emotions in their entrepreneurial decisions, the interviewees were homogeneous in stating that they were very important and ever present in them. A relevant number of these entrepreneurs supported that emotions and instincts were the most important aspect to their decisions, constituting the trigger that made them decide. Instincts were also mentioned to be relevant in maintaining the businesses, which can help support the idea (discussed in the beginning of this chapter) of the emotional connection these entrepreneurs have with their businesses.

The interviewees were also asked to classify themselves as eminently emotional or rational when it came to making entrepreneurial decisions, namely opening new ventures, and quite interesting aspects arose from that inquiry. In fact, it was curious to realise that a very high percentage (80%) of individuals with nine or less businesses considered themselves to be eminently rational, whereas all of the interviewees who declared to have had at least ten businesses throughout their entrepreneurial careers considered themselves to be fundamentally emotional. This has led us to question whether the relevance of emotions in entrepreneurial decisions increases as the entrepreneurial career evolves, which seems to be the case here. The fact that all the female entrepreneurs consider themselves fundamentally rational was also an interesting discovery, as it can signify that men and women may have different perspectives on their entrepreneurial careers, possibly due to social constraints and assumptions.

Several inconsistencies throughout the entrepreneurs' speeches when addressing this issue also raised peculiar and interesting aspects. For instance, all the interviewees who stated to consider risk and uncertainty irrelevant factors in their decision-making processes also declared to consider the existing business alternatives, which can in some way contradict their affirmed risk-seeking attitude. Moreover, the one interviewee who admitted to making entrepreneurial decisions of creating new ventures without much rationality and with absolute disregard for risk and uncertainty assumed himself to be eminently rational. Finally, one other entrepreneur, who also stated to be eminently rational, opened his last venture in order to prevent former employees from being dismissed, even though he had no knowledge of the business he was initiating. Supporting this assumption, it was interesting to notice that several entrepreneurs who considered themselves to be eminently rational did so as a reaction to the idea of being considered mainly intuitive.

As we have seen before, these aspects may signify that the interviewees mainly resort to more experiential/intuitive thinking processes (Epstein et al., 1996; Kahneman, 2003). In fact, some believe to be rational because their rationality overpowers their emotions, which makes this researcher understand that intuition is what first comes to their minds, but these entrepreneurs focus on rational elements to control the emotional ones. In our

opinion, this is a sign that emotions are what really drive these entrepreneurs in the first place, even if they afterwards need to control them with reason (which is in line with Kahneman, 2003). The entrepreneur who assumed to be 50% intuitive and 50% rational, for instance, has a mainly intuitive discourse, where his rationality limits his emotions, which is an interesting example of what was explained before.

Hesitations on the interviewees' discourses were also very impressive in making the researcher aware that some entrepreneurs' real beliefs and opinions were often different from the ones they actually expressed. When it came to openly address their opinions on emotions, intuitions and other nonrational aspects, we were left with the impression that most of the interviewees, while ending up admitting to their relevance, felt almost guilty about regarding them as relevant. It was often noticeable that the interviewees were uncomfortable addressing questions about their emotions and feelings towards their entrepreneurial careers, as they expressed their belief that they should be much more rational than they actually were.

The same can be said about the interviewees' self-classification as eminently rational or emotional, as many of them revealed clear difficulties when classifying themselves. Moreover, in some cases all the elements in the interviewees' discourses were clearly intuitive, but the interviewees somehow felt the need to state that they were eminently rational. This can be attributed to people's desire to answer some questions in a more socially acceptable way or to answer what they believe to be what the researcher wants or expects to hear, whilst their true opinions can in fact be different from the ones they expressed. In fact, society still demonstrates some preconceptions on what should entrepreneurs be and how they should act, and its tolerance for emotions in business environments is still much inferior than it should be (Lurie, 2004). What was interesting to notice, however, was that the opposite did not occur: none of the interviewees who declared to be eminently emotional in their decision-making hesitated on that classification or resorted to rational elements to explain their beliefs, which led the researcher to understand that once these entrepreneurs assume themselves as mainly emotional, the weight of what society would consider to be appropriate ceases to be relevant.



# Chapter 6

## Final Conclusions

### 6.1 Conclusions

Serial entrepreneurs' decision-making processes are complex and diverse, and this study aimed to shed some light over an issue that still has not been given thorough attention from literature on the field. It is our belief that it has fulfilled its objective, as it has established that serial entrepreneurs engage in entrepreneurial decision-making through eminently integrative thinking processes, such as the ones suggested by Epstein et al. (1996) and Kahneman (2003). In fact, notwithstanding the relevance these serial entrepreneurs attribute to their decisions' rational aspects (when, for instance, they declare to consider eventual alternatives to the businesses they detect or reveal their tendency to resort to external resources to support their opinions), it was made clear that their emotions play a fundamental and decisive role in their entrepreneurial decisions, which consubstantiates their resort to decision-making processes where rationality and intuition are both present.

The relevance (sometimes eventually unconscious) these entrepreneurs attribute to emotional aspects in their decision-making, the clear presence and prevalence of the overconfidence bias and the fundamental points of convergence in these entrepreneurs decision-making tendencies are collectively consubstantiated by aspects like the common lack of difficulties or self-doubt these entrepreneurs reveal regarding their entrepreneurial decisions and skills, their quickness in making such decisions, their detachment from the risk and uncertainty these new businesses entail and their own perspectives on the

relevance of emotions and feelings. The representativeness heuristic was not as notoriously ever-present, though relevant signs of its existence were provided when these entrepreneurs stated to rely on their own assumptions towards new businesses even when they have no external elements to sustain those decisions.

It is therefore our conclusion that serial entrepreneurs largely resort to the overconfidence bias, the representativeness heuristic and integrative decision-making processes, mainly emphasising emotional aspects over the rational, in line with what Epstein et al. (1996), Kahneman (2003) and Kort and Vermeulen (2008), among others, support. It is however our belief that, considering its relevance to the field, the subject of serial entrepreneurs' decision-making processes will still require further developments, as the next chapters will attempt to illustrate.

## **6.2 Study Limitations**

Despite our belief that this research will contribute positively to a greater understanding on serial entrepreneurs' decision-making processes, it could have benefited from a larger and more diverse sample of interviewees. If it had been possible to interview a sample of serial entrepreneurs with a wider range of age, gender, academic background and business areas, for instance, this study could have produced more thorough knowledge on the phenomena it was aiming to explore.

The previous aspect is connected to another relevant limitation we encountered: the sheer difficulty to detect serial entrepreneurs. The applied snowball method eventually came to a stop, but only after the researchers had interviewed entrepreneurs who were not serial, but rather portfolio or even novice entrepreneurs. This was partly due to the comprehensible lack of knowledge that some entrepreneurs who gracefully supplied further contacts had on other people's entrepreneurial careers (as sometimes it was not clear for them whether those entrepreneurs were serial or portfolio, as most of the times they had never heard about the theoretical differences between the two categories) and to the inexistence of a comprehensive nationwide database of entrepreneurs we could resort to.

The fact that interviews were the chosen method of research also constitutes a limitation of this work. In fact, as the interviewees are reporting experiences and feelings they handled in the past, when they made their entrepreneurial decisions, their considerations and the aspects they report may not be exactly the ones which influenced their decisions. Individuals may rationalise their past behaviours and attitudes, or even not recall them completely, which may introduce some misleading elements in studies like the present one.

Finally, the fact that two interviewees maintained regular jobs alongside their entrepreneurial career may distort these entrepreneurs' views on risk- and emotions-related entrepreneurial choices, for instance. Their responses were nevertheless considered here because this aims to be an exploratory study on a subject that still lacks generalist research - an aspect that can be improved in subsequent studies, as will be explored in the next chapter.

### **6.3 Suggestions for Future Research**

This investigation necessarily could not cover all the relevant issues connected to serial entrepreneurs and their decision-making processes. It is our firm belief that the field could largely benefit from studies similar to the present one, for instance, where higher demands on respondents' eligibility criteria could be upheld. Focusing on the matters we explored here in sets of serial entrepreneurs with a minimum number of ventures, who only had had successful or unsuccessful businesses or who necessarily did not have fixed jobs, for instance, could further contribute to knowledge on entrepreneurial decision-making processes. It would also be relevant to undertake further studies on the relevance of emotions and feeling throughout entrepreneurial careers, focusing on how they evolve and whether their importance grows, and within specific sets of entrepreneurs (in terms of gender, age or business areas of choice, for instance).

Additional studies on serial entrepreneurs failed businesses and its connection to their specific characteristics (such as youth, impetuosity, lack of preparation or skills) and subsequent decision-making patterns would also be extremely interesting to develop, as

well as studies that correlated the ways through which previous businesses had ended (if entrepreneurs had left them voluntarily or if they had failed, for instance) and their subsequent entrepreneurial choices regarding new ventures' creation.

Theoretical studies on the 'entrepreneurial instinct' notion - whether it really exists, if it can be taught, learned and developed, and if it really results from rational aspects that cannot be rationalized, as one of the interviewees suggested -, the society's perception on emotions in business - does it have to change? Is it realistic to assume that business only has to gain from strict rationality, discarding all that's emotive? - and on the 'everyone can be an entrepreneur' assumption - is it myth or reality? Can truly anyone become an entrepreneur? - would also provide significant developments on the entrepreneurship field.

Furthermore, we believe it would also be interesting to discuss whether serial entrepreneurs should be considered the 'real' entrepreneurs, as one other interviewee supported, when focusing on those serial entrepreneurs who keep on creating new businesses over and over again. If so, should 'one-venture-only' entrepreneurs be considered true entrepreneurs? And should entrepreneurs who simply create two ventures consecutively, regardless of the reasons they ended the first one (therefore becoming serial) and who never leave the second one maintain that designation? And for how long? Literature could largely benefit from further discussion on this subject, as it seems that these concepts could benefit from further clarification and eventually more rigid frontiers.

Lastly, and in a slightly different note, we propose that a database of each country's current entrepreneurs is created, developed and maintained, so that there can be more knowledge and control over new ventures' opening and closing moments, more thorough data on businesses' duration and ownership, and an updated list of entrepreneurs and business-owners. This would represent a fundamental tool for further research on entrepreneurial aspects, which would decisively contribute to deepen the existent knowledge on an ever present phenomena that is steadily becoming more and more prominent in nowadays society.

# Appendix

## Appendix 1: Interview Script

### Portuguese Version

1. Que projecto tem em mãos actualmente? Há quanto tempo? E quanto tempo teve nas suas mãos o(s) negócio(s) anterior(es)?
2. Quantos negócios/projectos empreendedores criou?
3. Como detectou a mais recente oportunidade de negócio em que se envolveu? Que factores foram relevantes para a sua decisão?
4. Ponderou se existiam alternativas à oportunidade de negócio em que decidiu embarcar? Porque decidiu embarcar neste projecto em específico?
5. Desde que a oportunidade surgiu, demorou muito tempo para decidir iniciar o seu segundo/actual projecto?
6. A decisão de embarcar num novo projecto foi difícil de tomar? Teve dúvidas quanto à mesma? Porquê?
7. Avaliou se possuía as competências necessárias para levar a cabo este novo projecto?
8. Recorreu a algum tipo de recursos (físicos - como, por exemplo, planos de negócio ou estudos de mercado - ou humanos - como, por exemplo, conselhos de outras pessoas) para decidir se iniciava ou não um novo projecto?

9. Que relevância tiveram para si o risco e a incerteza que se podem associar à criação de um negócio quando decidiu iniciar o seu primeiro projecto? E quando decidiu iniciar o(s) seguinte(s)/actual?
10. Que influência tiveram as suas emoções e instintos na(s) sua(s) decisões de embarcar num(em) novo(s) projecto(s)?
11. Diz-se que há empreendedores eminentemente intuitivos e outros eminentemente racionais. Concorda com esta afirmação? Se sim, como se classificaria?

### **English Version**

1. What project do you currently possess? How long have you had it so far? And how long did you possess your previous business(es)?
2. How many entrepreneurial projects have you created?
3. How did you detect the last business opportunity you became involved with? What were the relevant factors for your decision?
4. Did you consider any alternatives to the last business you decided to create? Why did you choose this specific project?
5. Since the opportunity arose, how long did it take you to decide whether to engage in this new project?
6. Was the decision to launch a new business a difficult one? Did you have any doubts about it? Why?
7. Did you evaluate whether you possessed the necessary competencies to accomplish this new project?
8. Did you resort to any type of resources (physical - like, for instance, business plans or market research - or human - like, for instance, advices) to decide whether to engage in a new project?

9. How relevant were the risk and uncertainty that can be associated with new businesses' creation when you decided to create your first business? And the subsequent ones?
10. What influence did your emotions and feelings have towards your decision to start new ventures?
11. There are those who consider that entrepreneurs are either eminently rational or eminently emotional. Do you agree? How would you classify yourself?

# References

- Amaral, A., & Baptista, R. (2007). Serial entrepreneurship: Differentiating direct from latent re-entrants. *Jena Economic Research Papers*(2007 - 044).
- Amaral, A., Baptista, R., & Lima, F. (2011). Serial entrepreneurship: impact of human capital on time to re-entry. *Small Business Economics*, 37(1), 1 - 21.
- Ariely, D. (2008). *Predictably irrational: The hidden forces that shape our decisions*. New York: Harper Collins Publishers.
- Bardin, L. (2009). *Análise de conteúdo*. Lisboa: Edições 70.
- Baron, R. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review*, 33(2), 328 - 340.
- Bernard, H. (2000). *Social research methods: qualitative and quantitative approaches*. Thousand Oaks: Sage Publications.
- Bernoulli, D. (1954). Exposition of a new theory on the measurement of risk. *Econometrica*, 22(1), 23 - 36.
- Böhm, G., & Brun, W. (2008). Intuition and affect in risk perception and decision making. *Judgment and Decision Making*, 3(1), 1 - 4.
- Buchholz, W., & Schymura, M. (2012). Expected utility theory and the tyranny of catastrophic risks. *Ecological Economics*, 77, 234 - 239.
- Busenitz, L., & Barney, J. (1997). Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing*, 12(1), 9 - 30.
- Chen, J. (2013). Selection and serial entrepreneurs. *Journal of Economics & Management Strategy*, 22(2), 281 - 311.
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109 - 132.



- Eisenhauer, J. G. (1995). The entrepreneurial decision: Economic theory and empirical evidence. *Entrepreneurship: Theory & Practice*, 19(4), 67 - 79.
- Elster, J. (1998). Emotions and economic theory. *Journal of Economic Literature*, 36(1), 47 - 74.
- Epstein, S., Pacini, R., Denes-Raj, V., & Heier, H. (1996). Individual differences in intuitive-experiential and analytical-rational thinking styles. *Journal of Personality and Social Psychology*, 71(2), 390 - 405.
- Fast, N., Sivanathan, N., Mayer, N., & Galinsky, A. (2012). Power and overconfident decision-making. *Organizational Behavior and Human Decision Processes*, 117(2), 249 - 260.
- Fishburn, P. (1968). Utility report. *Management Science*, 14(5), 335 - 378.
- Gartner, W. (1989). "Who is an entrepreneur?" is the wrong question. *Entrepreneurship: Theory & Practice*, 13(4), 47 - 68.
- Gigenrenzer, G. (2001). Decision making: nonrational theories. In *International encyclopedia of the social and behavioral sciences* (Vol. 5, p. 3304 - 3309). Oxford: Elsevier.
- Gilovich, T., & Griffin, D. (2002). Introduction - heuristics and biases: then and now. In *Heuristics and biases the psychology of intuitive judgment* (p. 1 - 18). Cambridge: Cambridge University Press.
- Gompers, P., Kovner, A., Lerner, J., & Scharfstein, D. (2010). Performance persistence in entrepreneurship. *Journal of Financial Economics*, 96(1), 18 - 32.
- Hartley, C., & Phelps, E. (2012). Anxiety and decision-making. *Biological Psychiatry*, 72(2), 113 - 118.
- Hayward, M., Forster, W., Sarasvathy, S., & Fredrickson, B. (2010). Beyond hubris: How highly confident entrepreneurs rebound to venture again. *Journal of Business Venturing*, 25(6), 569 - 578.
- Hessels, J., Grilo, I., Thurik, R., & Zwan, P. (2011). Entrepreneurial exit and entrepreneurial engagement. *Journal of Evolutionary Economics*, 21(3), 447 - 471.
- Hindle, T. (2008). *Guide to management ideas and gurus*. London: Profile Books Ltd.
- Holland, D., Reutzell, C., Chandler, G., & White, B. (2009). Need for cognition: an investigation on the use of biases in entrepreneurial decision making (interactive paper). *Frontiers of Entrepreneurial Research*, 29(6).

- Hyttinen, A., & Ilmakunnas, P. (2007). What distinguishes a serial entrepreneur?. *Industrial and Corporate Change*, 16(5), 793 - 821.
- Kahneman, D. (2003). Maps of bounded rationality: psychology for behavioral economics. *American Economic Review*, 93(5), 1449 - 1475.
- Kahneman, D., & Frederick, S. (2007). Frames and brains: elicitation and control of response tendencies. *Trends in Cognitive Sciences*, 11(2), 45 - 46.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: an analysis of decision under risk. *Econometrica*, 47(2), 263 - 292.
- Kort, M., & Vermeulen, P. (2008). Entrepreneurial decision-makers and the use of biases and heuristics. In *Entrepreneurial strategic decision-making - a cognitive perspective* (p. 123-136). Cheltenham: Edward Elgar Publishing Limited.
- Krabuanrat, K., & Phelps, R. (1998). Heuristics and rationality in strategic decision making: an exploratory study. *Journal of Business Research*, 41(1), 83 - 93.
- Li, Schulze, & Li. (2009). Plunging into the sea, again? A study of serial entrepreneurship in China. *Asia Pacific Journal of Management*, 26(4), 667-680.
- Li, W., & Sujirapinyokul, T. (2010). A study on mechanisms of strategic decision-making based on entrepreneur's mental model. In *2010 International Conference on E-product, E-service and E-entertainment (ICEEE)* (p. 1 - 6).
- Lurie, Y. (2004). Humanizing business through emotions: On the role of emotions in ethics. *Journal of Business Ethics*, 49(1), 1 - 11.
- Mahoney, J., & Goertz, G. (2006). A tale of two cultures: Contrasting quantitative and qualitative research. *Political Analysis*, 14(3), 227 - 249.
- Mann, A. E. (2006). Confessions of a serial entrepreneur: a conversation with Alfred E. Mann. Interview by Molly Joel Coye. *Health Affairs (Project Hope)*, 25(3), 104 - 113.
- March, J. (1978). Bounded rationality, ambiguity, and the engineering of choice. *Bell Journal of Economics*, 9(2), 587 - 608.
- McVea, J. (2009). A field study of entrepreneurial decision-making and moral imagination. *Journal of Business Venturing*, 24(5), 491 - 504.
- Mellers, B., Schwartz, A., & Ritov, I. (1999). Emotion-based choice. *Journal of Experimental Psychology: General*, 128(3), 332 - 345.
- Nielsen, K., & Sarasvathy, S. (2011, January 20 - 22). Who reenters entrepreneurship?

- and who ought to? an empirical study of success after failure [Paper to be presented at the DIME-DRUID ACADEMY Winter Conference 2011]. Aalborg: Dime-Druid Academy.
- Nueno, P. (1994). *Emprendiendo - el arte de crear empresas y sus artistas*. Bilbao: Ediciones Deusto.
- Parente, C., Costa, D., Santos, M., & Chaves, R. (2011). Empreendedorismo social: contributos teóricos para a sua definição. Lisboa: XIV Encontro Nacional de Sociologia Industrial, das Organizações e do Trabalho.
- Parker, S. (2013). Do serial entrepreneurs run successively better-performing businesses? *Journal of Business Venturing*, 28(5), 652 - 666.
- Plehn-Dujowich, J. (2010). A theory of serial entrepreneurship. *Small Business Economics*, 35(4), 377 - 398.
- Podoyntsina, K., Van der Bij, H., & Song, M. (2012). The role of mixed emotions in the risk perception of novice and serial entrepreneurs. *Entrepreneurship: Theory & Practice*, 36(1), 115 - 140.
- Qing, M., & Ling, L. (2010). A psychological model of entrepreneurial decision making. *Social Behavior & Personality: An International Journal*, 38(3), 357 - 363.
- Rogerson, M. D., Gottlieb, M. C., Handelsman, M. M., Knapp, S., & Younggren, J. (2011). Nonrational processes in ethical decision making. *American Psychologist*, 66(7), 614 - 623.
- Romanycia, M., & Pelletier, F. (1985). What is a heuristic? *Computational Intelligence*, 1(1), 47 - 58.
- Ruiz Espejo, M. (2013). Sampling. *Journal of Applied Statistics*, 40(4), 920 - 921.
- Sarasvathy, S., & Berglund, H. (2010). On the relevance of decision-making in entrepreneurial decision-making. In *Historical foundations of entrepreneurship research* (p. 163 - 182). Cheltenham: Edward Elgar Publishing Limited.
- Shafir, E., & LeBoeuf, R. (2002). Rationality. *Annual Review of Psychology*, 53(1), 491-517.
- Shane, S., Locke, E., & Collins, C. (2003). Entrepreneurial motivation. *Human Resource Management Review*, 13(2), 257 - 279.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217 - 226.

- Shepherd, D., Haynie, J., & McMullen, J. (2012). Confirmatory search as a useful heuristic? testing the veracity of entrepreneurial conjectures. *Journal of Business Venturing*, 27(6), 637 - 651.
- Shiloh, S., Salton, E., & Sharabi, D. (2002). Individual differences in rational and intuitive thinking styles as predictors of heuristic responses and framing effects. *Personality and Individual Differences*, 32(3), 415 - 429.
- Sobel, R. (2008). Entrepreneurship. In *The Concise Encyclopedia of Economics*. Retrieved on March 20, 2013 from the Library of Economics and Liberty Website: <http://www.econlib.org/library/Enc/Entrepreneurship.html>.
- Stam, E., Audretsch, D., & Meijaard, J. (2008). Renascent entrepreneurship. *Journal of Evolutionary Economics*, 18(3-4), 493 - 507.
- Starcke, K., & Brand, M. (2012). Decision making under stress: A selective review. *Neuroscience & Biobehavioral Reviews*, 36, 1228 - 1248.
- Tang, J., Kacmar, K., & Busenitz, L. (2012). Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing*, 27(1), 77 - 94.
- Townsend, D., Busenitz, L., & Arthurs, J. (2010). To start or not to start: Outcome and ability expectations in the decision to start a new venture. *Journal of Business Venturing*, 25(2), 192 - 202.
- Trotter II, R. (2012). Qualitative research sample design and sample size: Resolving and unresolved issues and inferential imperatives. *Preventive Medicine*, 55(5), 398 - 400.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, New Series*, 185(4157), 1124 - 1131.
- Ucbasaran, D., Westhead, P., & Wright, M. (2011). Why serial entrepreneurs don't learn from failure. *Harvard Business Review*, 89(4), 26.
- Ucbasaran, D., Westhead, P., Wright, M., & Flores, M. (2010). The nature of entrepreneurial experience, business failure and comparative optimism. *Journal of Business Venturing*, 25(6), 541 - 555.
- Welpel, I., Spörrle, M., Grichnik, D., Michl, T., & Audretsch, D. (2012). Emotions and opportunities: The interplay of opportunity evaluation, fear, joy, and anger as antecedent of entrepreneurial exploitation. *Entrepreneurship: Theory & Practice*, 36(1), 69 - 96.

- Westhead, P., Ucbasaran, D., & Wright, M. (2004). Experience and cognition: do novice, serial and portfolio entrepreneurs differ? In (p. 1 - 35). Tromso: NCSB 2004 Conference.
- Westhead, P., Ucbasaran, D., Wright, M., & Binks, M. (2005). Novice, serial and portfolio entrepreneur behaviour and contributions. *Small Business Economics*, 25(2), 109 - 132.
- Westhead, P., & Wright, M. (1998). Novice, portfolio, and serial founders: are they different? *Journal of Business Venturing*, 13(3), 173 - 204.
- Wright, M., Robbie, K., & Ennew, C. (1997). Venture capitalists and serial entrepreneurs. *Journal of Business Venturing*, 12(3), 227 - 249.
- Zeelenberg, M., Nelissen, R., Breugelmans, S., & Pieters, R. (2008). On emotion specificity in decision making: Why feeling is for doing. *Judgment and Decision Making*, 3(1), 18 - 27.
- Zinchenko, A. V. (2012). Nostalgia. *Russian Social Science Review*, 53(1), 68 - 81.