

**The Role of Passion in Driving Entrepreneurial Behaviours and
Performance**

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Dedication

I dedicate this thesis to my family for their love, encouragement and amazing support.

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Abstract

This thesis provides an original contribution towards the understanding of the role of entrepreneurial passion in the context of entrepreneurial behaviours and business performance. It develops a conceptual framework by integrating two seminal theories in the field of passion, namely the dualistic model of passion and the theory of entrepreneurial passion. This theoretical model, involving relationships between entrepreneurial passion (harmonious and obsessive) and entrepreneurial behaviours, which in turn are linked to business performance, is empirically tested using data from 218 Russian small and medium organisations.

The findings confirmed that both harmonious and obsessive entrepreneurial passion lead to high levels of engagement, persistence and opportunity creation behaviours. As expected, the effects of obsessive entrepreneurial passion were generally stronger. The study concluded that entrepreneurs who are more engaged in entrepreneurial activities are likely to derive better performance results. Similarly, the more entrepreneurs create opportunities, the more likely their business performance will improve. On the contrary, persistence was found to have no effect on business performance, meaning that no matter how persistent entrepreneurs may be in entrepreneurial activities, this will not affect business performance. In addition to that, post-hoc mediation analysis revealed that engagement and opportunity creation behaviours fully mediate the obsessive entrepreneurial passion – business performance relationship.

This thesis is an attempt to advance the conceptualisation and position of the passion construct in the literature by demonstrating its important outcomes within an entrepreneurial context. Theoretical, entrepreneurial and educational implications of the study findings are discussed and exciting areas for future research suggested.

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Chapter 1 : Introduction

1.1 Introduction

“Nothing great in the world has ever been accomplished without passion.”

(George Wilhelm Friedrich Hegel)

The notion of *Passion* has a long history, with early writings about its nature and importance dating back to Greek and Western philosophers e.g., Aristotle and Socrates. While these writings differ on whether it impairs or empowers reason, passion is viewed as one of the most intense emotions that stirs people with energy and deep longing to make a difference. Passion — a word often reserved for romance and artistic work — is more prevalent than people normally think. In today’s business world, non-romantic passion is a component of economic activities. It is an important, often not sufficiently recognised factor in decisions made by managers. Passion, as an intangible, hard-to-measure quality can be powerful and critical in many endeavours that are aimed at creating something new and successful in society (Chen et al., 2009).

"The passion to create something insanely great, the passion to exert an undeletable impact on society, and the passion to make history – this is a true entrepreneur" (Ma and Tan, 2006: p. 711). This quote perfectly summarises the research context and also demonstrates the strength and importance of passion for entrepreneurs.

1.2 Research Context

Entrepreneurship has been gaining increasing respect from the research community as an influential field of scholarly study, as well as strong practical application worldwide to achieve wealth creation and personal fulfilment. A key aspect of effective functioning for organisations was defined as an ‘entrepreneurial problem’ (Miles et al., 1978) with a pattern of strategic actions of entrepreneurially oriented firms influencing firm performance (Miller, 1983). One of the most significant current discussions in the Entrepreneurial literature

is the entrepreneurial antecedents of firms' entrepreneurial behaviour and success.

From a general perspective, the numerous explanations of entrepreneurship phenomenon can be categorised into two schools of thought: *the environmental school* and *the people school*. The environmental school tries to explain the existence of entrepreneurship from the basis of the cultural and structural conditions present in the local environment (Reynolds et al., 1994). The people school of entrepreneurship emphasises the importance of having the 'right personal characteristics' (Ronstadt, 1984). This posits that, if an individual has true 'entrepreneurial characteristics' he or she will always find the path to entrepreneurship, regardless of any environmental conditions. At the same time, Gibb and Ritchie (1981) suggested an alternative 'social development model' to explain and understand entrepreneurial business start-up intentions and actions, where authors suggest that "entrepreneurship can be wholly understood in terms of the types of situation encountered and the social groups to which individuals relate" (1981: p. 183). Nowadays, a notion of *entrepreneurial theory of the firm* often forms the central focus of scholarly research in entrepreneurship field (Langlois, 2007). This theory tries to explain the nature and boundaries of the firm, as well as develops the concept of entrepreneurship itself. It also points out the aspect of entrepreneur's authority and the idea of entrepreneurship as a problem solving tool.

Previously, entrepreneurship research has primarily been focused on the start-up of new ventures (Schendel, 1990; Sexton and Landstrom, 2000). However, lately this has changed dramatically, while entrepreneurship has become universally accepted as a firm-individual level phenomenon worthy of extensive scholarly attention (Zahra et al., 1999), based on the notion that entrepreneurship is relevant to managers irrespective of the company size or age.

Entrepreneurship is a unique management approach that consists of all-consuming passion for the quest and use of opportunities, regardless of the resources (Stevenson, 1983 in Brown et al., 2001). It is a process through which individuals with a unique vision and creativity-oriented perspective

identify, evaluate and exploit opportunities, allocate resources, and create value, usually resulting in the creation of new ventures (Ma and Tan, 2006). In other words, it is the process by which "opportunities to create future goods and services are discovered, evaluated, and exploited" (Shane and Venkataraman, 2000: p. 218). This definition does not necessarily view entrepreneurs only as the founders of organisations, but also it argues that they can still be performing growing and nurturing entrepreneurial activities (Shane et al., 2003).

A useful starting point for more detailed enquiry into the central aspects of determinants of entrepreneurship is the construct of *entrepreneurial orientation* (EO), which refers to the strength of a firm's predisposition to innovate, take risks, and aggressively chase new venture opportunities (Dess and Lumpkin, 2005). In addition to innovativeness, risk-taking and proactiveness, competitive aggressiveness and autonomy are considered as two supplementary dimensions critical to the concept. Entrepreneurial orientation is a key driver of entrepreneurial behaviour and can enhance organisation's initiatives at corporate entrepreneurship and venture creation and collectively, the five dimensions of EO can enhance a firm's entrepreneurial performance.

Then, Ma and Tan (2006) identified a framework for entrepreneurship improving the conceptual definition of the phenomenon. It combined a fragmented literature on the definition of entrepreneurship as a theoretical construct and aimed to advance an integrative explanation of the multifacetedness of it. As such, entrepreneurship can be explained using *4Ps framework*: *Pioneer*, meaning that entrepreneurs are innovators, who are passionate and persistent; *Perspective* – having a unique and creative mindset, with a clear sense of purpose and policy; *Practice* – being persuasive and having an ability to pursuit/attract societal resources; *Performance* – with profit and improved/enriched life of people working in entrepreneur's team (Ma and Tan, 2006). According to this model, relationship between practice and performance of the entrepreneurs will depend on their personal characteristics, including the domain of passion. This framework defines entrepreneurship as a process in which entrepreneurs willing to innovate and change, are not guided by social norms but rather by a unique mindset of creative approaches, when engaged in the practice of profit creation and opportunities transformation into performance

(Ma and Tan, 2006). This process takes place when entrepreneurs interface with opportunities and resources and causes entrepreneurial behaviour.

The concept of *entrepreneurial behaviour* was usually considered during the pre-start-up and start-up times of an entrepreneur's personal and business-related development (Vesalainen and Pihkala, 1997). However, it is about seizing the opportunities that fit with existing knowledge, not only during or before the business start-up, but continuously throughout the company's existence (Langlois, 2007). Accordingly, entrepreneurial behaviour is both enabled and constrained by the resources and capabilities entrepreneurs possess. However, significant difference is made in terms of the claim that a firm must be free of its past; free of memory, in order to build the future in a new way. It also positions cognitive leadership or charismatic authority as the author names it as an important factor that leads to the ability of directing the effort of others, while putting the entrepreneur's knowledge into practice (Langlois, 2007).

Entrepreneurship literature has also begun to realise the importance of the potential power of a self-concept-based approach for predicting entrepreneurial passion, action and outcomes (Cardon et al., 2009; Hoang and Gimeno, 2010; Krueger, 2007; Shepherd and Haynie, 2009). As a result, the notion of *entrepreneurial role identity* has come to attention. "Entrepreneurship is a process of identity construction and entrepreneurs establish ventures based on and driven by self-identities" (Ireland and Webb, 2007: p. 916). The concept of entrepreneurial identity has its origins in the entrepreneurial typology, defined by several terms used to differentiate between various types of entrepreneurs (Vesalainen and Pihkala, 1997). Entrepreneurial identity was originally conceptualised as the "latent social identity dealing with several possible combinations of meanings which forms the core of the entrepreneur's self-definition of the entrepreneurial role" (Stanworth and Curran, 1976). In addition to that, one of the key elements of the *corporate identity* (Melewar and Jenkins, 2002) is the behaviour of the company founder, which means that behaviours and actions of entrepreneurs also constitute a part of the overall company identity and reputation.

Traditionally, entrepreneurship has only been viewed as individual-level activities associated with creating new organisations. However, the construct of *corporate entrepreneurship* (CE) applies the idea of being risky, proactive and aggressive to already established firms (Teng, 2007). CE comprises of three key elements, such as innovation, strategic renewal and corporate venturing (Zahra, 1995; 1996). Innovation includes 'creating and introducing new products, production processes, and organizational systems', strategic renewal is about adapting the firm to the changes in environments or 'revitalizing a company's operations by changing the scope of its business, its competitive approach, or both' (Zahra, 1996, p. 1715). Corporate venturing includes the expansion of business by creating new ventures or purchasing new business organisations (Block and MacMillan, 1993; Chesbrough, 2002).

There have also been several additional streams developing recently, having their roots in the traditional entrepreneurship field. Nowadays, it is inevitable to mention the 'international entrepreneurship' concept, which is a mixture of innovative, proactive, and risky behaviour that expands across national borders and creates value in organisations (McDougall and Oviatt, 2005).

Studies within the entrepreneurial context are important for several reasons. First, entrepreneuring drives innovation and change, in such way supporting economic growth (Schumpeter, 1934). Second, entrepreneurial action enables the equilibration of supply and demand (Kirzner, 1997). Third, entrepreneurship is a process where knowledge is transformed into products and services (Shane and Venkataraman, 2000). Finally fourth, entrepreneurship has become an important endeavour nowadays and therefore, it is of a crucial importance to understand its role in the development of human and intellectual capital (Zahra and Dess, 2001).

Current interest in entrepreneuring can be explained by its usefulness in a sense of being able to renew already established organisations and their power to compete in the markets (Zahra and Covin, 1995). Entrepreneurship as a form of individual and organisational activity can improve performance in established organisations (Covin and Slevin, 1991). Moreover, the vital role of entrepreneurial activity for the transfer of the technological and organisational

innovation progress into new and often more efficient products and services is well acknowledged (Baum and Locke, 2004). Being the key element for gaining competitive advantage and as such greater financial rewards, entrepreneurship is considered an important process in business growth (Schollhammer, 1982). Similarly, undertaking entrepreneurial activities improves a company's financial performance and growth (Peters and Waterman, 1982). Moreover, the lack of behavioural research on entrepreneurship is evident in literature (see review by Moroz and Hindle, 2012), especially in relation to individual entrepreneurs and their personal characteristics (Hoskisson et al., 2011). Entrepreneurship scholars suggest that an integrated inquiry and even interdisciplinary one is needed to advance the field of entrepreneurship (Zachary and Mishra, 2010).

The development of the entrepreneurship field and importance of marketing for organisations has led to the emergence of a new discipline in business – entrepreneurial marketing. The next section will shed light on key conceptualisations and definitions of the new phenomenon and link it to the proposed research context.

1.2.1 Entrepreneurial marketing

Marketing and entrepreneurship were usually considered as two separate academic disciplines. Recently though, the interdisciplinary approach to several business disciplines has been found to be an exciting research outlet (Hills et al., 2008), especially when applied to the marketing activities of small and medium-sized businesses (SMEs). Notably, very entrepreneurial firms with a different organizational context than those that are more administrative tend to have a dissimilar perspective on marketing process and activities as such. This different viewpoint that entrepreneurial firm's marketing is associated with business growth and survival is the main inclination towards the development and advancement of the new 'Entrepreneurial Marketing' discipline.

Entrepreneurial marketing (EM) is the "marketing of small firms growing through entrepreneurship" (Bjerke and Hultman, 2002: p. 15). Scholars advocate that entrepreneurial firms have a different set of marketing capabilities and skills that typically include a greater understanding of customer needs, market trends, and

market positioning, just to name a few (Smart and Conant 1994 in Hills, Hultman and Miles, 2008).

In 1986 the first article appeared in *Marketing Journal* focusing purely on entrepreneurship (see Dickinson and Giglierano, 1986). Then, after more than a decade of thoughts and opinions on the matter, Miles (2000) wrote his article providing further credible outlets for scholars in the emergence of EM field. Finally, Bjerke and Hultman (2002) and Morris and colleagues (2002) published two seminal articles on the content and context of EM, as well as its definition and importance of the construct. Thus, in 25 years EM has advanced as an exciting and promising new field of academic inquiry and practical application (Kraus et al., 2010).

Entrepreneurial marketing can be discussed from two distinctive perspectives (Kraus et al., 2010). The first emphasises the quantitative aspect of the company in relation to marketing for small or new ventures. The second focuses on the qualitative aspect of EM by referring to it as marketing with an entrepreneurial essence and mindset (where marketing is done by entrepreneurs). Combining the American Marketing Association's definition of marketing with the definitions of entrepreneurship, Kraus et al. (2010) propose the following definition of EM:

“EM is an organisational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organisation and its stakeholders, and that is characterised by innovativeness, risk-taking, pro-activeness, and may be performed without resources currently controlled”
(Kraus et al., 2010: p. 26).

The core of the interplay between entrepreneurship and marketing is found in value creation and value alignment within the markets (Schindehutte et al., 2008). It is also a combination of entrepreneurial and market orientation in a firm (Kocak and Abimbola, 2009). EM as an integrative construct synthesises critical aspects of marketing and entrepreneurship into a complete

conceptualisation, where marketing becomes a facilitating process by which firms can act entrepreneurially (Morris et al., 2002).

Probably the most relevant definition of EM to the research proposed is the one by Morris and colleagues (2002), where authors claim that EM is the proactive identification and exploitation of opportunities with a purpose of acquiring and retaining profitable customers through the application of original methods to risk management, resource leveraging and value creation. Some of the dimensions of EM include proactiveness, opportunity-driven behaviours, customer intensity, innovation and value creation.

The research on entrepreneurship has for long been trying to find personality characteristics that could serve to explain a business success or failure. The role of passion in entrepreneurship will be the focus of this research, conducted within an entrepreneurial marketing field. EM is a highly relevant context and potentially can be an outcome of passionate entrepreneurs, who create new ventures or improve the existing ones striving for enhanced business performance. Therefore, introductory chapter will now shift its focus on the key variable of the research – Entrepreneurial Passion.

1.3 Focus of the Study

1.3.1 The Concept of Passion

The concept of Passion has received little attention in business. It has been looked at in the context of motivational aspects (Frijda et al., 1991) and creativity in the conceptual literature, but almost all empirical research on passion has been done in the area of psychology of personal relationships where ‘passionate love’ has been a key point of attention (Hatfield and Sprecher, 1986). Later Vallerand and colleagues (2003; 2007) conceptualised passion for activity and extended the research domain into hobbies and leisure activities, sports, gambling and internet contexts (Amiot et al., 2006; Mageau et al., 2005; Rousseau et al., 2002; Seguin-Levesque et al., 2003; Philippe et al., 2010). Baum and Locke (2001) were the first ones to associate individual’s passion with their work. Finally, the first detailed attempt to investigate the

construct of entrepreneurial passion was made by Cardon and colleagues (2009; 2013).

Most studies in the field of entrepreneurship focus only on single predictors of success (performance) separately from an economic or psychological perspective (Korunka et al., 2010). Only recently has research on firm development looked at entrepreneurs' personal characteristics in relation to their resources and environment (McMullen and Shepherd, 2006), as well as venture performance. Integrating a psychological perspective into entrepreneurial study not only brings in alternative predictors of entrepreneurial success; it also allows viewing personal characteristics in the context of behaviours and performance. For both the founder of the business and its stakeholders, it is important to know as early as possible whether specific characteristics of the entrepreneur effectively interact with resources and the environment in ways that can facilitate venture survival and growth.

Despite the fact that the findings of previous research demonstrate that affect plays an important role in influencing certain parts of individual's cognition in work settings (e.g., Isen, 2002; Borman et al., 2001; Staw et al., 1994), the major part of this research was conducted in large, well established companies and among employees rather than entrepreneurs or managers. It brings the following question: Do such effects also occur in entrepreneurial ventures and specifically among entrepreneurs? Notably, little evidence on this issue is currently available in the literature, but there has been an agreement among entrepreneurship scholars that there are two major reasons found implying that affect may indeed be relevant to processes occurring during the creation of new ventures and the development of the established ones (Baron, 2008).

There are several ways how affect can influence cognition. The first way involves creativity. Researchers argue that individuals experiencing positive affect are usually more creative than those experiencing neutral or negative one (Isen, 2002). Second way can be found in the tendency to engage in heuristic processing, which refers to a particular type of thinking that is based on mental 'shortcuts' or heuristics and knowledge gained in past experience. This undoubtedly has certain implications for decision making and problem solving

processes that is specific activities performed by entrepreneurs on a daily basis. These activities bear significant influence on the success and growth of the entrepreneurial ventures. As such, literature indicates that entrepreneurs who are experiencing positive affect, i.e. passion, are more likely to engage in heuristic thinking while dealing with current problems/decisions (Park and Banaji, 2000; Wegner and Petty, 1994). Finally, affect can also influence the cognitive strategies individuals use when dealing with intense levels of stress (Carver and Scheier, 2001 in Baron, 2008). Positive affect facilitates in following relatively effective strategies for fighting stress, namely direct attempts to address and solve the cause.

In the entrepreneurship literature, attempts to define passion share a common emphasis on affect, especially positive (Baum and Locke, 2004; Shane et al., 2003; Smilor, 1997; Cardon et al., 2009). Consequently, with the experience of positive affect, such as passion for work and entrepreneurial activities, entrepreneurs can potentially enhance their productivity, recognise opportunities faster, and increase their capability to respond effectively to excessively dynamic markets and environments, as well as handle high levels of stress.

Despite the unchallenged view that passion being an affective state is very important for venture creation and growth, surprisingly it has received extremely little theoretical attention. Only seven articles have empirically examined entrepreneurial passion and none of them explored the links between entrepreneurial passion and specific entrepreneurial behaviours or venture performance. Baum and Locke (2004), following earlier study by Baum et al. (2001), conceptualised one's passionate love for work as one of the components of personality traits that can lead to venture growth. Chen et al. (2009) and Mitteness et al. (2012) investigated the notion of perceived entrepreneurial passion among potential firm investors, and Breugst et al. (2012) explored the perceived entrepreneurial passion among venture employees. Thorgren and Wincent (2013) looked at how habitual versus novice entrepreneurs are going to experience passion, namely harmoniously versus obsessively. Murnieks and colleagues (2012) and Cardon and Kirk (2013)

related passion to self-efficacy. Finally, Ho and Pollack (2014) investigated how passion affects network centrality and financial performance.

In all these studies somewhat different conceptualisations of entrepreneurial passion were used and little was investigated in relation to its behavioural outcomes. Furthermore, these studies did not explore the impact of passion on overall venture performance. This demonstrates that there is indeed extremely limited research on the role of passion in entrepreneurship and provides a very strong motivation to address this issue.

Therefore, this section explained the importance of the research setting being entrepreneurship. It also discussed a relatively new and interdisciplinary field of entrepreneurial marketing and the importance of its advancement. Finally, it introduced the focal aspect in this research, which is passion. The next sections will summarise the aims of this thesis and corresponding contributions it provides.

1.4 Gaps in the Literature

Based on the introduction to the research context and the key construct, this study identified four gaps in the literature that need addressing. The addressing of these gaps can substantially advance the development of both entrepreneurship and passion scholarly fields.

Firstly, there is no systematic research on passion in the entrepreneurship or marketing scholarly fields. This is evident by the fact that only seven studies empirically tested passion (Chen et al., 2009; Breugst et al., 2012; Mitteness et al., 2012; Thorgren and Wincent, 2013; Murnieks et al., 2011; Cardon and Kirk, 2013 and Ho and Pollack, 2014) and only three of them looked at the outcomes of entrepreneurial passion. Moreover, there have been virtually no quantitative studies of the role of passion in leading to particular types of entrepreneurial behaviours and ultimately performance of the entrepreneurial firm. Ho and Pollack (2014) only investigated how passion can affect financial performance, which is quite limited approach. On a theoretical level, Vallerand and colleagues (2003) linked passion to engagement and persistence, followed by Cardon et al.

(2009), who similarly associated passion with absorption and persistence. Nonetheless, there is no empirical evidence to date that would support this assumption specifically for the case of entrepreneurs.

Secondly, no research has looked at whether passionate entrepreneurs along with engagement and persistence in their work are more likely to create opportunities themselves rather than just explore and/or exploit them (Oviatt and McDougall, 2005; Zahra et al., 2005). Furthermore, the absence of the relevant construct in the opportunity literature was identified, since there are two separate views on the way how entrepreneurs interact with the opportunities. One school posits that opportunities exist in the external environment and entrepreneurs only need to discover them (Bingham et al., 2007; Gruber, 2007). The second school posits that opportunities are a function of entrepreneurial process (Ardichvili et al., 2003; Mitchell et al., 2008). The evident gap is present in how entrepreneurs interact with opportunities and how could this process be conceptualised.

Thirdly, as mentioned previously, literature has only made scarce amount of inquiry into how specific entrepreneurial behaviours can affect firm performance. This is particularly applicable for small businesses that are usually independently owned and operated, rarely dominating in their market (Sadler-Smith et al., 2003). In such firms entrepreneur's primary goals are profitability and growth (Hodgetts and Kuratko, 2001) and a lot of outcomes can depend on their behaviours. Engagement has only been studied in the context of employee task performance (Ho et al., 2011). Similarly, even though persistence is an important part of the entrepreneurial process, there has been relatively little research regarding why entrepreneurs choose to persist with a business and entrepreneurial activities (Gatewood et al., 2002). Finally, as identified previously past research did not explore how opportunity creation can influence company performance. As such, a sufficient gap is present in how different entrepreneurial behaviours influence business performance.

Fourthly and lastly, an extensive literature review demonstrated that there are no studies that link entrepreneurial passion directly with firm performance, which forms a major gap in the passion and entrepreneurship research fields.

Several conceptual studies discuss that passion is a very common trait or affect among entrepreneurs in general (Ma and Tan, 2006; Brannback et al., 2006; Chen et al., 2009) and successful entrepreneurs in particular (Timmons, 2000). Yet, none of these studies investigate empirically whether the association between passion and performance is actually present.

1.5 Contributions of the Study

Accordingly, based on the four gaps in the literature identified in the previous section, this study aims at providing four important contributions, while attempting to address those gaps. In addressing the first gap on the lack of passion research in entrepreneurial context, the study contributes to the current literature by examining the associations between entrepreneurial passion (harmonious and obsessive) and entrepreneurial behaviours, namely engagement, persistence and opportunity creation. To address the gap related to the absence of a specific behaviour prevalent for many entrepreneurs when dealing with business opportunities, this study contributes to the current literature by developing a new construct of 'opportunity creation' and its measurement tool on the basis of integrating two dominant views of opportunity scholars. Moreover, it also examines the relationship between entrepreneurial passion (harmonious and obsessive) and opportunity creation. By providing additional insights into how particular entrepreneurial behaviours can affect firm performance, this study addresses the third gap by contributing to the literature in examining how engagement, persistence and opportunity creation affect business performance of the small and medium organisations. Finally, while addressing the gap on how entrepreneurial passion can affect firm performance, this study contributes to the literature by investigating the nature of direct effect of entrepreneurial passion (harmonious and obsessive) on business performance with the post-hoc mediation analysis.

1.6 Research Aim and Objectives

Consistent with the introduction to the context and the focus of the study, the overarching aim of this research is to examine the effects of entrepreneurial passion on business performance. On the basis of the literature gaps identified

in the previous section and with regard to the important contributions to the entrepreneurial marketing and passion scholarly fields, the overall study aim is broken down to formulate more specific objectives. The objectives of this study are fourfold. Firstly, the study aims to determine how entrepreneurial passion influences particular entrepreneurial behaviours, such as engagement, persistence and opportunity creation, and whether the effect is the same both for harmonious and obsessive passion. Secondly, it attempts to identify whether these entrepreneurial behaviours affect business performance and in what way. Thirdly, it intends to examine the direct relationship between passion and performance via mediation analysis. In studying the relationships between passion and behaviours of entrepreneurs, measures of 'opportunity creation' construct are developed and validated. Finally, this study aims to provide entrepreneurs with implications on how their passion for entrepreneurial activities can affect business outcomes. Therefore, the four objectives of this thesis are:

1. To examine the associations between entrepreneurial passion (harmonious and obsessive) and entrepreneurial behaviours, namely engagement, persistence and opportunity creation.
2. To study the relationships between the above mentioned behaviours and business performance of an entrepreneurial venture.
3. To investigate the differences in the relationship of harmonious and obsessive entrepreneurial passion with their behavioural and performance outcomes.
4. To provide entrepreneurs with the interpretation of how their passion for entrepreneurial activities can affect business outcomes.

To implement this research agenda, Vallerand et al.'s (2003) dualistic model of passion and Cardon et al.'s (2009) theory of entrepreneurial passion are integrated and used as a guiding tool for conceptual framework development. The choice of these particular theories lies in their uniqueness and novelty in relation to a relatively new and construct of 'passion', which has not been systematically studied in the business literature. Furthermore, their acceptance as useful models for assessing the dimensions of the passion construct in various domains and specifically, their appropriateness for this study's

purposes, contributed to the researcher's choice. The integration of the marketing and entrepreneurship literature represents a certain contribution to the scholarly field of entrepreneurial marketing and passion itself, because existing research on it is extremely limited. Thus, the achievement of the objectives outlined above will enable the study to make four significant contributions to the literature, as explained in the previous section.

Finally, another important aspect of this study lies in the geographic scope of the research. Russia was chosen as a data collection destination. Firstly, the Russian market is often referred to as 'untapped', 'a gold mine' or 'very promising', but also 'risky' and 'challenging' (VM Consult, 2011). This provides an interesting position for doing research in such a controversial market. Secondly, with a population more than 142.5 million people and a place within the top 10 largest countries as well as economies of the world, Russia undoubtedly is an emerging economic power. This potentially provides the researcher with exciting industry indicators and a positive overall entrepreneurial situation. Thirdly, Russia has undergone significant changes since the collapse of the Soviet Union, transferring from a globally-isolated, centrally-planned economy to a more market-based and globally-integrated one (CIA World Factbook, 2013). Thus, with the right assistance and preparation, the Russian market presents enticing opportunities for both small- and medium-sized enterprises. Following the above-mentioned reasons, it is evident that Russian data provides numerous opportunities for academic research.

1.7 Motivation of the Study

The motivation for this thesis is twofold. Firstly, it goes in line with the author's passion for research and a strong belief that only by following it, great results can be achieved. This principle has guided the author throughout her life and eventually brought her to complete doctoral studies at Leeds University Business School. The author feels that it is passion for research and academic work that has contributed extensively to future career choice, aspirations and goals achieved. Secondly, the idea to research passion as a construct in entrepreneurship formed on the basis of the abovementioned principles. At a

general level of discussion, people are likely to be better at things they are passionate about. Similarly, entrepreneurs are likely to be more successful if they are passionate about their work. The context of entrepreneurship seemed rather exciting, especially when applying the notion of passion to it and trying to explore whether passion actually contributes to positive effect.

1.8 Thesis Outline

Last section of this chapter explains the contents plan of the thesis. In order to achieve the research objectives discussed above, this study follows an outline demonstrated in Table 1.1.

Table 1.1: The Thesis Outline

CHAPTER NUMBER	CHAPTER TITLE
1	Introduction
2	Literature Review
3	Conceptual Framework and Hypotheses
4	Research Methodology
5	Measurement Development and Assessment
6	Hypothesis Testing and Results
7	Discussion, Implications and Limitations of the Study

First, in chapter two an extensive review of the relevant literature is provided in relation to passion, entrepreneurial behaviours and performance constructs, explaining the link between them. The goal of the literature review is to identify how much research has been conducted in the past and what were the key findings in it regarding the study constructs. Therefore, literature review focused on the passion construct conceptualisation and operationalisation, research applications and theoretical standpoint. In relation to entrepreneurial behaviours, three key behaviours prevalent for passionate entrepreneurs were identified and discussed. Finally, the discussion on performance construct included multidimensionality issues, measurement applicability and suitability for the study purposes.

Following the literature review outcomes and consistent with the study research objectives, chapter three discusses the development of the study conceptual framework and hypotheses. With regard to theoretical underpinnings of the study, the chapter identifies and investigates the dualistic model of passion and the entrepreneurial passion theories. It is argued that these two theoretical views are quite different yet can be complementary when used as an integrated research framework. This integration approach was chosen for the study due to the fact that it will help to better explain the nature and link between entrepreneurial passion, behaviours and business performance. As for the hypotheses, nine of them were proposed for this study and fell into two categories: (1) the direct association of entrepreneurial passion (harmonious and obsessive) with entrepreneurial behaviours (engagement, persistence and opportunity creation); and (2) the direct effect between specific entrepreneurial behaviours and business performance.

Chapter four provides a detailed discussion and justification of the study's research methodology. The chapter presents information on the choice of the research design and details of data collection procedures, along with the questionnaire design and administration activities. It also talks about the pre-test results and response rate improvement, concluding with the survey bias assessment.

Chapter five discusses information on the sample profile in relation to the firms used in the sample and characteristics of the entrepreneurs. It then provides a measurement development strategy, including exploratory and confirmatory factor analysis procedures. The next section focuses on validity and reliability of the measures, consisting of various tests and techniques used to make sure that the measurement is appropriate for further analytical stages. Finally, this chapter concludes with the descriptive analysis of the construct scales used in the study.

Chapter six focuses on the study hypotheses' testing, which was completed with the aid of structural equation modelling conducted in EQS 6.2 software package, using an elliptical distribution theory estimation method and following Anderson and Gerbing's (1988) two-way model assessment approach. After the

direct association hypotheses are discussed, it also provides post-hoc mediation tests for passion relationship with performance.

Finally, chapter seven focuses on the discussion and conclusions drawn from the study hypotheses' testing results. It summarises key findings in relation to the study objectives. Moreover, the last chapter also presents theoretical, entrepreneurial and educational implications of the study results. The chapter concludes with the limitations of the study and outlines several directions for future research.

Chapter 2 : Passion, Entrepreneurial Behaviours and Performance: A Literature-Based Review

2.1 Introduction

This chapter is organised into three main parts, discussing key concepts and literature fields of this study. The first section focuses on a focal research variable, namely passion, identifies its roots in various streams of literature and concludes with the summary and comments. The next section discusses three core behaviours that entrepreneurs engage in and links them to passion. Finally, the third part examines the past research practice of measuring organisational performance and provides an overview of the measurement choice and justification for this study, as well as the organisational context. Summaries are provided for every section, in addition to the chapter summary at the end.

2.2 Passion: A Literature-Based Review

Passion first appeared as a theoretical construct in the personal relationships literature within the *triangular theory of love* (Sternberg, 1987 in Acker and Davis, 1992). This theory assumes that three fundamental dimensions are underlying the different types of love which people can experience – intimacy, passion and commitment. Passion consists of motivational and other sources of arousal, also including needs for self-esteem, affiliation, dominance/submission and self-actualisation. It may be also considered as the ‘hot’ component in the theory, as it usually comprises of the most intense feelings.

Social psychologists have been interested in the passion concept for a long time and treated it as a motivational construct having three distinctive components. Passion is a strong inclination towards an activity that people like (i.e., affective), that they find important (i.e., cognitive), and in which they invest time and energy (i.e., behavioural) (Vallerand et al., 2003: p. 757). Perttula (2003) defined passion as a psychological state characterized by intense positive emotional arousal, internal drive and full engagement with personally

meaningful work activities (p. 15). Passion is also domain specific, as it needs to have a target, which often is a specific activity. However, far too little attention in the academic literature has been paid to passion as an affect, personal trait or in relation to specific activity.

Philosophers have been interested in the concept of passion for a long time, with two distinct stances emerging (review by Rony, 1990). The first posits that passion causes a loss of reason and control. Rational and appropriate thoughts originate from reason, whereas irrational and inappropriate ones derive from passion. People with the feeling of passion experience a certain kind of suffering in line with the meaning of the word itself – *passio* (Latin) for suffering. Accordingly, these individuals are seen as passive slaves to their passion, which controls and manipulates them. On the contrary, the second and positive perspective of passion portrays people as more active and being in control of their passion, defining passions as strong emotions with natural behavioural tendencies that can be positive as long as reason precedes the behaviour (Vallerand et al., 2003).

Table 2.1 summarizes the literature on Passion and related emotions, feelings and traits in various fields of investigation. It includes both conceptual and empirical studies, providing an up-to-date overview of the concept development and application in the academic literature. While past research is highly fragmented in its conceptual and empirical development, and lacks a systematic approach, it is nevertheless coherent in its recognition of the relevance of passion.

Table 2.1: Conceptualisation of the Passion Construct

Construct	Conceptualization and components	Type of research	Authors
Passion	Triangular Theory of Love (the context of adult romantic relationships)	Empirical	Acker and Davis (1992)
Passion	Passion as a part of Occupational Entrepreneurial Identity	Empirical	Vesalainen and Pihkala (1997)
Passion	Strength of Belief, Courage, Strategic	Conceptual	Bierly III et al. (2000)

	Wisdom, Motivation		
Passion towards Activities	Harmonious and Obsessive Passion (development of Passion for Activities scale)	Empirical	Vallerand et al. (2003)
Passion	Entrepreneurial Motivation, Need for Achievement, Goal Setting, Self-Efficacy, Drive and Egoistic Passion	Conceptual	Shane et al. (2003)
Passion	Consumers Passion, Desire	Empirical	Belk et al. (2003)
Passion for Work	Zeal, Fervour, Ardour, Emotional Energy, Drive and Spirit (in the context of Entrepreneurial traits)	Empirical	Baum and Locke (2004)
Entrepreneurial Passion, Love	(in the context of parenthood metaphor of entrepreneurship)	Conceptual	Cardon et al. (2005)
Entrepreneurial Passion	As a component of Entrepreneurial Motivation and Success, The multidimensional nature of Passion, Affect	Conceptual	Cardon et al (2005)
Passion	As a key component of Entrepreneurship, Perseverance; Passion for Achievement and Creation, Pursuit	Conceptual	Ma and Tan (2006)
Passion for Goals	Perseverance and Passion for long-term goals, the conceptualization of Grit	Empirical	Duckworth et al. (2007)
Entrepreneurial Passion	Emotional Display of Passion, the idea of Contagiousness and Entrepreneurial Role Identities according to Passion for specific entrepreneurial activities	Conceptual	Cardon (2008)
Passion	Consumer's brand love, product love and service love	Empirical	Yim et al. (2008)
Passion	Athletes' passion for sports, passion for activity; motivation	Empirical	Stephan et al. (2009)
Entrepreneurial Passion	First conceptualization of the construct; parallels with Pride, Love, Enthusiasm, Joy and Motivational Energy	Conceptual	Cardon et al. (2009)

Grief	The ending part of passion, a result of dysfunctional passionate entrepreneuring	Conceptual	Shepherd et al. (2009)
Passion	Personal Characteristics, (predictors of business survival)	Empirical	Korunka et al. (2010)
Passion	Harmonious and Obsessive Passion in interpersonal relationships	Empirical	Philippe et al. (2010)
Passion	As a positive effect generated by Entrepreneurial Identity	Empirical	Farmer et al. (2011)
Harmonious Passion	Team of employees' passion for work/task	Empirical	Liu et al. (2011)
Job Passion in the Workplace	Work attitude: a combination of harmonious and obsessive dimensions	Empirical	Ho et al. (2011)
Entrepreneurial Passion	Harmonious passion for entrepreneurial work	Empirical	Murnieks et al. (2012)
Entrepreneurial Passion	Perception of entrepreneurial passion by employees and their commitment	Empirical	Breugst et al. (2012)
Passion for Work	The extent to which people love work	Empirical	De Clercq et al. (2012)
Passion	CEO's passion for work and enthusiasm	Empirical	Mittiness et al. (2012)
Passion	One's passion for physical activities	Empirical	Belanger et al. (2013)
Passion	Harmonious and obsessive passion in goal – systems theory	Empirical	Belanger et al. (2013a)
Entrepreneurial Passion	Scale development and validation on the basis of Cardon et al. (2009)	Conceptual	Cardon et al. (2013)
Passion	Harmonious and obsessive passion among novice and habitual entrepreneurs	Empirical	Thorgren and Wincent (2013)
Entrepreneurial Passion	Mediator in the relationship between Self-Efficacy and Persistence	Empirical	Cardon and Kirk (2013)
Passion	Harmonious and obsessive passion in network centrality	Empirical	Ho and Pollack (2014)

Some studies try to define or link passion with a diverse range of positive effects and emotions, including pride (Bierly III et al., 2000), love (Baum and

Locke, 2004; Cardon et al., 2005^a), enthusiasm, and joy (Smilor, 1997) that occur as a part of the entrepreneurial process and provide an emotional resource for dealing with entrepreneurial activities. Smilor (1997) defines Passion as the enthusiasm, joy and zeal that come from the energetic and unflagging pursuit of a worthy, challenging and uplifting purpose (p. 342). It emerges when one has the freedom and opportunity to pursue one's dream. Undoubtedly, passion is strongly associated with motivation. To be motivated means to be aroused and direct in one's actions towards a goal in a persistent manner (Bierly III et al., 2000). Without passion, motivation often has only a strong potential with unrealised value.

Another concept strongly associated with passion is grit. Duckworth and colleagues (2007) define *grit* as a perseverance and passion for long-term goals. It entails working towards challenges, maintaining effort and not losing interest over years despite failures and obstacles during progress. The gritty individual sees achievement as an ongoing marathon and while disappointment or boredom signals to others that it is time to implement changes, the gritty individual stays on course.

In marketing, passion was first mentioned in the consumer behaviour literature in the context of consumer passion. Such passion entails often uncontrollable and continuous consumption of specific products stemming out from a strong desire of buying those (Belk et al., 2003).

2.2.1 Passion for Activity

In their extensive study, Vallerand and colleagues (2003) were first to conceptualise the 'passion for activity' construct. They proposed and empirically proved that the passion construct consists of two antipodal dimensions, with functional and dysfunctional consequences, respectively. Passion ensures that the entrepreneur persists in the face of difficulties and challenges, still keeping the enthusiasm high during a difficult pursuit. On the other hand, passion can also make it difficult to let go of the dream, for instance, even when the dream-related venture performs poorly for a considerable length of time. Such persistence can sometimes be very dysfunctional (Meyer and Zucker, 1989; McGrath, 1999). The 'blindness' associated with this kind of passion means

risks and difficulties are decisively ignored, enabling more self-assured depiction of the venture performance. Such confident enactment essentially helps to create a positive reality, where the entrepreneur puts in more effort, feeling certain it will be rewarded (Gartner et al., 1992). At the same time, a lack of passion may lead to a failure of the venture to be successful, due to a lack of effort, as well as faith from the entrepreneur's part. As a result, passionate entrepreneuring may bring some nonmonetary benefits that help to counterbalance what are usually sparse or even not existent monetary benefits, especially in the early days of the venture. If this positive type of passion is not present, entrepreneurial attachment and involvement may suffer, leading to abandonment of the venture. According to Vallerand and colleagues (2003), whether a passion will foster positive or negative effects depends on whether it is *Harmonious* or *Obsessive*.

2.2.2 Harmonious Passion

Harmonious passion (HP) results from an autonomous internalisation of the activity into the person's identity (Vallerand et al. 2003). An autonomous internalisation occurs when individuals have accepted the activity at their own will – without any internal pressure – as important and interesting for them without any contingencies attached. In other words, this type of internalisation creates a strong motivational force to engage in a particular activity willingly and stimulates a sense of volition and personal endorsement about pursuing its development (Vallerand et al., 2003; Frijda et al., 1991). With this type of passion, the activity occupies a substantial but not overshadowing space in the person's identity and is in harmony with other aspects of one's life.

Having harmonious passion for the specific activity or activities, one can fully control the activity engagement and even stop the activity completely (Philippe et al., 2010). Harmonious passion can also serve as a motivating mechanism towards the activity, as well as increase one's volition, autonomy and creativity (Liu et al., 2011).

2.2.3 Obsessive Passion

In contrast to harmonious passion, obsessive passion (OP) results from a controlled internalisation of the activity into one's identity (Vallerand et al.,

2003). Such internalisation develops from intrapersonal and/or interpersonal pressures. This happens either due to certain contingencies being attached to the activity, for example, social acceptance or self-esteem, or because the sense of excitement derived from activity engagement becomes uncontrollable. Hence, although individuals enjoy the activity, they simply feel obliged to engage in it, due to these internal issues that happen to control them. Furthermore, because activity engagement is out of the person's control in this case, it eventually occupies disproportionate space within the person's identity; which also causes conflict with other activities in the person's life. It means that individuals like the activity so much that they cannot help but constantly engage in it, not being able to control the desire (Philippe et al., 2010).

2.2.4 Entrepreneurial Passion

Passion is deeply rooted in the practice of entrepreneurship. Langlois (2007) suggests that entrepreneurship is about seizing the opportunities that fit with existing knowledge. According to the *entrepreneurial theory of the firm*, entrepreneurial behaviour is both enabled and constrained by the resources and capabilities entrepreneurs possess. It is essentially important that the entrepreneur as a person has certain traits and characteristics that will motivate entrepreneurial action, such as passion and persistence in particular. Passion has a potential to explain entrepreneurial behaviours, such as unusual risk taking, uncommon intensity of focus, resistant handling of stress and strong belief in a dream, etc. An individual's passion for work comes from self-motivation to work more for achieving set goals. It creates an insatiable need for excellence. For entrepreneurs, being passionate about their work is not only important but crucial, because it directly affects their business. They constantly need to discover new ways of not just surviving, but also expanding their business, maintaining their clientele base and recognising potential opportunities.

Several strong theoretical attempts have been made to explain entrepreneurial passion within entrepreneurial motivation setting, though these studies still lack empirical proof. Passion is a strong indicator of how motivated an entrepreneur is in building a venture, whether she/he is likely to continue pursuing goals when confronted with difficulties, how well she/he articulates the vision to

current and future employees, and whether she/he will be able to influence, persuade, and lead people in growing the venture (Vallerand et al., 2003). Thus, it is also related to strategic wisdom – the ability to best use knowledge for the purpose of establishing and achieving set goals (Bierly III et al., 2000).

True entrepreneurs are passionate about what they do – aspiring, striving to achieve, to create and make it happen (McGrath and Mac Millan, 2000; Lundmark and Westelius, 2014). Entrepreneurs experiencing passion for work or love of one's work confront opportunities and challenges with fervour and ardour (Baum and Locke, 2004). Entrepreneurial behaviour is passionate, full of emotional drive, energy and enthusiastic spirit (Bird, 1989). Passion for work is a common characteristic of successful leaders and helps entrepreneurs to face both extreme uncertainty and lack of resources (Timmons, 2000).

Cardon et al. (2009) were first to conceptualise the nature of entrepreneurial passion, associating it with salient entrepreneurial role identities. The authors also theorised mechanisms of the experience of entrepreneurial passion that provide consistency to goal-related cognitions and behaviours during the pursuit of entrepreneurial effectiveness.

Passion is a distinctive emotion common for entrepreneurs. Entrepreneurial passion is defined as “consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful for the self-identity of the entrepreneur” (Cardon et al. 2009, p. 515). It lies in the process of creation or building a company/venture; entrepreneurs acknowledge the importance of money as one measure of a business's success, and passion as another. Entrepreneurial passion is a fundamental emotional meta-experience for entrepreneurs (Cardon et al., 2009). Emotional meta-experience is defined by Cardon et al. (2005) as the cognitive process that integrates arousal, pleasantness, appraisal of the situation and mobilisation of the energy for potential action. Entrepreneurial passion is also entrepreneur's deep affective state accompanied by cognitive and behavioural displays of high personal value (Chen et al., 2009).

Chen and colleagues (2009) explicate two aspects of this definition with greater clarity. Entrepreneurial passion as a strong affective state is accompanied by cognizance and behaviour. Passionate entrepreneurs not only experience intense emotions — their minds are also extremely active and they are likely to take action to address their passion. Thus, to distinguish the affective from the cognitive dimension of the entrepreneurial passion construct, Chen et al. (2009) label the affective aspect as “passion” and the cognitive aspect as “preparedness”, or in other words affective and cognitive passion.

One of the substantial benefits generated by entrepreneurial passion is the high level of affective organisational commitment among entrepreneurs (Klaukien et al., 2010). The state of being passionate about entrepreneurial activities towards establishing or expanding a specific venture creates a strong attachment and involvement in it.

Entrepreneurial passion for a venture and related activities can lead to both functional and dysfunctional consequences. Knowing that passion makes the entrepreneur persistent in the face of difficulties and keeps enthusiasm very high during the process of achieving a certain goal, it may also often make it difficult to let go of the dream, even when all the signals and events suggest to do so (Cardon and Kirk, 2013). Thus, such persistence can be extremely dysfunctional (Meyer and Zucker, 1989; McGrath, 1999; Shepherd et al., 2009; Ho et al., 2011).

There are three dispositions complementing entrepreneurial passion (Stephan et al., 2009). They guide entrepreneur in initiating and building an enterprise and foster the entrepreneur’s vision of what makes this enterprise effective. The first disposition is a *proclivity for action*. Entrepreneurship is essentially a practice which ultimately depends on performance. Proactivity suggests that our behaviour is a result of our decisions, not our conditions. Instead of letting a situation determine how they would act or not, proactive entrepreneurs take the initiative to change the situation.

The second is a *tolerance for ambiguity*. When starting a business one will have to undergo continual and unforeseen ups and downs. The ability to deal with the

unexpected together with high levels of stress is a part of the entrepreneurial journey that without doubt puts physical and emotional pressure on the entrepreneur.

Finally, the third disposition is a *desire for control*. Entrepreneurs like to be in charge of their own lives. They seek independence and autonomy, which can be expressed in being one's own boss. Also entrepreneurs are usually referred to as risk-takers. However, effective entrepreneurs are not simply gambling with the opportunities and external factors, they are sometimes even willing to bet everything on one business decision (Smilor, 1997). The more individuals are obsessively passionate about an activity, the more they engage in risky behaviours (Stephan et al., 2009). A better analogical metaphor than the gambler would be the chess player, who makes a bold move, but at the same time understands all aspects of the game and anticipates possible counter moves. As a result, the entrepreneur calculates risks. Notably, effective entrepreneurs seek to secure better chances by acquiring greater knowledge about the field in which the risk is taking place. This is usually achieved via extensive market research, contingent business planning and competition analysis.

Cardon and colleagues (2013) conceptualised, developed and validated a scale to measure entrepreneurial passion with three distinctive dimensions of inventing, founding and developing a business, which relates to three distinctive entrepreneurial identities. In addition to that, Cardon and Stevens (2009) in their study on the discriminant validity of entrepreneurial passion made sure that these three dimensions are distinguished one from another and empirically distinct.

The theory of entrepreneurial passion proposed earlier by Cardon and colleagues (2009) encompasses entrepreneurs having positive intense feelings in relation to the entrepreneuring activities they are involved in and a strong motivational drive to follow those feelings. Moreover, these activities are consciously found to be important by entrepreneurs. The scale was developed in three dimensions on the basis of the identity type of the actual entrepreneur – inventing, founding and nurturing a business. It means that entrepreneurs can

experience passion for inventing, showing positive affect when identifying and exploring new opportunities, often having a special skill of creative thinking (Breugst et al., 2012). Entrepreneurs who experience passion for founding a company primarily enjoy the process of founding itself, related to sourcing and raising capital, assembling a founding team, finding the right location, mode and type of business. Finally, entrepreneurs can also have a strong passion for developing a company, which results in enjoying such activities as finding new customers, developing new markets, optimising organisational processes and so on (Cardon et al., 2013; Breugst et al., 2012).

Entrepreneurial passion also creates the emotional bonds between entrepreneurs and their businesses. They make continuous emotional 'investments' in their businesses (Cardon et al., 2005^a in Shepherd et al., 2009). Several studies related to entrepreneurial passion involve a specific object that is a potential source of, target and at the same time, central concern in the evoked emotion. For entrepreneurs this is the focal venture (Shepherd, 2003). However, some scholars treat passion as a completely individual trait, arguing that certain entrepreneurs will be passionate regardless of the specific venture they are involved in (Ma and Tan, 2006). In order to get a precise understanding of and insights into the phenomenon of entrepreneurial passion, both the individual and venture must be considered, as the interaction of those two is what drives entrepreneurial success.

A reflective metaphor used to describe the relationship between entrepreneurs and ventures is a 'parent-child' analogy, meaning that entrepreneurs invest a lot of effort, time and money in their ventures and are sturdily attached to them. A 'parenting' metaphor emphasises the importance of passion (strong emotions and eagerness) and identification (close attachment and connection) between an entrepreneur and a venture (Cardon et al., 2005^b). Passion arises not because some entrepreneurs are naturally predisposed to such feelings and emotions, but, indeed because they are involved in something that relates to a meaningful and salient self-identity for them (Baum and Locke, 2004; Shane et al., 2003). Murnieks and Mosakowski (2006) also invoke identities, arguing that passion emerges when a broad entrepreneurial role identity is salient.

Passion is vitally important in entrepreneurship since it can foster motivation, enhance mental activities and focus, as well as even provide meaning of everyday entrepreneurial work (Brannback et al., 2006). In order to be able to prove the importance of passion in organisational processes, scrutinised investigation of the effects of passion on entrepreneurial behaviours and most importantly performance is needed; the study thus summarises certain patterns and regularities that lead to the enactment of a passionate entrepreneur.

The importance of passion research in the entrepreneurship field can also be justified from the entrepreneurial experience point of view. It can be assumed that novice and serial or habitual entrepreneurs would experience different levels of amounts of entrepreneurial passion (Thorgren and Wincent, 2013). Similarly, entrepreneurs with varying amount of years spent in entrepreneurship might have different attitudes and motivations towards entrepreneuring (Westhead et al., 2005). Thus, their experience of passion, both harmonious and obsessive might potentially differ as well. This assumption adds an additional research angle to the passion literature. Accordingly, this study considers the entrepreneurial experience aspect which is explained in more details in the chapter 4.

2.2.5 Summary and Gaps

Despite the fact that passion is an affective state quite common to entrepreneurs, only seven articles have empirically examined entrepreneurial passion and none of them explored the links between entrepreneurial passion and entrepreneurial behaviours or overall venture performance. Baum and Locke (2004) following earlier study by Baum et al. (2001) conceptualised one's passionate love for work as one of the components of personality traits that can lead to venture growth. Chen et al. (2009) and Mitteness et al. (2012) investigated the notion of perceived entrepreneurial passion among potential firm investors, and Breugst et al. (2012) explored the perceived entrepreneurial passion among venture employees. Thorgren and Wincent (2013) looked at how habitual versus novice entrepreneurs are going to experience passion, namely harmoniously versus obsessively. Murnieks and colleagues (2012) and Cardon and Kirk (2013) related passion to self-efficacy. Finally, Ho and Pollack

(2014) investigated how passion affects network centrality and financial performance.

Passion in its general meaning (as defined by Vallerand et al. (2003)) has been the subject of a lot of research in the psychology literature. Specifically, passion has been studied in such non-work or entrepreneuring relating activities like gambling, sports, internet and personal relationships (Amiot et al., 2006; Mageau et al., 2005; Rousseau et al., 2002; Seguin-Levesque et al., 2003; Philippe et al., 2010). This said, however, research on the role of passion at work and particularly in entrepreneurial process has only started to develop very recently (Cardon et al., 2005^a; 2005^b; 2009; 2013).

The two perspectives discussed above, namely the dualistic model of passion (Vallerand et al., 2003) and the theory of entrepreneurial passion (Cardon et al., 2009) are the most important and acknowledged paradigms in relation to the passion construct. At the same time, there is a lack of understanding in terms of when each of those should be used and why. Scholars have not looked at passion consistently in the entrepreneurship research. To address these gaps, this research attempts to explore the role of harmonious and obsessive entrepreneurial passion in the formation of subsequent entrepreneurial behaviours and outcomes.

2.3 Entrepreneurial Behaviours: A Literature-Based Review

The entrepreneurial perspective is best reflected in entrepreneurs' traits and behaviours (Vesper, 1990; Covin and Slevin, 1991; Zahra, 1993). As a business process, entrepreneurship features a strong action orientation. It is about doing something, behaving in a certain way, creating something, and making things happen, because successful entrepreneurs are doers. Literature suggests that specific entrepreneurial activities and behaviours can influence overall corporate identity of the venture, where *founder's behaviour* is one of the key elements (Melewar and Karaosmanoglu, 2006). When entrepreneurial behaviours result in effective outcomes, they can give a company a competitive advantage in existing or even new markets (Miller, 1983; Stopford and Baden-Fuller, 1994; Zahra and Covin, 1995; Zahra and Garvis, 2000).

Table 2.2 summarises the literature selected for the present entrepreneurial behaviours review. It includes both conceptual and empirical studies that are relevant to the current research and provides an overview of entrepreneurial behaviours and actions phenomena.

Table 2.2: Conceptualisation of the Entrepreneurial Behaviours Construct

Construct	Conceptualization and components	Type of research	Authors
Absorption	Job Involvement and Work Involvement	Empirical	Kanungo (1982)
Absorption	Job Involvement and Organisational Commitment	Conceptual	Blau and Boal (1987)
Creative Problem Solving	Organisational Creativity and Individual Creativity	Conceptual	Woodman et al. (1993)
Entrepreneurial Activities	Corporate Entrepreneurship, Innovation, Venturing	Empirical	Zahra and Garvis (2000)
Tenacity	Persistence for New Ventures, Passion	Empirical	Baum et al. (2001)
Entrepreneurial Style	Decision Making, Opportunity Recognition	Empirical	Sadler-Smith et al. (2003)
Behavioural Persistence, Engagement	Flow and Pursuit (in the context of Harmonious and Obsessive Passion)	Empirical	Vallerand et al. (2003)
Organisational Ambidexterity	Contextual Ambidexterity, Alignment and Adaptation, Vision	Empirical	Gibson and Birkinshaw (2004)
Entrepreneurial actions	EO: Autonomy, Innovativeness, Proactiveness, Competitive Aggressiveness and Risk-taking	Conceptual	Dess and Lumpkin (2005)
International Entrepreneurial Activities	Exploitation, Opportunity Recognition and Evaluation	Conceptual	Zahra et al. (2005)
International Entrepreneurship Action	EO, Value Creation, Internationalization, Networking	Conceptual	Oviatt and McDougall (2005)
Ambidexterity	Exploitation and Exploration (SME's context)	Empirical	Lubatkin et al. (2006)
Entrepreneurial Practice	Innovation, Perseverance, Persuasion, Pursuit	Conceptual	Ma and Tan (2006)
Absorption	Job Involvement, Work Engagement and Organisational	Empirical	Hallberg and Schaufeli (2006)

	Commitment		
Ambidexterity	Exploration and Exploitation	Empirical	Menguc and Auh (2008)
Organisational Ambidexterity	Exploitation and Exploration, Organisational Learning, Technological Innovation, Organisational Adaptation, Strategic Management and Organisational Design	Conceptual	Raisch and Birkinshaw (2008)
International Entrepreneurial Activities	Entrepreneurial Competence, Opportunity Identification, New Venture Start-up, Networking	Conceptual	Muzychenko (2008)
Persistence, Creative Problem Solving, Absorption	As outcomes of Entrepreneurial Identities and Passion	Conceptual	Cardon et al. (2009)
Persistence	From the perspective of Founder's Identity	Conceptual	Hoang and Gimeno (2010)
Innovative Ambidexterity	Exploration and Exploitation, Explorative and Exploitative Innovation Behaviours	Empirical	Hughes et al. (2010)
Engagement	Job Engagement, Persistence and Task Performance	Empirical	Rich et al. (2010)
Engagement	Efficacy, Affect and Engagement in Activity	Empirical	Salanova et al. (2011)
Engagement	Time Pressure and Work Engagement	Empirical	Kühnel et al. (2012)

Entrepreneurial behaviours are associated with venture growth and development, in relation to the opportunity recognition and use. In order to understand the patterns of specific traits and behaviours common to entrepreneurs, research needs to address issues like why and how entrepreneurs are able to use opportunities in an effective way, as well as what are the consequences of certain entrepreneurial behaviours (Shane and Venkataraman, 2000).

Baum and Locke (2004) have revived the interest in understanding the effects of entrepreneurial behaviours influencing venture growth and performance. Georgelli and colleagues (2000) talked about 'being entrepreneurial' referring to risk-taking, being innovative, empowered with growth ambitions.

Determinants of entrepreneurial actions, for example, starting up an enterprise or managing venture internationalisation, form a complex web of various explanatory concepts. Entrepreneurial passion has been identified as one of those determinants in several recent studies (Cardon et al., 2005^a; Cardon et al., 2005^b; Shane et al., 2003; Cardon, 2008; Cardon et al., 2009). In the study by Cardon et al. (2009) authors argue that entrepreneurial passion as one of the most crucial personal characteristics will influence entrepreneur's effectiveness in creative problem solving, increase absorption and persistence in entrepreneurial tasks, which can facilitate venture growth. Passion has been associated with high levels of absorption in the activity along with the persistent action (Vallerand et al., 2003). In the following paragraphs entrepreneurial behaviours of engagement (absorption), persistence and opportunity creation are reviewed and discussed. These entrepreneurial behaviours will be scrutinised in the next pages of the chapter since they specifically stem from passionate entrepreneuring as the central aspect of the research is entrepreneurial passion.

2.3.1 Engagement

Entrepreneurs fired by passion evidence behavioural engagement in entrepreneurial activities (Cardon et al., 2009). This means that entrepreneurs who are passionate about their venture are likely to be strongly involved and engaged in day-to-day entrepreneurial activities.

The literature on work engagement does not provide a systematic understanding of how entrepreneurs engaged in their work influence venture performance outcomes. At the same time, since engaged employees can give companies they work for competitive advantages, it means that engaged entrepreneurs should be able to provide the same.

Employees strongly engaged in work activities demonstrate higher levels of success and accomplishment in their tasks which leads to increased overall performance (Rich et al., 2010). Similarly, Xanthopoulou and colleagues (2009) argue that engagement among employees is associated with higher levels of productivity. The research concerning explanatory factors of work and task performance stems from three competing streams. First, *job involvement* notion

has received a lot of attention and refers to the degree to which people relate to their jobs as comprising the important part of their lives. It means employees who are strongly involved in various work domains and identify themselves with their jobs will think about their jobs even when outside of work. Second, there is a stream on *job satisfaction* which is promoted by favourable perceptions of job characteristics and supervisors influenced by the individual personality differences. Thus, those positive feelings in relation to perceived job satisfaction can increase employees' effectiveness at work and ultimately their performance. Finally, a third stream concerns the satisfaction of specific psychological needs at work as explained in self-determination theory (Rich et al., 2010). Particularly, such work talks about the concept of intrinsic motivation and how it creates the desire to exert effort on a specific task even in the absence of any external contingencies or pressures. It has been argued that the satisfaction of those needs – autonomy, competence and relatedness – can positively influence individual performance.

Engagement is referred to as “the simultaneous employment and expression of one's preferred self in task behaviours that promote connections to work and to others, personal presence (physical, cognitive and emotional) and active, full performances” (Kanh, 1990: p.700). At a general level, entrepreneurs who are highly engaged in their venture and entrepreneurial activities are imputing a lot of cognitive and emotional energy into regular work tasks, which is likely to be reflected in their individual, as well as firm performance. The investment of physical energy into work activities contributes towards the achievement of goals and overcoming challenging obstacles. It facilitates the accomplishment of effort and particular behaviours needed for optimal individual performance and functioning. Similarly, the investment of cognitive energy promotes vigilant and focused behaviour at work and leads to improved performance. Finally, the investment of emotional energy is associated with the enhancement of performance through the promotion of strong connectedness and relatedness with employees.

Engagement is often substituted with a construct of absorption, which is defined as being fully concentrated and deeply engrossed in one's work (Schindehutte et al., 2006). However, engagement should not be confused with absorptive

capacity – being similarly named it captures a capability pertaining to knowledge creation and utilisation, and enhances a firm's ability to gain and sustain a competitive advantage in time (Zahra and George, 2002).

Absorption captures the level of engagement in activities, which is why the two constructs are found to be similar. Performance peaks that entrepreneurs experience at certain times are characterised by personal absorption and immediate involvement in entrepreneurial tasks, strong focus, singleness of purpose and self-validation (Schindehutte et al., 2006). The presence of passion is also consistent with the high level of engagement and continuous involvement, strong focus and attention concentration, purposefulness and sense of infallibility associated with flow.

Slightly similar concept to engagement and absorption is job involvement. Job involvement is defined as the degree of importance of one's job to one's self-image (Lodahl and Kejner, 1965; Lawler and Hall, 1970); and the degree to which an individual is actively participating in his/her job (Allport, 1943; Bass, 1965). This construct emphasises the degree and amount of time that a person dedicates to his/her work in particular profession. A distinctively different concept is work involvement (Kanungo, 1982), where definition is bound by the working context on the whole, in contrast to job involvement which underlines specific job and related activities in it. Thus, work involvement on the contrary to the job involvement looks at a general level of being involved in one's work. Therefore, engagement appears to bear quite different meaning to these two constructs.

From an entrepreneurial perspective, it is relevant to conceptualise engagement as the degree to which an entrepreneur is actively conducting his/her actions while participating in his/her own job. Work engagement can be defined as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption (González-Romá et al., 2006; Maslach et al., 2001; Schaufeli et al., 2006; Kühnel et al., 2012). Vigour refers to high levels of work energy and focus, the willingness to input effort in one's work, while dedication represents strong involvement in one's work and experiencing sense of importance, enthusiasm, motivation and pride. Absorption as the third

component of work engagement in this definition forms a key point in the conceptualisation of the engagement in this research (Cardon et al., 2009) and is defined as being fully concentrated and immersed in one's work, following the notion of flow (Kühnel et al., 2009; Salanova et al., 2011). When pursuing a passionate activity, it is quite common for individuals to experience state of attention and absorption (Mageau et al., 2005; Vallerand et al., 2003), in other words, engagement in the activity.

Work engagement stresses the assumption of 'optimal functioning' at work in terms of well-being. It is similar to having 'flow', being carried away and experiencing a sense of total harmony (Csikszentmihalyi, 1997 in Hallberg and Schaufeli, 2006), but in contrast to flow, which tends to be a peak experience, work engagement is more stable and longer lasting. Absorption is mentioned as one of the components of work engagement (the degree of being happily engrossed in one's work) along with vigour and dedication.

Passion can bring a flexible or a controlled form of activity engagement (harmonious and obsessive respectively) and should facilitate better concentration and the experience of absorption and flow (Vallerand et al., 2003). Thus, the inclusion of engagement in this study provides an interesting insight into the passion and performance relationship and is proposed to be studied in current research project.

2.3.2 Persistence

Entrepreneurial persistence occurs when the entrepreneur decides to continue pursuing a previously selected opportunity, regardless of alternatives or risks. In its core meaning, entrepreneurial persistence involves two distinctive components: 1) the continuation of effort towards a previously selected entrepreneurial opportunity, and 2) pursuit of the selected opportunity in the face of present obstacles and opposing factors. Opposing factors may include negative feedback and comments about the current opportunity or positive information about an alternative opportunity (Gimeno et al., 1997).

Persistence is defined as the continuation of effort despite failures, obstacles or threats, both real and imagined (Gimeno et al., 1997). It essentially refers to the

duration of task involvement and therefore is conceptually distinct from engagement, which accounts for the degree of task involvement. According to Bandura (1986), persistence is also endurance, the refusal to lose or give up, especially when faced with opposition. Therefore, persistence is a strong cognitive and behavioural tendency to continue in a chosen direction despite difficulties.

Persistence is an important factor influencing the successful establishment and operation of new ventures, as well as the nurturing and development of the existing ones (Bird, 1989; Chandler and Jansen, 1992). Persistence is regarded as a significant behavioural trait predetermining entrepreneurial success as most entrepreneurs have to overcome extremely adverse situations in relation to resource constraints, cutthroat competition and other aspects characteristic for dynamic environments (Alvarez and Busenitz, 2001).

One stream of literature posits that the decision to persist is mostly influenced by personal characteristics of an individual. In other words, entrepreneurial persistence has been considered as a trait, suggesting that this characteristic leads to increased motivation, which in turn can lead to venture growth (Baum and Locke, 2004). Other researchers have viewed persistence as a perception of having power over adversity, and have demonstrated that entrepreneurs tend to have a greater perception of control than non-entrepreneurs (Markman et al., 2005). Finally, Holland and Shepherd (2013) looked at persistence as a complex decision that is a combination of both personal and environmental factors. In their study Holland and Shepherd (2013) examined entrepreneurial persistence decision making. They found that entrepreneurial persistence decision policies are diverse and depend both on the level of difficulties experienced and the individual traits and values held by the entrepreneur. De Tienne and colleagues (2008) investigated several internal and external aspects that can influence entrepreneurial persistence. Those include self-efficacy, personal investments, past success and extrinsic motivation. Entrepreneurs may persist or not in the pursuit of specific opportunities or tasks depending on a context of the activity, as well as internal stimuli and external pressures.

A construct similar to persistence that is commonly used in the psychological literature, is perseverance or tenacity (Duckworth et al., 2007; Baum and Locke, 2004; Gartner et al., 1991), defined as a trait which relates to maintaining goal-oriented action and energy even when faced with difficulties and barriers. Perseverance is not only a good personal quality, but also a necessary ingredient of successful entrepreneurship. Thriving entrepreneurs are not quitters. They pursue dreams and often have amazing capacities for dealing with losses and high pressure (Ma and Tan, 2006). Perseverance can be regarded as a distinguishing feature of entrepreneurs; for the average person, a failed attempt is a failure, whereas for the entrepreneur it is a sign to persevere.

Eisenberger (1992) defined perseverance as a tendency to persist in the face of adversity. Most research in the area of perseverance construct has focused on cognitive perspective – beliefs, thoughts and attitudes – and paid little attention to behavioural persistence, let alone its impact towards work performance (Markman et al., 2005). Due to the fact that individuals react differently to similar adversities, it is the standpoint of this research to investigate behavioural persistence as defined previously in this section. Entrepreneurial success is determined by the extent to which entrepreneurs persevere in their tasks, in spite of the obvious and often insurmountable obstacles.

Persistence has a direct influence on entrepreneurs' courses of action. It accounts for the level of effort they put in the pursuit of entrepreneurial activities and their resilience towards setbacks and even repeated failures (Cardon and Kirk, 2013). Moreover, persistence also displays how much stress entrepreneurs can handle while coping with the setbacks (Bandura, 1997). Thus, passionate and persistent entrepreneurs may discover the ways to get around obstacles or change them with their actions, while less resilient people are easily dispirited even by minor hurdles or unexpected challenges (Baron and Shane, 2004).

Duckworth and colleagues (2007) combined the constructs of passion and perseverance to form a new concept of 'grit'. They defined grit as 'perseverance and passion for long-term goals' (Duckworth et al., 2007: p. 1087). Therefore, grit provides a broader construct compared to persistence and refers to working

vigorously with respect to occurring challenges and maintaining endurance and passion over time, despite failures and adversities. The gritty entrepreneur approaches a journey to achievements as a marathon with the advantage of being resilient (Duckworth et al., 2007).

According to Vallerand et al. (2003), passion is likely to foster persistence in entrepreneurial activities. Passionate activity is dear to those who engage in it and passionate entrepreneurs are likely to devote huge amounts of time and energy on entrepreneurial activities and to persist in them for long periods of time. As long as the entrepreneur derives positive benefits from the activity, he or she will persist.

Entrepreneurs who experience passion, benefit from its motivational energy, since passion entails strength (Bierly III et al., 2000), mobilising energy (Brannback et al., 2006) and the indefatigable pursuit of challenging goals (Smilor, 1997). Passion has often been related to tenacity, willingness to work long hours and persistence in the face of adversities (Bierly III et al., 2000).

At the same time, rigid persistence may also lead to dysfunctional outcomes affecting the entrepreneur's mental state and ultimately performance (Vallerand et al., 2003). Obsessive passion can lead to blind persistence and to serious mental and organisational damages that entrepreneur is likely to face when having tendencies to go beyond limits and persist at all costs in the activity (Vallerand et al., 2003; 2010). Thus, it is crucial to understand the extent to which entrepreneurs can and should persevere in their activities, without causing damage to themselves and their firm.

2.3.3 Opportunity Creation

In order to capture how entrepreneurs recognise and use opportunities, it was essential to come up with a new construct that encompasses these aspects from the entrepreneurial perspective. Moreover, exploratory interviews conducted with entrepreneurs signified the importance of creating opportunities for business development (please refer to section 3.2.4 for more details). The paragraphs that follow explain the viewpoint and development of a specific new

construct introduced for the investigation in this research – namely, opportunity creation.

A recurring theme in a variety of organisational literatures is that successful organisations are those determined and efficient in their management, as well as adaptive to changes in a dynamic environment (Duncan, 1976; Tushman and O'Reilly, 1996). Even though Duncan (1976) was the first to use the term organisational ambidexterity, it is March's (1991) landmark article that has been cited as the starting point for the current interest in the concept. March (1991) proposed that exploitation and exploration are two fundamentally different learning activities between which firms divide their attention and resources. While exploitation is associated with activities such as refinement, efficiency, selection, and implementation, exploration refers to notions such as search, variation, experimentation, and discovery (March, 1991: p. 102). Those firms that are able to exploit existing competencies and explore new opportunities with equal dexterity are ambidextrous (Gibson and Birkinshaw, 2004). The intent of exploitation is to respond to current environmental conditions by adapting existing technologies and further meeting the needs of existing customers (Harry and Schroeder, 2000). In contrast, exploration involves the use of tacit knowledge bases, such that by externalising and combining them, new technological or marketing trajectories are developed (Nonaka, 1994 in Menguc and Auh, 2008).

Entrepreneurial opportunities are situations in which new goods, services, raw materials, markets and organising methods can be introduced through the formation of new means, ends, or means-ends relationships (Eckhardt and Shane, 2003). Successful entrepreneurs possess specific ability to identify market opportunities and to exploit them for the creation and nurture of business ventures (Dutta and Crossan, 2005; Welpé et al., 2012).

Short and colleagues (2010) in their review article on the opportunity concept in entrepreneurship posited a question in relation to the nature of opportunities. Are they actually discovered (recognised) or created (enacted) by entrepreneurs? From the first point of view, opportunities are viewed as existing in reality and waiting to be found (Bingham et al., 2007; Gregoire and Shepherd,

2012). Opportunity discovery starts either from a known supply and proceeds in search of an unknown demand, or from a known demand that motivates search for an unknown supply (Miller, 2007). Within discovery theory, competitive imperfections are assumed to arise from changes in technology, customer preferences or any other attributes of the industry. These changes disrupt competitive equilibrium, thus forming opportunities to be discovered by entrepreneurs (Alvarez and Barney, 2007).

On the contrary, from the second stream of literature's opinion, opportunities are a function of enacted actions that occur during entrepreneurial process (Ardichvili et al., 2003; Mitchell et al., 2008 among others). Thus, to capture both dominant views, authors come up with the following definition: an opportunity is an idea or a dream that is discovered or created by an entrepreneurial entity and that is revealed through analysis over time to be potentially lucrative (Short et al., 2010: p. 55).

Oviatt and McDougall's (2005: p. 540) definition of entrepreneurship being 'the discovery, enactment, evaluation and exploitation of opportunities to create future goods and services', posits that some opportunities are located and discovered (Autio et al., 2013), whereas others are the result of a process of enactment where entrepreneur conceives of an idea and gives it meaning (Zahra et al., 2005). This implies that exploration and exploitation alone are not sufficient enough to capture the process of opportunity creation construct, which forms the focus of this research.

Hsieh et al. (2007) relate opportunity discovery ultimately to problem-solving, including two distinct stages: entrepreneurs select deliberately or stumble upon problems. Then they seek for an appropriate solution. Thus, a unique and valuable problem-solution pairing defines an opportunity. Therefore, according to this perspective, the entrepreneur's task is to discover and exploit opportunities to solve problems.

Thus, another existing construct that provides a significant understanding of how entrepreneurs deal with difficult situations and challenges in dynamic environments is creative problem solving. Creative problem solving is defined

as the production of novel and useful ideas or actions (Woodman et al., 1993). It usually refers to organisational creativity – the creation of a valuable, useful new product, service, idea, procedure, or process by individual/individuals working in a complex social system. Creative problem solving is consistent with the passion perspective (Cardon et al., 2009): passionate entrepreneurs are creative while identifying opportunities and performing entrepreneurial actions; and the entrepreneurial mindset can enhance problem solving and risk-management.

However, there are several reasons why creative problem solving as it is formulated now is not the construct sought for the current research. First, there is no clear definition, as the existing mix of definitions is derived from organisational creativity or opportunity recognition or development and ultimately holds a similar meaning (Woodman et al., 1993; Hsieh et al., 2007). Second, creative problem solving has been regarded as a more practical approach and even a tool or an outcome rather than a construct of research (Gilson and Shalley, 2004). In other words, one is likely to measure individual creative problem solving as a propensity to approach problems in a more creative and unique manner. For example, creative problem solving could be based on ideas sought outside one's field of expertise and competence. Therefore, this construct does not really talk about the ability to create opportunities rather than merely solve problems in a creative way. Third, the construct was usually measured using experimental design – giving the participant(s) a task that needs to be solved and thus the creativity of a person is or isn't displayed. In addition to that, the creativity element is already present within the entrepreneurship definition/idea, since creativity is defined as the ability to come up with unique yet appropriate ideas and solutions (Perry-Smith and Shalley, 2003). Problem-solving is one of the skills of creativity. When entrepreneurs identify and enact upon opportunities they are being creative and ambidextrous at the same time.

What may be required to achieve the ability of equally exploring new opportunities and exploiting the existing ones, and even create opportunities him or herself, is to have an entrepreneur passionate about his/her own work. The exploration and exploitation of opportunity is a setting in which people with

a passion for high achievements distinguish themselves (Shane and Venkataraman, 2000).

On the basis of the above, as well as exploratory interviews' outcomes (see section 3.2.4 in the chapter 3 for more details), the author decided to focus particularly on the aspect of how entrepreneurs are able to create opportunities, following the second stream of opportunity literature (Ardichvili et al., 2003; Mitchell et al., 2008; Oviatt and McDougall, 2005). The reasoning for this also comes from the passion literature, where passionate entrepreneurs are likely to be creative and extravert, and think of new ways of doing business, rather than just explore or exploit the existing ones. Therefore, it seems much more exciting to investigate how such opportunities for improving a business can be created by entrepreneurs themselves. This means that opportunity discovery process lies outside of this research interests, along with exploration and exploitation processes. A new construct developed for this study purposes builds off some key aspects of exploration and exploitation, however focuses on the actual enactment of the opportunities by entrepreneurs.

The key distinguishing feature of opportunity creation view point is that the entrepreneur has an underlying role in bringing the opportunity into reality (Alvarez and Barney, 2007). Opportunity creation stream predisposes that neither the supply, nor demand exists prior to the action of entrepreneur, who participates in creating both (Miller, 2007) and the opportunity does not exist prior to the entrepreneur's initiative. In creation theory, opportunities are not assumed to be objective phenomena in the industry or market. They are created endogenously by the actions and reactions of entrepreneurs identifying ways of producing new products or services (Alvarez and Barney, 2007).

Opportunity creation construct was chosen to represent the particular innovative and creative entrepreneurial behaviour and a new definition was developed. Opportunity creation is an entrepreneurial behaviour where the actions and reactions of entrepreneurs result in the identification of new ways of doing business. It is the development of situations where new goods, services, markets, resources and/or organising methods can be introduced (adapted from Alvarez and Barney, 2007 and Eckhardt and Shane, 2003). According to Morris

and colleagues (2002), entrepreneurial marketing involves the proactive identification and exploitation of opportunities with a purpose of acquiring and retaining profitable customers through the application of original and innovative methods to risk management, value creation and business performance improvement. As such, in line with the entrepreneurial marketing research context, the new construct developed captures the key characteristics and behaviours of those entrepreneurs who are involved in marketing activities and drive the entrepreneurial growth of their firms.

It has been argued that passionate entrepreneurs are likely to demonstrate high levels of creativity and unique vision (Cardon et al., 2013). It means that along with being engaged and persistent in entrepreneurial activities, they are also likely to be establishing new opportunities for business improvement and thus, opportunity creation behaviour becomes of high interest in this research.

2.3.4 Summary and Link to Entrepreneurship

This section has described the entrepreneurial behaviours that are especially characteristic for passionate entrepreneurs. These behaviours can substantially increase the successful outcomes as well as influence positively on the entrepreneurial firm. Entrepreneurial competence forms a set of knowledge, skills and abilities that enable entrepreneurs to successfully perform their job role (Baum et al., 2001; Chandler and Hanks, 1994; Man and Lau, 2000; Man et al., 2002), and reflects the behavioural aspects like engagement, persistence and opportunity creation. These behaviours are driven by the presence of passion as passionate entrepreneurs are argued to be highly engaged and persistent in their work, along with being able to create new ways of doing business effectively and efficiently (Cardon et al., 2009; 2013).

2.4 Business Performance

Venture success encompasses a wide variety of factors that are important for entrepreneurs, such as profits, market position, personal satisfaction and goal achievement to name a few (Schjoedt, 2009; Gatewood et al., 2002; Hmieleski and Baron, 2009). Personal profit motives play a central role in empowering private enterprises and creating social wealth. Entrepreneurship is considered

as particularly productive from a social welfare creation viewpoint; provided that in the process of pursuing selfish motives, entrepreneurs also improve social wealth being by creating new markets and industries, new technologies, new business forms, jobs and increases in real productivity (Venkataraman, 1997). This connection between private wealth-seeking and social wealth creation forms a distinctive and legitimate domain for the field of entrepreneurship.

A general tendency of the shortening of product and business model life cycles is prevalent in today's business environment (Wiklund and Shepherd, 2005). Therefore, the future sources of the profit from existing operations are quite uncertain and businesses have to regularly search for new opportunities.

Entrepreneurs are driven by results. They are concerned with the recognition and exploitation of profitable opportunities (Shane and Venkataraman, 2000), as well as with the creation of new ones. Consistent with psychological theories that explain individual performance, personal traits can be important predictors of venture growth (Baum et al., 2001). As discussed previously in this chapter, the entrepreneur's traits and behaviours (such as being passionate, having a strong engagement and persistence at work, and being able to create opportunities) are likely to affect venture performance. This somewhat explains why practitioners and scholars continue to emphasise the importance of 'the entrepreneur' in venture success (Westhead et al., 2005; Schjoedt, 2009), even though entrepreneurship trait research has not uncovered direct relations to performance yet.

The next section of this chapter deals with the understanding of the business performance construct, concerning its multidimensionality and complicated nature related to the objectivity of the data used when measuring it. The core dimensions of performance are also presented and discussed. Finally, it concludes with the approach and context chosen to be used in this particular study.

2.4.1 Theoretical Approaches to Performance: Dimensions and Measures

While investigating the performance in entrepreneurship, it is essential to understand the multidimensional nature of the construct (Morgan, 2012).

Entrepreneurial activity or processes may sometimes lead to positive outcomes on one performance dimension such as provide good profits, but at the same time it could bring unfavourable outcomes on a different performance dimension, such as low growth expectations and so on (Lumpkin and Dess, 1996; Haber and Reichel, 2005).

The vast majority of the research on performance measurements has come to entrepreneurship from organisation theory and strategic management. There are three fundamental approaches dominant in the literature for conceptualisation and measurement of organisational effectiveness. The 'goal-based approach' argues that an organisation can be evaluated by the goals it sets for itself (Yuchtman and Seashore, 1967; Pfeffer and Salancik, 1978). The 'systems approach' considers the concurrent achievement of multiple, generic performance aspects (Steers, 1975). Finally, the 'multiple constituency approach' examines the extent to which various stakeholder types are satisfied with business performance (Pennings and Goodman, 1977; Connolly et al., 1980). Strategy research attempts to integrate all three organisational theoretic perspectives in a form of hierarchical multiple constructs structure for organisational performance measurement (Venkatraman and Ramanujam, 1986).

Performance is viewed as a multifaceted high-order construct consisting of three dimensions, such as sales performance – sales volume, sales growth, new product sales and so on; financial performance – profitability, return on investment, profit growth etc.; and customer performance – their acquisition, retention and satisfaction. The latter one is sometimes called market performance and measures aspects of market share and sales volume. In addition to that, it is sometimes very useful to measure these aspects in relation to the company's key competitors (Katsikeas et al., 2006). However, in recent studies (Morgan, 2012; Reimann et al., 2010; Ernst et al., 2011) scholars tend to combine aspects from various performance dimensions to create one measurement construct to capture performance more accurately.

The literature investigation demonstrates a high diversity of performance measures across different research fields, company industries, size and context

(see reviews by Combs et al., 2005; Venkatraman and Ramanujam, 1986; Devinney et al., 2010; Richard et al., 2009; O'Sullivan and Abela, 2007; Leonidou et al., 2011). A notable conclusion is that all of these studies provide a clear distinction between financial and nonfinancial measures of performance. The next sections of this chapter are looking into these two dimensions and discuss key indicators used to assess them.

2.4.1.1 Financial Performance

Performance is viewed as a complex and multidimensional construct, which at various times may be reflected by financial outcomes, sales growth, customer satisfaction or new product development to name a few. Some scholars argue that financial dimension of performance itself can be regarded as a multifaceted one, where growth and profitability being some of the most commonly used measures within this dimension reflect rather distinct outcomes (Wolff and Pett, 2006).

Steffens and colleagues (2009) argue that profitability and growth are two key elements of company performance. However, there is a range of situations where firms can gain profitability from growth and vice versa and thus, enter an infinite cycle, where growth leads to profitability and in turn, profitability leads to growth (Steffens et al., 2009).

The distinction between the two indicators is one of the occurring issues within financial performance literature (Rauch et al., 2009). Conceptually one can determine the difference between profitability and growth measures. However, regardless of the fact that these components are related both on empirical and theoretical levels, there are also crucial differences between the two (Combs et al., 2005). For instance, companies may decide to invest heavily in long-term growth projects, while inevitably sacrificing short-term profits (Rauch et al., 2009). Consequently, when using profitability and growth elements in performance measurement, researchers need to understand that though very similar, these two concepts are also inter-related. As a result profitability and growth measures should not be combined together if assessed with the financial indicators, otherwise they would potentially provide very contradicting results.

The financial dimension of company performance lies at the core of the business effectiveness. Financial or economic indicators are the most commonly used when measuring firm performance (Katsikeas et al., 2000; Morgan, 2012). The reason for that is the fact that financial measures are extremely useful for organisational and accounting research, since they are usually readily available in a secondary data format. Financial measures can be sales related or profit related, mostly looking at profits, growth and sales volumes (Richard et al., 2009). Studies in various academic fields and including different company operating industries have primarily used financial variables to assess business performance, mostly reflecting owner–manager interests (Richard et al., 2009; Devinney et al., 2010; Carton, 2006).

Performance measures within a financial domain fall into two distinctive categories. Accounting-based measures usually present 'objective' financial realities and frequently used indicators are return on assets (ROA) and return on equity (ROE) among others, as well as other accounting indicators such as cash flows and profitability (Morgan, 2012; Richard et al., 2009). Stock-based measures reflect 'subjective' perceptions and behaviours (Haslam et al., 2010). One of the most often used measures in this category is Tobin's Q, which compares the market value of the firm with the replacement value of the firm's assets. In other words, it estimates how efficient investors perceive a firm's use of its assets. Both of those categories are acknowledged to have strengths and weaknesses. Accounting-based measures are somewhat 'backward-looking' as they are based on the assessment of past performance of the company, whereas stock-based measures are on the contrary 'forward-looking', because they reflect both current position and future potential of the firm (Haslam et al., 2010).

Often financial measures tend to take central part in examining firm performance, nonetheless, there is no clear understanding of which financial measures are the most appropriate for this purpose (Devinney et al., 2010). Financial performance is the main goal of all management in the organisation, but not a superior aspect to everything else that matters for success (Morgan, 2012; Richard et al., 2009). Financial measures rarely capture any of the

intangible assets of the company that notably make up the majority of many firms' value (Lehmann, 2004). Assessing company performance only on the basis of financial measures neglects other relevant dimensions of firms that can relate to factors such as market share, number of employees, customer relationship management and many others, depending on the business context and the industry it operates in. Thus, objective financial measures are not enough to provide a complete picture of the firm's performance (Haber and Reichel, 2005). Along with financial results, focusing on sales, market share, customer retention and other market performance measures per se becomes in the centre of attention.

2.4.1.2 Non-Financial Performance

A second dimension prevalent in the literature is often called non-financial performance dimension, which includes product/market and customer performance indicators, such as product quality and market share measures to name a few (Richard et al., 2009; Carton, 2006; Katsikeas et al., 2006; Morgan, 2012) and focuses on day to day operations of the company.

Nonfinancial measures include a vast variety of elements that often are goal-related, such as satisfaction with success ratings of owners or business managers, the extent of the strategic goals achievement, and overall perceived success (Rauch et al., 2009; Cavusgil and Zou, 1994). Moreover, non-financial indicators also look at market share and effectiveness, as well as customer-related measures.

One of the perspectives often used in relation to non-financial performance measurement comprises of indices that reflect size of the business, in terms of employees and/or projects number (Haber and Reichel, 2005; Aragón-Sánchez and Sánchez-Marín, 2005). This approach is particularly useful for small and new companies, where profits are not occurring yet due to the small number of years in business. When new venture performance is the key aspect of interest, another common measure used is sales growth over the past several years (Ensley et al., 2006; Hmieleski and Corbett, 2008). However, this approach is more useful when firms under investigation are at least 3-5 years old in order to be able to obtain the growth data.

Market share is one of the most frequently used measures of market performance, which can be defined as firm's sales revenue in the particular product market divided by the total sales of the product in that market (Jarvis et al., 2003; Combs et al., 2005; Carton, 2006; Leonidou et al., 2013; Richard et al., 2009). This measure also provides an overview of company's position and strength within the market of operations. Another important indicator in relation to the market performance depicts the volume of goods sold in the market, referred to as sales volume (Carton, 2006; Katsikeas et al., 2000, 2006; Devinney et al., 2010). This particular measure is especially useful when the company or companies under investigation are relatively new and the actual profitability cannot be assessed. The two are slightly similar and can sometimes be used separately, however provide a more comprehensive understanding when used together to assess company performance in relation to the market.

Several scholars (Boulding et al., 2005; Payne and Frow, 2005) posit that determining how companies can profit and grow from their customer relationship management is essentially important for marketing, management and entrepreneurship practitioners, as well as academics. Customer satisfaction, which refers to the degree of customer-oriented success and perceived level of satisfaction, along with market effectiveness, measuring the degree to which the market-related goals had been achieved, are some of the dominant customer and market performance measures respectively (Reimann et al., 2010; Ernst et al., 2011). It has been demonstrated in past research (Brockman et al., 2012; Ernst et al., 2011) that customer orientation is positively associated with small firm performance. This argument is especially relevant for the present study, which is looking specifically at small and medium firms (sample frame discussed further in the chapter 4).

Ittner and Larcker (1998) emphasise the impact of customer satisfaction and market performance within overall business performance assessment. Authors also argue that current financial and particularly accounting measures of performance do not fully reflect the results of it. Customer satisfaction, retention, acquisition and loyalty are some of the most popular measures within this domain and are widely used in business research (Katsikeas et al., 2006; Morgan, 2012; Vorhies and Morgan, 2005; Leonidou et al., 2013).

Consequently, non-financial measures of performance construct are equally important in research with financial. They provide insight into various intangible assets of the company and help creating a more credible assessment of business performance.

2.4.1.3 Development of the Aggregated Construct

In addition to various dimensions of performance measures, there is also a difference between the sources of information for its assessment. Basically performance may include 'subjective' measures – self-reported measures, dealing with perceived level of results of the company performance; 'quasi-objective' measures – asking informants to answer about specific objective information with their opinion and later compare with the objective values collected from secondary data (Venkatraman and Ramanujan, 1986); and 'objective' measures – the ones discussed previously in this chapter, which are obtained from secondary data (Devinney et al., 2010).

Since it is quite difficult to measure such a multi-aspect phenomenon as company performance, academic literature recommends combining both quantitative and qualitative indicators, as both of them have their own advantages and limitations. Quantitative indicators are the ones usually used within financial and market performance domains. Qualitative indicators can include business knowledge and experience, ability to provide quality products or services, new product development, management and team work, corporate social responsibility and many other (Aragón-Sánchez and Sánchez-Marín, 2005).

Recent approaches go beyond just financial of operational performance measurement, considering various constituencies and internal factors (Katsikeas et al., 2000; Wolff and Pett, 2006; Zammuto, 1984; Morgan, 2012; Richard et al., 2009 among others), hence the existence of multiple constructs. It is somewhat a classifying structured approached, with financial versus operational performance and primary versus secondary data sources (Murphy et al., 1996). It is vitally important to measure performance with a combination of different factors and often items used within a combination are return on

assets, market share, net profit, return on sales and sales volume (Su et al., 2011).

In addition to financial and operational considerations in company performance, in previous studies, growth is also used as an alternative measure for business performance (Brush and Vanderwerf, 1992; Chandler and Hanks, 1993; Fombrun and Wally, 1989; Tsai et al., 1991; McKelvie and Wiklund, 2010; Morgan et al., 2012; Steffens et al., 2009). Notably, growth as a measure of performance may be even more accurate and representational than most of the accounting measures used in financial performance (Zahra, 1991), due to the fact that financial indicators only account for a present state of the company, whereas growth is associated with the long-term perspective.

Thus, research examining performance in entrepreneurship should include multiple performance measures. Such measures could include traditional accounting measures such as sales growth, profitability and return on investments (Lumpkin and Dess, 1996; Morgan, 2012). Additionally, various indicators of the overall performance are useful in considering the firm's goals, as well as other elements of wider stakeholder groups' satisfaction. Furthermore, nonfinancial considerations may also be of high importance. Factors relating to entrepreneurial and company reputation, image (Melewar and Karaosmanoglu, 2006) and customers may be especially important to small and new business entities. It is, however, crucial to understand that even when multiple measures are used while investigating firm performance, it still displays a high propensity to change at different stages of the life of an organisation and has an exceptionally unstable nature. To account for that, Wiklund and Shepherd (2005) suggest examining both financial performance (change in profit and sales, cash flows), also compared with competitors, in a form of benchmarking (Vorhies and Morgan, 2005) and growth (change in sales, number of full-time employees), in order to gain more accurate and appropriate understanding and capture different aspects.

2.4.2 Summary and Gaps

Organisational performance is the critical dependent variable of colossal interest across various fields of business literature. At the same time, there is no

universal mechanism to capture and measure this phenomenon. There are several factors and issues that in addition to performance dimensionality influence its relevance, accuracy and the extent to which the indicators used to measure it capture the realistic aspects of a company.

Consequently, the performance of entrepreneurial entities (Murphy et al., 1996) could be measured with various tools and approaches, such as in terms of economic profit (Schumpeter, 1934, 1976; Zahra, 1995), product innovation (Jennings and Young, 1990), venture growth (Baum et al., 2001), concern for public welfare and social impact (Pfeffer, 1994), or simply with entrepreneur's personal satisfaction (Miner, 1997), among other measures (Zahra and Covin, 1995). If and when achieved, a superior performance is the result of both outstanding entrepreneurial practice (employing particular behaviours and using particular traits), as well as the financial rewards. Evidently, in most cases, not only the monetary rewards motivate entrepreneurs. It is the feeling of freedom and pride, creating value and impact, applying skills and developing competences, as well as the ultimate self-actualisation through the entrepreneurial process that leads to an all-encompassing success (Ma and Tan, 2006).

There is a clear lack of information and guidance on performance measurement in the field of entrepreneurship to date. At the same time, accurate and appropriate measurement of performance construct is essential in entrepreneurship research. Without adequate measuring tools for performance theory development is limited and practical implications lack useful prescriptions for entrepreneurs (Murphy et al., 1996; Richard et al., 2009).

Based on the review of performance literature presented in this section, a multidimensional conceptualisation of performance variable integrating both quantitative (financial) and qualitative (non-financial) aspects has been widely applied in strategy and entrepreneurship research and has been recommended recurrently to capture the multifaceted nature of the phenomenon of performance (Venkatraman, 1989; Morgan, 2012; Katsikeas et al. 2000, 2006; Richard et al., 2009; Devinney et al., 2010; O'Sullivan and Abela, 2007). Accordingly, following these discussions and guidelines on the approach to

performance measurement, this study employs two key dimensions of financial and customer/market performance, in an attempt to create a single construct of measurement.

This approach of aggregating performance into an 'average' single construct measure has been particularly common when using subjective measures of performance (Varadarajan and Ramanujam, 1990). Since the key informants in this study are entrepreneurs, it has been decided to use their subjective measures in a form of considering entrepreneurial satisfaction in relation to financial indicators: profitability, cash flows and return on investments; and customer/market variables: market share, customer satisfaction and sales volume.

In order to capture the performance adequately, a variety of items will be used from both financial and customer/market performance dimensions. The items are measuring the following: profitability refers to firm's revenue minus all related costs; cash flows are inflows and outflows of cash within the company; and return on investments can be defined as a ratio of net operating profit to the net book value of assets (Richard et al., 2009; Wolff and Pett, 2006). On the market/customer aspect, the first item of market share refers to the firm's sales revenue in specific product market divided by the total sales in that market; customer satisfaction refers to the extent of customer satisfaction with the company and its products/ services etc.; and sales volume represents the total volume of products sold (Devinney et al., 2010; Richard et al., 2009; Brockman et al., 2012). Consequently, all selected measures can potentially provide more holistic performance measurement.

It is vital to understand that sometimes specific measures of performance are relevant only in specific contexts. In Europe, the dominant small and medium-sized enterprises hold a very important position in the economy, where companies operate in extremely complex environments and often quite saturated markets, being affected by diverse national cultures and regulatory influences of the European Union (Ratten, 2006 in Muzychenko, 2008).

Small businesses are the ones that are independently owned and usually not dominant in the industry. The entrepreneur's key objectives in SMEs are primarily concerned with profitability and growth, providing a differing perspective compared with larger businesses that are more likely to also consider acquisitions and alliances, investments and stakeholders' satisfaction in the performance assessment (Sadler-Smith et al., 2003). Consistent with previous research (Wiklund and Shepherd, 2005), it is possible to conclude that entrepreneurial activities influence small business performance. SMEs and entrepreneurial firms, including micro ventures, form a key segment and driver for the majority of national economies. Small businesses are important to most economies and countries and therefore, deserve a scholarly investigation into their performance. Understanding how these small companies achieve high performance and how to measure their performance appropriately has important implications on company managers, entrepreneurs and the economies as well. Given their resource constraints and limited experience, a better understanding of what factors impact and what indicators comprise the small firm performance is essential (Wolff and Pett, 2006). Thus, this study in an attempt to uncover some unexplored performance aspects researches small and medium companies with up to 200 full-time employees (sampling procedures are outlined in detail in the chapter 4).

Companies need to address multiple levels of different stakeholders, such as managers, employees, suppliers/distributors, customers and governments, who in turn have different goals, ideas, and priorities, hence imply different measurement needs. Furthermore, measures of performance are also influenced by the key performance indicators that firms themselves use internally and which sometimes differ from the ones used in research or widely used in practice (Richard et al., 2009) within other firms.

2.5 Chapter Summary

The current chapter developed a comprehensive literature-based review of the research constructs under consideration. It discussed the past research approaches used in relation to those constructs and summarised key recent developments in those scholarly fields. The next chapter is going to present

provisional research framework developed from the literature-based review provided in this chapter, and describe the key variables with the potential relationships between them.

Chapter 3 : Conceptual Framework and Hypotheses

3.1 Introduction

This chapter outlines the development of a conceptual model and research framework, considering the role and impact of entrepreneurial passion and subsequent entrepreneurial behaviours on firm performance. The chapter is organised into two parts. The first section introduces two theories that discuss the passion construct from different perspective, namely, the dualistic model of passion (Vallerand et al., 2003) and entrepreneurial passion theory (Cardon et al., 2009) as the key theoretical bases underpinning this study. Next, it explains the integration of both theories and their application to this study, as well as how finding of exploratory interviews resulted in minor refinement of the conceptual model. In the second part, hypotheses pertaining to the passion variable and leading to particular entrepreneurial behaviours are presented. Further on, the proposed relationships between the specific entrepreneurial behaviours and business performance are described. Finally, a complete conceptual model is provided. At the end, a summary of the chapter is presented.

3.2 Theoretical Foundations in Past Research

A review of the passion literature suggests that there is no single dominating theoretical paradigm that is adopted by scholars when examining the phenomenon and its outcomes, especially in the entrepreneurial setting. Moreover, since the entrepreneurial passion construct itself has only been conceptualised recently (Cardon et al., 2013), only four studies have used it in the actual research context. Baum and Locke (2004) following an earlier study by Baum et al. (2001) conceptualised one's passionate love for work as one of the personality traits that can lead to venture growth. Chen et al. (2009) and Mitteness et al. (2012) investigated the notion of perceived entrepreneurial passion among potential firm investors, and Breugst et al. (2012) explored the perceived entrepreneurial passion among venture employees. In all of these studies somewhat different conceptualisations of entrepreneurial passion were used and none was linked directly to specific behavioural outcomes and their impact on overall venture performance.

Cardon and colleagues (2009; 2013) applied identity theory to their entrepreneurial passion research, proposing that entrepreneurs can be categorised into three salient identity groups, namely being passionate about inventing, founding or developing a venture. Thus, the self-identity aspect (Farmer et al., 2011; Murnieks and Mosakowski, 2007) explains conceptualisation and the scale development of entrepreneurial passion in that body of research, however does not really provide a theoretical basis for future investigations of passion at a general entrepreneurial level, where the identities of entrepreneurs are not under scrutiny.

Another theoretical standpoint concerns the theory of planned behaviour (Ajzen, 1991), where entrepreneurial intentions and actions under investigation form on the basis of attitude, social norms and perceived control in relation to the subsequent behaviour (Cassar, 2006; Endres and Woods, 2006; Wiklund and Shepherd, 2003). However, this theoretical approach has not been applied to the passion construct in any of the studies.

Finally, many studies used self-determination theory in organizational contexts when investigating leaders' and employees' behaviours and performance (Deci et al., 2001; Van den Broeck et al., 2011; Baard et al., 2004). Since self-determination theory focuses not on the consequences of the strength of the needs for different individuals, but rather on the consequences of the extent to which individuals are able to satisfy them within their environments, the application of this theory can be a promising tool to uncover how some new behaviours and factors that 'need satisfaction' can potentially foster or weaken passion.

In the following sections, two main theories within the passion literature are defined and discussed in more detail to help explain the relationships within the present study. The discussion concerns the dualistic model of passion, theory of entrepreneurial passion and their components, following the integration perspective adopted for this study's purposes.

3.2.1 Dualistic Model of Passion

Vallerand and colleagues (2003) developed a conceptualisation of the dualistic model of passion that is prolific within the social sciences literature, where passion for a specific activity or hobby refers to a strong inclination towards an activity that people like – affective, that they find important - cognitive, and in which they invest time and energy – behavioural. They further proposed that there are two distinctive types of passion, namely harmonious passion and obsessive passion.

Harmonious passion represents passion which results from an autonomous internalisation of the activity into the person's identity, meaning that individuals freely accept the activity without any contingencies associated with it (Vallerand et al., 2003). Harmonious passion takes a significant place in the person's identity and everyday life, however, not an overwhelming one and remains in harmony with other matters of an individual's life. Harmonious passion can also be defined as a motivational force leading people to engage in the activity, creating a sense of personal endorsement (Forest et al., 2011).

On the contrary, obsessive passion refers to a type of passion which results from a controlled internalisation of the activity into person's identity and life. This type of passion is associated with high levels of internal and interpersonal pressure due to the fact that certain contingencies are related to the activity (Vallerand et al., 2003). Therefore, even though individuals like the activity while experiencing this type of passion, they feel forced to engage in it, because of these contingencies controlling them. In other words, obsessive passion makes people almost dependent on the activity (Forest et al., 2011; Amiot et al., 2006). An example of experiencing obsessive passion could be the following: a person preparing for tomorrow's important work presentation has an obsessive passion for football and is likely to stop working to go play, even though his presentation might suffer tomorrow.

In line with the above discussion, past research on the affective and behavioural consequences of passion (Vallerand et al., 2006; 2008; Philippe et al., 2010) demonstrated that harmonious passion is usually linked to positive outcomes, whereas obsessive passion is associated with less positive and even negative

consequences. Therefore, this study includes these two passion factors (harmonious and obsessive – Vallerand et al., 2003) in the conceptualisation and hypotheses testing, to capture positive and any negative effects.

The next section discusses the second prevalent passion theory, which specifically defines entrepreneurial passion and provides an important framework for the conceptual development of this study. Subsequently, an integration of the two theories is explained along with the reasoning behind it.

3.2.2 Theory of Entrepreneurial Passion

Passion has been identified as a distinctive emotion common to many entrepreneurs. Entrepreneurial passion as defined by Cardon and colleagues (2009) refers to intense positive feelings associated with engagement in entrepreneurial activities that are meaningful for the self-identity of the entrepreneur. One of the most exciting questions concerning entrepreneurial passion is how and to what extent it can influence entrepreneurial behaviours.

Cardon and colleagues (2009) were the first to define the concept of entrepreneurial passion, arguing that entrepreneurs have positive intense feelings in relation to the entrepreneuring activities they are involved in and a strong motivational drive to follow those feelings. Moreover, these activities are consciously found to be important for entrepreneurs and their identity (Cardon et al., 2009). The theory of entrepreneurial passion (Cardon et al., 2009) is the only theory that conceptualised and operationalised the entrepreneurial passion phenomenon. The theory posits that entrepreneurial passion is ‘consciously accessible, intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur’ (Cardon et al., 2009: p. 517).

Later Cardon and colleagues (2013) developed and validated a scale in relation to three key entrepreneurial identities they identified and that differentiate the construct into passion for inventing, founding or developing a venture (Cardon et al., 2013). It means that if entrepreneurs experience passion for inventing, they will show positive affect when identifying and exploring new opportunities, often having a special skill of creative thinking (Breugst et al., 2012).

Entrepreneurs who experience passion for founding a company primarily enjoy the process of founding itself, related to sourcing and raising capital, assembling a founding team, finding the right location, mode and type of business. Finally, entrepreneurs can also have a strong passion for developing a company, which results in enjoying such activities as finding new customers, developing new markets, optimising organisational processes and so on (Cardon et al., 2013; Breugst et al., 2012).

The importance of this theory can be found in several aspects. First, it proposes that entrepreneurs differ in the degree to which they can regulate their internal feeling and emotions to cope effectively at work (Cardon et al., 2013), meaning that entrepreneurial passion is likely to influence behavioural outcomes to a great extent. Second, it argues that passionate entrepreneurs are likely to have certain behaviours while involved in entrepreneurial activities, such as engagement or absorption, persistence and creative problem solving (Cardon et al., 2009). Finally, entrepreneurial passion theory recognises passion as a phenomenon that is quite common among many entrepreneurs, yet is often misunderstood, confused with other constructs or even ignored.

Since the main focus of this study is to uncover how passion affects entrepreneurial behaviours and firm performance, it was considered applicable to investigate the behaviours suggested by Cardon et al. (2009) in their initial conceptual paper. As such, constructs of absorption (engagement), persistence and opportunity creation (newly developed construct in line with creative problem solving – see section 3.2.4 for more details) form a set of entrepreneurial behaviours in this research. The next section of this chapter will provide the reasoning behind integration of the two passion theories for this study's purposes.

3.2.3 Integration of the Theories

In building the conceptual framework of this study, the author draws from the dualistic model of passion theory of Vallerand and his colleagues (2003), integrating it with the theory of entrepreneurial passion developed by Cardon and colleagues (2009; 2013).

Thus, a proposed research framework contains key variables from the entrepreneurial passion theory (Cardon et al., 2009), such as engagement, persistence and creative problem solving (later respecified into opportunity creation), along with the key conceptualisation of passion, using the dualistic approach of Vallerand et al. (2003).

This approach was chosen for several reasons: first, the scale developed by Vallerand and colleagues (2003) has been used in over 25 studies (e.g. Forest et al., 2011; Philippe et al., 2010; Amiot et al., 2006 just to name a few), where passion has been investigated in various domains, and demonstrates very high levels of internal and external validity; second, Murnieks and colleagues (2011) successfully applied this approach in their study while examining the effect of passion on entrepreneurial behaviours in terms of time dedicated to entrepreneurial activities, as well as self-efficacy formation; third, Vallerand and colleagues' (2003) scale of harmonious and obsessive passion seems to be more appropriate for this research since it does not primarily concentrate on entrepreneurial identities on the contrary to Cardon et al. (2013). Moreover, Cardon and colleagues (2013) strongly advised not to combine all items from the three identity dimensions of the entrepreneurial passion scale they developed, since it will undermine the results, and instead recommended researchers to use these three sub scales separately depending on the type of entrepreneur under investigation. Thus, it seemed more suitable and academically relevant to use Vallerand and colleagues' (2003) scale.

Vallerand et al.'s (2003) and especially Cardon et al.'s (2009) theories apply an identity perspective to their theoretical framework and particularly different entrepreneurial identities, such as inventor, founder and developer of business. However, it is crucial to note that the focus of this research does not include different identities of entrepreneurs, instead looking at the general level of an individual who is an entrepreneur already and is actively involved in entrepreneurial activities. The focus of this research is not to identify how different entrepreneurs behave in terms of their experience or stage of entrepreneuring process, but rather to investigate how passion leads to different behavioural outcomes common for many entrepreneurs.

3.2.4 Conceptual Framework Refinement

After the integration of the theories had been completed and a draft conceptual model developed, it was decided to conduct several exploratory interviews with the actual entrepreneurs (please refer to section 4.4.1.1 in chapter 4 for more details on the interviews' structure and process). The main purpose of this step was to understand their views on the related broader topics, such as behaviours at work, passion and opportunities, key performance indicators, as well as to gather their opinions on the draft research framework. As such, interviewees were asked about their activities and behaviours at work, as well as work-related attitudes and future plans. This constituted the first part of the interview, followed by a demonstration of the actual draft research model.

As a result, certain refinements to the proposed research framework were implemented. While all entrepreneurs strongly believed that passion and behaviours like engagement and persistence are important for their entrepreneurial activities and venture performance, there seemed to be a confusion caused by the creative problem solving construct. Namely, interviewees were confident that the entrepreneur's task is not to solve problems but rather to avoid them and create more business opportunities. The example quotes from the transcripts are: *"It is not about solving problems, it is always about avoiding them and thinking of the future"* and *"We do not recognize or explore for opportunities, we are called entrepreneurs because we create them and make things work."*

Moreover, the review of creative problem solving and opportunities literature in general (please refer to section 2.3.3 in the previous chapter) revealed that there are certain issues associated with the opportunities perspective and creative problem solving construct in particular. Passionate entrepreneurs are likely to be creative and extravert, and think of new ways of doing business, rather than just explore or exploit the existing ones. Therefore, it seems much more exciting to investigate how such opportunities for improving a business can be created by entrepreneurs themselves. This means that opportunity discovery process lies outside of the scope of this research, along with exploration and exploitation processes.

In addition to that, there are several reasons why creative problem solving cannot be the construct sought for the current research. First, there is no clear definition, as the existing mix of definitions is derived from organisational creativity or opportunity recognition or development (Woodman et al., 1993; Hsieh et al., 2007). Second, creative problem solving has been regarded as a more practical approach and even a tool or an outcome rather than a construct of research (Gilson and Shalley, 2004). In other words, one is likely to measure individual creative problem solving as a propensity to approach problems in a more creative and unique manner. For example, creative problem solving could be based on ideas sought outside one's field of expertise and competence. Therefore, this construct does not really talk about the ability to create opportunities rather than merely solve problems in a creative way. Third, the construct was usually measured using experimental design – giving the participant(s) a task that needs to be solved and thus the creativity of a person is or isn't displayed.

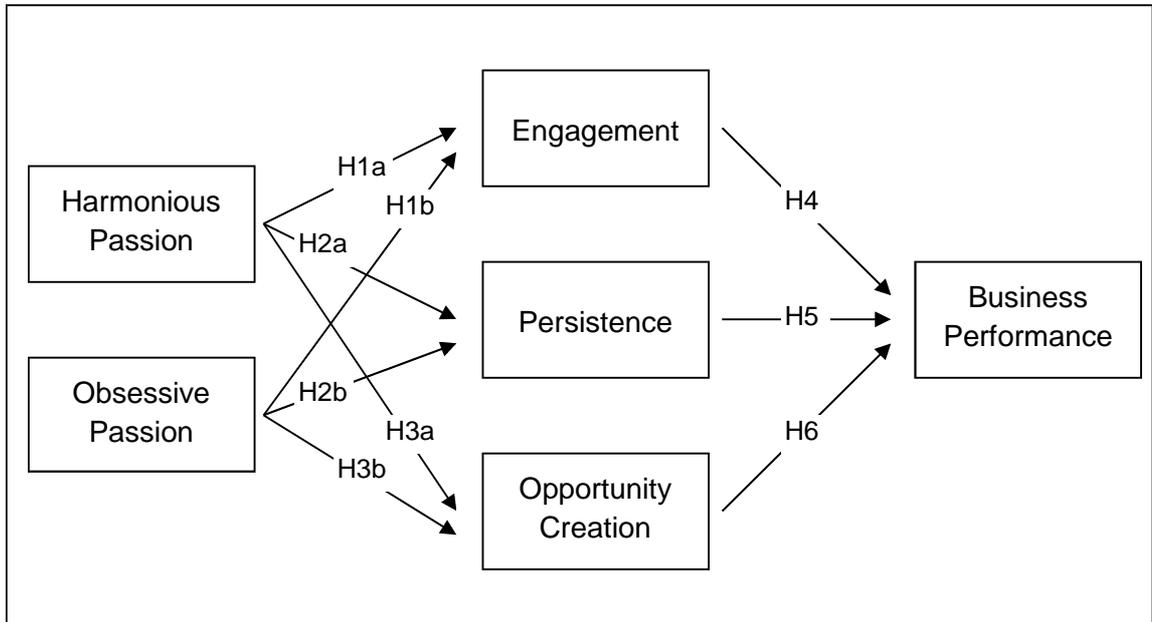
Based on the exploratory interviews' findings and a thorough literature review, the new construct of opportunity creation developed for this study's purpose builds off some key aspects of exploration and exploitation, however focuses on the actual enactment of the opportunities by entrepreneurs. The opportunity creation construct is defined as an entrepreneurial behaviour where the actions and reactions of entrepreneurs result in the identification of new ways of doing business. It is the development of situations where new goods, services, markets, resources and/or organising methods can be introduced (adapted from Alvarez and Barney, 2007 and Eckhardt and Shane, 2003). Consequently, the opportunity creation construct was developed to replace the creative problem solving variable based on the considerations discussed above. The details on the construct operationalisation development are provided in the subsequent chapters.

3.3 Conceptual Model and Hypotheses Development

The final section of this chapter provides an overview of the conceptual research framework developed for this study, along with the formulation of the

study hypotheses. The unique conceptual model for this research is presented in Figure 3.1.

Figure 3.1: Conceptual Model



3.3.1 Entrepreneurial Passion and Engagement

According to Cardon and colleagues (2009), entrepreneurial passion refers to the intense positive feelings that are experienced by entrepreneurs when engaged in entrepreneurial activities which are meaningful for them. In terms of engagement, it means being fully concentrated and immersed in one's work, following the sense of flow (Kühnel et al., 2012). With the presence of entrepreneurial passion, it is often common for individuals to experience a state of attention and absorption (Mageau et al., 2005; Vallerand et al., 2003) or engagement in the activity. Thus, Vallerand and colleagues (2003) proposed that both harmonious and obsessive passion will lead to the increased task engagement, in other words engagement in entrepreneurial activities. The key difference between harmonious and obsessive entrepreneurial passion is the notion that the former results from an autonomous activity internalization without any contingencies attached, while the latter is caused and controlled by inter- and intrapersonal pressures. It is assumed that the two types of passion will lead to engagement at different levels of strength, that is, obsessive passion will be more strongly related to the engagement, since in the case of harmonious passion, individuals have a lot more flexibility in terms of engagement (Kahn,

1990, 1992; Rothbard, 2001). Murnieks and colleagues (2011) have investigated the influence of passion on entrepreneurial behaviours, by using questions related to the amount of time being dedicated to the entrepreneurial activities. Cardon et al. (2009) have also posited that entrepreneurial passion could lead to the engagement or absorption in entrepreneurial activities, as it lies in the definition of passion that when entrepreneurs are passionate they dedicate more energy and time to entrepreneurial activities. Similarly, in another context, Ho and colleagues (2011) linked employees' job passion with work engagement, where they proposed that passionate employees will have higher levels of work engagement. Therefore, it seems logical to predict that:

H1a: Harmonious entrepreneurial passion is positively related to engagement.

H1b: Obsessive entrepreneurial passion is positively related to engagement.

3.3.2 Entrepreneurial Passion and Persistence

Passionate entrepreneurs will persist in entrepreneurial activities since these activities are important and valuable for them and they are willing to devote time and energy to them (Vallerand et al., 2003). Since entrepreneurial passion relates to overcoming challenges and obstacles that occur on the way to entrepreneurial effectiveness, passionate entrepreneurs are likely to be more persistent at work. Benefiting from motivational energy and drive stemming from passion, entrepreneurs are likely to engage in the persistent chase of challenging achievements. Passion has already been associated with drive, tenacity and willingness to work long hours (Vallerand et al., 2007; 2009; Bierly III et al., 2000). Entrepreneurial passion will lead to persistence in entrepreneurial activities, despite any failures or obstacles in the way of the entrepreneurs (Cardon et al., 2009; Cardon and Kirk, 2013; Murnieks et al., 2011). Passion has also been used in the conceptualisation of a 'grit', which refers to perseverance and passion for long-term goal pursuit (Duckworth et al., 2007). As such, it has become a predetermining element of entrepreneurial persistence. Behavioural persistence will be strengthened by both harmonious and obsessive passion (Vallerand et al., 2003). Harmonious passion will provide a healthy persistence outcome, whereas obsessive passion will be more

strongly linked to persistence, demonstrating bold and irrational behaviour. Hence, this study hypothesises the following:

H2a: Harmonious entrepreneurial passion is positively related to persistence.

H2b: Obsessive entrepreneurial passion is positively related to persistence.

3.3.3 Entrepreneurial Passion and Opportunity Creation

Entrepreneurs recognise and use opportunities in their daily venture management. As discussed in the previous chapter, opportunities are a function of enacted actions of entrepreneurs that occur during entrepreneurial process (Ardichvili et al., 2003; Mitchell et al., 2008). Generally, entrepreneurs are active in discovering and exploiting opportunities in business. Moreover, it has been argued that passionate entrepreneurs are likely to demonstrate high levels of creativity and unique vision (Cardon et al., 2013). Passionate entrepreneurs are creative while identifying opportunities and performing entrepreneurial actions; and the entrepreneurial mindset can enhance problem solving and risk-management (Cardon et al., 2009). Notably, passionate entrepreneurs are likely to be creative and extravert as explained before, however, they are also likely to think of new ways of doing business, rather than just exploring or exploiting the existing ones. Therefore, it seems much more appropriate to argue that such opportunities for improving a business and facilitating entrepreneurial success can be created by passionate entrepreneurs themselves. Both harmonious and obsessive passion will lead to opportunity creation. The link between obsessive passion and opportunity creation will be stronger, because obsessed entrepreneurs are likely to devote more time, energy and effort in opportunity creation and as such are likely to gain greater results. This could be explained on the basis that the obsessive entrepreneurial passion results from contingencies and pressures associated with entrepreneurial activities, when entrepreneurs simply cannot stop engaging in their work tasks (Vallerand et al., 2003; 2007). Accordingly, it is possible to assume that:

H3a: Harmonious entrepreneurial passion is positively related to opportunity creation.

H3b: Obsessive entrepreneurial passion is positively related to opportunity creation.

3.3.4 Engagement and Business Performance

Engagement shows the extent to which entrepreneurs are involved and concentrated in their entrepreneurial activities and tasks (Salanova et al., 2011). In the context of employees at work, Ho and colleagues (2011) discovered that the relationship between employees' job passion and work performance is mediated by absorption. The more engaged employees were in their daily tasks at work, the higher their performance. Entrepreneurs engaged in entrepreneurial activities are likely to become more successful and provide superior results for their firm. In contrast to the state of flow, which tends to be productive only in a form of peak occasional experiences, engagement is characterised as more stable and longer lasting behaviour (Csikszentmihalyi, 1997 in Hallberg and Schaufeli, 2006). This means that being highly devoted to and engrossed in entrepreneurial activities, entrepreneurs can increase their productivity and take actions for improving their work, which ultimately could lead to a better performance of the venture. Similarly, Cardon and colleagues (2009) argued that entrepreneurial engagement is likely to lead to increased efficiency, since entrepreneurs are devoting lots of time and energy to their entrepreneurial activities and have higher chances of success and achievements. Thus, the following hypothesis is suggested:

H4: Engagement is positively related to business performance.

3.3.5 Persistence and Business Performance

Entrepreneurial persistence results from the continuous pursuit of an opportunity by the entrepreneur, regardless of alternatives or risks (Gimeno et al., 1997). Notably, entrepreneurial persistence involves two distinctive elements. First, it is the continuation of effort which is put towards a previously recognised or created entrepreneurial opportunity. Second it is the continuous and somewhat quite stubborn pursuit of that opportunity in the face of present obstacles and opposing factors. When entrepreneurs persist in their activities and continue to input effort despite failures or obstacles in the way, they are more likely to achieve their goals, compared to those who would have already

given up (Cardon et al., 2009). As discussed earlier, passionate entrepreneurs are willing to persist in their business activities to achieve better results. Such passionate persistence among entrepreneurs can bring greater outcomes for business, larger growth potential and higher profitability (Shepherd et al., 2009). Persistence for long-term goals and plans is likely to keep entrepreneurs on track and to ensure that they are working towards personal and firm success. Since persistence maximises the chances of entrepreneurs finding the right way of entrepreneuring, as well as improving their skills and experience, it is possible to assume that persistence will lead to a better firm performance. Therefore, this study hypothesises the following:

H5: Persistence is positively related to business performance.

3.3.6 Opportunity Creation and Business Performance

As defined in the previous chapter, opportunity creation is an entrepreneurial behaviour where the actions and reactions of entrepreneurs result in the identification of new ways of doing business. Often new ways of doing entrepreneurial activities can bring better results and additional profits for the venture (Short et al., 2010). Along with being engaged and persistent in entrepreneurial activities (Vallerand et al., 2003; Cardon et al., 2009), entrepreneurs are also likely to be establishing new opportunities for business improvement, new product development and problem solving to name a few. Literature has already investigated the link between opportunity exploration/exploitation and performance, finding positive results (Dutta and Crossan, 2005; Hsieh et al., 2007; Miller, 2007). However, the focus of this study lies specifically on how opportunity creation can influence business performance. The creation of new opportunities to use in entrepreneurial operations is likely to enhance business performance outcomes. Undoubtedly, not all of those opportunities will potentially be used or will turn out successful. Nonetheless, the opportunity creation act or behaviour is likely to have a positive effect on firm performance, since some of those opportunities will indeed be useful and profitable for a company. Thus, this study hypothesises that:

H6: Opportunity creation is positively related to business performance.

3.3.7 Control Variables

This research also employs control variables to reduce the confounding effect of variations and to maximise the verity of the findings. Along with the key variables displayed in the Figure 3.1, this study also uses two control variables. Different entrepreneurs will have a varying degree of entrepreneurial experience. In the present study, a difference in the years entrepreneurs have spent in the actual entrepreneuring process may affect their behaviours and business performance. Similarly, firm age might affect the behaviours of entrepreneurs and ultimately firm performance in a different way, depending on how long has the company been operating. In order to account for a varying degree of years dedicated to entrepreneuring, as well as the number of operating years of a firm under investigation, control variables of 'entrepreneurial experience' and 'firm age' are introduced to this study.

3.4 Chapter Summary

This chapter provided a discussion on the study's conceptual model and hypotheses development. A research framework based on integration of the dualistic model of passion and entrepreneurial passion theory was explained and presented. This approach is the key theoretical underpinning for the conceptual model. Hypotheses introducing the links between the study construct were developed and the model argues that entrepreneurial passion, both harmonious and obsessive in type, will lead to engagement, persistence and opportunity creation in entrepreneurial activities. Furthermore, the model explores the conceptual link between each entrepreneurial behaviour and business performance. In the next chapter, the research methodology that is applied in this study and particularly methods of data collection and analysis are discussed.

Chapter 4 : Research Methodology

4.1 Introduction

This chapter talks about the research design implemented to collect the data for the study. Research design is a certain way of organising a specific research project to increase the likelihood of it generating enough suitable evidence to provide answers to research questions and test theory (Gorard, 2013). Following the research aims and hypotheses of the study, it is essential to have a detailed research plan outlining research objectives and hypotheses that are going to be tested. Hence, the current chapter is organised in five sections dedicated to several research design elements. The first section describes the overall data collection process with a detailed explanation and justification of the choice of a cross-sectional research design. The second section provides information on survey administration methods and general enhancement techniques. The third section of the chapter introduces the questionnaire design and development. In the fourth section, the pre-test stages are explained, whereas the fifth section discusses issues regarding the main study survey. At the end, an overall chapter summary is provided.

4.2 Research Philosophy

With the development and perceived legitimacy of both qualitative and quantitative research in the social sciences, mixed methods (MM) research, employing the combination of the abovementioned approaches, has gained popularity (Creswell, 2003). It is described as a step forward in the development of research methodology. Those hoping to achieve stronger inferences can use MMs to “attack a research problem with an arsenal of methods that have non-overlapping weaknesses in addition to the complementary strengths” (Brewer and Hunter, 1989), thus triangulating findings and reducing biases or errors in analysis. Hence, the author intends to conduct mixed methods interdisciplinary research with a purpose of utilising the strengths of both quantitative and qualitative methods.

Marketing research has been also called a 'problem-oriented' research in that it is highly applied and its driving force is to make a contribution to the solution of an important practical problem. Hunt (1991) suggested that for most marketing researchers, philosophy of science issues and methods are introduced and discussed only when they are deemed useful for explicating some particular methodological issue in marketing research. One of the most common philosophical positions to be adopted in mixed methods research is pragmatism. It was founded by American scholars such as Charles Sanders Peirce, William James and John Dewey in the early 20th Century (Teddlie and Tashakkori, 2009), and is now arguably the most popular philosophical orientation for MM research in America (e.g. Biesta and Burbules, 2003; Bryman, 2006; Johnson and Onwuegbuzie, 2004; Maxcy, 2003; Morgan, 2007; Tashakkori and Teddlie, 2003). It is seen as the 'middle position' between paradigms and methods, believing that paradigmatic views should neither be totally divorced from, nor dictate, methodological considerations (Howe, 1988).

Pragmatists agree with positivists and post-positivists that there is an external reality and deny that there is an absolute truth (Tashakkori and Teddlie, 1998). Creswell and Tashakkori (2007) indicate that pragmatics consider the research question to be more important than either the method or the worldview that is supposed to underlie the method, using the credo 'what works'. It is a reactive philosophical perspective that argues against dominant systematic philosophies, critiquing the strict choice between qualitative and quantitative. It aims to interrogate a particular question/theory with the most appropriate research method(s) (Feilzer, 2010).

As pragmatists take an equidistant standpoint in most dualisms, it allows them to endorse 'practical theory' using pluralistic methods and integrative eclecticism in order to find 'what works' as the truth regarding the research question under investigation (Tashakkori and Teddlie, 2003: p. 713.).

Entrepreneurial marketing is characterised by responsiveness to the market place and a seemingly intuitive ability to anticipate changes in customer demands (Collinson and Shaw, 2001, Hills et al., 2008). The development of this area of theory has led towards the emergence of a new discipline that

author intends to research: following the sequential transformative strategy (Creswell, 2003), which is a two-phase approach. An initial exploratory phase consists of qualitative interviews with entrepreneurs, in order to evaluate the theoretical model and its constructs; followed by the second phase, a quantitative large-scale survey with companies from Russia.

4.3 Research Design

4.3.1 Qualitative stage design

Qualitative research in the form of interviews with entrepreneurs serves as an exploratory research stage in this study. Exploratory qualitative research stage facilitates the understanding of the conceptual framework development (as discussed in chapter 3). The aim of using theory-driven questions such as ‘the understanding and experience of entrepreneurial passion and behaviours’, as well as the perceptions and beliefs of interviewees on the particular research topic is to assist in developing both research model and foundations for the quantitative stage.

Phenomenological method – coding of insights and perspectives, arranging in related themes and areas – is used for the assessment and analysis of qualitative data gathered from interviews. Qualitative procedures are guided by the use of Interpretative Phenomenological Analysis (IPA), an idiographic approach developed by Smith and colleagues (2009) that focuses on the individual’s own interpretations and perceptions of particular experiences. IPA is phenomenological in that the primary concern of the approach is the subjective meanings people ascribe to their experiences as opposed to attempting to produce an objective record of the experience itself. At the same time, IPA recognises that interpretation is an inevitable process in qualitative research as the researcher is active in the data collection and analysis processes. Instead of treating this fact as a ‘bias’ that needs to be eliminated, IPA encourages researchers to reflect upon their assumptions and adopt a collaborative stance with the participants, allowing a shared picture of their experience to emerge (Smith et al., 2009). This is completely appropriate for the exploratory stage of this study as the idiographic approach is particularly suitable for small samples. It also provides a conceptual thematic understanding, allowing the participants

unique perspectives to shape the analysis and permitting the emergence of unanticipated themes. The application of IPA will undergo the stages of abstraction/subsumption (identifying patterns between emergent themes), polarisation (the focus on differences of the themes instead of similarities), numeration (tracking the frequencies of themes occurring and their relevance) and function (organising themes by positive and negative presentation).

4.3.2 Quantitative stage design

Marketing researchers as well as practitioners often use survey research designs in order to be able to gain understanding of marketplace behaviours and to predict these behaviours in the future (Rindfleisch et al. 2008; Churchill and Iacobucci, 2010).

There are several research designs available for academics and practitioners, such as cross-sectional, longitudinal, experimental, etc. (Malhotra, 2010) and the choice greatly depends on the context of the study, information sought and analytical procedures to be undertaken. Research design can be compared with a detailed plan that guides through a research study towards the achievement of its aims. Churchill and Iacobucci (2010) argue that cross-sectional and longitudinal survey designs are the most common forms of research design used in the marketing field.

Cross-sectional survey design refers to a single observation of a population sample at one specific point in time; providing a snapshot of variables in the study (Rindfleisch et al., 2008). On the contrary, longitudinal design involves repeated observations of the same variables over periods of time. In recent years, there has been an ongoing debate on the choice between these two designs specifically in relation to a survey validity aspect. Rindfleisch and colleagues (2008) define two issues that are generally dominating validity concerns in survey design: *common method variance* (CMV) – systematic measurement error that occurs due to the use of single method and/or single source of information; and *causal inference* (CI) – the ability to conclude causation from observed empirical relations. These issues are also interrelated, since CMV can alter a relationship between predictors and outcomes.

The core purpose of a cross-sectional design suggests that surveys are completed by single respondents at a single time point, therefore demonstrating proneness to having some degree of CMV. Conversely, longitudinal design can sometimes serve as a solution to such issues. The main benefit of longitudinal studies is that researchers are able to note developments and changes in the respondents' characteristics and behaviours in the target population at both the group and the individual levels of analysis. As a result, even sequences of events can potentially be established. However, longitudinal designs are often extremely costly, both in time and financial terms, especially when facing deadlines or time restrictions during a doctoral study (in this case). Moreover, they often require a profound knowledge of specific statistical analysis techniques for dealing with panel data.

Considering the defining feature of a cross-sectional study, which is the ability to compare a large amount of variables and different population groups at a single point in time, a well-designed cross-sectional survey can significantly reduce the degree of CMV. In addition to that, since the aim of this research does not include a detection of changes in variables over time, it has been decided to use a cross-sectional survey design. Several techniques for CMV elimination have been used in this study and the last section of this chapter contains a detailed description of those.

4.3.3 Scope of Research

This section explains the detailed research scope in relation to the sample, particular industries selected, the focus of the unit of analysis and key informants used in the data collection process.

4.3.3.1 Geographic scope

In order to be able to complete innovative research both in terms of content and context, it was decided to select Russia for the sampling basis.

Russia was chosen due to several reasons. Firstly, the Russian market is often referred to as 'untapped', 'a gold mine' or 'very promising', but also 'risky' and 'challenging' (VM Consult, 2011). This provides an interesting position for doing research in such a controversial market. Secondly, with a population

more than 142.5 million people and a place within the top 10 largest countries as well as economies of the world, Russia undoubtedly is an emerging economic power. This potentially provides the researcher with exciting industry indicators and a positive overall entrepreneurial situation. Thirdly, Russia has undergone significant changes since the collapse of the Soviet Union, transferring from a globally-isolated, centrally-planned economy to a more market-based and globally-integrated one (CIA World Factbook, 2013). Thus, with the right assistance and preparation, the Russian market presents enticing opportunities for both small- and medium-sized enterprises. Following the above mentioned reasons, it is evident that Russian data provides numerous opportunities for academic research.

Being originally from Latvia, the researcher is familiar with the country and its economy. Moreover, research in Russia is also facilitated by the fact that the Russian language - the researcher's mother tongue - is spoken in Latvia as well. Though the selection of this country represents a certain degree of convenience, the anticipated outcomes potentially enable an interesting analysis and exciting findings.

4.3.3.2 Industry scope

In order to enable a comprehensive analysis and whole market overview, a range of various industries was chosen for this study. Companies across different industries were selected with the purpose of providing diversity in the dataset, as well as of accounting for any particular industry related factors that might be of additional interest.

4.3.3.3 Unit of analysis

The unit of analysis in this study is considered at two levels and is sometimes called a multiple micro levels and aggregate mix (Davidsson and Wiklund, 2001). The first unit of analysis is at a micro level - an individual, actual entrepreneur in the company. Individual human beings are commonly used units of analysis in social science research, especially in the entrepreneurship field (Hill and Birkinshaw, 2010). Any type of individual can be the unit of analysis in social science research. As the units of analysis, individuals are commonly characterised in terms of their membership in social groups or roles,

in this case, entrepreneurs. The second unit of analysis is also at the micro level - an actual firm of the entrepreneur. This specifically relates to the performance of the company. This micro-level of analysis dominance in entrepreneurship research has increased over the past years; specifically the mix of 'firm and individual' rose from 1.6% to 11.1% of all studies published in entrepreneurship (Davidsson and Wiklund, 2001).

Researchers tend to describe and explain social groups and behaviours by analysing and sometimes aggregating the behaviours of individuals. By noting the characteristics of individuals (gender, age, attitudes, reflections, etc.), one can combine these descriptions to provide a composite picture of the group the individuals represent, to make generalisations about the population they belong to. Entrepreneurship research is dominated by the micro-level analysis, predominantly using the firm or the individual or both as the level of analysis.

4.3.3.4 Key informants

Key informants were carefully chosen on the basis of one key criterion - them being entrepreneurs, as the study is dealing with entrepreneurial passion and behaviours.

Information gathered from single informants can often be of insufficient credibility and validity. This happens due to the fact that respondents have their own judgement in relation to information sought, are ignorant to certain aspects and facts, and sometimes lack specific knowledge. Applications of key informant methods (Phillips, 1981) in marketing research have generally been in conjunction with survey data collection procedures, provided that at the same time it is being supported by additional procedures such as respondent competence and knowledgeability evaluation. Therefore, the informant competency evaluation technique recommended by Kumar and colleagues (1993) was used, which involved asking questions about: a) respondents' involvement in entrepreneurial activities of the firm; b) their knowledge about questions asked in the survey; and c) the extent to which respondents' answers reflect firm 'realities'. These measures were included at the end of the survey instrument in the form of self-reported items.

4.4 Data Collection Procedures

This study includes an extensive empirical element to investigate questions raised in the previous chapters, targeted at the companies across different industries in Russia. Based on the perspective of triangulation, the research combined several methodological approaches, sources and empirical data to justify the results obtained. This section covers information about methodology of both qualitative and quantitative elements.

4.4.1 Sampling procedures

Due to the fact that quantitative research is usually seen as more deductive and confirmative, it is advisable for it to be preceded by a qualitative research stage, which is commonly seen as inductive and highly useful for exploratory purposes (Shah and Corley, 2006). Therefore, a mixed method approach was applied for this study.

4.4.1.1 Qualitative procedures

Qualitative procedures were first used to confirm the overall structure of the conceptual research framework. Qualitative stage consisted of face-to-face in-depth interviews with 9 entrepreneurs to increase the overall understanding of the entrepreneurial passion concept and entrepreneurial activities and to gain clearer understanding of how they experience passion for entrepreneurial activities, as well as to take into consideration the perceptions and beliefs of interviewees on the overall research area. Semi-structured interviews were organised in the following way: in the first part entrepreneurs were asked several questions in relation to potential conceptual framework and survey constructs; and in the second part, interviewees were demonstrated a draft version of conceptual framework, asking for their evaluation and comments.

Accordingly, semi-structured interviews comprised of different types of questions (Smith et al., 2009), such as descriptive (respondents were asked to describe something that is relevant to present), narrative (describing something that happened already), structural (talking about the stages of the process), contrast (defining the main differences between particular aspects), evaluative (feelings, perceptions and reflections of interviewees), circular (talking about

something in relation to another person) and comparative (comparing different aspects, including imaginative) question. These were also supported with further prompts and probes when additional explication of certain aspects was necessary. In relation to particular topics and areas discussed during the interviews, the following list of indicative questions was used (in some cases changes to the preliminary questions were applied, based on the answers of interviewees and the overall direction of the dialogue):

1) Opening Questions

- Describe yourself at work. What is your usual working day? What are your key roles and responsibilities?
- How did you establish your company? Could you please explain to me the stages of the development of a business idea?

2) Passion:

- Would you describe yourself as a person having certain emotions or feelings for your work? How does it influence your working abilities?
- How do you think having passion for work can influence the quality and result of work?
- How do you think passion for work influences persistence and engagement in work?
- What do you think are the main differences between harmonious and obsessive passion? What could be the potential differences in the outcomes?
- Could you please compare the business styles of passionate and non-passionate entrepreneurs? What would be the main difference?
- What additional traits/behaviours can passion develop in an entrepreneur? Is there anything that can create a significant impact on work outcomes?
- How important is it to be optimistic at work? Can optimism become too 'blind'?
- Would you be able to think of any negative consequences of strong passion for work?
- Would you say that passion for work is an important prerequisite for success? Why?
- Is there anything that can sometimes weaken your passion?

3) Persistence

- Are you easily discouraged by pitfalls and failures in business? If a project you started/have been working on fails or has a drawback, how does this influence your working practices? Why?
- Could you please describe a situation where you showed your persistence in work?

4) Opportunities

- What does opportunity mean for you?
- How does the recognition of the opportunity and its further development happen in your company?
- Would you consider creative problem solving as an essential part of your work? What does it mean to you?

5) Engagement

- Are you easily distracted when at work?
- How important is it for you to be completely focused and immersed in your work activities?
- Could you please describe the level of your engagement at work? Is there anything in particular that can have an impact on it?

6) Business Performance

- How do you feel about your business and its performance? Is there anything else that you deem equally important to you as financial capital/profit?
- What do you think can potentially influence you performing these activities?
- What do you think is important in business? What is your main short term and long term goal?
- What factors can influence business performance in your company?

After completion of the interviews, the coding procedure took place and was conducted manually due to the relatively low number of transcripts. As a result, several themes around the proposed constructs emerged and the key findings confirmed the importance and relevance of the proposed research model. All interviewees mentioned passion as a necessary condition for business success, love and joy for one's business (even though a direct question was not asked).

At the same time, three entrepreneurs noted that *“sometimes too much passion stops people from being realistic”*. Interviewees have also stressed out that optimism, purposefulness and perseverance are necessary for business growth. In relation to entrepreneurial behaviours, engagement was often emphasised as an important prerequisite for success; example quotes: *“being completely engrossed in my work helps me get through even the most complicated work situations”* and *“it is very important to be absorbed in entrepreneurial activities, we don’t work - we live in our business”*. Persistence was also mentioned several times as a useful behaviour. However, it is highly dependent on a particular situation it is exerted in. Creative problem solving did not seem to be important in the entrepreneurial context and all interviewees have explained it in the following way: *“It’s not really about solving problems; it’s rather about creating the opportunities to make the business work without problems”*. As explicated in section 3.2.4 of the previous chapter, creative problem solving was not found to adequately capture the necessary behaviour that entrepreneurs should have. Ideally that should be a behaviour that would not lead to problems. Therefore, a variable respecification took place and the proposed conceptual framework was refined to having an opportunity creation construct instead of creative problem solving.

Finally, in relation to business performance entrepreneurs pointed out that in SMEs business survival is imperative and indeed financial and market performance indicators are the ones that matter. Additionally, the majority of interviewees mentioned that personal satisfaction is another outcome that is important for them.

Consequently, exploratory qualitative stage resulted in addition of a new construct that literature did not previously suggest (opportunity creation) and in additional literature review of specific relevant aspects and variables for the purpose of conceptualisation and measurement development of this construct (as explained in section 3.2.4 of the previous chapter). Interviews also verified the operationalisation of other constructs and the suitability of their scales adapted from the literature. As such, qualitative stage of the data collection proved to be a very significant part of the research and provided important insights.

4.4.1.2 Quantitative procedures

Quantitative stage included a large-scale tailored design or mixed-mode survey (mail and web combination) in Russia. A structured questionnaire was designed and sent to respondents via mail (with cover letter and paper version of the questionnaire) and email (asking them to fill it in via attached URL). There are several advantages related to the survey method and its use in marketing research. First, surveys enable to collect data from large samples of the population. Second, surveys require minimal investment from the researcher's part to develop and administer, and third, it is relatively simple to code, analyse and make generalisations from them (Malhotra, 2010). Surveys can also provide information about attitudes or perceptions that are otherwise difficult or impossible to measure using observational techniques (Fink, 2003).

4.4.2 Sampling Frame

The target population for this study was small and medium companies (SMEs) in Russia. *Dun & Bradstreet's Russian database* was used to select the appropriate companies.

The sampled organisations across were filtered according to several criteria, such as firm age, firm size, industry type, location and so on. Consequently, companies were included (excluded) applying the following criteria: a) it had to be registered not earlier than in 1982, but not later than in 2009 (providing at least one year of operations to gain a representative performance overview, and not older than twenty five years of operating, due to the fact that entrepreneurial passion might weaken in longer time periods (Cardon et al., 2013); b) it should have 200 or less employees; and c) the overall profile should vary by industry sector and geographical location to provide diversity and wider scope.

Based on the aforementioned criteria, 2,000 Russian SMEs with information on each firm's managerial profile and contact details were randomly selected and acquired from *Dun & Bradstreet International*. The assumption made here was that Russian data would prove more difficult to collect. The planned mode of analysis presupposed respectable final sample. Key rules of thumb of structural equation modelling (Bagozzi and Yi, 1988; Hair et al., 2010) were considered when choosing a sample size: regarding the sample size being over 100 cases,

having 10 to 15 observations per predictor variable and preferably 5 observations per item, but not less than 2 (Bagozzi and Yi, 2012; Marsh et al., 1988).

4.4.3 Survey Administration Methods

Having explained and chosen a cross-sectional research design in the section 4.3, a tailored design survey with a structured questionnaire was developed. The tailored design method is a scientific approach to conducting sample surveys with a focus on reducing the four sources of survey error — coverage (not all members of the specific sample population have a chance to participate), sampling, nonresponse and measurement — that may undermine the quality of the information collected (Dillman et al., 2009: p. 16). Moreover, this surveying approach involves a set of procedures that work together for maximum efficiency and response rate. It was chosen due to the fact that it involves multiple motivational features, as well as the use of online tools and media in compatible and mutually supportive ways to encourage high quantity and quality of response. It gives attention to all aspects of contacting and communicating with respondents. Tailoring is about developing survey procedures that build positive social exchange (Dillman et al., 2009).

Several survey administration methods are available for a researcher, such as interviews, both face-to-face and via telephone, and mail and online surveys. The following paragraphs will explain and evaluate each of these chosen methods in relation to the study. The described methods were applied to the sampling and survey approach, because of the following reasons: *simplicity* in terms of collection of structured information and its administration and *accuracy* in results.

Firstly, a face-to-face interview was evaluated for use in this study. Apart from the exploratory and pre-test stages (discussed further in the chapter), due to the large number of cases required and all the arrangement time to be spent contacting potential interviewees, it was quite complicated to apply this method. Moreover, the sample population in this study was located in Russia, which would make it even more financially costly to implement face-to-face meetings with entrepreneurs. Thus, this method was not used for the main survey data

collection part. Secondly, a telephone interview was also considered to be an unfit method for this study, because of the large number of questions and type of information needed from respondents. Thirdly, an online/email questionnaire was considered to be an extremely useful and efficient method for this research in particular. There are several factors explaining this evaluation: reaching large numbers of potential respondents, less paperwork and ease of administration and data transfer. Finally, a mail questionnaire was also selected as a key survey administration method for this study on the basis of the following factors: mail survey is a relatively cheap method; it increases perceptions of the study's professionalism; it allows participants to work at their own speed during completion; and it allows sending out large quantities of questionnaires at the same time. Therefore, it was reasonable to employ this survey method.

To summarise, online/email and mail questionnaires were chosen as two main survey administration methods as explained above, along with face-to-face pre-test interviews with several entrepreneurs prior the main study launch.

4.5 Questionnaire Design

After the detailed description of research design and methods in use, this section of the chapter describes the questionnaire design process, including all the stages and specific question types, response format and layout. A structured questionnaire was developed reflecting the conceptual research framework and hypotheses of the study.

4.5.1 Type of questions

Questionnaire design was systematic so as to improve several criteria, such as simplicity, comprehensibility, logic and avoiding repetitive questions. Rigour in the questionnaire design and the survey procedures is required to solicit an adequate survey response (Dillman et al., 2009). In order to generate more accurate responses, the questionnaire was designed using semantic differential 7-point scales with bipolar labels.

There are several reasons why closed-ended questions (scales) were chosen for the questionnaire design. Closed-ended answer format reduces the risk that

questions would be misinterpreted by respondents. Additionally, closed-ended answers are very useful when responses have to be compared across multiple respondents or groups (Churchill and Iacobucci, 2010). Moreover, a closed-ended response format can help to reduce the completion time by minimising respondents' fatigue and pressure while filling out the questionnaire.

4.5.2 Layout

Since the questionnaire is a main research instrument used in this study, it is essential to ensure that it looks physically presentable and professional. Visual characteristics can increase credibility for the study among potential respondents, as well as their response rate.

To introduce the study to potential respondents, the front page of the questionnaire contained information about its nature and purpose and instructions for completion. It was printed on *University of Leeds* headed page. Moreover, the assurance of confidentiality and anonymity as a way of increasing the credibility and safety of the study, as well as the participation rate (Dillman et al., 2009), was mentioned on the cover page.

The main part of the questionnaire comprised three key sections: Section A) *entrepreneurial passion* (harmonious and obsessive) containing two key starting variables for passion with 14 pre-coded statements; Section B) *entrepreneurial behaviours*, including three behavioural variables in 18 pre-coded statements; Section C) *business performance* comprising of two performance variables (financial and market) with 6 pre-coded items.

All statements in the first two sections required respondents to indicate the extent to which they agree or disagree. This was organised by putting pre-coded items into a seven-point Likert scale ranging from 1) "strongly disagree" to 7) "strongly agree". The third section of the questionnaire implied the same format of the scale with pre-coded items, but requested the respondents to show their degree of satisfaction.

Company information and respondents' characteristics were present in Section D at the end of the questionnaire, with subsequent key informant evaluation and

a space for any additional comments, as well as the researcher's contact details.

4.5.3 Translation

The questionnaire has initially been developed in English language, however due to the fact that data collection was conducted in Russia, it had to undertake a double translation. The researcher used the professional service of Latvian-based *Lingo-S* agency to translate the questionnaire into Russian language. At the same time, in order to avoid misinterpretation of the words and change or loss of meaning, the back-translation technique was also applied. The translated version of the questionnaire into Russian was translated back to English and then compared with the original English questionnaire. This resulted in several stylistic corrections. In addition to that, since the researcher speaks Russian as mother tongue, it was also possible to double check the final translated version.

4.5.4 Cover letter

A cover letter was attached separately or on the front page of the questionnaire (in case of online version), which served as an introduction to the study research topic, highlighting its importance and asking respondents to participate. The cover letter was personalised to each entrepreneur, both in mail and email formats. There were also instructions for the completion of the questionnaire, as well as the value of the study explained for the layperson's understanding. It also contained an emphasis on the respondents' expert knowledge in the research area, thus applying both 'egoistic' and 'social utility' appeals that can increase credibility in the study itself and consequently the response rate (Diamantopoulos and Schlegelmilch, 1996; Helgeson et al., 2002).

It is also known that company managers and entrepreneurs are more responsive towards surveys supported by organisations known to them. Indeed, research suggests that the government- and university-supported studies usually yield higher response rates by top ranked managers (Diamantopoulos and Schlegelmilch, 1996; Helgeson et al., 2002). Therefore, the cover letter was printed on the official University of Leeds high-quality paper with the letterhead

and logo present, along with the contact details. Complete survey with the cover letter was printed in a booklet format to make it look short and professional. Finally, the letter promised absolute confidentiality and anonymity for respondents. As an incentive, participants were offered a summary of key findings of the study.

4.5.5 Web questionnaire

Following a tailored mixed-mode survey design (Dillman et al., 2009) and in order to increase the response rate, a web questionnaire was created on (www.esurveycrator.com). It was initially planned to use university provided domain: www.survey.leeds.ac.uk, however the problem was that this survey tool did not support Cyrillic type alphabet (Russian) or any others with special characters. Therefore, *esurveycrator* was selected after several considerations in relation to data storage, security and fees. The front (cover) page of the questionnaire was similar to the one in the printed version, but also ensured participants of the easy-to-use web form for completion. All relevant check boxes and space for respondents' answers were assigned to each item as normal. Broadly, the structure and appearance of the web version was identical to the paper one. All responses were kept in the online database, secured with researcher's personal login and password, and could be downloaded to the computer at any time.

4.6 Pre-Testing and Revision

This section provides detailed explanation of procedures undertaken prior to the main survey launch. It describes various survey improvement techniques that were implemented.

4.6.1 Expert Advice on the Questionnaire

According to Hair et al. (2010), face validity is one of the most important aspects to consider before the launch of the main full-scale survey. It is especially important when several new measures have been developed for some constructs. Since face validity reflects the extent to which a scale is measuring what it is expected to measure, items of a scale should be relevant and representative of the theoretical constructs used in the study.

Expert advice on the questionnaire is a very useful tool for a survey instrument pre-testing stage. In this study all measures of the constructs used were reviewed by five academics in marketing, management and entrepreneurship research and two experts in overall questionnaire design and enhancement. Academic reviewers, along with the main two research supervisors dealt with the definitions and items used to measure specific constructs, made comments on the scale items and helped improve wording. Then, a general reviewer – a person of an industrial background in marketing and entrepreneurship commented on a questionnaire structure and outlook.

4.6.2 Survey Pre-tests

As a rule, questionnaire should always be pre-tested prior to the field launch (Dillman et al., 2009; Churchill and Iacobucci, 2010), that is questionnaire structure, content, duration and visual characteristics need to undergo an evaluation. Before the full-scale surveying starts, it is necessary to check whether the workability of the questionnaire is sufficient enough to proceed with the stage of data collection. This is usually done with at least 20 managers/firms (Malhotra, 2010). Hence, pre-testing procedures took place and were organised in three steps.

4.6.3 Step 1: Survey Pre-Test Interviews

Ten exploratory interviews were conducted with entrepreneurs after the questionnaire development, for the pre-testing purposes. Paper version of the questionnaire was provided to interviewees for scrutiny and a detailed discussion of questions, sections and items emerged. This resulted in some minor corrections to the questionnaire.

4.6.4 Step 2: In-Depth Academic Pre-Test

Two entrepreneurs, familiar with the research area and previously working as full-time academics, along with two current senior academics with extensive experience in survey design and primary data collection, were asked to test the questionnaire and the cover letter. This resulted in some minor corrections to the questionnaire and cover letter style.

4.6.5 Step 3: Pilot Study

The pre-testing of sample draft questionnaires was carried out, which facilitated in maintaining professionalism in conducting the survey and correcting possible mistakes of the initial questionnaire design. Paper version of the questionnaire along with the cover letter was mailed to 25 entrepreneurs from the above mentioned databases. Similarly, a link for the web questionnaire was emailed to another 25 entrepreneurs, with cover letter as an email body. A total of 21 questionnaires were returned (via both modes combined) providing a 42% response rate.

4.6.6 Pre-Test Feedback Analysis and Revision

There was an empty space at the end of the questionnaire provided for respondents' comments. This was especially important during the pre-test stage. Table 4.1 provides a summary of feedback received from the mail and web pre-test, as well as from academic reviewers.

Table 4.1: Pre-test Feedback Analysis

Feedback source	Feedback type
Academic and industry experts	Stylistic corrections and minor wording changes
Mail survey pre-test	Clearer phrasing of items – for easier understanding
Web survey pre-test	Minor amendments on the cover page and final page

On the basis of the feedback received, a revision to the questionnaire's paper and online versions was completed. It was also decided to keep the space for comments at the end of the questionnaire even during the main survey stage.

Final version of the questionnaire, which was used in the main study, consisted of four pages, including both cover and end page for comments, providing a very acceptable length. Two pages contained key three sections along with the concluding section of respondent characteristics and company information. Feedback demonstrated that completion time was approximately 5-8 minutes, which is a good indicator for a four-page academic survey.

4.6.7 Response Rate Enhancement

Prior to the full-scale survey launch, several methods of response rate enhancement were considered and implemented. There are several ways of establishing trust and increasing benefits of participation in the survey. First of all, information about the survey was provided to all potential participants, informing how the collected data will be used. An invitation to participate was formulated in the form of 'asking for help', so that it is appealing to many people's helping tendencies. Personally addressing contacts proved to be another positive aspect in increasing the response rate. Verbal appreciation can be a very important reward in social exchanges. Informing potential participants with the fact that researcher is originally from the same country and speaks the same language can encourage them to respond. A crucial point was to ensure confidentiality and security of information (Dillman et al., 2009).

Designing questionnaire in a way that the majority of people would find questions interesting also encourages higher response rate. Additionally, knowing that people similar to them have already completed the survey can significantly influence others to do the same. Table 4.2 summarises all encouraging, motivational procedures and aspects considered during the study, in order to increase the response rate via gaining respondents' trust and providing benefits. Further response rate enhancement techniques and additional approaches will be discussed in section 4.8.3.

Table 4.2: Summary of Survey 'Trust and Benefits' Aspects

Purpose	Type of motivational aspect	Details	Used in the study
TO GAIN TRUST	Survey sponsorship	Study approved by organisation with respectful image (University of Leeds).	Yes
	Survey information	Provided in the cover letter	Yes
	Cover letter	Personalised, printed on a high quality university paper with letter head and logo. Included both 'egoistic' and 'social utility appeals'.	Yes
	Questionnaire	Clear, well-structured, with comprehensible questions and instructions for completion. Custom print, booklet format, professional outlook.	Yes
	Confidentiality/Anonymity	Clearly provided in the cover letter in a separate box to draw attention	Yes
	Researcher's contact details	Provided in the cover letter and at the back of the questionnaire	Yes
	Postage	Self-addressed pre-paid return envelope provided	Yes
	Web questionnaire	Designed with a link provided as an additional mode of completion	Yes
TO PROVIDE BENEFITS	Monetary incentives	Enclosed or promised upon completion	No
	Non-monetary incentives	Promised a summary of the study findings to all participants	Yes
	"Thank you"	Gratitude expressed in advance in the cover letter	Yes
	Interesting questionnaire	Overall research topic and questions developed in an interesting and appealing way for a potential respondent	Yes

4.7 Types of Information Sought

The current section of the methodology chapter explains in detail the development of the measures for the constructs used in the study. It also provides information and justification on how established scale items were practically adapted and refined for the purpose of the present study, as well as

demonstrates the development of measures for completely new, specially introduced construct.

This study employed both reflective and formative constructs to address different research questions. *Reflective constructs* are the ones where the direction of causality flows from the construct to the indicators, so that if any changes occur in the underlying construct, this will cause changes in the indicators or items as well, thus the measures are referred to as reflective (Fornell and Bookstein, 1982 in Jarvis et al., 2003). In order to capture the construct, reflective approach tries to maximise the overlap between the items, which are considered interchangeable and inter-correlations are the important indicators of the appropriate measurement. In contrast, for *formative constructs* changes in the items are causing changes in the underlying construct, thus, these measures are referred to as formative (Fornell and Bookstein, 1982 in Jarvis et al., 2003) indicators. On the contrary to the reflective model, this model does not assume that all the measures are caused by a single latent construct, conversely the measures all have an impact on a construct itself. In other words, the direction of causality is from the items to the latent construct, and the items jointly determine the meaning of the construct and therefore, are considered complementary.

In relation to the new construct development process, C-OAR-SE model of Rossiter (2002) was applied. This approach comprises of several stages, starting with a conceptual definition of the construct. Next, the classification of the focal object takes place depending on the number of dimensions of the scale and is derived from the question of 'what does the construct include?'. The next stage involves the decision on the main attribute of the construct, based on whether it will mean different things to the sample of raters and whether these differences will form the items of the scale. The next procedural step is the selection of raters' entity – a group, in this study being a sample of entrepreneurs. Then, a general scale formation step takes place by generating a pole of items, created on the basis of the construct definition and relevant literature review. Subsequent expert judging and pre-tests are required to reduce the amount of items and to increase parsimony and validity of the scale.

As a result, the multi-item scale comprising of particular amount of items is being developed to capture the latent variable.

In this study, multi-item scales were applied to measure all reflective constructs and measures were selected from prior research during a special literature review and adapted to fit the context of the study and facilitate the process of data collection. Table 4.3 summarises the information that was required from respondents to complete the survey in the order that it was presented to them (please refer to Appendix 4.1 for a full version of questionnaire used in the main study).

Table 4.3: Information Sought from Entrepreneurs

<p>Entrepreneurial Passion Harmonious passion Obsessive passion</p>
<p>Entrepreneurial Behaviours Engagement Persistence Opportunity creation</p>
<p>Business Performance Market/customer performance Financial performance</p>
<p>Company profile data and entrepreneur's characteristics Entrepreneurial experience Firm age Total employee number Industry type Entrepreneur's gender</p>

4.7.1 Entrepreneurial Passion

The main focus of this study was to empirically test the construct of entrepreneurial passion. At the time of survey development and the establishment of the final research framework, only one scale was available in the literature, developed by Vallerand and colleagues (2003): passion for activity. In this measurement, passion consists of two antipodal dimensions - harmonious and obsessive, with functional and dysfunctional consequences, respectively. Since 'entrepreneurship' can be considered as a certain type of activity, it was decided to adapt this scale to the context of the study and use it for the data collection. Table 4.4 demonstrates all items comprising the

harmonious and obsessive passion dimensions that were measured on a 7-point Likert scale, with anchors at 1 = “strongly disagree” and 7 = “strongly agree”.

Table 4.4: Passion measures

Construct	Measurement items	Sources
Harmonious passion	1. My work allows me to live various experiences 2. The new things that I discover with my work allow me to appreciate it even more 3. My work allows me to live memorable experiences 4. My work reflects the qualities I like about myself 5. My work is in harmony with the other activities in my life 6. For me work is passion, that I still manage to control 7. I am completely taken with my work	Vallerand et al. (2003) ‘Passion’ scale
Obsessive Passion	1. I cannot live without my work 2. The urge is so strong. I can’t help myself from doing my work 3. I have difficulty imagining my life without my work 4. I am emotionally dependent on my work 5. I have a tough time controlling my need to do my work 6. I have almost an obsessive feeling for my work 7. My mood depends on me being able to do my work	Vallerand et al. (2003) ‘Passion’ scale

4.7.2 Engagement

Since absorption is essentially defined as being fully engaged in one’s work (Schindehutte et al., 2006) and demonstrates the level of engagement in activity, it was reasonable to use the domain of absorption for capturing entrepreneurial engagement. For this purpose, 6 items from the Utrecht Work Engagement Scale (Schaufeli and Bakker, 2003) were selected and adapted for the study context. Consistent with the previous measures of entrepreneurial behaviours, all items of the engagement construct were measured on a 7-point Likert scale, with anchors at 1 = “strongly disagree” and 7 = “strongly agree” and are provided in the Table 4.5.

Table 4.5: Engagement measures

Construct	Measurement items	Sources
Engagement	1. Time flies when I am working 2. When I am working, I forget everything else around me 3. I feel happy when I am working intensely 4. I am immersed in my work 5. I get carried away when I am working 6. It is difficult to detach myself from my job	Schaufeli and Bakker (2003) – ‘Utrecht Work Engagement’ Scale

4.7.3 Persistence

To measure the extent of continuation of effortful action despite failures, impediments, or threats, real and imagined — how persistent entrepreneurs can be — a scale developed by Duckworth and colleagues (2007) was applied and several items were adapted to fit the study context in an appropriate manner. Table 4.6 demonstrates all items of the persistence variable that were measured on a 7-point Likert scale, with anchors at 1 = “strongly disagree” and 7 = “strongly agree”.

Table 4.6: Persistence measures

Construct	Measurement items	Sources
Persistence	1. I have achieved a goal that took years of work 2. I have overcome setbacks to conquer an important challenge 3. I finish whatever I begin 4. I am tenacious enough to overcome setbacks at work 5. I am a hard worker 6. I am persistent in my work	Duckworth et al. (2007) – ‘Perseverance of Effort’ scale

4.7.4 Opportunity Creation

The new construct developed particularly for this study to depict a specific entrepreneurial behaviour, has undergone a set of procedures to increase parsimony. Following the C-OAR-SE model of Rossiter (2002), a conceptual definition of the construct was introduced. *Opportunity creation* was defined as an entrepreneurial behaviour where the actions and reactions of entrepreneurs result in the identification of new ways of doing business. It is the development of situations where new goods, services, markets, resources and/or organizing methods can be introduced. The definition was developed on the basis of *opportunity* (Eckhardt and Shane, 2003 in Short et al., 2010) and *entrepreneurship* (McDougall and Oviatt, 2000) constructs. Next, classification of the focal object took place as advised — defined as *abstract collective object*,

since the opportunity creation construct consisted of several components, and the interpretations will differ across the sample and the scale is mainly answering the question of ‘what does the construct include?’. The next step involved the decision on the main attribute of the construct, which is *eliciting*—since it will suggest somewhat different things to the sample of raters and these differences will form the components of the scale. Following the next procedural step, raters’ entity was selected as a *group* — in this study it is a sample of entrepreneurs. Then, a general scale formation step took place by generating a pool of 22 items, created on the basis of the construct definition and relevant literature. Subsequent expert judging and pre-tests took place at that stage to reduce the amount of items and to increase parsimony and validity. As a result, the multi-item scale comprising of 6 items was developed (provided in the Table 4.7) to capture the latent variable and items were measured on a 7-point Likert scale, with anchors at 1 = “strongly disagree” and 7 = “strongly agree”.

Table 4.7: Opportunity creation measures

Construct	Measurement items	Sources
Opportunity Creation	1. I am good at creating new ways of doing business 2. I can easily come up with new product ideas 3. I regularly come up with new product-market ideas and projects 4. I am good at generating and implementing new ideas 5. I always try to combine resources and capabilities in novel ways 6. I am good at coming up with novel solutions for specific problems of the company	Newly developed

4.7.5 Business Performance

In order to capture business performance, an aggregated construct was developed applying several indicators from different dimensions. Thus, the first domain of performance variable — customer/market performance — was measured with items sourced from Murphy et al (1996), Morgan (2012) and Katsikeas et al. (2006). Financial performance was measured with items selected from Richard et al. (2009) and Morgan (2012). All business performance items were measured on a 7-point Likert scale, with anchors at 1 = “completely dissatisfied” and 7 = “completely satisfied” and measures are displayed in the Table 4.8 below.

Table 4.8: Performance measures

Construct	Measurement items	Sources
Market/Customer Performance	1. Market share 2. Customer satisfaction 3. Sales volume	Items from Murphy et al (1996), Morgan (2012) and Katsikeas et al. (2006)
Financial Performance	1. Profitability 2. Cash flows 3. Return on investments	Richard et al. (2009) and Morgan (2012) – ‘Marketing and Business Performance’ scales

4.7.6 Profiling Variables

There were 6 questions altogether that were used to profile the SMEs in the study and entrepreneurs themselves (see Table 4.9 below). Some of the profile variables like firm age and entrepreneurial experience were used as control variables in the conceptual framework following the prior research suggestions. Most of the profile variables were sourced from previous strategic marketing and entrepreneurship studies like Cavusgil and Zou (1994) and Katsikeas et al. (2000; 2006) among others.

Table 4.9: Profiling variables

<p>Respondent Characteristics and Company Information</p> <p>How experienced are you in entrepreneurship? <i>(Please specify the number in the space provided)</i></p> <p>Number of years in the current venture _____</p> <p>Number of years in entrepreneurship in general _____</p> <p>Please state for how long has your company been operating? _____ years _____ months</p> <p>How many full time employees are there in your company? _____</p> <p>Please state the type of industry sector that best describes your business:</p> <p>_____</p> <p>What is your gender? <input type="checkbox"/> Male <input type="checkbox"/> Female</p>

4.8 The Main Survey

This section sheds light on the extensive fieldwork procedures undertaken for a successful data collection. It also provides survey bias assessment and prevention techniques.

4.8.1 Sample Frame Refining and Administration

The sampling frame for the main full-scale survey was the same as for the pre-test stage. It has been argued that a minimum of 200 cases or observations is needed (Hair et al., 2010) in order to adequately evaluate the reliability and validity of measures. Thus, an extensive fieldwork data collection took place to ensure the return of the above mentioned required number of cases.

Regarding this issue, it was essential to establish contact with potentially responding entrepreneurs, which did not turn out to be very successful. Pre-notification telephone calls were made and emails were sent to Russian selected SMEs. Entrepreneurs were contacted via telephone or email (where available) to ask for their cooperation and commitment, and to also check the accuracy of the postal addresses compared to the database in use. Several complications occurred during this stage. First of all, it was quite hard to reach entrepreneurs via the telephone, because either database wouldn't provide one for the company or secretary would not be interested in listening or participating in the conversation. Business research culture is not present in Russia and, therefore, it was very hard to achieve credibility and value of the study in the eyes of the companies contacted. Nevertheless, a series of approaches were developed and implemented in order to collect the necessary amount of cases.

4.8.2 Fieldwork Procedures

The data collection process started with the several telephone calls to entrepreneurs to inform them about the study and get their consent prior to sending out questionnaires via mail or email. As explained earlier, while trying to call several entrepreneurs in Russia, it was quite difficult to get any answer and to adjust to huge time differences, because of geographical diversity of the sample selected. Therefore, it was decided to move to the second stage of the fieldwork process.

The second stage of the data collection process involved an online survey link emailed to potential respondents, along with the cover letter in a body of the email. This generated a large number of completed questionnaires, but still not enough to proceed with data analysis. Consequently, the final stage of data collection was implemented in a form of a mail survey. A total of 950 letters were sent in Russia, including cover letter, return prepaid envelope and booklet questionnaire, anticipating approximately 10% response rate. It is evident that mixed mode survey data collection, as predicted, effectively served its purpose (Dillman et al., 2009).

4.8.3 Final Response Rate Enhancement

It was crucial to increase the response rate during the main survey data collection, in order to get the necessary amount of completed questionnaires. For this purpose after a week of the initial survey emailing step, a reminder was sent out in a similar web manner. Likewise, after three weeks of letters sent out in Russia (due to a wide geographical scope and longer delivery times), a mail reminder was sent to the respondents. Furthermore, where possible (if the company's telephone number was available), entrepreneurs were contacted by telephone and reminded to complete the questionnaire. After applying a mixture of these reminders extra completed questionnaires were generated, sufficient for the study.

4.8.4 Response Analysis

At the end of the mail and web pre-testing of the survey, there were 1,975 companies left in Russian sample. During the first stage of online questionnaire, the sample frame dropped for the reason that some respondents were removed from the sample frame, because they no longer had any business operations, and because contact details of the companies were either wrong or did not exist, as well as in case of not willing to participate. This resulted in the 1,136 eligible SMEs. Table 4.10 provides the detailed analysis of response pattern of the sample frame that was finally used in the main study.

Table 4.10: Response analysis

Response pattern	Grand Total	Total
<i>Initial sampling frame</i>		2,000
Used for pre-tests	25	
No longer operating	106	
Incorrect/untraceable contact details	307	
Not willing to participate	426	
<i>Non-eligible</i>		864
<i>Eligible SMEs</i>		1,136
Responses generated via web survey link	156	
Responses generated via mail survey	68	
Responses generated via reminders	4	
<i>Responses generated</i>		228
Responses removed due to low score in informant evaluation technique	10	
<i>Usable responses</i>		218
Eligible non-responses		908

Out of the total 950 SMEs in Russia that were sent a mail questionnaire and 186 SMEs that were sent a web questionnaire link, 908 did not return their questionnaire and thus created a large number of non-responses. There were, however, several reasons for those non-responses.

Firstly, 426 entrepreneurs did not want to participate in the study, who replied saying that they do not support any research and find it suspicious to participate in any surveys. Among them 246 respondents sent an email indicating that their entrepreneurial activities are minimal and 144 entrepreneurs did not think their responses would be of any value to the study. The following are the main reasons for survey non-response:

- Time factor – survey too long
- Lost the document
- Not interested
- Suspicious and not trusting
- Did not support academic research
- Did not feel comfortable about sharing company data

In the end, 228 completed questionnaires were returned. This consisted of 218 useable and 10 non-useable questionnaires. The reason for not using 10

questionnaires in the sample was the fact that entrepreneurs in those questionnaires failed the informant competency test (Kumar et al., 1993).

Consequently, the 1136 eligible SMEs and 228 completed questionnaires in Russia were used to calculate the response rate for the study. The effective response rate in this study reached 20.1 per cent ($[(228/1136)*100]$). The calculation was based on all eligible SMEs and that were all actually contacted during the data collection stages. The 20.1 per cent response rate in this study was considered acceptable. In fact, it was a major difficulty to succeed in data collection in Russia, since business research culture there is not developed at all and most of entrepreneurs suspected an element of deception in the survey. Yet still, this response rate fits well within recent studies in the marketing and entrepreneurship fields (DeClercq et al., 2013; Sarin et al., 2012; Homburg et al., 2012 and many other). Therefore, the achieved response rate in this study is considered appropriate to continue with the analysis and non-response bias did not significantly undermine the course of the research and generalisability of the results.

4.8.5 Survey Bias Assessment

Rindfleisch and colleagues (2008) define CMV as a systematic measurement error that occurs due to the use of single method and/or single source of information. It has the potential to negatively affect key informant research by weakening the validity and reliability of the findings. However, there are several techniques to reduce its presence, such as gathering/using multiple types of data, multiple respondents and data gathered over multiple time periods (Podsakoff et al., 2003).

In order to address CMV, preventive procedures recommended by Podsakoff and colleagues (2003) were applied. For instance, all construct scales were systematically and carefully adapted from different sources, as well as verified by several academics during the pre-test stages of the data collection. Also, survey items were put together under overall general topic sections rather than being grouped by specific construct, to preclude respondents from identifying items measuring particular construct or guessing the actual hypothesised relationships. A profiling variable of 'number of years in the current venture' was

used to double check that respondents were actually the ones who established the company, as such the response to this item had to match the firm age. In addition to that, the survey also guaranteed respondents' anonymity and confidentiality, clearly stating it on the cover page. Finally, several statistical tests proactively checking for CMV were used during the analysis stages, which are explained in the next chapter.

4.9 Analytical Tools and Approaches

This section of the chapter briefly introduces the analytical approaches of the study. Analysis that applies valid measures and rigorous techniques is a crucial requirement for every research. It is very important that some rigorous statistical analyses are undertaken to assess both reliability and validity of the study measurement.

Measurement development as discussed previously in this chapter has undergone several checks to ensure high validity and appropriateness when testing hypotheses (Anderson and Gerbing, 1988). Specific analytical software used for the measurement assessment in this study is: *IBM SPSS Statistics 21* package and *Structural Equation Modelling* package *EQS 6.2*.

Analytical techniques used in this research are described in more details in the next chapter. Key SPSS techniques used are: exploratory factor analysis (henceforth EFA) and item analysis - reliability analysis using Cronbach's Alpha method, inter-item correlations and item-scale correlations, general descriptive statistics and frequencies (Field, 2005; Sharma, 1996).

Structural Equation Modelling (SEM) in EQS 6.2 software was used for data analysis purposes - measurement model and structural model. This particular methodology was chosen based on several considerations (Bagozzi and Yi, 2012). First, it offers a great rigour of analysis by applying an integrative function – covering various leading methods available. Second, it helps to achieve clarity and precision on measurement issues and specification of hypotheses. Third, it considers reliability of measures and works well both under the notion of discovery and confirmation. Finally, it is useful especially for cross-

sectional surveys, using the simultaneous multi-measure approach and providing insights on originally not considered relationships. Some of the EQS techniques employed are confirmatory factor analysis (henceforth CFA) to develop and refine a measurement model, and a structural model development and testing, using the elliptical distribution theory (Byrne, 2006).

4.10 Chapter Summary

This chapter provided detailed information on and justification for the choice of the research design being cross-sectional. It also discussed the qualitative and quantitative stages and the scope of research, including the geographical location, industry choices, as well as key informants and units of analysis used. The description of the study's sampling frame and procedures followed. Further, it talked about data collection process and survey administration methods and their specific application to the study, exploratory face-to-face interviews and mail/online survey in particular. The stepwise explanation of how questionnaire was designed and what it contained was the next section of the chapter, followed by the detailed explanation of the pre-testing procedures, including expert advice, survey pre-tests, and response rate enhancement techniques. Next, it provided the detailed portrayal of all measures and scales used. Finally, the chapter contained information on the revised questionnaire, fieldwork procedures and response pattern analysis, as well as crucially evaluated the implemented actions to address survey biases.

Ultimately, this study chose a mail-and web-based survey method for the quantitative data collection purposes. Regarding the sample, 1,136 eligible SMEs in Russia were surveyed for this study and 228 responses were received, representing the 20.1 per cent response rate. Respondents were entrepreneurs with significant knowledge and experience on the firm's entrepreneurial activities. Finally, several techniques were implemented to control for possible non-response and CMV issues. Thus, the described research design activities in this chapter ensured that the data collected was valid. In the next chapter, sample profile is presented, followed by the stages of measurement development and validation.

Chapter 5 : Measurement Development and Assessment

5.1 Introduction

The aims of this chapter are the following: first - to provide a descriptive analysis of the sample and develop a sample profile and second - to describe the measurement development and assessment approaches. The descriptive analysis or sample profile provides general characteristics of the entrepreneurs and ventures, used in the study and thus, develops an overall understanding of the subjects. The measurement development strategy, including both selection and assessment, helps to explain the underlying mechanism of the planned multivariate analysis (i.e., structural equation modelling with EQS software) and particular method (i.e., elliptical distribution theory), that will be used to identify and analyse characteristics and relationships of the variables tested in this study.

5.2 Missing Values

The essential starting point in relation to measurement assessment and purification in this study was the analysis of missing values, which appear if some questions are left unanswered by respondents. Missing observations is one of the most common barriers that researchers have to overcome when collecting primary data (Hair et al., 2010). Almost always these are beyond the researchers' control and still appear after the necessary shortenings and clarifications of the questionnaire, becoming 'rules' rather than 'exceptions'. The failure of respondents to answer all questions of the survey is affected by several problems they potentially encounter: failure to understand the question correctly, time constraints or unwillingness to provide an answer, specifically for questions of a sensitive nature (Kamakura and Wedel, 2000; Ball, 2003). At the same time, having considered these issues, the most important thing for researchers is to understand the pattern of the missing data and the amount (Kamakura and Wedel, 2000). The key aspect to understand and evaluate is whether the data is missing intentionally or unintentionally (Hair et al., 2010) by completing a Little's MCAR test and then to use various techniques, such as expectation-maximisation algorithm within missing value analysis (Little and

Rubin, 1987; Kamakura and Wedel, 2000; Schafer, 1997; Hair et al., 2010; Tsiriktsis, 2005) to address the problem.

Missing value analysis in this study revealed that there was no missing data present in the dataset. Respondents did not skip answering any questions. This conclusion permits to move to the next step, since absence of missing values strengthens the validity of the current study.

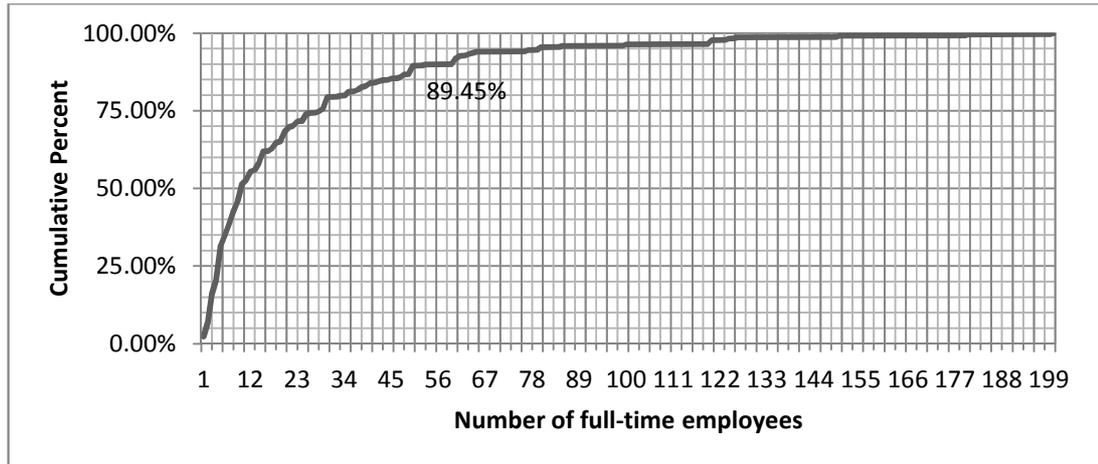
5.3 Sample Profile

This section provides an overview of the general characteristics of the entrepreneurs and their organisations that participated in the study. This aspect is important, because it helps to achieve an understanding of the subjects that were studied. Therefore, this section generates an early impression of the sample profile. This is necessary, because the entrepreneurs and their ventures under study vary across different dimensions such as entrepreneurial experience, firm size and age and so on. Moreover, the organisations operate in different industries offering diversity among situations and answers of the subjects. The analysis in this section also demonstrates the general characteristics of the key informants - entrepreneurs that provided the information on the organisations under study. All variables that are discussed below are taken from the profiling variables of the section 4.7.6.

5.3.1 Firm Size

Following the past research guidance, this study assessed firm size by examining the distribution of the firms 'total number of full-time employees' (Cavusgil and Zou, 1994; Katsikeas et al. 2000; 2006). The distribution of firm size was positively skewed. The sample covered a wide range from 1 to 200 full-time employees with a median of 10 and a mean of 23 full-time employees. As can be seen in the percentile distribution in figure 5.1, almost 90 per cent of the firms employed 50 or fewer employees with the 10 per cent of firms employing more than 50, but fewer than 200 employees. Thus, it can be concluded that the sample mostly consists of small and micro companies.

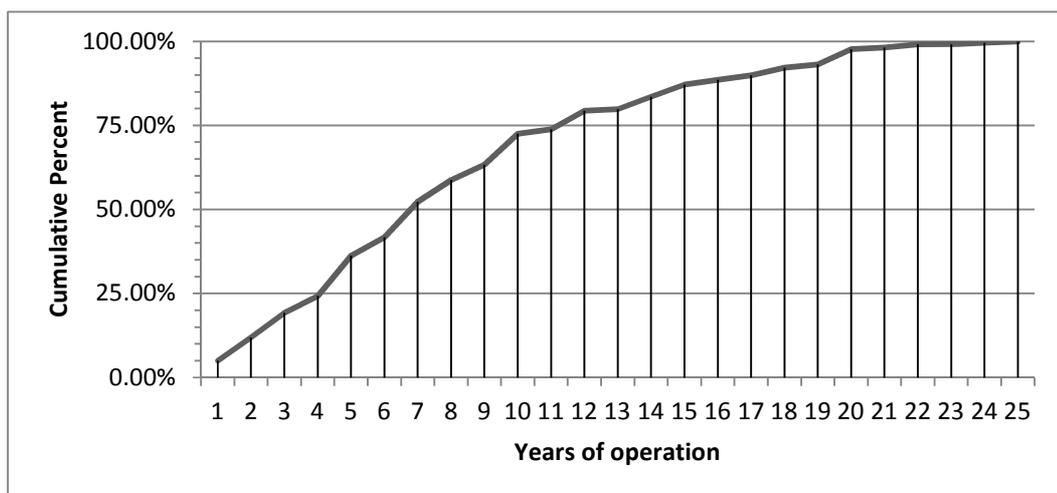
Figure 5.1: Firm Size (number of full-time employees)



5.3.2 Firm Age

In relation to the firm age, the sample provides a reasonably good spread of companies in business. Figure 5.2 demonstrates that the minimum number of years that firms have been in business is 1 year and the maximum is 25 years. On average, the firms have been in business for 8.5 years. The distribution of the firm age is the following: 35 per cent of the firms had been in business for less than 5 years and 75 per cent (third quartile) had less than 12 years of operations, while firms with 12 and more years of operations constituted 25 per cent of the sample.

Figure 5.2: Firm Age (number of years in business)



5.3.3 Entrepreneurial experience

Regarding the entrepreneurial experience, this was assessed with the total number of years that respondents have been involved in entrepreneurship.

Figure 5.3 provides the sample structure in relation to this aspect. It is evident that nearly 50 per cent of respondents have been involved in entrepreneurship for 10 or less years. On average the involvement in entrepreneurial activities constituted 12 years. 29 per cent of respondents had been involved in entrepreneurship for more than 15 years up to 45, which was the maximum.

Figure 5.3: Number of Years in Entrepreneurship

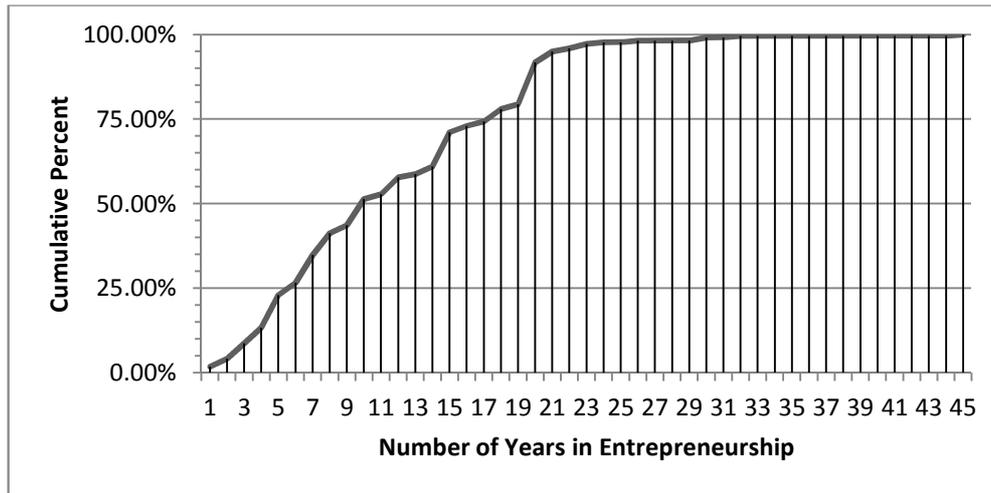
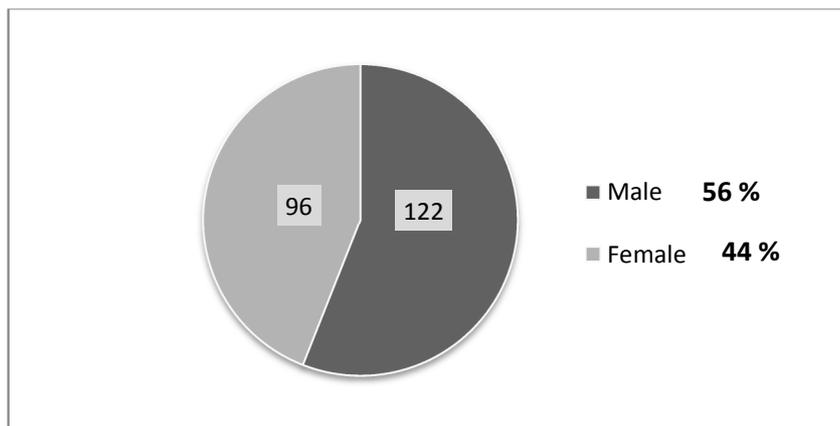


Figure 5.4 of this section provides an overview of the gender distribution in the sample. Figure 5.4 demonstrates that sample consists of 122 male and 96 female entrepreneurs, which provides a ratio of 56 to 44 percent respectively.

Figure 5.4: Entrepreneurs' gender



As for the industry characteristics, a lot of the companies in the sample are from services sector – around 70 per cent, namely real estate, advertising, trade, consulting, transportation and design. The organisations from manufacturing

sector included textile, furniture, metal construction, timber and technological industries.

5.3.4 Section Summary

This section of the chapter discussed information of the sample profile - general characteristics of the entrepreneurs and their organisations that participated in the study. The analysis of the descriptive statistics revealed that the majority of the firms in the sample were small and relatively young organisations, employing less than 50 people and operating up to 10 years. With regard to entrepreneurial experience, sample consisted of quite experienced entrepreneurs having 12 years of entrepreneuring experience on average. With respect to the gender of entrepreneurs, the sample provided a distribution very close to equal. The aim of getting a diverse spread of the sample across industries was achieved since it covered various services and manufacturing sectors.

5.4 Measurement Development Strategy

5.4.1 An Overview

Obtaining valid and reliable measures is one of the most essential tasks for a researcher and needs to be accomplished prior to any attempts of hypotheses testing and analysis. Consequently, it is vitally important that rigorous statistical techniques are applied to assess the feasibility and validity of the measures used in this study. This section of the chapter discusses the recommended statistical techniques and procedures that were used in developing and purifying study measures. The respective techniques and procedures were chosen following the measurement development literature suggestions (Fornell and Larcker, 1981; Fornell and Bookstein, 1982; Anderson and Gerbing 1982, 1988; Spector, 1985; Bagozzi et al., 1991; Jarvis et al., 2003; Hair et al., 2010; Churchill, 1979; Netemeyer et al., 2003).

The aim of this section is twofold. First, it discusses the item selection and assessment process, in order to identify poorly performing items in the scales. Specific analytical techniques that are used for this purpose in this study include: exploratory factor analysis (EFA), item analysis (inter-item and item-

scale correlations, scale reliability assessment), and confirmatory factor analysis for dimensionality assessment (CFA). Second, it provides a detailed explanation on the purification process, assessing the reliability and validity of finalised measures.

This study uses EFA and CFA as the main procedures to assess the dimensionality, reliability and validity of all scales. Hence, it is necessary to establish the minimum sample size to parameters ratio to ensure the rigorous analysis is in place. It is often recommended that the five-to-one ratio of sample size to parameters is an acceptable criterion (Hair et al., 2010; Tabachnick and Fidell, 2007). However, some scholars argue that a ratio of even two-to-one can be sufficient for smaller samples and would still provide an acceptable model fit (Bagozzi and Yi, 2012). Therefore, it was decided not to use subset analysis when conducting CFA procedures.

5.4.2 Item Selection using EFA

EFA procedure is one of the most appropriate analytical approaches for the initial item selection at the preliminary stage of the measurement analysis (Wedel, 2010). Factor analysis is a multivariate statistical test that facilitates researchers in identifying themes and structure within a set of observed measures (Hair et al. 2010). This technique also allows determining the existing interrelationships among variables in order to find the most appropriate ones when defining and measuring a construct. In summary, factor analysis helps to establish dimensions within a data and even develop measurement scales for variables that are new, and thus serves as a data reduction and measure improvement technique (Thompson, 2004).

In this study, EFA procedure is used for the purposes of initial item selection. As a first step of measurement development, it is very useful to identify underlying dimensions within the sets of variables used (Hair et al., 2010). These dimensions are usually referred to as 'factors'. This means that a factor represents a set of items that are interrelated. Consequently, factor can be defined as a construct or a hypothetical entity that is assumed to underlie a set of items (Hair et al., 2010). The interrelated items load on a factor in a way that substantially maximises the variance within the data which is explained by this

factor. Ultimately, factors that develop during the exploratory factor analysis procedure may represent specific constructs (Hair et al., 2010; Wedel, 2010). In this study, EFA is primarily used to assess the appropriateness of the sets of items that are measuring specific constructs.

5.4.2.1 EFA Procedure and Outcomes

There are two key factor analysis techniques used in statistical analysis (Hair et al., 2010). First is a common factor analysis, which is especially suitable when the development of new scales is undertaken (Spicer, 2005). Second is a principle component analysis, which is often applied when the scales are not newly-development, but item selection and refinement is needed (Hair et al., 2010). Therefore, this study uses principal component analysis for the EFA procedure.

Given a sample size of 218, in this study factor loading of 0.6 is chosen as a critical minimum value (Hair et al. 2010; Thompson, 2004) to achieve a good level of robustness and appropriateness of the scales. For clarity purposes, EFA is run in three subsets. First, two passion variables are analysed, then three entrepreneurial behaviours and finally, business performance.

First, a factor analysis of harmonious and obsessive passion took place with a total of 14 items. The result returned two factors as expected in line with theory (Vallerand et al., 2003), however some items indicated problems. Two items of harmonious passion were eliminated due to the fact that they had a cross-loading of less than 0.2 on items of obsessive passion (Field, 2005; Pallant, 2013), and one with the loading below 0.6. Similarly, one item from obsessive passion was removed, since it had a loading of less than 0.6 established threshold. In the next step remaining 10 items were run in EFA again and returned satisfactory results (please see Appendix 4.2 for full factor analysis results on passion subset). While examining the correlation matrix, no items were found to be correlated with each other too high (less than 0.8), meaning that there were no factor loadings on particular items only. Bartlett's test for sphericity showed that results were significant with $p = .000 (< 0.01)$. Next, Kaiser-Meyer Olkin measure of sampling adequacy compares the magnitudes of the correlation coefficients and the partial correlation coefficients within a set.

It returned a value of 0.862, suggesting satisfactory outcome, since the value is close to 1 and above 0.5, meaning that correlations are distinct and there is a good factor distribution. Anti-image matrix measures of sampling adequacy (labelled with ^a in the anti-images matrices table) were all higher than 0.5, allowing to continue to the next step. The communalities table showed that all the values were more than recommended 0.3, which means that a reasonable amount of variance was explained. Total cumulative variance explained by two factors was 67.35 per cent. The scores of the factors were calculated using Anderson-Rubin method and table 5.1 demonstrates the loading distribution for two passion variables (please refer to Appendix 4.2 for full EFA statistics).

Table 5.1: EFA Results of Harmonious and Obsessive Passion

Items		Factor Loading	
		OP	HP
HP_1	My work allows me to live various experiences		.837
HP_2	The new things that I discover with my work allow me to appreciate it even more		.756
HP_3	My work allows me to live memorable experiences		.753
HP_4	My work reflects the qualities I like about myself		.616
OP_1	I cannot live without my work	.853	
OP_2	The urge is so strong I can't help myself from doing my work	.876	
OP_3	I have difficulty imagining my life without my work	.818	
OP_4	I am emotionally dependent on my work	.738	
OP_5	I have a tough time controlling my need to do my work	.866	
OP_6	I have almost an obsessive feeling for my work	.847	
KMO: 0.862			
Bartlett's test: 1263.43 (sig. 0.000)			
Percentage of Variance Extracted: 67.35			

Next, the EFA for entrepreneurial behaviours was run with the total of 18 items. The result returned three factors as expected. One item of persistence construct loaded poorly on its factor (below 0.6) and was eliminated. The remaining 17 items were run again and returned satisfactory results (please see Appendix 4.3 for full factor analysis results on entrepreneurial behaviours). The correlation matrix revealed that no parameters were correlated with each other too high (less than 0.8), meaning that there were no factor loadings on particular items only. Bartlett's test for sphericity returned significant results ($p = .000$). Kaiser-Meyer Olkin measure of sampling adequacy had a value of 0.888, suggesting

satisfactory outcome. Anti-image matrix measures of sampling adequacy (labelled with ^a in the anti-images matrices) were all higher than 0.5. The communalities table demonstrated that all values were more than recommended 0.3 minimum. Total cumulative variance explained by three factors was 64.48 per cent. The scores of the factors were calculated using Anderson-Rubin method and table 5.2 demonstrates the loading distribution for three entrepreneurial behaviours (please refer to Appendix 4.3 for full EFA).

Table 5.2: EFA Results of Engagement, Persistence and Opportunity Creation

	Items	Factor Loading		
		OC	ENG	PERS
ENG_1	Time flies when I am working		.645	
ENG_2	When I am working, I forget everything else around me		.824	
ENG_3	I feel happy when I am working intensely		.713	
ENG_4	I am immersed in my work		.727	
ENG_5	I get carried away when I am working		.769	
ENG_6	It is difficult to detach myself from my job		.700	
PERS_2	I have overcome setbacks to conquer an important challenge			.633
PERS_3	I finish whatever I begin			.761
PERS_4	Setbacks at work don't discourage me			.733
PERS_5	I am a hard worker			.680
PERS_6	I am diligent in my work			.737
OC_1	I am good at creating new ways of doing business	.824		
OC_2	I can easily come up with new product ideas	.817		
OC_3	I regularly come up with new product-market ideas and projects	.833		
OC_4	I am good at generating and implementing new ideas	.844		
OC_5	I always try to combine resources and capabilities in novel ways	.732		
OC_6	I am good at coming up with novel solutions for specific problems of the company	.765		
KMO: 0.888				
Bartlett's test: 2142.15 (sig. 0.000)				
Percentage of Variance Extracted: 64.48				

Finally, EFA for business performance was run with the total of 6 items. Factor analysis showed that one item loaded poorly on the factor extracted and was eliminated. Remaining 5 items were run in EFA again and returned satisfactory results by loading on one extracted factor with the scores greater than 0.6. The

correlation matrix revealed that no parameters were correlated with each other too high (less than 0.8), meaning that there were no factor loadings on particular items only. Bartlett's test for sphericity returned significant results ($p=.000$). Kaiser-Meyer Olkin measure of sampling adequacy had a value of 0.785, suggesting satisfactory outcome. Anti-image matrix measures of sampling adequacy (labelled with ^a in the anti-images matrices table) were all higher than 0.5. The communalities table demonstrated that all values were more than recommended 0.3 minimum. Total variance explained by the factor was 65.24 per cent. The scores of the factors were calculated using Anderson-Rubin method and table 5.3 demonstrates the loading distribution for business performance (please refer to Appendix 4.4 for full EFA statistics).

Table 5.3: EFA Results for Business Performance

Items	Factor Loading PERF
Market share	.777
Sales volume	.782
Profitability	.867
Cash flows	.853
Return on investments	.753

KMO: 0.785
 Bartlett's test: 579.53 (sig. 0.000)
 Percentage of Variance Extracted: 65.24

Consequently, EFA procedure was carried out to complete a preliminary selection of scale items that will be used in the next step of data analysis. EFA returned satisfactory results for all the variables in the study and allowed to conclude that scales are ready to be tested in the CFA.

5.4.3 Dimensionality Assessment using CFA

Statistical procedures recommended by Diamantopoulos and colleagues (2008) were followed to assess internal and external validity of the study, along with the application of techniques suggested by Anderson and Gerbing (1988) regarding the two-step approach, to estimate the measurement and structural models. This section provides detailed information on the first step of this approach - measurement model development and assessment using CFA.

The aim of the CFA stage within the measurement development and assessment process is to finalise the scales and items used in this study, by providing empirical validation and fit information of the data and the model. CFA adds rigour to the theoretical framework researcher has developed and ensures that it is valid enough to test the hypotheses (Netemeyer et al., 2003). It also checks the reliability and validity of all constructs, thus providing an encompassing and robust analysis of the measures prior the structural model assessment (Anderson and Gerbing, 1988; Byrne, 2006).

Another important function of CFA deals with dimensionality assessment, which is conducted not only on the basis of inter-item analysis on one construct level, but also considering item relations with all other items in the measurement model under investigation (Gerbing and Anderson, 1988; Hair et al., 2010). Notably, dimensionality has already been assessed in this study using EFA procedure in SPSS, as well as inter-item and item-scale correlation indicators, however, CFA dimensionality assessment is considered to be more robust as it also accounts for external consistency and validity, in addition to the internal (Schumacker and Lomax, 2010; Byrne, 2006; Gerbing and Anderson, 1988).

Therefore, this section of the chapter will present and discuss the CFA procedure with measurement model specification and assessment of its fit, validity and appropriateness to use for hypotheses testing. It will conclude with the finalised constructs structure in terms of scale items.

5.4.3.1 Model Specification

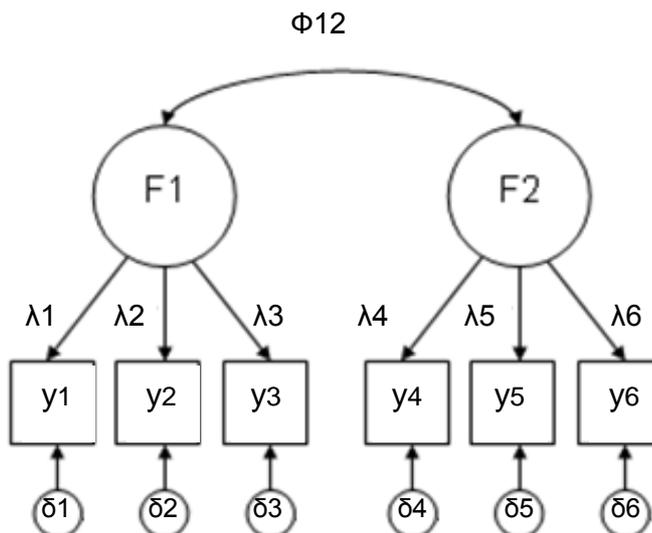
Model specification involves using all relevant theoretical and research information to develop a conceptual framework for hypotheses testing. Therefore, before operationalising the CFA model, it is necessary to identify the exact relationships within the model (Schumacker and Lomax, 2010). Naturally this should be done a priori (Anderson and Gerbing, 1988; Bagozzi and Yi, 2012) to ensure that the implied model is consistent with the true model. True model refers to the population model that data generated within the sample (Hair et al., 2010; Schumacker and Lomax, 2010). Ultimately, researcher needs to know the degree to which the true population model is deviated from the

implied theoretical model. If there is no consistency between the two models, it means that theoretical model is misspecified and requires additional insights.

In addition to testing the accuracy of relationships and associations proposed, CFA also examines the assumption of unidimensionality, meaning that each observed item (scale item) reflects or loads on the respective latent construct (Byrne, 2006). Moreover, it evaluates the error terms associated with all items in the model and their inter-correlations and effects on the observed item loading scores (Hair et al., 2010; Schumacker and Lomax, 2010; Byrne, 2006).

Figure 5.5 demonstrates the example of measurement model. The correlations are represented by Φ . The correlations between the pairs of specific variables are numbered accordingly to the variable number of a pair. For example, the correlation between the two factors in the figure is specified by Φ_{12} . In the model y_1, y_2, y_3 are the observed indicators of factor 1 (F1) and y_4, y_5, y_6 are the observed indicators of factor 2 (F2). λ 1-6 represent the factor loadings of each y (item) on each latent construct (F1 and F2), while δ represents the unique error term associated with each observed indicator in the model.

Figure 5.5: Sample Measurement Model



The measurement model logic presented in figure 5.5 is used to specify and assess the CFA model for all constructs in the conceptual framework of this study. Conceptual framework after EFA item reduction held the following parameters: HP_1 to HP_4 are the observed indicators of harmonious passion;

OP_1 to OP_6 are the observed indicators of obsessive passion; ENG_1 to ENG_6 are the observed indicators of engagement; PERS_2 to PERS_6 are the observed indicators of persistence; OC_1 to OC_6 are the observed indicators of opportunity creation; and PERF_1, PERF_3 to PERF_6 are the observed indicators of business performance.

This model was tested within the CFA procedure. The next subsection opens with a discussion of various fit indices and different model evaluation criteria, followed by model assessment on their basis, to ensure that robustness and parsimony are achieved.

5.4.3.2 Measurement Model Assessment

There is a number of different criteria and fit indices that scholars use when assessing CFA models. Some of them include the significance of the parameter estimates, other focus on average variance captured by specific parameters and their measurement errors etc. (Byrne, 2006; Schumacker and Lomax, 2010; Hair et al., 2010). These criteria and indices are evaluated to conclude whether the implied theoretical model under assessment fits the obtained dataset. The assessment of the measurement model in this study is completed in EQS 6.2 software package as mentioned in the last section of the previous chapter.

The purpose of the measurement model assessment is to identify and evaluate overall model fit to the data obtained within the study. Scholars suggest several fit indices that are crucial for the model evaluation and these have been recurrently used in the marketing and entrepreneurship literature (Anderson and Gerbing, 1982; 1988; Hair et al., 2010). Following the guidelines on recommended fit evaluation criteria, this study uses a number of different indices for the measurement model assessment purposes (Byrne, 2006; Hoyle and Panter, 1995; Schumacker and Lomax, 2010). These include chi-square statistic (with associated degrees of freedom), normed fit index (NFI), non-normed fit index (NNFI), comparative fit index (CFI), goodness of fit index (GFI) and root mean square error of approximation (RMSEA). These fit indices are discussed and explained below.

A very widely used criteria of assessing a model is the chi-square (or χ^2), which is associated with degrees of freedom (Diamantopoulos et al., 2008; Hoyle and Panter, 1995; Byrne, 2006). This index provides a test of perfect fit, concluding that the null hypothesis of model fitting the population data perfectly can be supported (Schumacker and Lomax, 2010). The degrees of freedom (df) refer to the difference between the number of observations (respondents in the sample) and the number of parameters that are estimated in the CFA. Some scholars have indicated that the χ^2 test is extremely sensitive to sample size and to even slight deviations from the perfect true model (Bagozzi and Yi, 2012; Schumacker and Lomax, 2010; Hair et al., 2010). At the same time this test can also be affected by the complexity of the model. Very often in large and complex models with different variables, large amount of items and degrees of freedom, the observed χ^2 results would be statistically significant, even when the fit of the model to the data is actually good (Hair et al., 2010; Byrne, 2006). Nonetheless, apart from the significance of the χ^2 test, the criterion to use for evaluation is the ratio of the test value to its degrees of freedom (χ^2/df), which should be less than 2.0, but often a value of less than 3.0 is also acceptable (Anderson and Gerbing, 1988; Bagozzi and Yi, 2012; Byrne, 2006). Thus, when χ^2 test is used to evaluate the model fit, it is also recommended to complement the fit evaluation with other available indices to account for the sample size and model complexity issues associated with χ^2 statistics.

Some scholars recommend CFI, NFI and NNFI indices to use for further measurement model assessment (Bentler, 1990; Bollen, 1990; Gonzales and Griffin, 2001). Comparative Fit Index (CFI) measures the improvement in noncentrality in moving from the implied theoretical model to the independence one and defines the comparative fit, with the result ranging between 0 and 1, where '0' means no fit and '1' represents perfect fit. Normed Fit Index (NFI) is a criteria of chi-square rescaled into a range of 0 to 1, where '0' means no fit and '1' represents perfect fit, compared to the null (independent) model. The independent model refers to the one where all variables are assumed not to correlate. Non-Normed Fit Index (NNFI) is very similar to NFI, but accounts for model complexity and provides a particularly good estimate of model fit with smaller sample size (Bentler, 1990; Hu and Bentler, 1995; Byrne and Watkins, 2003). To provide good fit, the defined threshold for these indices is at least

0.90 and preferably larger (Chou and Bentler, 1995; Byrne, 2006; Schumacker and Lomax, 2010, Hair et al., 2010). This 0.90 or greater value suggests that the overall fit of the model is at least 90% better than of the independent one.

Root Mean Square Error of Approximation (RMSEA) is another especially important fit index that is almost always used and reported in CFA procedure of SEM models. It can be defined as the indicator of the standardised summary of the average covariance residuals, that explain the difference between the observed (data generated) and implied (theoretical) model covariances (Bollen, 1990; Byrne, 2006; Schumacker and Lomax, 2010). RMSEA value increases along with the discrepancy level, therefore its value should be close to '0' for a perfect model fit. There is a certain debate between various scholars as to what threshold should be used when evaluating this fit index. It is often recommended that the value of RMSEA should be less than 0.1 (Hair et al., 2010), with a preference of less than 0.08 (Bagozzi and Yi, 2012; Byrne, 2006), whereas some scholar even suggest the value of less than 0.05 (Kelloway, 1998). In this study, a threshold chosen for the RMSEA value is less than 0.08 in line with (Bagozzi and Yi, 2012; Anderson and Gerbing, 1988).

The measurement model was run in EQS 6.2 statistical package and returned the following results in terms of the fit statistics: ($\chi^2_{(449)} = 994.26$; $p = .000$; CFI = .942; NFI = .90; NNFI = .94; RMSEA = .075). The results indicated several issues within the initial model tested. First, NFI index was at the absolute minimum of acceptance. RMSEA value rounded up to 0.8, which suggested that fit is not good enough. Moreover, some of the item loadings were below the recommended 0.6 threshold. It was therefore decided to focus on the model fit improvement to achieve stronger validity and parsimony before the subsequent hypotheses testing. There are several ways of how this can be done and the next subsection provides a discussion on the model fit improved and actions implemented in this study.

5.4.3.3 Model Fit Improvement

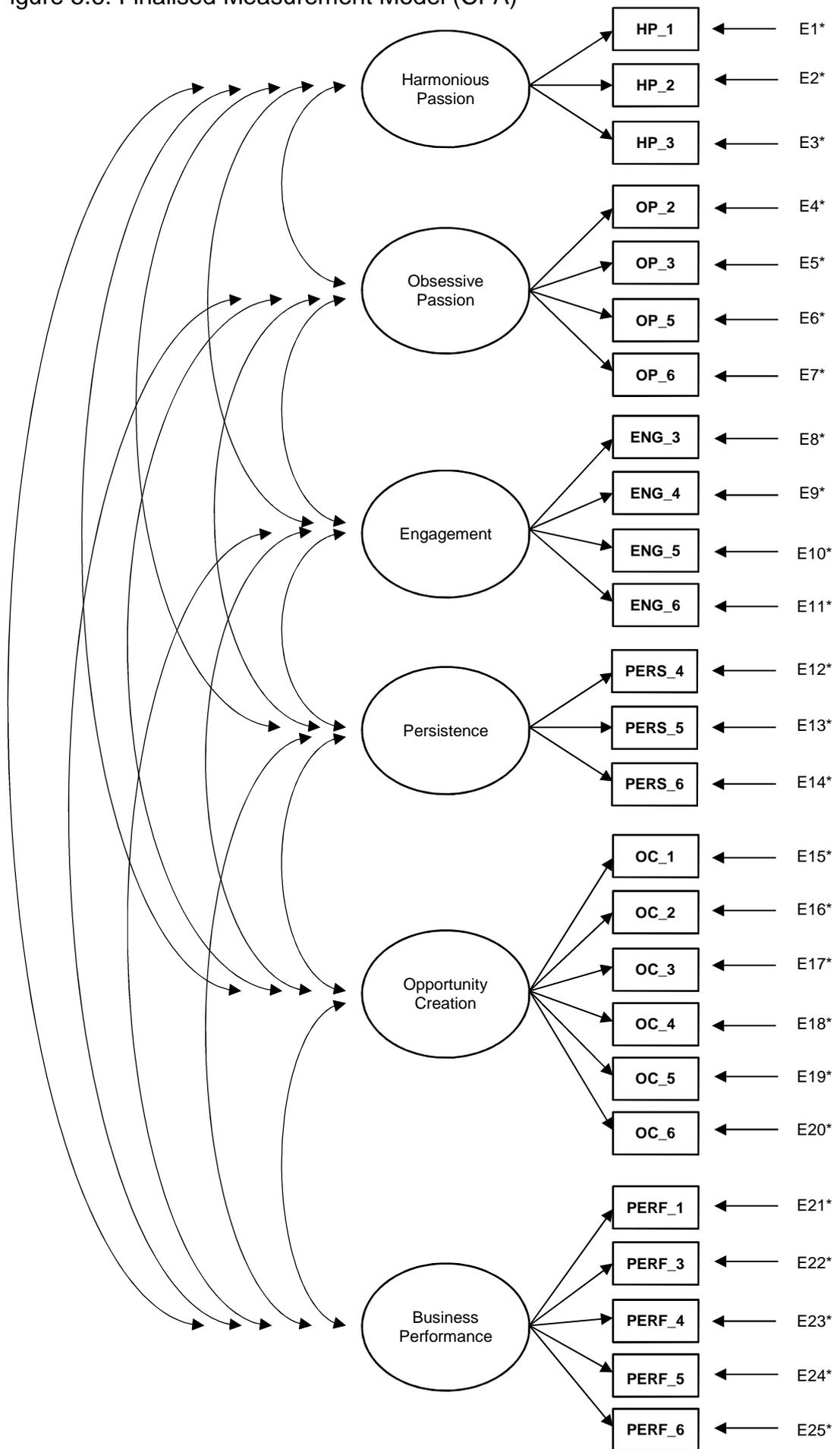
When assessing a measurement model in CFA, it is often the outcome that the theoretical model developed does not fit the observed data within the sample well enough after the first estimation (Kelloway, 1998; Hair et al., 2010; Byrne,

2006). Therefore, it is widely recommended that some modifications and respecifications of the theoretical model are implemented. For instance, a removal of poorly loading items is one of the most common approaches of model fit improvement. At the same time, it is crucial to understand that all modifications within a model have to be meaningful and theoretically justified (Byrne, 2006; Bagozzi and Yi, 2012; Kelloway, 1998). Anderson and Gerbing (1988) suggest that items with large correlated errors and low loadings on the respective factors should be considered for removal. As a result, to reach a satisfactory model fit, sometimes a series of such procedures need to be carried out following the guidelines provided by the literature (Diamantopoulos and Siguaw, 2000; Byrne, 2006; Anderson and Gerbing, 1982, 1988; Fornell and Larcker, 1981).

The respecifications that were undertaken within this study only involved the removal of several items that loaded poorly on the respective factor. As such, item HP_4 from harmonious passion factor, items OP_1 and OP_4 from the obsessive passion, items ENG_1 and ENG_2 from the engagement variable and finally, items PERS_2 and PERS_3 from the persistence construct were eliminated. Essentially, the removal only of the critical items would have helped the model fit improvement already, but given the sample size and complex nature of the study it was decided to improve fit as much as possible for achieving parsimonious results.

After the modifications CFA model was run again and suggested a good model fit: ($\chi^2_{(260)} = 553.596$; $p = .000$; $\chi^2/df = 2.1$; CFI = .952; NFI = .91; NNFI = .94; RMSEA = .072). This revised measurement model provided a better fit compared to the initial one and satisfactory enough to avoid any other respecifications. Thus, figure 5.6 demonstrates the finalised measurement model in this study, where HP_1 to HP_3 are the observed indicators of harmonious passion; OP_2, OP_3, OP_5 and OP_6 are the observed indicators of obsessive passion; ENG_3 to ENG_6 are the observed indicators of engagement; PERS_4 to PERS_6 are the observed indicators of persistence; OC_1 to OC_6 are the observed indicators of opportunity creation; and PERF_1, PERF_3 to PERF_6 are the observed indicators of business performance.

Figure 5.6: Finalised Measurement Model (CFA)



5.4.3.4 Finalised Construct Scales and Loadings

Table 5.4 provides the item loadings obtained in the CFA procedure. It also provides final construct scales used in the study.

Table 5.4: Measurement model item loadings

	Items	HP	OP	ENG	PERS	OC	PERF
HP_1	My work allows me to live various experiences	.765					
HP_2	The new things that I discover with my work allow me to appreciate it even more	.689					
HP_3	My work allows me to live memorable experiences	.647					
OP_2	The urge is so strong I can't help myself from doing my work		.855				
OP_3	I have difficulty imagining my life without my work		.762				
OP_5	I have a tough time controlling my need to do my work		.888				
OP_6	I have almost an obsessive feeling for my work		.853				
ENG_3	I feel happy when I am working intensely			.674			
ENG_4	I am immersed in my work			.819			
ENG_5	I get carried away when I am working			.688			
ENG_6	It is difficult to detach myself from my job			.760			
PERS_4	Setbacks at work don't discourage me				.638		
PERS_5	I am a hard worker				.739		
PERS_6	I am diligent in my work				.873		
OC_1	I am good at creating new ways of doing business					.792	
OC_2	I can easily come up with new product ideas					.764	
OC_3	I regularly come up with new product-market ideas and projects					.796	
OC_4	I am good at generating and implementing new ideas					.887	
OC_5	I always try to combine resources and capabilities in novel ways					.791	
OC_6	I am good at coming up with novel solutions for specific problems of the company					.818	
PERF_1	Market share						.637
PERF_3	Sales volume						.652
PERF_4	Profitability						.878
PERF_5	Cash flows						.851
PERF_6	Return on investments						.709

Goodness-of-Fit Statistics: Chi-square (χ^2) = 553.59, $p = .000$, $df = 260$; Normed Chi-square (χ^2/df) = 2.1; Normed Fit Index (NFI) = 0.91; Non-Normed Fit Index (NNFI) = 0.94; Comparative Fit Index (CFI) = 0.95; Root Mean Squared Error of Approximation (RMSEA) = 0.072.

Three items comprised the scale of harmonious passion, while four items measured the obsessive passion construct. In terms of three entrepreneurial behaviour variables, engagement was measured by four items, three items constituted the scale of persistence variable and all six initial items were kept to measure opportunity creation construct. Finally, five items were measuring business performance construct. The finalised scale was kept in the same format as after the EFA results and did not undergo any modifications.

5.4.3.5 Assessment of Average Variance Extracted

After having finalised the scales for the next stage of analysis, internal consistency diagnostics need to be performed. One of the most frequently used techniques is to assess the average variance extracted (AVE) by each variable. AVE presents the amount of variance captured by a set of scale items for a construct considering the measurement error (Netemeyer et al., 2003). Therefore, AVE was computed for all finalised constructs included in the measurement model (Bagozzi and Yi, 2012).

The AVE is computed as a function of all squared standard factor loadings divided by the number of items (Netemeyer et al., 2003; Fornell and Larcker, 1981; Hair et al. 2010; Ping Jr., 2004). Scholars recommend that AVE value of 0.50 or above is adequate to suggest convergent validity of the measures in the model (Fornell and Larcker, 1981). Sometimes values very close to the 0.50 threshold (>0.45) are accepted (Schumacker and Lomax, 2010; Hair et al., 2010). As a result, using the item loadings from the CFA (please refer to table 5.4 above) all scales were further assessed on AVE, calculated in Excel spreadsheet. Table 5.5 demonstrates that AVE values for all constructs reached the minimum recommended value of 0.5 and consequently suggested a presence of convergent validity.

Table 5.5: Average Variance Extracted

<i>Variables</i>	<i>AVE</i>
1 Harmonious passion	0.50
2 Obsessive passion	0.71
3 Engagement	0.54
4 Persistence	0.57
5 Opportunity Creation	0.65
6 Business performance	0.57

5.5 Validity of Measures

5.5.1 Scale Reliability Assessment

This stage of the item analysis serves as an important measure of checking whether all items and the scales demonstrate high level of reliability in terms of internal consistency. Consequently, this assessment helps to check the presence of the homogeneity of the items within a scale (Sharma, 1996; Netemeyer et al., 2003). As such, the main goals of this section are to show evidence that items measuring the same construct show high level of inter-item correlations, item-scale correlations and reliability coefficient. Therefore, each item and scale was assessed using Cronbach's alpha technique provided in SPSS 21.0. Along with the alpha coefficient for each scale, inter-item correlations and item-scale correlations were also calculated (Netemeyer et al., 2003; Spector, 1985). Further sections explain the process in details and indicate whether any items contributed poorly to reliability and were eliminated from the scales.

There are several different methods used for the assessment of scale reliability. Some of the most popular are the split-half reliability, test-retest reliability and coefficient alpha reliability (Bulmer, 2003; Cronbach and Shavelson, 2004; Moore, 2009). In social sciences research it is very common to use Cronbach's alpha coefficient when assessing reliability. Moreover, it is a very widely used measure of scale reliability among marketing scholars (e.g. Covin and Slevin 1989; Bagozzi and Yi, 2012). Therefore, Cronbach's alpha is used to assess the reliability of the scales in this study.

5.5.1.1 Inter-Item Correlation

The validity of a construct can be assessed by using inter-item correlation values (Pallant, 2013; Spicer, 2005). A strong inter-item correlation would suggest that items under scrutiny fit together for a common measurement purpose, which in other words means that the items are measuring the same thing (Churchill and Iacobucci, 2005; Moore, 2009). It is recommended that inter-item correlations of 0.4 and greater are required to demonstrate a valid measure of a variable, with a critical accepted value of 0.35.

In this study inter-item correlations, item-scale correlations and alpha coefficient are simultaneously calculated and assessed using SPSS 21.0 as a part of measurement validity analysis (Pallant, 2013; Hair et al. 2010). As can be seen from Appendix 4.5, all items strongly correlated with values above a recommended threshold of 0.4 across all scales. Only one item demonstrated a value of .381, which is still higher than critical value of 0.35 and therefore was kept for further analysis.

5.5.1.2 Item-Scale Correlation

Item-scale correlations are often used to establish unidimensionality and validity of scales (Churchill and Iacobucci, 2005; Bulmer, 2003; Hair et al., 2010). Those items that demonstrate low correlations with the rest of the items in the scale should be considered for removal as they potentially do not belong to the same scale. The corrected item-total correlation (available in SPSS 21.0) facilitates in examining the extent to which any item is correlated with the corresponding scale itself (Pallant, 2013). Consequently, items with low item-total correlations turn into potential candidates for elimination. A common practice among scholars is to consider item-scale correlation less than 0.5 as a signal for item removal (Tabachnick and Fidell, 2007; Cronbach and Shavelson, 2004). Furthermore, a full scale dimensionality and validity assessment was also carried out in CFA stage of this study, discussed previously in this chapter (see section 5.4.3).

Item-scale correlations in this study were sufficiently strong and well above the critical value of 0.50 (please refer to Appendix 4.5). The smallest corrected item-total correlation was 0.515 for one of three harmonious passion items. Consequently, these results provided evidence for sufficient internal consistency of the scales.

5.5.1.3 Cronbach's Alpha Coefficient

Reliability of a scale can be defined as the extent to which scale items are free from random error and demonstrate internal consistency (Cronbach and Shavelson, 2004). A common research practice among scholars is to report coefficient alpha for both existing and newly developed scales (Hair et al., 2010; Moore, 2009). Kline (1998) argues that reliability coefficient around or close to

0.90 is excellent, coefficient near 0.80 is considered to be very good, and values close to and not less than 0.70 are at adequate level. Other scholars have reached a consensus that a minimum acceptable alpha coefficient value should be 0.7 (Nunnally and Bernstein, 1994; Spicer, 2005; Pallant, 2013).

Following these guidelines, it was crucial that in this study the coefficient alpha values for all scales exceed the recommended 0.70 threshold. Table 5.6 demonstrates that all constructs appear to have acceptable level of coefficient alpha value (see Appendix 4.5 for full information). In addition to this assessment, further reliability check with a construct or composite reliability technique is provided next in this chapter (see section 5.5.3).

Table 5.6: Cronbach's Alpha Coefficient

	Constructs	α
1	Harmonious Passion	0.73
2	Obsessive Passion	0.90
3	Engagement	0.82
4	Persistence	0.79
5	Opportunity Creation	0.92
6	Performance	0.86

5.5.2 Assessment of Construct Reliability (CR)

In spite of having assessed scale reliabilities with Cronbach's Alpha Coefficient method in the previous section of this chapter, additional measure is recommended to check construct reliability. Cronbach's alpha reliability assessment is widely used in research (Nunnally and Bernstein, 1994; Cronbach and Shavelson, 2004), but can sometimes lack sufficient rigour (Gerbing and Anderson 1988). Alpha coefficient assumes that all scale items are perfectly correlated, i.e. demonstrating no measurement error (Cronbach and Shavelson, 2004). Thus, it can be concluded that coefficient alpha method somewhat underestimates reliability (Hair et al., 2009; Byrne, 2006) as in reality measures cannot be perfectly correlated.

Therefore, a technique called composite or construct reliability (CR) can be defined as a measure of the overall reliability of a collection of heterogeneous but similar items (Fornell and Larcker, 1981; Byrne, 2006; Schumacker and Lomax, 2010), which allows assessing reliability with more accuracy. Netemeyer and colleagues (2003) posit that CR “is a measure of the internal consistency of items in a scale” (p. 153). This method considers item loadings and their standard errors which can be obtained from a CFA procedure. However, to the researcher’s best knowledge, there is no statistical package that calculates composite reliability (CR). Thus, it has to be calculated manually. The formula behind CR is represented in the figure 5.7 and can be explained the following way: a squared sum of all item loadings (λ_i) within a construct are divided by the total of the squared sum of loadings and the sum of standard errors (e_i).

Figure 5.7: Formula for Calculating Composite Reliability

$$\frac{\sum(\lambda_i^2)}{\sum(\lambda_i^2) + \sum(e_i)}$$

As a result, using the item loadings from the CFA, all scales were further assessed on CR. The values of CR were calculated in Excel spreadsheet, using item loading from CFA and the above-displayed formula. Scholars recommend that an acceptable minimum of 0.60 should be achieved for CR to be considered sufficient (Bagozzi and Yi, 1988; Fornell and Larcker, 1981). CR values for all constructs were significantly higher than the threshold of 0.6 (presented in table 5.7).

Table 5.7: Composite Reliability

Variables		Composite Reliability
1	Harmonious passion	0.75
2	Obsessive passion	0.91
3	Engagement	0.83
4	Persistence	0.80
5	Opportunity creation	0.92
6	Business Performance	0.86

Consequently, the assessment of CR values for all constructs lead to the conclusion that all variables in the study demonstrated satisfactory composite reliability. In other words, it can be claimed that a convergent validity of all constructs in this study was established (Fornell and Larcker, 1981).

5.5.3 Assessment of Discriminant Validity

Discriminant validity is an important measure of ensuring the distinctness of one construct from another (Byrne, 2006; Kline, 1998). Consequently, high discriminant validity supports an assumption that a particular construct is distinct from others and captures a phenomenon different to other constructs (Hair et al., 2010). Even though this study did not use any multidimensional constructs, the discriminant validity analysis was performed.

There are several ways of assessing discriminant validity and this study employs all recommended techniques for its evaluation. First option of assessing discriminant validity is to look at the correlations among constructs, which should remain at a moderate level – preferably less than 0.6, with a maximum of 0.7 (Anderson and Gerbing, 1988). Table 5.8 demonstrates inter-construct correlations. None of the correlations was higher than 0.7, which is the recommended maximum in the literature (Hair et al., 2010; Spicer, 2005). The largest inter-construct correlation was the one between obsessive passion and engagement ($r = 0.66$). However, these results could be justifiable since obsessive passion construct to a certain extent presupposes a high level of engagement in activity (Vallerand et al., 2003).

Table 5.8: Inter-Construct Correlations and AVEs

<i>Variables</i>	<i>AVE</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1 Harmonious passion	0.50	-	0.09	0.17	0.08	0.10	0.04
2 Obsessive passion	0.71	0.30	-	0.44	0.16	0.13	0.08
3 Engagement	0.54	0.41	0.66	-	0.22	0.16	0.11
4 Persistence	0.57	0.28	0.40	0.47	-	0.23	0.10
5 Opportunity Creation	0.65	0.31	0.36	0.40	0.48	-	0.12
6 Business performance	0.57	0.19	0.29	0.33	0.31	0.34	-

Note: *Inter-construct correlation coefficients are reported below the diagonal in bold text
The squared correlations between the constructs are reported above the diagonal*

A second way of assessing discriminant validity, while at the same time addressing any problematically high correlations, is to compare the AVEs for each construct (obtained during the CFA procedure – see section 5.4.3.5) with the squared correlations (i.e. the shared variances) between each pair of constructs (Hair et al. 2010; Byrne, 2006). Following the guidelines from the literature, it is necessary the AVE value for each variable is greater than the squared correlations for a pair of constructs (Anderson and Gerbing, 1988; Byrne, 2006; Hair et al., 2010). Regarding the issue of high correlation coefficient between obsessive passion and engagement, it is evident from table 5.8 that the AVE estimate for obsessive passion and engagement is 0.71 and 0.54 respectively, whereas a squared correlation value between them is 0.44. This comparison, therefore, demonstrates discriminant validity for these constructs. Ultimately, looking at the smallest AVE of 0.50 and the largest squared correlation between a pair of constructs of 0.44, it was concluded that each construct had satisfactory discriminant validity.

Finally, a third technique of assessing discriminant validity looks at the chi-square test differences between two nested models (Anderson and Gerbing, 1988). The procedure is carried out the following way; in the first model, the correlations between any two sets of constructs are constrained, that is fixed to 1 (Hair et al., 2010; Kline, 1998; Byrne, 2006). This assumes that the items, of the two constructs within the analysis, could be put together reflecting one construct. This step posits that fixing the correlations between any two sets of constructs to 1 should decrease model fit, meaning that chi-square test result will get bigger. In the second model, the parameter is freely estimated (Schumacker and Lomax, 2010). Thus, the outcome of the chi-square difference test is that the constrained model should have bigger chi-square value and degrees of freedom compared to the unconstrained model. The ultimate rule is that the freely-estimated model should have a considerably lower chi-square result than the constrained one (Bagozzi et al., 1991).

Having completed chi-square difference test between each pair of constructs, results revealed that freely estimated models in all cases returned much lower chi-square result compared to constrained models. The minimum difference observed was 80.1 which suggested a presence of discriminant validity among

all study constructs. As a result, following a rigorous approach of multi-method assessment, results revealed a strong presence of discriminant validity.

5.6 Descriptive Analysis of the Scales

Final section of this chapter provides a descriptive analysis of each finalised scale. This analysis is carried out to ensure that each scale is fit and appropriate for the subsequent hypotheses testing stage. Some scholars have argued that the structural equation modelling technique (an analytical tool used in this study and explained in the next chapter) with maximum likelihood approach can produce rigorous models and robust results when there is no presence of extremes in skewness and kurtosis of the data (Sharma, 1996; Hair et al, 2010; Schumacker and Lomax, 2010). At the same time, the use of iteratively reweighted least squares solution in the elliptical distribution theory (discussed more in the next chapter) assumes that the multivariate distribution of the observed data is symmetric, but permits univariate kurtosis that deviates from the kurtosis of a normal distribution (Hair et al., 2010; Byrne, 2006). As such, both ML and ERLS approaches perform good, but ERLS performs better if the data is non-normal.

The purpose of this analysis is to reject the assumption that the data distribution of the measures differed significantly from normal distribution. This can be assessed using Kogomorov-Smirnoff (K-S) test available in SPSS 21.0. The non-significant K-S test result would mean that the distribution of the data was very close to normal (Hair et al., 2010). However, it has been argued that the K-S test can be too sensitive to any small deviation from normality in the data (Sharma, 1996), working better with very large samples and therefore, other analytical methods should be considered.

It is often recommended that the Z-values of the skewness and kurtosis of the scale are computed (Sharma, 1996; Hair et al., 2010) to check the normality of the distribution. Normal distribution of the scales is present if their Z-values are less than the critical value of 1.96 for an alpha level of 0.05 (Sharma, 1996). Other scholars (Bulmer, 2003; Moore, 2009) suggest that absolute skewness value less than -1 or greater than +1 represents data that is highly skewed,

value within -1 to -0.5 and within +0.5 to +1 signifies that data is moderately skewed and finally if skewness is between -0.5 and +0.5 data is approximately symmetric. In relation to kurtosis, absolute value within -3 to 3 is considered as acceptable deviation and the data distribution being fairly normal, because for the case of normal distribution kurtosis value is equal to 3 (Bulmer, 2003).

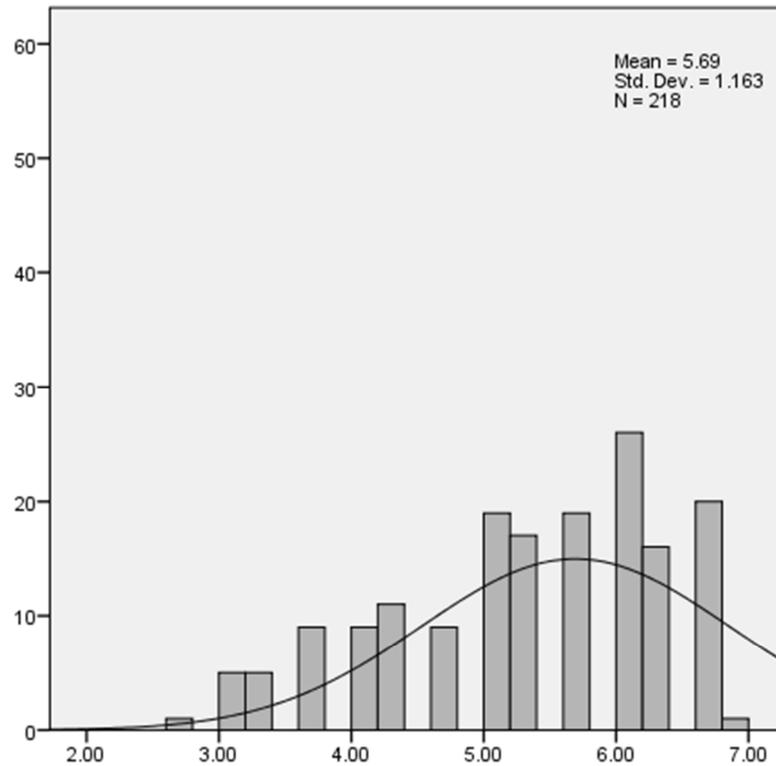
On the basis of the above discussions, the calculations of the scores for each scale in relation to skewness, kurtosis and descriptive statistics such as mean, standard deviation, minimum and maximum were completed using SPSS 21.0. Results of the descriptive analyses are provided in figures 5.8 to 5.13 and revealed that none of the scale demonstrated significant deviation from normality or any other statistical issues. Thus, all the scales are found fit for use in hypotheses testing with structural equation modelling at the next stage.

5.6.1 Harmonious Passion

Figure 5.8 demonstrates the histogram for the final harmonious passion scale. The scale's mean value is 5.69, which is reasonably higher than the neutral mean of 3.5, with a standard deviation of 1.16. The response ranged from a minimum of 2.67 to a maximum of 7. It is evident from figure 5.9 that the distribution was moderately skewed to the left (skewness value of -0.63) and 'flatter' in terms of kurtosis value, but appeared to be fairly normally distributed.

Even though a K-S test returned a significant result implying that further insights were needed, value of Kurtosis was -1.77, which is lower than the critical value of 1.96 and within the suggested -3 to +3 (Bulmer, 2003). This therefore provided support that the variable was normally distributed (Sharma, 1996; Hair et al., 2010). Consequently, the scale was retained in its present form.

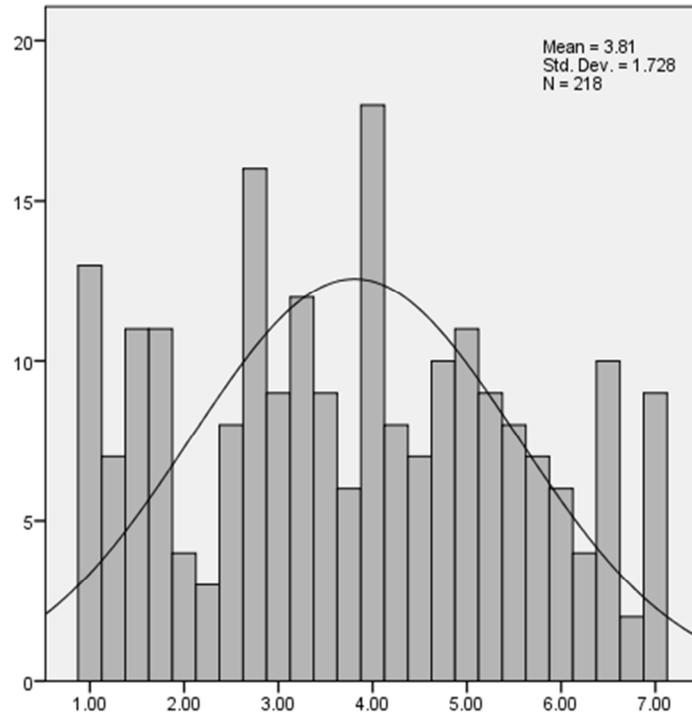
Figure 5.8: Harmonious Passion Frequency Distribution



5.6.2 Obsessive Passion

Figure 5.9 presents the histogram for the final obsessive passion scale. The mean value for the scale was 3.81 and its standard deviation was 1.73. The response ranged from a minimum of 1 to a maximum of 7. As can be seen from figure 5.9, the distribution of the data is quite symmetrical with the skewness value of 0.08, which is very close to 0 and suggests that data is almost symmetrical. As for kurtosis value of -1, it can be assumed that the data did not demonstrate any serious deviations from normality and the finalised scale was found suitable enough to proceed with the analysis.

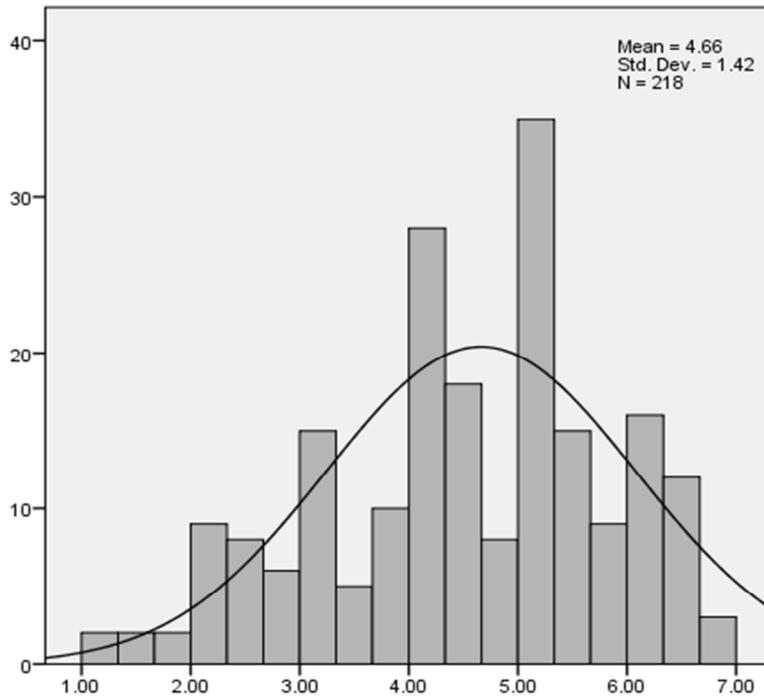
Figure 5.9: Obsessive Passion Frequency Distribution



5.6.3 Engagement

Figure 5.10 displays the frequency distribution of engagement variable. Observed values ranged from 1 to 7 with a mean of 4.66 (standard deviation = 1.42). A significant K-S test result required more insights on the normality of distribution. The skewness value of -0.30 indicated that data was approximately symmetric only with a little skewness to the left, whereas kurtosis value of -0.51 similarly suggested that data is only slightly 'flatter' compared to the perfectly normal distribution. Therefore, the engagement measure displays sufficient robustness and as such is ready to be used for model testing.

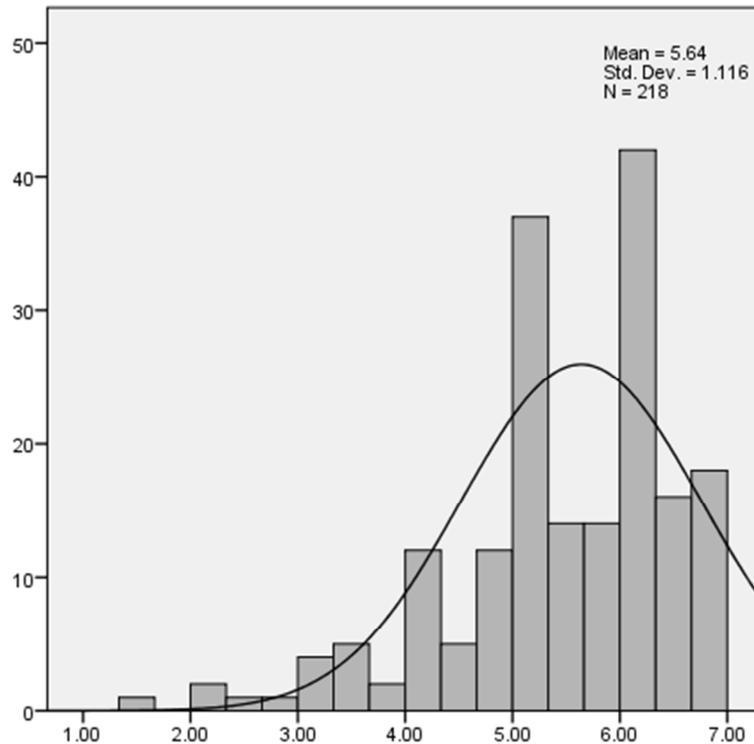
Figure 5.10: Engagement Frequency distribution



5.6.4 Persistence

Figure 5.11 displays the frequency distribution of persistence construct. Observed values ranged from 1.5 to 7 with a mean of 5.64 and standard deviation of 1.12. The mean value was considerably higher than the neutral 3.5 mean of the scale. However, even though a K-S test returned a significant result, additional insights on the normality of the distribution revealed that there are no serious deviations. Skewness value of -0.93 indicated that the data was moderately skewed to the left and kurtosis value of 0.85 suggested a slightly 'peaked' distribution of the data, thus both not causing any appropriateness or suitability issues for further analytical procedures. Following the results obtained, it was deemed that the persistence scale is sufficiently robust for subsequent model testing and was retained in its present form.

Figure 5.11: Persistence Frequency Distribution

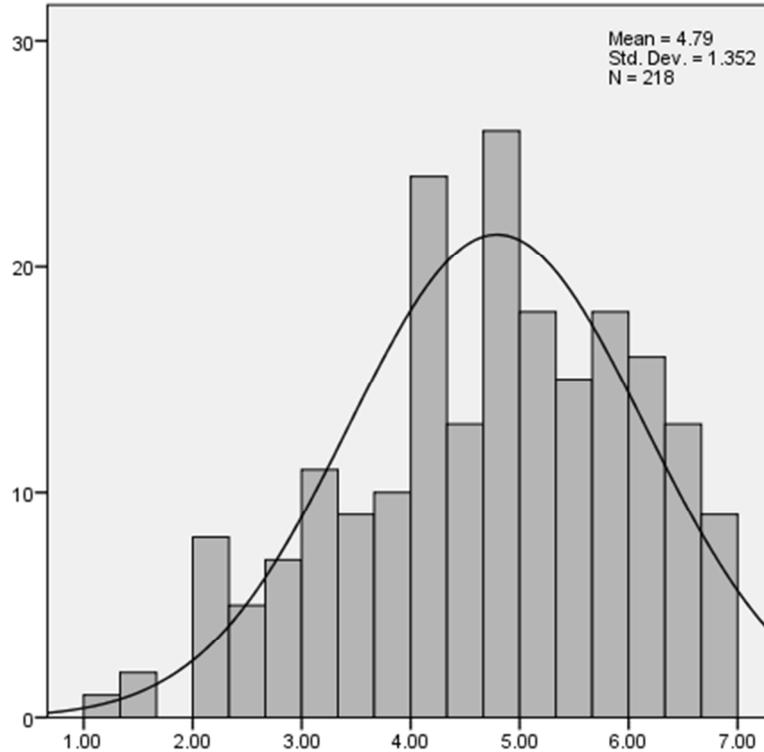


5.6.5 Opportunity Creation

Figure 5.12 demonstrates the histogram for the final opportunity creation scale, which notably is the only scale that was kept in its original form. Since this is a new construct and required a scale development for measurement purposes, the process of the scale generation and validation is discussed in the previous chapter in the section 4.7.4.

The mean value for the scale was 4.79 and its standard deviation was 1.35. The response ranged from a minimum of 1.17 to a maximum of 7. As can be seen from figure 5.12, the data is slightly skewed to the left, but quite symmetrical with the skewness value of -0.29. A K-S test was carried out and it returned a non-significant result suggesting no significant deviation from normality. As for kurtosis value of -0.50, it can be concluded that the distribution was a little 'flatter' compared to normal. Accordingly, the distribution is considered to be within an acceptable range as the data did not demonstrate any serious deviations from normality, and as such the opportunity creation scale in its present form appears suitable for use at the next stage of analysis.

Figure 5.12: Opportunity Creation Frequency Distribution

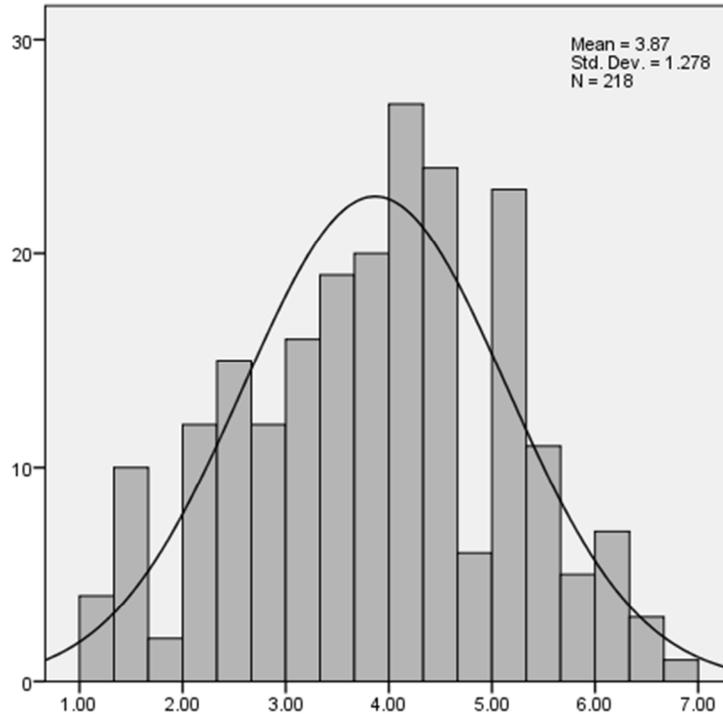


5.6.6 Business Performance

Figure 5.13 provides the histogram for the final business performance scale. It consists of the items sought from several dimensions of performance measurement, such as financial and customer/market performance, which is discussed in detail in the previous chapter, section 4.7.5.

Observed values ranged from 1 to 7 with a mean value of 3.87 and standard deviation of 1.28. The mean value was very close to the neutral 3.5 mean of the scale. As evident from the figure 5.18, the distribution of the data is quite symmetrical with the skewness value of -0.09, which is very close to 0 and suggests that data is almost symmetrical with a slight skewness to the left. As for kurtosis value of -0.51, it can be assumed that the distribution of the data is a little bit 'flatter' than perfectly normal. A K-S test was performed and it returned a non-significant result suggesting no significant deviation from normality. In other words, the results obtained in this analysis did not demonstrate any serious deviations from normality and the finalised scale was found robust enough to proceed with the further analysis.

Figure 5.13: Business Performance Frequency Distribution



5.7 Chapter Summary

The aim of this chapter was to provide an insight on the measurement development process, as well as purification of those measures applying various analytical tools and techniques. This process included construct measurement development and purification for harmonious passion, obsessive passion, engagement, persistence, opportunity creation and business performance scales. In congruence with the recommended procedures, all measurement items and scales were assessed for their reliability and validity, both discriminant and convergent. Unidimensionality and overall fit of the scales were established using EFA and CFA procedures. While all measures have been assessed for their validity, results demonstrated no problems in relation to that. Finally, a descriptive analysis was performed for all scales. The results indicated no serious issues regarding the distribution of the data in the sample. Therefore, all the scales were evaluated to be suitable and sufficiently robust for model testing, which is discussed in the next chapter.

Chapter 6 : Hypotheses Testing and Results

6.1 Introduction

As mentioned in the previous chapter, this study chose to apply the structural equation modelling (SEM) approach to the data analysis. This particular approach for testing the relationships among the constructs in the conceptual model was selected for several reasons (Bagozzi and Yi, 2012). First, it offers a great rigour of analysis by applying an integrative function – covering various leading methods available. Second, it helps to achieve clarity and precision on measurement issues and specification of hypotheses. Third, it considers reliability of measures and works well both under the notion of discovery and confirmation. Finally, it is useful especially for cross-sectional or longitudinal surveys, using the simultaneous multi-measure approach and providing insights on originally not considered relationships. As discussed in the previous chapter, some of the EQS techniques employed are confirmatory factor analysis (henceforth CFA) to develop and refine a measurement model, and a structural model development and testing, using the elliptical distribution theory (Byrne, 2006).

Some traditional multivariate analysis techniques available at SPSS software, such as linear and logistic regression, ANOVA and many others are also useful tests for examining direct relationships between variables (Hair et al., 2010). However, it is important to bear in mind that real life situation may not be so 'linear' and thus, relationships between various variables after often more complex, forming somewhat a web of links and associations (Tabachnick and Fidell, 2007; Hair et al., 2010). Moreover, often it is highly recommended to model and test the relationships between the constructs simultaneously, as it provides a more accurate overview of the associations within a conceptual model (Anderson and Gerbing, 1988). SEM techniques enable the assessment of various theoretical models, especially those models that consist of complex relationships (Anderson and Gerbing, 1988). As such, it offers comprehensive means for theory testing and development, which fits the objectives of this research.

In assessing hypothesised relationships of the models in SEM, it is necessary to examine the fit of a conceptual model used compared to an observed model in a similar manner to the CFA procedure (described in the previous chapter), which forms a basis for the second of the two-step approach recommended by Anderson and Gerbing (1988). Therefore, this chapter first focuses on the overall fit of the structural model and then on the significance of the path coefficients and their related t-values (Hair et al., 2010; Byrne, 2006).

As already outlined in the chapter five, the elliptical distribution theory iteratively reweighted least squares solution estimation method in the EQS 6.2 programme is used to test the structural model (Bentler, 1995). In addition to the advantages of this method, which are discussed in the previous chapter, it is also an acceptable estimation approach often used by marketing and entrepreneurship scholars (e.g. Stump et al., 2002; Zou and Cavusgil, 2002; Townsend et al., 2004; Griffith et al., 2010). It was concluded in the previous chapter that after all the data validity and reliability checks, along with descriptive statistics of the constructs, the data was found to be suitable for the structural model testing. However, before moving on to the model testing, it is crucial to consider several statistical assumptions that underlie the SEM technique.

6.2 Structural Equations Modelling for Hypotheses Testing

6.2.1 Key Statistical Assumptions of SEM

The literature suggests that there are five key assumptions that need to be satisfied when using SEM for model testing, in order to achieve valid results from structural equations analysis (Hair et al., 2010; Anderson and Gerbing, 1988; Tabachnick and Fidell, 2007; Byrne, 2006; Hoyle and Panter, 1995). These assumptions are normality, continuity, linearity, homoscedasticity of the data and independence of observations. It is crucial to assess whether these assumptions are satisfied within a given dataset, since significant violations of them can undermine the validity of any results of the structural model (Hair et al., 2010).

A data sample can contain two kinds of non-normal distribution that is skewness and kurtosis (Hair et al., 2010). As discussed in the previous chapter, a skewed distribution can be either positive or negative, where positively skewed distribution will have the majority of scores concentrated below the midpoint, and negatively skewed one will have the higher concentration of scores above the midpoint of the scale. In relation to kurtosis, a distribution can be leptokurtic, when lots of the scores are located at the tails and too few at the middle or platykurtic, where too many scores are concentrated at the middle and too few at the tails. These well-known non-normality factors can undermine statistical results of the analysis and it is usually advised to correct them (Churchill and Iacobucci, 2005; Byrne, 2006). It was investigated in the section 5.6 of chapter five, whether means, standard deviations, and histogram distributions for all variables were within an acceptable range and the results demonstrated that there was no need for any corrections. Therefore, normality assumption was met.

The second and third assumptions are related to linearity and homoscedasticity. Whether the data meets linearity and homoscedasticity assumptions can be checked in IBM SPSS software, by completing and examining bivariate scatterplots or scatterplot matrices (Hair et al., 2010; Byrne, 2006). Thus, data in this study has undergone linearity and homoscedasticity screening in SPSS 21 software, inspecting scatterplots. This procedure revealed that all variables used in the study had no serious violations of linearity and all demonstrated homoscedasticity presence. Moreover, it is argued that SEM analytical approaches can account for minor departures from normality and linearity of the data (Chou and Bentler, 1995; Hair et al., 2010; Byrne, 2006). Details of the scatterplots for linearity and homoscedasticity analysis are provided in Appendix 4.6, demonstrating that these assumptions were met.

The next assumption relates to the observed data being continuous. The survey in this study contained 7-point Likert scales to collect information from respondents in relation to the constructs of this study. Therefore, it is possible to conclude that indeed a continuous variable underpins each measurement scale (see sections 4.7.1 - 4.7.5 in chapter 4 for all construct measurement scales).

Finally, the fifth assumption of SEM considers the independence of observations. Given the fact that an online and mail survey was used for data collection purposes in this study, it is logical to conclude that this approach allowed answering questionnaire only once (with special settings for the online version of the survey), as well as without any inter-communication between the respondents. Moreover, a sample used in this study was a random one and thus, an assumption of random respondents composition in the dataset was has been thoughtfully addressed.

Having met all key assumptions for conducting analysis using SEM, it is now possible to proceed with model testing and evaluation, in order to investigate the relationships proposed in chapter three. The structural model overview and main effects evaluation procedure is explained in the next sections of this chapter.

6.2.2 Multicollinearity Assessment

Multicollinearity can often be a serious issue in multivariate analysis (Hair et al., 2010; Hu and Bentler, 1995). Multicollinearity refers to a situation where there are too high correlations between independent variables (Kline, 1998; Byrne, 2006). Multicollinearity is likely to affect the validity of study results, because when two or more independent variables are highly correlated, it becomes quite difficult to separate the effects that each of those variables have on the dependent one (Tabachnick and Fidell, 2007).

To ensure that multicollinearity does not pose a problem to the study results, researchers should inspect the correlation matrix (looking at Pearson correlations within a two-tailed test). Correlations between any pair of constructs within a study should not be higher than 0.80 (Hair et al., 2010; Byrne, 2006). In addition to that, in line with Fornell and Larcker (1981) the AVEs of each correlated constructs should be larger than the squared correlations between them. If Fornell and Larcker's test of discriminant validity (please see chapter five section 5.5.3 for detailed explanation) is satisfied then multicollinearity is very unlikely to be present.

As demonstrated in table 5.8 (chapter five) correlations among the constructs did not appear to show any multicollinearity threats. Furthermore, the highest correlation was between obsessive passion and engagement (0.66), while the next highest was between opportunity creation and persistence (0.48). Therefore, correlations between the constructs did not reveal any multicollinearity issues. Similarly, AVE for each construct was greater than their respective squared correlations, which means that multicollinearity is not present in this study.

6.2.3 Test Power

Test power refers to the probability of rejecting the null hypothesis when the alternate hypothesis is true (Sharma, 1996). It is an important aspect to consider during the statistical analysis, because it should be high enough to provide confidence when interpreting results (Hair et al., 2010).

Test power is directly associated with sample size (Kline, 1998). It is suggested that a minimum sample size of 200 observations is recommended for appropriate parameter estimation and a valid analysis in SEM (Bagozzi and Yi, 1988; Hair et al., 2010). To achieve high test power, it is also necessary to establish the minimum sample size to parameters ratio, to ensure the rigorous analysis is in place. It is often recommended that the five-to-one ratio of sample size to parameters is an acceptable criterion (Hair et al., 2010; Tacbanik and Fidell, 2007). However, some scholars argue that a ratio of even two-to-one can be sufficient for smaller samples and would still provide acceptable model fit estimates (Bagozzi and Yi, 2012). Based on these recommendations, it was considered appropriate to rely on the 218 sample for model testing in SEM using the ERLS estimation.

6.2.4 Common Method Variance

As discussed in chapter four, responses on the independent and dependent variables were sought from the same informants. This inevitably raises the potential issue of common method variance (CMV), which can appear when using self-reported surveys as a data collection method (Spector and Brannick, 2010). Podsakoff and colleagues (2003) define CMV as a “variance that is attributable to the measurement method rather than to the constructs the

measures represent” (p. 879). This means that a presence of CMV can cause false internal consistency since it is related to the scale items, response format and research context. Therefore, several techniques have been applied ex ante (see section 4.8.5 in chapter four).

Previously it was a common CMV approach to apply a one-factor test when conducting EFA. Recently, however, it has been argued that completing the single-factor test at the CFA stage can bring greater parsimony (Podsakoff et al., 2003). As such, to ensure that CMV did not pose any threats to the study results, Harman’s single-factor approach was applied via CFA (Podsakoff et al., 2003). This method is used within SEM analysis, and is based on the notion that the relationships between two or more variables are present due to CMV (or are false) in case of a single factor being able to explain all the common variances shared by the whole set of observed variables and items. As such, an alternative (constrained) model is typically evaluated and compared with the CFA (unconstrained). The presence of CMV bias can be confirmed if the unconstrained model does not significantly fit the data better than the constrained one.

Therefore, CMV was addressed by running the alternative model as explained before. Table 6.1 displays the results of the CMV analysis, where the two models are compared in terms of their fit. It is evident from table 7.1 that the unconstrained model (CFA) performed significantly better than the constrained model. Consequently, this indicated that a method factor did not account for a large proportion of common variance in the data, permitting to conclude that CMV did not appear to be an issue in this study.

Table 6.1: The Comparison of Unconstrained versus Constrained model

Models	χ^2 (df)	RMSEA	CFI	NFI	NNFI
Measurement model (CFA) – unconstrained	553.596 (260)	0.072	0.952	0.910	0.940
CMV – constrained	2347.819 (275)	0.186	0.660	0.633	0.629

6.3 Structural Model Results

6.3.1 Analysis Overview

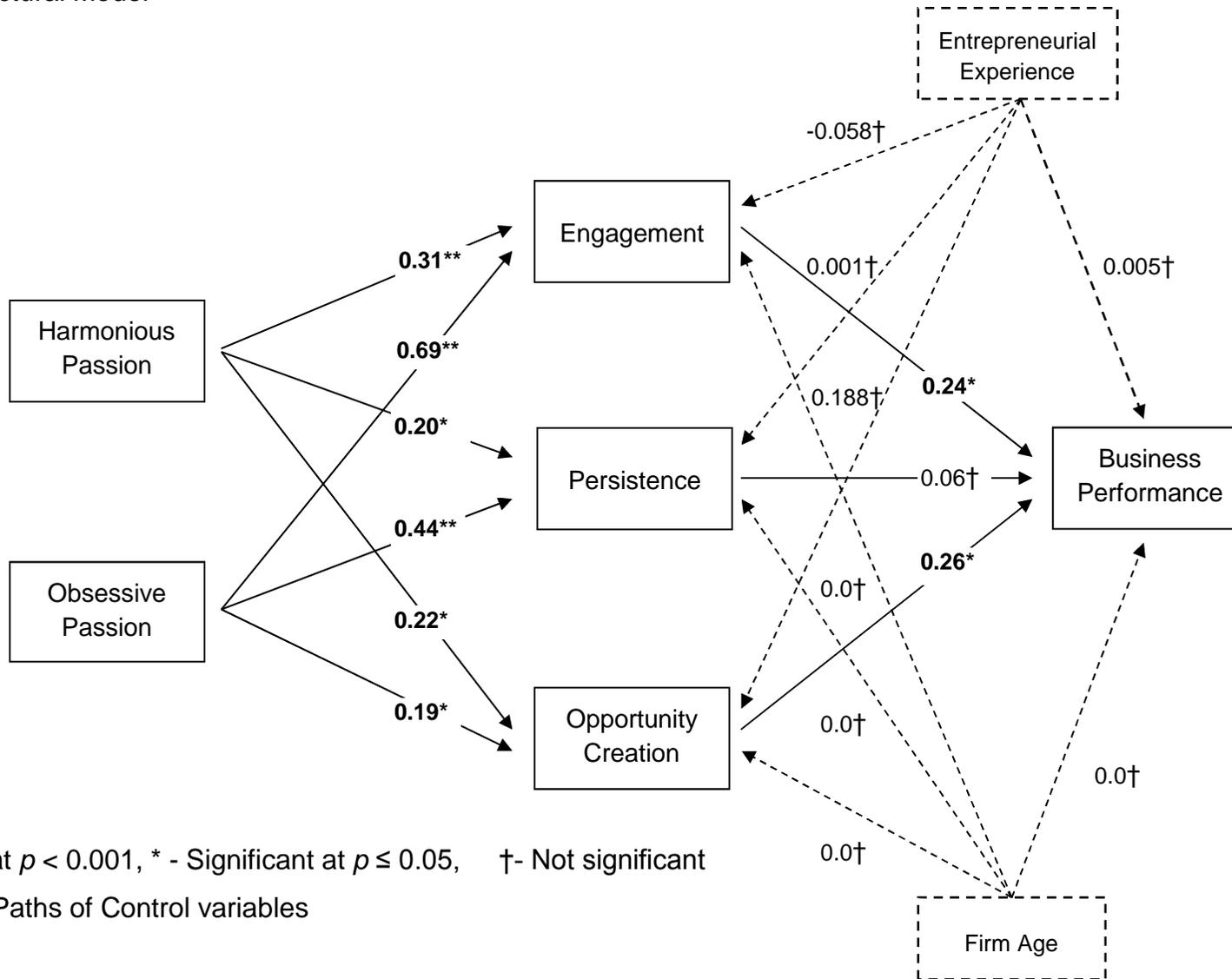
The results of the key statistical assumptions assessment, underlying the SEM method, as well as multicollinearity and CMV procedures, have permitted to proceed with the formal hypotheses testing in a structural model. First of all, hypotheses of the main effects were tested in a structural model. Then, the mediating effects of entrepreneurial behaviours were tested with Baron and Kenny's recommended technique (1986).

In the following sections, the results of the structural model are reported and the fit indices evaluated. Then, individual hypotheses are assessed on the basis of the model results. Finally, the mediation tests were conducted, in order to see whether particular entrepreneurial behaviours, namely engagement, persistence and opportunity creation mediate the relationship between passion and business performance.

6.3.2 Structural Model Assessment

The structural model was run to assess the hypothesised associations of the conceptual research framework and provided appropriate goodness-of-fit statistics: ($\chi^2_{(297)} = 587.063$; $p = .000$; CFI = 0.95; NFI = 0.91; NNFI = 0.95; RMSEA = 0.067). The evaluation of these indices suggested no further need for model modification or fit improvement. Both control variables – entrepreneurial experience and firm age (previously having undergone a natural log function to remove unnecessary skewness of the distribution where needed) have also been tested in the structural model. In line with literature recommendations (Byrne, 2006), both control variables were correlated with independent variables to provide clearer model specifications. This procedure ensured that there is no inter-correlatedness bias in the model (Field, 2005). Figure 6.1 demonstrates the results of the structural model; for convenience, these are also summarised in table 6.2.

Figure 6.1: Structural Model



Note:

** - Significant at $p < 0.001$, * - Significant at $p \leq 0.05$, † - Not significant

-----> Paths of Control variables

Table 6.2: Results of the Structural Model

Hypothesis	Hypothesised association	β	t-value	p
H1a	Harmonious passion → Engagement	0.31	3.80**	0.0002
H1b	Obsessive passion → Engagement	0.69	6.60**	0.0001
H2a	Harmonious passion → Persistence	0.20	2.32*	0.021
H2b	Obsessive passion → Persistence	0.44	4.86**	0.0001
H3a	Harmonious passion → Opportunity creation	0.22	2.85*	0.005
H3b	Obsessive passion → Opportunity creation	0.19	2.36*	0.019
H4	Engagement → Business performance	0.24	1.95*	0.052
H5	Persistence → Business performance	0.06	0.47	0.639
H6	Opportunity creation → Business performance	0.26	2.70*	0.007
Effects of Controls (Entrepreneurial experience)				
	Entrepreneurial experience → Engagement	-0.058	-0.69	0.49
	Entrepreneurial experience → Persistence	0.001	0.01	0.99
	Entrepreneurial experience → Opportunity creation	-0.188	-0.82	0.41
	Entrepreneurial experience → Business performance	-0.005	-0.05	0.96
Effects of Controls (Firm age)				
	Firm age → Engagement	0.000	-0.04	0.97
	Firm age → Persistence	0.000	0.33	0.74
	Firm age → Opportunity creation	0.000	0.15	0.88
	Firm age → Business performance	0.000	0.17	0.87

Notes: Goodness-of-Fit Statistics: Chi-square (χ^2) = 587.063, $p = .000$, $df = 297$; Normed Chi-square (χ^2/df) = 1.98; Normed Fit Index (NFI) = 0.91; Non-Normed Fit Index (NNFI) = 0.95; Comparative Fit Index (CFI) = 0.95; Root Mean Squared Error of Approximation (RMSEA) = 0.067.

** - Significant at $p < 0.001$, * - Significant at $p \leq 0.05$, † - Not significant

-----> Paths of Control variables

6.3.3 Analysis of the Hypothesised Structural Relationships

6.3.3.1 Passion and Engagement

The hypothesis H1a argued that harmonious entrepreneurial passion would be positively related to engagement. The test for this hypothesis confirmed a significant relationship ($\beta = 0.31$; $t = 3.80$; $p < 0.001$). Thus, H1a of the study was supported. Therefore, this study showed that a higher level of harmonious entrepreneurial passion would lead to a greater level of engagement.

The hypothesis H1b proposed that obsessive entrepreneurial passion will be positively related to engagement. Similarly to harmonious passion, the test for this hypothesis along with the presence of both control variables yielded a significant result ($\beta = 0.69$; $t = 6.60$; $p < 0.001$). Thus, H1b of the study was supported. Consequently, a higher level of obsessive entrepreneurial passion is associated with a higher level of engagement.

These results support the view of Vallerand and colleagues (2003) that both harmonious and obsessive passion can lead to high levels of engagement in relation to the activity one is passionate about. The results also provide support to the theoretical propositions of Cardon and colleagues (2009) that entrepreneurial passion is going to lead to the engagement in entrepreneurial activities.

6.3.3.2 Passion and Persistence

The hypothesis H2a argued that harmonious entrepreneurial passion will be positively associated with persistence. The structural model demonstrates a significant result for this hypothesis ($\beta = 0.20$; $t = 2.32$; $p < 0.05$). Accordingly, H2a of the study was supported, meaning that higher level of harmonious passion for entrepreneurial activities is likely to lead to higher levels of persistence in them.

The hypothesis H2b argued that obsessive entrepreneurial passion will be positively related to persistence. The test for this hypothesis in a structural model returned a significant result ($\beta = 0.44$; $t = 4.86$; $p < 0.001$). Therefore, H2b of the study was supported. Consequently, the more entrepreneurs

experience obsessive passion the more likely they are to be persistent in entrepreneurial activities.

These results support the conceptual propositions of Cardon and colleagues (2009) that entrepreneurial passion will lead to high level of persistence. Similarly, Vallerand and colleagues (2003) mentioned in their conceptualisation paper that both harmonious passion and obsessive passion are likely to be related to higher levels of persistence.

6.3.3.3 Passion and Opportunity Creation

The hypothesis H3a of the study proposed that harmonious entrepreneurial passion is positively related to opportunity creation. The test for this hypothesis was run in the structural model and returned a significant result ($\beta = 0.22$; $t = 2.85$; $p < 0.05$). Thus, hypothesis H3a of this study was supported. This means that with higher level of harmonious passion entrepreneurs are likely to experience higher levels of opportunity creation.

The hypothesis H3b of the study argued that obsessive entrepreneurial passion is positively associated with opportunity creation. The test for this hypothesis returned a significant result ($\beta = 0.19$; $t = 2.36$; $p < 0.05$). Consequently, hypothesis H3b of the study was supported. Therefore, entrepreneurs with higher level of obsessive passion are likely to have a higher level of opportunity creation behaviour. However, this hypothesis is only partially supported, due to the fact that the effect of obsessive passion on opportunity creation was not stronger than the effect of the harmonious one.

These results are in line with the conceptual proposition of Cardon and colleagues (2009) with regard to the entrepreneurial passion leading to creative problem solving, which is somewhat a similar construct to opportunity creation (please see literature review discussion on this construct in chapter two). At the same time, entrepreneurs have long been associated with being able to recognise and use opportunities (Dutta and Crossan, 2005; Eckhardt and Shane, 2003; Short et al., 2010) and this effect is evident when entrepreneurial passion is present.

6.3.3.4 Engagement and Business Performance

The hypothesis H4 in this study argued that engagement will be positively related to business performance. The test for this hypothesis within the structural model returned a significant result ($\beta = 0.24$; $t = 1.95$; $p = 0.05$). Thus, hypothesis H4 of the study was supported. As such, entrepreneurs who are more engaged in entrepreneurial activities are likely to drive greater business performance levels.

Prior findings from non-entrepreneurship research in a context of employees' engagement to their tasks demonstrated that job involvement and engagement drive better performance, which is supported in the current study (Ho et al., 2011). The results of this study support the notion that engagement – an investment of physical, cognitive and emotional energy into entrepreneurial activities contributes towards the achievement of higher levels of overall business performance (Schindehutte et al., 2006). To a certain extent performance peaks that entrepreneurs experience can be explained by their personal engagement or absorption in entrepreneurial tasks.

6.3.3.5 Persistence and Business Performance

The hypothesis H5 in this study proposed that persistence will be positively related to business performance. The structural model yielded insignificant result for this hypothesis ($\beta = 0.06$; $t = 0.47$; $p > 0.05$). Thus, hypothesis H5 of the study was rejected. Therefore, no matter how persistent entrepreneurs may be in entrepreneurial activities, this will not affect business performance.

Persistence is considered as an important behaviour that facilitates the successful establishment and operation of ventures, as well as the development and growth of the existing ones (Bird, 1989; Chandler and Jansen, 1992). Moreover, it helps entrepreneurs to overcome extremely adverse situations in relation to entrepreneurial activities (Alvarez and Busenitz, 2001). At the same time, this continuous rigid effort despite failures, obstacles or threats (Gimeno et al., 1997) may also lead to dysfunctional outcomes affecting business performance (Vallerand et al., 2003). On the contrary to the above-mentioned positive and negative effects of persistence, in this study persistence does not affect business performance at all, meaning that no matter how persistent

entrepreneurs may be, overall business performance will not be affected. This result could be explained by the presence of two other entrepreneurial behaviours, namely engagement and opportunity creation. The next chapter will provide more discussion on this interesting and unexpected outcome.

6.3.3.6 Opportunity Creation and Business Performance

The hypothesis H6 of the study argued that opportunity creation will be positively associated with business performance. The test for this hypothesis within the structural model yielded a significant result ($\beta = 0.26$; $t = 2.70$; $p < 0.05$). Therefore, hypothesis H6 of the study was supported. The more entrepreneurs are involved in opportunity creation behaviour, the more likely this will lead to better business performance.

According to Eckhardt and Shane (2003), entrepreneurial opportunities are situations when new products, raw materials, markets and organising methods can be introduced through the formation of new means and ends. As such, there is a high possibility that at least some of those new goods, services and market operations will increase company performance. The results of this study support this notion in a sense that the more entrepreneurs create opportunities, the more likely their business performance will improve.

6.3.3.7 Control Variables

None of the control variables applied in the model affected the findings concerning the hypotheses, demonstrating insignificant results in relation to all dependent variables. A varying degree of entrepreneurial experience did not have any effect on entrepreneurial behaviours and business performance. Similarly, firm age or a number of operating years of a firm under investigation did not yield any effect on key variables in the study. Overall, the model developed in this study explained 22.4% ($R^2 = 0.224$) of business performance variable.

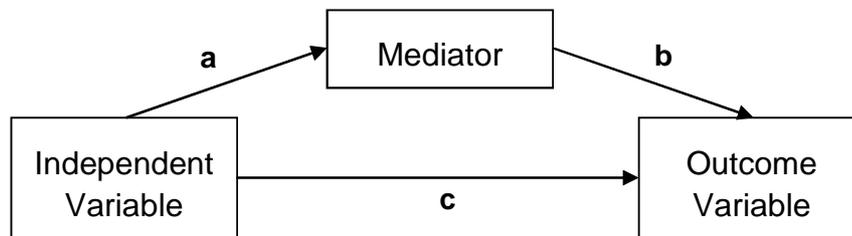
6.4 Post Hoc Mediation Analysis

Having examined the hypothesised relationships between passion, entrepreneurial behaviours and performance, the study proceeded to explore

the mediating effects of engagement and opportunity creation on harmonious and obsessive entrepreneurial passion. The mediation analysis following Baron and Kenny's (1986) recommended approach was implemented in EQS 6.2 software by running three additional structural models, in line with previous research practices (Bello et al., 2010).

On the whole, a variable can function as a mediator based on the extent to which it accounts for the relationship between the independent and the dependent variable (Baron and Kenny, 1986). The basic causal chain model explaining mediation is presented in Figure 6.2.

Figure 6.2: Basic Mediation Model



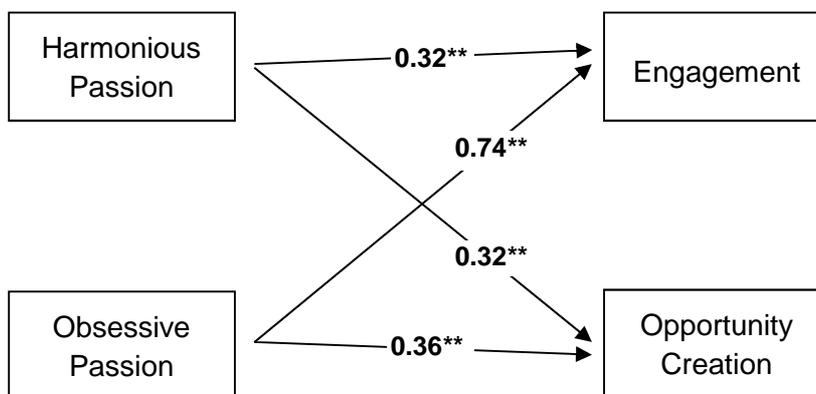
The basic mediational model assumes that there are two causal paths leading to dependent or outcome variable (DV): the direct effect of the independent variable (IV) on the outcome variable (path c) and the impact of the mediator (M) on the outcome variable (path b). There is also a path from the independent variable to the mediator (path a).

Based on this model, a variable functions as a mediator if the following conditions are satisfied: 1) variations in levels of IV significantly account for variations in M (path 'a' is significant); 2) variations in levels of M significantly account for variations in levels of DV (path 'b' is significant); 3) when paths 'a' and 'b' are controlled, a previously significant relationship between IV and DV is no longer significant (Baron and Kenny, 1986). To examine a possible mediating role for engagement and opportunity creation in this study, Baron and Kenny's (1986) approach was followed as explained above (Zhao et al., 2010).

6.4.1 Model 1: Paths from IVs to Ms

First, Model 1, testing the effect of independent variables (IVs) on the potential mediators (Ms), was run and yielded significant results for harmonious passion → engagement ($\beta = .32$, $t = 4.03$, $p < .001$) and obsessive passion → engagement ($\beta = .74$, $t = 7.56$, $p < .001$), as well as significant results for harmonious passion → opportunity creation ($\beta = .32$, $t = 3.63$, $p < .001$) and obsessive passion → opportunity creation ($\beta = .36$, $t = 4.54$, $p < .001$). Figure 6.3 provides model results.

Figure 6.3: Mediation Model 1

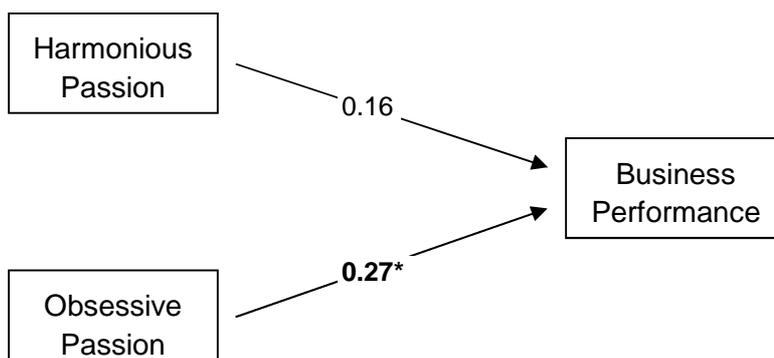


Note: $^{**} p < 0.001$

6.4.2 Model 2: Paths from IVs to DV

As a next step, Model 2 testing the direct effects of passion (IVs) on business performance (DV) was run. Obsessive passion affects business performance ($\beta = .27$, $t = 3.07$, $p < .005$), while harmonious passion has no influence ($\beta = .16$, $t = 1.78$, $p > .05$). Figure 6.4 demonstrates the model of direct effects.

Figure 6.4: Mediation Model 2

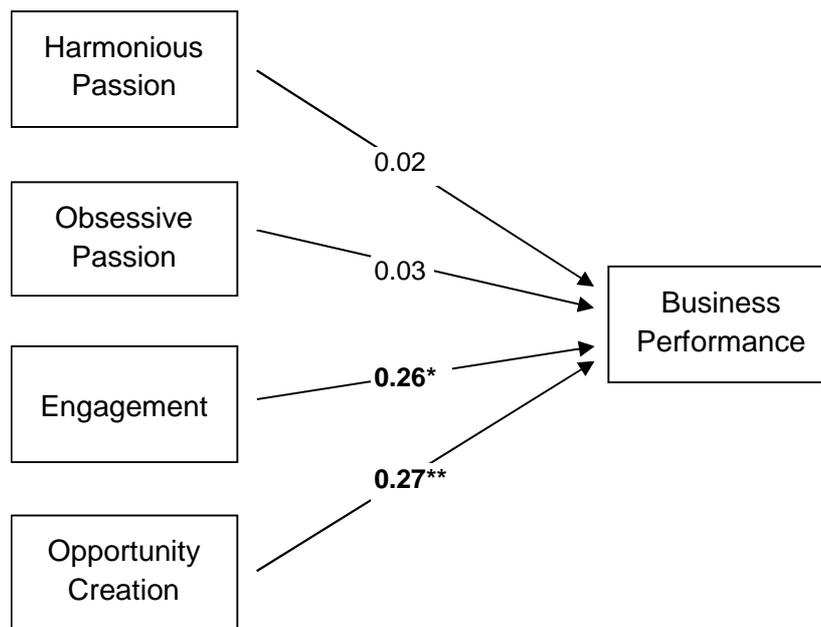


Note: $^* p < 0.005$

6.4.3 Model 3: Paths from IVs and Ms to DV

Finally, Model 3 yielded significant results for the paths to business performance (DV) from engagement ($\beta = .26$, $t = 2.98$, $p < .005$) and opportunity creation ($\beta = .27$, $t = 3.43$, $p < .001$), but not from harmonious passion ($\beta = .02$, $t = 0.26$, $p > .05$) and obsessive passion ($\beta = .03$, $t = 0.38$, $p > .05$). The results are presented in Figure 6.5 below.

Figure 6.5: Mediation Model 3



Note: ** $p < 0.001$; * $p < 0.005$

6.4.4 Mediation Results

These findings suggest that engagement and opportunity creation fully mediate the obsessive entrepreneurial passion – business performance relationship, but play no mediating role for the harmonious entrepreneurial passion – business performance link. In order to achieve complete clarity and make sure that the results obtained were correct, mediation models with each mediator separately, that is engagement and opportunity creation, were run and yielded the same outcomes. The discussion on this mediation effect is provided in the next chapter.

6.5 Chapter Summary

This chapter dealt with the analysis of the hypothesised associations between the key study variables. The first part of the conceptual framework focused on how entrepreneurial passion, both harmonious and obsessive, affects entrepreneurial behaviours, namely engagement, persistence and opportunity creation within entrepreneurial activities. The second part of the model looked at how those behaviours influence firm performance. The effects of harmonious and obsessive passion were further explored in post-hoc mediation analysis, to determine whether any of them is mediated by engagement and/or opportunity creation.

Table 6.3 summarises the results of the hypothesised relationships. Results showed that harmonious entrepreneurial passion was positively related to engagement, persistence and opportunity creation. Similar outcomes were present for obsessive entrepreneurial passion. These findings are in line with what has been proposed in the passion literature (Vallerand et al., 2003; Cardon et al., 2009).

Table 6.3: Summary of Results

Hypothesis	Hypothesised association	Supported	Rejected
H1a	Harmonious passion → Engagement	√	
H1b	Obsessive passion → Engagement	√	
H2a	Harmonious passion → Persistence	√	
H2b	Obsessive passion → Persistence	√	
H3a	Harmonious passion → Opportunity creation	√	
H3b	Obsessive passion → Opportunity creation	(√)	
H4	Engagement → Business performance	√	
H5	Persistence → Business performance		√
H6	Opportunity creation → Business performance	√	

Note: *parentheses imply partial support*

In relation to the link between entrepreneurial behaviours and business performance, engagement and opportunity creation demonstrated positive significant results, while persistence was found not to affect performance. The next chapter provides a detailed discussion on these results.

Post hoc mediation analysis revealed exciting results in relation to engagement and opportunity creation variables. Both were found to function as full mediators for obsessive entrepreneurial passion and business performance relationship, yet none of them mediated the link between harmonious entrepreneurial passion and business performance. This interesting outcome is discussed in more details in the next chapter.

Chapter 7 : Discussion, Implications and Limitations of the Study

7.1 Introduction

The purpose of the final chapter is to conclude the study and thesis with a discussion of key findings and provide implications for theory advancement, as well as for entrepreneurs and entrepreneurship educators. Therefore, the structure of this chapter is the following. First, findings of the study are discussed in line with a reflection on study objectives and theoretical contributions. Second, theoretical implications are drawn on the basis of the conclusions, and entrepreneurial implications are also provided. Third, limitations of the study are presented and directions for future research avenues suggested. Finally, a short conclusion of the study is provided.

7.2 Discussions of the Study

Current research interest in entrepreneurship can be explained by its usefulness in a sense of being able to renew already established organisations and their power to compete in the markets (Zahra and Covin, 1995). Moreover, the vital role of entrepreneurial activity for the transfer of the technological and organisational innovation progress into new and often more efficient products and services is well acknowledged (Baum and Locke, 2004). Being the key element for gaining competitive advantage and, as such, greater financial rewards, entrepreneurship is considered an important process in business growth (Schollhammer, 1982).

For a long time entrepreneurship scholars have been trying to identify specific constructs of individual characteristics that are unique to entrepreneurs. Entrepreneurship is a process through which individuals with a unique vision and creativity-oriented perspective evaluate and exploit opportunities, allocate resources, and generate value (Ma and Tan, 2006). Therefore, it is essentially important that the entrepreneur as a person has certain traits and characteristics that will motivate entrepreneurial action, such as passion in

particular. The lack of behavioural research on entrepreneurship is evident in the literature (see review by Moroz and Hindle, 2011), especially in relation to individual entrepreneurs and their personal characteristics (Hoskisson et al., 2011; Zachary and Mishra, 2010).

Despite the fact that passion is an affective state quite common to entrepreneurs, only five articles have empirically examined entrepreneurial passion and none of them explored the links between entrepreneurial passion and entrepreneurial behaviours or venture performance. While Baum and Locke (2004), following earlier work by Baum et al. (2001), conceptualised one's passionate love for work as one of the components of personality traits that can lead to venture growth, Chen et al. (2009) and Mitteness et al. (2012) investigated the notion of perceived entrepreneurial passion among potential firm investors, and Breugst et al. (2011) explored the perceived entrepreneurial passion among venture employees. Thorgren and Wincent (2013) looked at how habitual versus novice entrepreneurs are going to experience passion, namely harmoniously versus obsessively. Murnieks and colleagues (2011) and Cardon and Kirk (2013) related passion to self-efficacy. Finally, Ho and Pollack (2014) investigated how passion affects network centrality and financial performance. To the best knowledge of the researcher, this is the first study to apply entrepreneurial passion into the actual empirical context of entrepreneurial ventures; and to explore its effects on specific behavioural outcomes and its impact on the overall venture performance.

Theoretical relationships between constructs of the study were underpinned by the integration of the dualistic model of passion (Vallerand et al., 2003) and the theory of entrepreneurial passion developed by Cardon and colleagues (2009; 2013). As such, this research is a novel attempt to empirically test a concept of passion with a proposed conceptual foundation containing key variables from the entrepreneurial passion theory (Cardon et al., 2009): such as, engagement, persistence and the newly developed construct of opportunity creation, along with the key conceptualisation and operationalization of passion stemming from the dualistic approach of Vallerand et al. (2003).

This study has sought to integrate several literature bodies, such as psychology, entrepreneurship and marketing in order to investigate how harmonious and obsessive entrepreneurial passion affects specific entrepreneurial behaviours and business performance in small and medium companies. The sections that follow provide key findings and implications of the study.

7.2.1 The Effects of Entrepreneurial Passion

In line with the first objective of this study, the primarily part of the conceptual framework developed for this research investigates the effects of entrepreneurial passion on other constructs used in the study. Thus, the following sections provide detailed discussion of the results that harmonious and obsessive entrepreneurial passion produced in relation to entrepreneurial behaviours and business performance.

7.2.1.1 The Effects on Entrepreneurial Behaviours

Entrepreneurial passion, both harmonious and obsessive, was found to be significantly related to the behaviour of engagement. This means that the more passionate entrepreneurs are about entrepreneurial activities and tasks, both harmoniously and obsessively, will lead to their higher engagement in those activities. These results are in line with theoretical assumptions of passion literature, where Cardon and colleagues (2009) posited that higher levels of entrepreneurial passion will be associated with higher engagement or absorption in entrepreneurial activities, as it lies in the definition of passion that when entrepreneurs are passionate they dedicate more energy and time to entrepreneurial activities. In addition to that and similarly to Vallerand and colleagues' (2003) conceptualisation, obsessive entrepreneurial passion is related to engagement stronger than is the harmonious one. This makes sense, since obsessively passionate entrepreneurs feel obliged to get involved in entrepreneurial activities compared to than those experiencing harmonious entrepreneurial passion, due to interpersonal pressures.

Similar effects were established in relation to persistence. Both harmonious and obsessive entrepreneurial passion were found to be significantly related to persistence; but obsessive entrepreneurial passion to a greater extent. In other

words, the more passionate are entrepreneurs the more likely are they to persist in entrepreneurial tasks, projects and challenges. This outcome confirms theoretical predictions of passion literature (Vallerand et al., 2003; Cardon et al., 2009) and also provides support for a link explored in the paper by Cardon and Kirk (2013), where entrepreneurial passion is found to mediate the relationship between self-efficacy and persistence. The fact that obsessive entrepreneurial passion is more strongly related to persistence, compared with harmonious, can again be explained by looking at the nature of obsessive passion. It results from a controlled internalisation of the activity into one's identity (Vallerand et al., 2003) either due to certain contingencies being attached to the activity, for instance, self-esteem or social status, or because the sense of excitement derived from activity becomes uncontrollable. Therefore, entrepreneurs who are obsessively passionate about entrepreneurial activities persist more despite obstacles or failures.

Finally, in relation to opportunity creation, both harmonious and obsessive entrepreneurial passion yielded significant positive results. This means that entrepreneurs who are passionate about entrepreneurial activities, both on harmonious and obsessive levels, are likely to be able to create more opportunities for business development and growth. These results are fruitful, since the opportunity creation is a newly developed construct which immediately contributes to the advancement of the entrepreneurial passion conceptualisation. Cardon and colleagues (2009) argued that passionate entrepreneurs are likely to be creative and extravert and they are also likely to think of new ways of doing business. As such, the results of this study provide support for this claim. However, in this case the comparison of the effects between harmonious and obsessive entrepreneurial passion provided an intriguing outcome.

Contrary to the expected result and the previous pattern of obsessive passion being related to engagement and persistence more strongly, when associated with opportunity creation, it did not show any difference compared with harmonious entrepreneurial passion. The link between obsessive passion and opportunity creation might be expected to be stronger, because obsessed entrepreneurs devote more time, energy and effort in opportunity creation and

as such are likely to gain greater results. Nonetheless, this assumption did not find support, which can be explicated in two ways. First, while behaviours like engagement and persistence require less intellectual effort and are more associated with willingness to be occupied with entrepreneurial activities, opportunity creation presents a slightly different type of behaviour; where entrepreneurs need to apply various skills and knowledge. In order for entrepreneurs to be able to do that, they need to think clearly and focus on particular aspects of information both inside and outside of the firm. The more passionate they are about those entrepreneurial activities, the more likely are they to create opportunity for business development. But whether they are passionate harmoniously or obsessively does not affect their ability to create opportunities, since a lot more other factors and determinants are involved in this process compared to the behaviours of engagement or persistence. Moreover, some of those external aspects are out of entrepreneurs' control.

To summarise the discussion on the first part of the conceptual model results, both harmonious and obsessive entrepreneurial passion were found to be positively related to engagement, persistence and opportunity creation behaviours. As a result, one could argue that harmonious and obsessive passion might be the same thing at least in an entrepreneurial context with slightly different measurement wording. However, even though effects are almost the same, apart from obsessive passion being more strongly linked to engagement and persistence, harmonious and obsessive are undoubtedly two distinct dimensions of passion. Both of the dimensions were used in this research for completeness reasons and it is important to understand that they should not be combined as this would go against theoretical and conceptualisation rigour (Vallerand et al., 2003; Thorgren and Wincent, 2013). In addition to that, during study pre-tests harmonious and obsessive passion proved to be different aspects, as demonstrated by their face validity, as well as discriminant and convergent validity which was established further in the analyses. Consequently, harmonious and obsessive passion are indeed distinct dimensions of passion. The difference in their effects on entrepreneurial behaviours and particularly business performance was discovered during the post-hoc mediation analysis and is explained in detail in section 7.2.3 of this chapter.

7.2.1.2 The Effects on Business Performance

This study is the first attempt to explore the direct effect of entrepreneurial passion on business performance as a part of post-hoc mediation analysis. In the second model run during the post-hoc mediation analysis, exploring the effects of independent variables on the dependent, only the obsessive entrepreneurial passion had a significant and positive effect on business performance. As such, contrary to the assumptions in the literature (Vallerand et al., 2003; Cardon et al., 2009), obsessive entrepreneurial passion was found to have a positive influence on business performance. The explanation behind this effect could be the following: although individuals enjoy the activity, they simply feel obliged to engage in it, due to the internal issues that happen to control them. Furthermore, it eventually occupies disproportionate space within the person's identity and the person's life. This would mean that when entrepreneurs are obsessively passionate about their work, they are spending more time and putting more effort into entrepreneurial activities, which can yield positive outcomes. Even though obsessive passion is claimed to bring negative results since it is internalised in the individual's identity under certain contingencies and interpersonal pressures (Vallerand et al., 2003; Amiot et al., 2006; Mageau et al., 2005; Rousseau et al., 2002; Seguin-Levesque et al., 2003; Philippe et al., 2010), in the case of entrepreneurs it is not dysfunctional results that obsessive passion brings.

7.2.2 Relationships between Entrepreneurial Behaviours and Performance

The first behaviour affecting business performance in the model is engagement. Results demonstrated that engagement is positively related to business performance. Therefore, entrepreneurs who are more engaged in entrepreneurial activities are likely to derive better performance results. This result supports findings of prior research in the literature on the non-entrepreneurial context, where employees' engagement to their tasks was found to improve their performance (Ho et al., 2011). As such, the results of the current study support the notion that engagement being an investment of physical, cognitive and emotional energy, particularly into entrepreneurial activities, contributes towards the achievement of higher levels of overall business performance (Schindehutte et al., 2006).

Next, the effect of persistence on business performance is evaluated. Contrary to the hypothesised association, the findings provided no significant effect of persistence behaviour on business performance. Since persistence is supposed to increase the chances of entrepreneurs finding the right way of 'entrepreneurship', as well as improving their skills and experience, it was assumed that persistence will lead to a better firm performance (Cardon et al., 2009; Chandler and Jansen, 1992). At the same time, literature posits that this would only be possible to a certain extent, namely until persistence becomes blind and unreasonable, bringing only dysfunctional outcomes (Vallerand et al., 2003). In this study persistence was found not to affect business performance in any way. In other words, no matter how persistent entrepreneurs may be in their entrepreneurial activities, tasks and projects, overall business performance will not be affected. This could be explained based on the following logic: the persistence as such may not be a productive behaviour for entrepreneurs at all, as often it does not go along with reason and rational decision-making (Bandura, 1986; Holland and Shepherd, 2013). Thus, for entrepreneurs to be successful, aspects like rationality and reason alone might be enough to gain success when dealing with entrepreneurial projects, tasks and everyday activities. Another potential explanation of the insignificant effect of persistence on business performance could relate to the strong significance of other dominating behaviours in the model, that is engagement and opportunity creation. Presumably these two behaviours are more important for business performance compared to persistence.

Finally, the influence of opportunity creation behaviour on business performance is examined. Findings of the study indicated that opportunity creation is positively associated with overall business performance. Therefore, the results of this study support the notion that the more entrepreneurs create opportunities, the more likely their business performance will improve. This outcome goes in line with the claims in the opportunities literature, where often new ways of doing entrepreneurial activities can bring better results and profits for the venture (Short et al., 2010). Additionally, scholars have already investigated the link between opportunity exploration/exploitation and performance, establishing positive results (Dutta and Crossan, 2005; Hsieh et al., 2007; Miller, 2007). As conceptualised in this research, opportunity creation

refers to entrepreneurial behaviour where the actions and reactions of entrepreneurs result in the identification of new ways of doing business. Notably, this study provides the first empirical application of this construct, particularly in an entrepreneurship context and confirms its importance in the entrepreneurial process.

On the whole, with the outcomes of the second research objective, two out of three hypothesised behavioural associations were supported, namely engagement and opportunity creation behaviours were found to positively affect business performance of entrepreneurial firm. In contrast, persistence yielded no significant results in relation to business performance. As such, results demonstrate that engagement and opportunity creation are much more important and consequential behaviours for entrepreneurs and ultimately their business performance.

7.2.3 Mediation Results

In line with the study's third objective to investigate the differences of entrepreneurial harmonious and obsessive passion in their effect on specific entrepreneurial behaviours as well as performance, a post-hoc mediation analysis was completed. Findings from the analysis revealed that engagement and opportunity creation behaviours fully mediate the obsessive entrepreneurial passion – business performance relationship, but play no mediating role for the harmonious entrepreneurial passion – business performance link.

As such, this result is an indication that two passion dimensions are indeed different in their effects on entrepreneurial behaviours and business performance, where obsessive entrepreneurial passion has a strong link with engagement, opportunity creation and business performance, but harmonious entrepreneurial passion has only significant effects on engagement and opportunity creation, but indirect effects on business performance. This means that obsessive entrepreneurial passion appears to be a stronger dimension of passion compared with the harmonious one, which reflects the theoretical assumptions in the literature (Vallerand et al., 2003).

Results indicate that engagement and opportunity creation behaviours appear to be powerful constructs in determining business performance. This proves, that no matter how obsessively passionate entrepreneurs are, their engagement in entrepreneurial tasks and activities, as well as creation of opportunities for business development constitute much more important effects on their business performance.

7.3 Implications of the Study

This section of the chapter summarises key implications drawn from the study in relation to entrepreneurs. It also provides implications for the theory advancement and entrepreneurship educators.

7.3.1 Implications for Entrepreneurs

Considering the discussed findings and conclusions, this study offers several important practical implications for entrepreneurs. A theoretical model of the entrepreneurial passion – entrepreneurial behaviours relationships has been developed and empirically tested in this study. Findings suggest that both entrepreneurial passion forms (i.e. harmonious and obsessive) are strong drivers of engagement and opportunity creation behaviour. The study further establishes that high levels of engagement and opportunity creation behaviours of entrepreneurs can help firms to derive stronger benefits from their entrepreneurial activities. Results suggest that the development of opportunities and being highly engaged in entrepreneurial tasks and activities can help small and medium sized organisations to improve their business performance. Furthermore, results show that behavioural persistence in entrepreneurial activities in relation to tasks, goals and projects does not have any effect on performance, meaning that no matter how strong entrepreneurs will persist, it won't necessarily influence the performance outcomes. Findings of the study could also help entrepreneurs to reflect on their behaviours during decision-making, product/market ideas development, negotiating with partners and identifying ways of venture growth.

Overall, this study provides entrepreneurs with a comprehensive overview of entrepreneurial passion and entrepreneurial behaviours, ways to measure the

components of both, and how it can help to improve business success. Generally, the findings of this study could contribute to a basis development of a self-assessment tool, which would facilitate in helping entrepreneurs to distinguish between useful and damaging behaviours when at work. This tool could measure an individual's entrepreneurial passion for a particular firm, engagement in the entrepreneurial activities and ability to create business opportunities, along with many other factors that are important for the optimal functioning of entrepreneurial firms.

This study has emphasised how entrepreneurial passion affects engagement, persistence and opportunity creation, which, in turn, has implications on the business performance of entrepreneurial ventures. This provides an important domain for the entrepreneurship advancement and enhancement at a practical level.

7.3.2 Implications for Entrepreneurship Educators and Policy Makers

Educators in the academia could emphasise on specific entrepreneurial behaviours, such as engagement and opportunity creation when discussing the implications of entrepreneurial passion to people being involved in entrepreneurial activities. Moreover, educators could increase the level of their students' demonstrating a strong passion in the entrepreneuring context by showing that entrepreneurial opportunities exist in a variety of areas, encouraging students to consider what areas they are interested in, and on the basis of that, designing training exercises that involve creation of entrepreneurial opportunities in those selected areas of their interest.

This study also provides several implications for educators in professional entrepreneurial training. They could specifically focus on developing preparation classes for prospective, early or even experienced entrepreneurs. For instance on the basis of opportunity creation skills trainees would be provided with or directed to the information they could use and assigned a specific task in relation to creating a business opportunity. Entrepreneurship programs should recognise that a general passion for work along with particular entrepreneurial behaviours all go hand in hand and can have synergistic effects on the

development of the interest among young adults to start their own businesses or existing entrepreneurs to improve their work.

7.3.3 Implications for Theory

The present study offers a number of significant contributions in the understanding of entrepreneurial passion and its outcomes. First, the study contributes to the current literature by examining the associations between entrepreneurial passion (harmonious and obsessive) and entrepreneurial behaviours, namely engagement, persistence and opportunity creation. On a theoretical level, Vallerand and colleagues (2003) linked passion to engagement and persistence, followed by Cardon et al. (2009), who similarly associated passion with absorption and persistence. This study provides empirical evidence that supports this assumption for the case of entrepreneurs.

Second, by addressing the gap related to the absence of a specific behaviour prevalent for many entrepreneurs when dealing with business opportunities, this study contributes to the current literature by developing a new construct of 'opportunity creation' and its measurement tool on the basis of integrating two dominant views of opportunity scholars. One school posits that opportunities exist in the external environment and entrepreneurs only need to discover them (Bingham et al., 2007; Gruber, 2007). The second school posits that opportunities are a function of entrepreneurial process (Ardichvili et al., 2003; Mitchell et al., 2008). This research contributes to the opportunities scholarly field taking the standpoint that passionate entrepreneurs are more likely to create opportunities themselves rather than just explore and/or exploit the existing ones (Oviatt and McDougall, 2005; Zahra et al., 2005). Moreover, this study also contributes to the literature by examining the relationship between entrepreneurial passion (harmonious and obsessive) and opportunity creation.

Third, by providing additional insights into how particular entrepreneurial behaviours can affect firm performance, this study contributes to the literature in examining how engagement, persistence and opportunity creation affect business performance of the small and medium organisations. As mentioned previously, literature has only directed a scarce amount of inquiry into how specific entrepreneurial behaviours can affect firm performance. The effect of

entrepreneurial behaviours is particularly applicable for small businesses that are usually independently owned and operated, rarely dominating in their market (Sadler-Smith et al., 2003). In such firms entrepreneur's primary goals are profitability and growth (Hodgetts and Kuratko, 2001) and a lot of outcomes can depend on their behaviours. Engagement has only been studied in the context of employee task performance (Ho et al., 2011). Similarly, even though persistence is an important part of the entrepreneurial process, there has been relatively little research regarding why entrepreneurs choose to persist with a business (Gatewood et al., 2002). As identified previously, past research did not explore how opportunity creation can influence company performance. As such, the contribution is evident in unveiling whether these entrepreneurial behaviours influence business performance and how.

Finally, this study contributes to the literature by investigating the nature of the direct effects of entrepreneurial passion (harmonious and obsessive) on business performance. Even though this was conducted during the post-hoc mediation analysis, results provide new insights into the differences of harmonious and obsessive entrepreneurial passion, as well as their importance for firm performance.

In sum, the powerful role of entrepreneurial passion in influencing entrepreneurial behaviours and ultimately business performance advances the knowledge and theory within entrepreneurship field. This study also highlights a greater role of affective processes that entrepreneurs experience and their behavioural outcomes.

7.4 Limitations and Future Research Directions

Although passion has been studied in a number of other contexts, this study provides a novel attempt to further extend its scope and studies entrepreneurial passion, following the integration of two seminal theories in the field, that is the dualistic model of passion (Vallerand et al., 2003) and the entrepreneurial passion theory (Cardon et al., 2009). At the same time, this study also acknowledges several limitations related to the research methodological and theoretical aspects that need addressing as a part of future research agenda.

First, this study applies the scale by Vallerand and colleagues (2003) to measure the focal variable of entrepreneurial passion, without using the scale developed by Cardon et al. (2013), where the construct measurements were developed based on three dimensions of the identity type of the entrepreneur – inventing, founding and developing a business. According to Cardon and colleagues (2013) entrepreneurs can experience passion for inventing – showing positive affect when identifying and exploring new opportunities; passion for founding a company – primarily enjoying the process of founding itself, related to sourcing and raising capital, assembling a founding team; and passion for developing a company – enjoying such activities as finding new customers, developing new markets, optimizing organizational processes and so on (Cardon et al., 2013; Breugst et al., 2012). As such, future research could explore how entrepreneurs experience harmonious and obsessive passion at different stages of their entrepreneurial involvement with the venture.

Second, this research has been focused only on three entrepreneurial behaviours, such as engagement, persistence and opportunity creation. Future research can extend these findings testing the role played by entrepreneurial passion in relation to behaviours not explored so far. For instance, it seems very exciting to determine whether entrepreneurial passion fosters risky and proactive behaviour (Lumpkin and Dess, 1996, 2001; Wiklund and Shepherd, 2005). Similarly, the relationship between other behaviours and business performance needs further investigation.

Third, this study acknowledges the limitations of relying on single informants for information on both the dependent and the independent variables, which clearly raises the possible issue of CMV, despite the researcher's efforts to control for its effects on the study results (Podsakoff et al. 2003). In this study the subjective measures of performance were suitable to test the hypothesised associations, since the key point was to identify how entrepreneurs evaluate their state of passion and their behaviours and how well they believe the firm is operating in relation to several selected criteria. Future studies could control for potential influence of CMV by collecting performance data from multiple sources. One way of doing this is to use information on business performance

by contacting finance directors of the same companies or by using company's financial statements. Another option would be to collect performance data from secondary sources, such as annual reports, industry databases and commercial databases, provided these sources are reliable enough and information is up to date.

Fourth, by looking at only business performance as an outcome of passion and entrepreneurial behaviours, this study does not capture individual entrepreneurial satisfaction compared with the company performance evaluation. Similarly, it does not explore how business growth is affected. Future research could explore how passion and particular entrepreneurial behaviours affect entrepreneurial job satisfaction (Schjoedt, 2009), as well as venture growth (Baum and Bird, 2010).

Fifth, applying a cross-sectional research design is certainly a limitation concerning the potential effects of the results over time (Rindfleisch et al., 2008). Entrepreneurial passion can take time to develop (Cardon et al., 2009; 2013) and the effect of passion can potentially change over time. Some scholars have to research entrepreneurial behaviours over time in order to determine the level of their intensity as firms grow (Hughes and Morgan, 2007; Lumpkin and Dess, 2000). Hence, future research is encouraged to test the model developed in a form of longitudinal research and investigate the established relationships across time.

Sixth, this research has only looked at direct relationships among constructs and has established some mediation effects during the post-hoc analysis. Therefore, future studies could contribute by introducing some moderators that could foster or weaken the established relationships. Some of those could include commitment (Vandenberghe and Bentein, 2009; Solinger et al., 2008), employees' support (Tsui et al., 1997; De Clercq and Rangarajan, 2008), creativity (Grant and Berry, 2011; Zhou et al., 2012; Perry-Smith, 2006) and big five personality characteristics (Barrick and Mount, 1991) to name a few.

Finally, this research is only testing hypotheses in one geographical location and among small and medium sized companies. Testing these predictions in

other countries and larger organisations could contribute to the generalisability of results. Future research could also look into comparing results among multiple countries.

7.5 Conclusion

To conclude, this study has investigated the notion of entrepreneurial passion and behaviours. First of all, the entrepreneurial passion understanding and importance has been reconfirmed by integrating the theory of entrepreneurial passion with the dualistic model of passion in the context of small and medium sized companies. Next, the study revealed that both harmonious and obsessive entrepreneurial passion influence particular entrepreneurial behaviours, namely engagement, persistence and opportunity creation. Finally, it was found that behaviours like engagement and opportunity creation positively affect business performance. All of the study's objectives were achieved. Findings of this study are likely to encourage further research in the behavioural entrepreneurship area and the implications discussed above will be of interest to those studying, practicing and working in entrepreneurship.

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Appendices

Appendix 4.1: Main Study Cover Letter and Questionnaire

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UNIVERSITY OF LEEDS

This research has been approved by AREA Ethics Committee. Ref. Nr. AREA 10-197

THE OUTCOMES OF ENTREPRENEURIAL PASSION

SURVEY

Dear Respondent,

I am a Doctoral Researcher in the Marketing Division at Leeds University Business School of the United Kingdom. I am conducting this survey among entrepreneurs in Russia and this research will form the basis for my Doctoral Thesis. It would be highly appreciated if you could take the time to complete the survey.

The objective of this survey is to evaluate the role of entrepreneurial passion/needs in the achievement of entrepreneurial outcomes. Your participation in this survey is vitally important for the advancement of both theoretical and practical aspects of entrepreneurship.

All information provided is strictly confidential; results of the study will only be exhibited in aggregate form and no names will be disclosed. As a thank you for your participation I would like to offer you a report of the key study findings, sent as soon as it is ready.

It is absolutely crucial that this survey is completed by an entrepreneur with respect to their work in a particular company, since the primary objects of interest are the needs, characteristics and behaviours of the entrepreneur him/herself. This survey is organized in 4 sections on 3 pages and should take not more than 10 minutes to complete. Please follow the instructions on completion before each question and please answer all questions as fully and honestly as possible.

Yours faithfully,

Vita Kadile
v.kadile@leeds.ac.uk
Leeds University Business School

SECTION A: Entrepreneurial Passion

Please indicate the extent to which you agree or disagree with the following statements:

Entrepreneurial Passion	Strongly Disagree						Strongly Agree
My work allows me to live various experiences	1	2	3	4	5	6	7
The new things that I discover with my work allow me to appreciate it even more	1	2	3	4	5	6	7
My work allows me to live memorable experiences	1	2	3	4	5	6	7
My work reflects the qualities I like about myself	1	2	3	4	5	6	7
My work is in harmony with the other activities in my life	1	2	3	4	5	6	7
For me work is passion, that I still manage to control	1	2	3	4	5	6	7
I am completely taken with my work	1	2	3	4	5	6	7
I cannot live without my work	1	2	3	4	5	6	7
The urge is so strong. I can't help myself from doing my work	1	2	3	4	5	6	7
I have difficulty imagining my life without my work	1	2	3	4	5	6	7
I am emotionally dependent on my work	1	2	3	4	5	6	7
I have a tough time controlling my need to do my work	1	2	3	4	5	6	7
I have almost an obsessive feeling for my work	1	2	3	4	5	6	7
My mood depends on me being able to do my work	1	2	3	4	5	6	7

SECTION B: Entrepreneurial Behaviours

Please indicate the extent to which you agree or disagree with the following statements:

Entrepreneurial Behaviours	Strongly Disagree						Strongly Agree
Time flies when I am working	1	2	3	4	5	6	7
When I am working, I forget everything else around me	1	2	3	4	5	6	7
I feel happy when I am working intensely	1	2	3	4	5	6	7
I am immersed in my work	1	2	3	4	5	6	7
I get carried away when I am working	1	2	3	4	5	6	7
It is difficult to detach myself from my job	1	2	3	4	5	6	7
I have achieved a goal that took years of work	1	2	3	4	5	6	7
I have overcome setbacks to conquer an important challenge	1	2	3	4	5	6	7
I finish whatever I begin	1	2	3	4	5	6	7
I am tenacious enough to overcome setbacks at work	1	2	3	4	5	6	7
I am a hard worker	1	2	3	4	5	6	7
I am persistent in my work	1	2	3	4	5	6	7
I am good at creating new ways of doing business	1	2	3	4	5	6	7
I can easily come up with new product ideas	1	2	3	4	5	6	7
I regularly come up with new product-market ideas and projects	1	2	3	4	5	6	7
I am good at generating and implementing new ideas	1	2	3	4	5	6	7

I always try to combine resources and capabilities in novel ways	1	2	3	4	5	6	7
I am good at coming up with novel solutions for specific problems of the company	1	2	3	4	5	6	7

SECTION C: Business Performance

Please indicate the extent to which you are satisfied or dissatisfied with the business performance of the company:

Business performance (current)	Completely Dissatisfied			Completely Satisfied			
Market share	1	2	3	4	5	6	7
Customer satisfaction	1	2	3	4	5	6	7
Sales volume	1	2	3	4	5	6	7
Profitability	1	2	3	4	5	6	7
Cash flows	1	2	3	4	5	6	7
Return on investments	1	2	3	4	5	6	7

SECTION D: Respondent Characteristics and Company Information

How experienced are you in the following areas? (Please specify the number in the space provided)

Number of New product/service development experiences in general _____

Number of years in entrepreneurship in general _____

Number of years in the current venture _____

What is your gender?

Male Female

To what extent are you involved with the entrepreneurial activities in your company?

Not at all involved					Very involved	
1	2	3	4	5	6	7

To what extent do you feel you possess knowledge regarding the questions asked in this questionnaire?

No knowledge				Full knowledge		
1	2	3	4	5	6	7

To what extent do you believe the responses given by you accurately reflect the 'realities' of your company?

Not at all accurate					Very accurate	
1	2	3	4	5	6	7

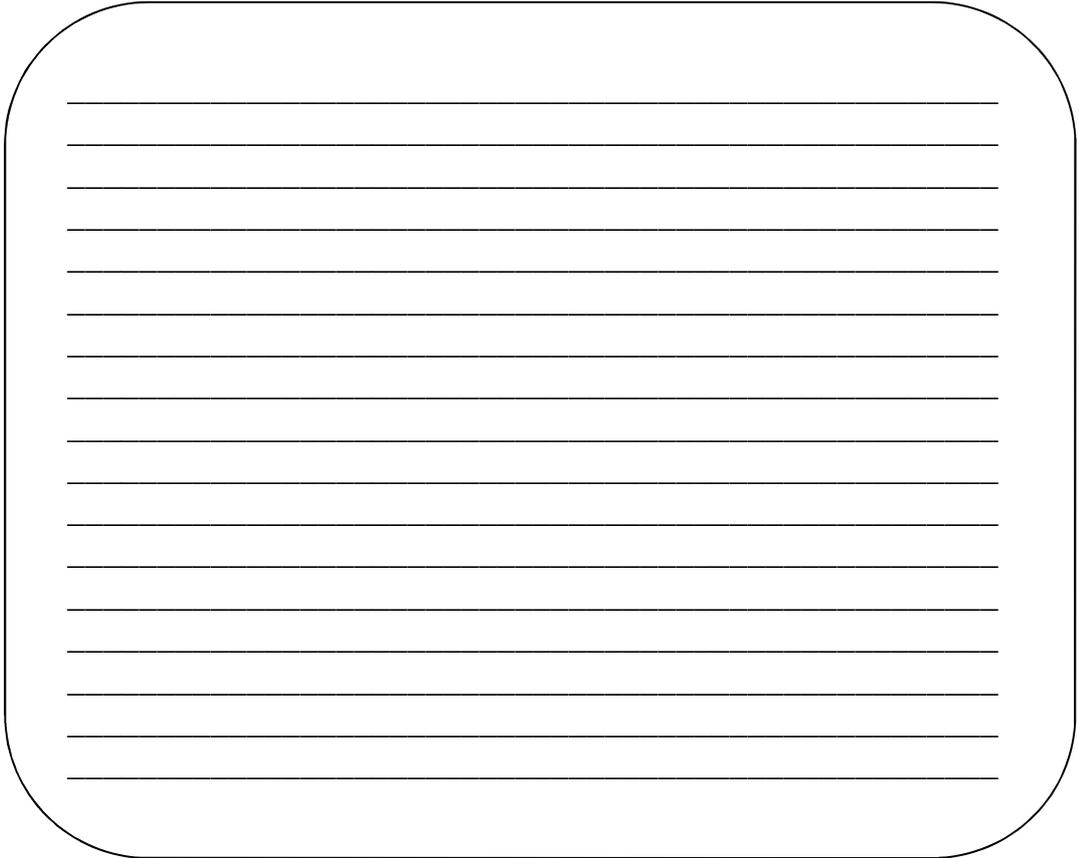
Please state for how long has your company been operating? _____ years _____ months

How many full time employees are there in your company? _____

Please state the type of industry sector that best describes your business:

Thank You very much for completing this survey!

If you have any additional thoughts about any of the above questions and survey itself, please share them here:

A large rounded rectangular box with a thin black border, containing 18 horizontal lines for writing. The lines are evenly spaced and extend across most of the width of the box.

Ms VITA KADILE
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Marketing Division
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Appendix 4.2: Exploratory Factor Analysis Results for Entrepreneurial Passion Subset

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
My work allows me to live various experiences	6.083	1.2304	218
The new things that I discover with my work allow me to appreciate it even more	5.277	1.5868	218
My work allows me to live memorable experiences	5.716	1.4940	218
My work reflects the qualities I like about myself	5.332	1.4067	218
I cannot live without my work	4.00	1.978	218
The urge is so strong I can't help myself from doing my work	3.89	1.927	218
I have difficulty imagining my life without my work	4.30	2.029	218
I am emotionally dependent on my work	4.47	2.003	218
I have a tough time controlling my need to do my work	3.81	1.903	218
I have almost an obsessive feeling for my work	3.24	1.984	218

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.862
Bartlett's Test of Sphericity	Approx. Chi-Square	1263.429
	df	45
	Sig.	.000

Correlation Matrix^a

		My work allows me to live various experiences	The new things that I discover with my work allow me to appreciate it even more	My work allows me to live memorable experiences	My work reflects the qualities I like about myself	I cannot live without my work	The urge is so strong I can't help myself from doing my work	I have difficulty imagining my life without my work	I am emotionally dependent on my work	I have a tough time controlling my need to do my work	I have almost an obsessive feeling for my work
Correlation	My work allows me to live various experiences	1.000	.513	.542	.294	.082	.068	.064	-.050	.066	.011
	The new things that I discover with my work allow me to appreciate it even more	.513	1.000	.404	.470	.387	.403	.391	.130	.322	.303
	My work allows me to live memorable experiences	.542	.404	1.000	.335	.219	.203	.250	.133	.206	.163
	My work reflects the qualities I like about myself	.294	.470	.335	1.000	.321	.373	.273	.094	.307	.263
	I cannot live without my work	.082	.387	.219	.321	1.000	.836	.741	.508	.695	.667
	The urge is so strong I can't help myself from doing my work	.068	.403	.203	.373	.836	1.000	.703	.541	.739	.720
	I have difficulty imagining my life without my work	.064	.391	.250	.273	.741	.703	1.000	.562	.680	.598
	I am emotionally dependent on my work	-.050	.130	.133	.094	.508	.541	.562	1.000	.572	.550
	I have a tough time controlling my need to do my work	.066	.322	.206	.307	.695	.739	.680	.572	1.000	.784
	I have almost an obsessive feeling for my work	.011	.303	.163	.263	.667	.720	.598	.550	.784	1.000
Sig. (1-tailed)	My work allows me to live various experiences		.000	.000	.000	.115	.158	.174	.233	.167	.438
	The new things that I discover with my work allow me to appreciate it even more	.000		.000	.000	.000	.000	.000	.027	.000	.000
	My work allows me to live memorable experiences	.000	.000		.000	.001	.001	.000	.025	.001	.008
	My work reflects the qualities I like about myself	.000	.000	.000		.000	.000	.000	.084	.000	.000
	I cannot live without my work	.115	.000	.001	.000		.000	.000	.000	.000	.000
	The urge is so strong I can't help myself from doing my work	.158	.000	.001	.000	.000		.000	.000	.000	.000
	I have difficulty imagining my life without my work	.174	.000	.000	.000	.000	.000		.000	.000	.000
	I am emotionally dependent on my work	.233	.027	.025	.084	.000	.000	.000		.000	.000
	I have a tough time controlling my need to do my work	.167	.000	.001	.000	.000	.000	.000	.000		.000
	I have almost an obsessive feeling for my work	.438	.000	.008	.000	.000	.000	.000	.000	.000	

a. Determinant = .003

Anti-image Matrices

		My work allows me to live various experiences	The new things that I discover with my work allow me to appreciate it even more	My work allows me to live memorable experiences	My work reflects the qualities I like about myself	I cannot live without my work	The urge is so strong I can't help myself from doing my work	I have difficulty imagining my life without my work	I am emotionally dependent on my work	I have a tough time controlling my need to do my work	I have almost an obsessive feeling for my work
Anti-image Covariance	My work allows me to live various experiences	.557	-.224	-.265	-.015	-.007	.017	.053	.022	-.024	.037
	The new things that I discover with my work allow me to appreciate it even more	-.224	.526	-.021	-.157	-.007	-.034	-.080	.059	.021	-.029
	My work allows me to live memorable experiences	-.265	-.021	.638	-.102	-.005	.017	-.053	-.042	-2.042E-05	-.006
	My work reflects the qualities I like about myself	-.015	-.157	-.102	.700	.005	-.063	.021	.070	-.035	.011
	I cannot live without my work	-.007	-.007	-.005	.005	.250	-.128	-.099	.009	-.011	-.023
	The urge is so strong I can't help myself from doing my work	.017	-.034	.017	-.063	-.128	.226	-.018	-.038	-.042	-.052
	I have difficulty imagining my life without my work	.053	-.080	-.053	.021	-.099	-.018	.356	-.104	-.069	.021
	I am emotionally dependent on my work	.022	.059	-.042	.070	.009	-.038	-.104	.570	-.054	-.060
	I have a tough time controlling my need to do my work	-.024	.021	-2.042E-05	-.035	-.011	-.042	-.069	-.054	.288	-.150
	I have almost an obsessive feeling for my work	.037	-.029	-.006	.011	-.023	-.052	.021	-.060	-.150	.330
Anti-image Correlation	My work allows me to live various experiences	.626 ^a	-.413	-.445	-.024	-.018	.047	.118	.039	-.060	.086
	The new things that I discover with my work allow me to appreciate it even more	-.413	.814 ^a	-.036	-.258	-.018	-.099	-.186	.108	.054	-.069
	My work allows me to live memorable experiences	-.445	-.036	.769 ^a	-.153	-.014	.045	-.111	-.070	-4.768E-05	-.013
	My work reflects the qualities I like about myself	-.024	-.258	-.153	.869 ^a	.013	-.158	.043	.111	-.079	.022
	I cannot live without my work	-.018	-.018	-.014	.013	.870 ^a	-.539	-.333	.024	-.041	-.079
	The urge is so strong I can't help myself from doing my work	.047	-.099	.045	-.158	-.539	.876 ^a	-.064	-.107	-.163	-.191
	I have difficulty imagining my life without my work	.118	-.186	-.111	.043	-.333	-.064	.898 ^a	-.230	-.215	.061
	I am emotionally dependent on my work	.039	.108	-.070	.111	.024	-.107	-.230	.921 ^a	-.134	-.137
	I have a tough time controlling my need to do my work	-.060	.054	-4.768E-05	-.079	-.041	-.163	-.215	-.134	.887 ^a	-.486
	I have almost an obsessive feeling for my work	.086	-.069	-.013	.022	-.079	-.191	.061	-.137	-.486	.885 ^a

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
My work allows me to live various experiences	1.000	.715
The new things that I discover with my work allow me to appreciate it even more	1.000	.650
My work allows me to live memorable experiences	1.000	.576
My work reflects the qualities I like about myself	1.000	.445
I cannot live without my work	1.000	.775
The urge is so strong I can't help myself from doing my work	1.000	.813
I have difficulty imagining my life without my work	1.000	.711
I am emotionally dependent on my work	1.000	.548
I have a tough time controlling my need to do my work	1.000	.775
I have almost an obsessive feeling for my work	1.000	.728

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	4.808	48.077	48.077	4.808	48.077	48.077	4.344	43.441
2	1.928	19.276	67.353	1.928	19.276	67.353	2.391	23.911	67.353
3	.779	7.789	75.142						
4	.571	5.708	80.850						
5	.465	4.654	85.504						
6	.462	4.625	90.129						
7	.353	3.525	93.654						
8	.290	2.901	96.555						
9	.195	1.954	98.510						
10	.149	1.490	100.000						

Component Matrix^a

	Component	
	1	2
My work allows me to live various experiences		.815
The new things that I discover with my work allow me to appreciate it even more	.559	.581
My work allows me to live memorable experiences		.651
My work reflects the qualities I like about myself	.482	.461
I cannot live without my work	.868	
The urge is so strong I can't help myself from doing my work	.889	
I have difficulty imagining my life without my work	.832	
I am emotionally dependent on my work	.653	
I have a tough time controlling my need to do my work	.857	
I have almost an obsessive feeling for my work	.816	

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
My work allows me to live various experiences		.837
The new things that I discover with my work allow me to appreciate it even more		.756
My work allows me to live memorable experiences		.753
My work reflects the qualities I like about myself		.616

I cannot live without my work	.853	
The urge is so strong I can't help myself from doing my work	.876	
I have difficulty imagining my life without my work	.818	
I am emotionally dependent on my work	.738	
I have a tough time controlling my need to do my work	.866	
I have almost an obsessive feeling for my work	.847	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.916	.401
2	-.401	.916

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

Appendix 4.3: Exploratory Factor Analysis Results for Entrepreneurial Behaviours Subset

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
Time flies when I am working	5.93	1.404	218
When I am working, I forget everything else around me	4.69	1.786	218
I feel happy when I am working intensely	4.75	1.782	218
I am immersed in my work	5.03	1.586	218
I get carried away when I am working	4.65	1.758	218
It is difficult to detach myself from my job	4.22	1.888	218
I have overcome setbacks to conquer an important challenge	5.11	1.662	218
I finish whatever I begin	5.57	1.396	218
Setbacks at work don't discourage me	5.63	1.413	218
I am a hard worker	5.57	1.453	218
I am diligent in my work	5.79	1.331	218
I am good at creating new ways of doing business	4.71	1.669	218
I can easily come up with new product ideas	4.24	1.854	218
I regularly come up with new product-market ideas and projects	4.72	1.727	218
I am good at generating and implementing new ideas	4.78	1.541	218
I always try to combine resources and capabilities in novel ways	5.17	1.445	218
I am good at coming up with novel solutions for specific problems of the company	5.13	1.389	218

Correlation Matrix^a

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Correlation																	
Time flies when I am working	1.000	.592	.403	.487	.445	.374	.335	.212	.329	.370	.449	.216	.136	.229	.252	.346	.322
When I am working, I forget everything else around me	.592	1.000	.445	.515	.606	.469	.132	.029	.210	.322	.332	.185	.188	.248	.190	.208	.170
I feel happy when I am working intensely	.403	.445	1.000	.602	.468	.478	.254	.161	.222	.204	.330	.147	.215	.204	.203	.279	.230
I am immersed in my work	.487	.515	.602	1.000	.550	.588	.314	.280	.293	.460	.512	.356	.321	.349	.417	.413	.392
I get carried away when I am working	.445	.606	.468	.550	1.000	.570	.294	.172	.360	.354	.397	.247	.174	.274	.211	.207	.253
It is difficult to detach myself from my job	.374	.469	.478	.588	.570	1.000	.364	.163	.308	.364	.368	.285	.258	.288	.275	.307	.340
I have overcome setbacks to conquer an important challenge	.335	.132	.254	.314	.294	.364	1.000	.443	.500	.356	.444	.380	.274	.282	.351	.361	.365
I finish whatever I begin	.212	.029	.161	.280	.172	.163	.443	1.000	.446	.489	.507	.269	.336	.250	.511	.370	.370
Setbacks at work don't discourage me	.329	.210	.222	.293	.360	.308	.500	.446	1.000	.448	.562	.335	.229	.215	.309	.387	.414
I am a hard worker	.370	.322	.204	.460	.354	.364	.356	.489	.448	1.000	.649	.247	.286	.310	.371	.309	.315
I am diligent in my work	.449	.332	.330	.512	.397	.368	.444	.507	.562	.649	1.000	.320	.266	.296	.407	.401	.415
I am good at creating new ways of doing business	.216	.185	.147	.356	.247	.285	.380	.269	.335	.247	.320	1.000	.691	.675	.672	.590	.642
I can easily come up with new product ideas	.136	.188	.215	.321	.174	.258	.274	.336	.229	.286	.266	.691	1.000	.686	.696	.482	.555
I regularly come up with new product-market ideas and projects	.229	.248	.204	.349	.274	.288	.282	.250	.215	.310	.296	.675	.686	1.000	.711	.581	.608
I am good at generating and implementing new ideas	.252	.190	.203	.417	.211	.275	.351	.511	.309	.371	.407	.672	.696	.711	1.000	.727	.715
I always try to combine resources and capabilities in novel ways	.346	.208	.279	.413	.207	.307	.361	.370	.387	.309	.401	.590	.482	.581	.727	1.000	.757
I am good at coming up with novel solutions for specific problems of the company	.322	.170	.230	.392	.253	.340	.365	.370	.414	.315	.415	.642	.555	.608	.715	.757	1.000
Sig. (1-tailed)																	
Time flies when I am working		.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.001	.023	.000	.000	.000	.000
When I am working, I forget everything else around me		.000		.000	.000	.000	.026	.336	.001	.000	.000	.003	.003	.000	.002	.001	.006
I feel happy when I am working intensely		.000		.000	.000	.000	.000	.009	.000	.001	.000	.015	.001	.001	.001	.000	.000
I am immersed in my work		.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I get carried away when I am working		.000		.000	.000	.000	.000	.006	.000	.000	.000	.000	.005	.000	.001	.001	.000
It is difficult to detach myself from my job		.000		.000	.000	.000	.000	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000
I have overcome setbacks to conquer an important challenge		.000	.026	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I finish whatever I begin		.001	.336	.009	.000	.006	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Setbacks at work don't discourage me		.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000
I am a hard worker		.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I am diligent in my work		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I am good at creating new ways of doing business		.001	.003	.015	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I can easily come up with new product ideas		.023	.003	.001	.000	.005	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I regularly come up with new product-market ideas and projects		.000	.000	.001	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000
I am good at generating and implementing new ideas		.000	.002	.001	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I always try to combine resources and capabilities in novel ways		.000	.001	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I am good at coming up with novel solutions for specific problems of the company		.000	.006	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

a. Determinant = 3.81E-005

Anti-image Matrices

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Anti-image Covariance	Time flies when I am working	.508	-.203	-.036	-.037	.007	.036	-.093	-.011	.000	-.020	-.044	.005	.052	.001	.016	-.034	-.049
	When I am working, I forget everything else around me	-.203	.424	-.035	-.028	-.153	-.049	.083	.081	-.004	-.034	-.010	.007	-.040	-.011	-.015	-.008	.057
	I feel happy when I am working intensely	-.036	-.035	.532	-.169	-.055	-.061	-.036	-.022	-.005	.103	-.027	.080	-.074	-.007	.037	-.052	.014
	I am immersed in my work	-.037	-.028	-.169	.380	-.055	-.102	.025	.004	.062	-.070	-.057	-.043	.015	.028	-.037	-.014	.002
	I get carried away when I am working	.007	-.153	-.055	-.055	.455	-.116	-.015	-.023	-.078	.001	-.004	-.028	.052	-.053	.011	.058	-.017
	It is difficult to detach myself from my job	.036	-.049	-.061	-.102	-.116	.511	-.104	.048	-.003	-.050	.022	.008	-.017	.007	.014	-.003	-.045
	I have overcome setbacks to conquer an important challenge	-.093	.083	-.036	.025	-.015	-.104	.585	-.106	-.120	.002	-.031	-.077	.013	-.011	.007	-.008	.023
	I finish whatever I begin	-.011	.081	-.022	.004	-.023	.048	-.106	.487	-.074	-.104	-.086	.057	-.039	.066	-.118	.012	.011
	Setbacks at work don't discourage me	.000	-.004	-.005	.062	-.078	-.003	-.120	-.074	.521	-.052	-.112	-.047	-.001	.050	.043	-.047	-.054
	I am a hard worker	-.020	-.034	.103	-.070	.001	-.050	.002	-.104	-.052	.473	-.165	.051	-.031	-.052	.005	.008	.022
	I am diligent in my work	-.044	-.010	-.027	-.057	-.004	.022	-.031	-.066	-.112	-.165	.408	-.012	.029	.006	-.008	.003	-.023
	I am good at creating new ways of doing business	.005	.007	.080	-.043	-.028	.008	-.077	.057	-.047	.051	-.012	.347	-.127	-.070	-.025	-.030	-.045
	I can easily come up with new product ideas	.052	-.040	-.074	.015	.052	-.017	.013	-.039	-.001	-.031	.029	-.127	.356	-.094	-.076	.060	-.022
	I regularly come up with new product-market ideas and projects	.001	-.011	-.007	.028	-.053	.007	-.011	.066	.050	-.052	.006	-.070	-.094	.356	-.076	-.029	-.026
	I am good at generating and implementing new ideas	.016	-.015	.037	-.037	.011	.014	.007	-.118	.043	.005	-.008	-.025	-.076	-.076	.229	-.091	-.047
	I always try to combine resources and capabilities in novel ways	-.034	-.008	-.052	-.014	.058	-.003	-.008	.012	-.047	.008	.003	-.030	.060	-.029	-.091	.320	-.129
	I am good at coming up with novel solutions for specific problems of the company	-.049	.057	.014	.002	-.017	-.045	.023	.011	-.054	.022	-.023	-.045	-.022	-.026	-.047	-.129	.319
Anti-image Correlation	Time flies when I am working	.879 ^a	-.438	-.070	-.083	.014	.071	-.170	-.022	.000	-.041	-.096	.012	.122	.003	.047	-.084	-.121
	When I am working, I forget everything else around me	-.438	.814 ^a	-.075	-.070	-.349	-.106	.167	-.177	-.009	-.075	-.023	.020	-.103	-.028	-.048	-.023	.154
	I feel happy when I am working intensely	-.070	-.075	.844 ^a	-.376	-.112	-.117	-.065	-.043	-.009	.205	-.059	.186	-.171	-.017	.106	-.127	.034
	I am immersed in my work	-.083	-.070	-.376	.903 ^a	-.132	-.231	.052	.010	.138	-.165	-.145	-.119	.040	.075	-.124	-.039	.006
	I get carried away when I am working	.014	-.349	-.112	-.132	.882 ^a	-.239	-.030	-.050	-.160	.001	-.010	-.069	.130	-.132	.033	.151	-.046
	It is difficult to detach myself from my job	.071	-.106	-.117	-.231	-.239	.914 ^a	-.191	.096	-.007	-.102	.047	.020	-.039	.017	.040	-.007	-.113
	I have overcome setbacks to conquer an important challenge	-.170	.167	-.065	.052	-.030	-.191	.897 ^a	-.199	-.218	.004	-.063	-.170	.027	-.024	.020	-.018	.053
	I finish whatever I begin	-.022	.177	-.043	.010	-.050	.096	-.199	.841 ^a	-.148	-.217	-.148	.138	-.094	.159	-.354	.030	.029
	Setbacks at work don't discourage me	.000	-.009	-.009	.138	-.160	-.007	-.218	-.148	.892 ^a	-.104	-.242	-.111	-.002	.116	.124	-.115	-.131
	I am a hard worker	-.041	-.075	.205	-.165	.001	-.102	.004	-.217	-.104	.876 ^a	-.375	.125	-.076	-.125	.014	.020	.056
	I am diligent in my work	-.096	-.023	-.059	-.145	-.010	.047	-.063	-.148	-.242	-.375	.915 ^a	-.032	.076	.015	-.026	.009	-.064
	I am good at creating new ways of doing business	.012	.020	.186	-.119	-.069	.020	-.170	.138	-.111	.125	-.032	.899 ^a	-.362	-.198	-.088	-.091	-.136
	I can easily come up with new product ideas	.122	-.103	-.171	.040	.130	-.039	.027	-.094	-.002	-.076	.076	-.362	.869 ^a	-.263	-.265	.179	-.066
	I regularly come up with new product-market ideas and projects	.003	-.028	-.017	.075	-.132	.017	-.024	-.159	.116	-.125	.015	-.198	-.263	.916 ^a	-.265	-.084	-.076
	I am good at generating and implementing new ideas	.047	-.048	.106	-.124	.033	.040	.020	-.354	.124	.014	-.026	-.088	-.265	-.265	.888 ^a	-.337	-.173
	I always try to combine resources and capabilities in novel ways	-.084	-.023	-.127	-.039	.151	-.007	-.018	.030	-.115	.020	.009	-.091	.179	-.084	-.337	.893 ^a	-.404
	I am good at coming up with novel solutions for specific problems of the company	-.121	.154	.034	.006	-.046	-.113	.053	.029	-.131	.056	-.064	-.136	-.066	-.076	-.173	-.404	.918 ^a

a. Measures of Sampling Adequacy(MSA)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.888
Bartlett's Test of Sphericity	Approx. Chi-Square	2142.150
	df	136
	Sig.	.000

Communalities

	Initial	Extraction
Time flies when I am working	1.000	.519
When I am working, I forget everything else around me	1.000	.686
I feel happy when I am working intensely	1.000	.531
I am immersed in my work	1.000	.673
I get carried away when I am working	1.000	.640
It is difficult to detach myself from my job	1.000	.565
I have overcome setbacks to conquer an important challenge	1.000	.488
I finish whatever I begin	1.000	.651
Setbacks at work don't discourage me	1.000	.600
I am a hard worker	1.000	.580
I am diligent in my work	1.000	.703
I am good at creating new ways of doing business	1.000	.721
I can easily come up with new product ideas	1.000	.690
I regularly come up with new product-market ideas and projects	1.000	.738
I am good at generating and implementing new ideas	1.000	.813
I always try to combine resources and capabilities in novel ways	1.000	.659
I am good at coming up with novel solutions for specific problems of the company	1.000	.707

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.013	41.253	41.253	7.013	41.253	41.253	4.231	24.888	24.888
2	2.411	14.180	55.433	2.411	14.180	55.433	3.652	21.480	46.368
3	1.539	9.053	64.486	1.539	9.053	64.486	3.080	18.118	64.486
4	.810	4.762	69.248						
5	.761	4.479	73.728						
6	.724	4.256	77.984						
7	.577	3.393	81.377						
8	.514	3.023	84.400						
9	.465	2.736	87.136						
10	.379	2.227	89.363						
11	.356	2.092	91.455						
12	.303	1.782	93.238						
13	.295	1.733	94.971						
14	.257	1.513	96.483						
15	.231	1.357	97.840						
16	.202	1.190	99.030						
17	.165	.970	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component		
	1	2	3
Time flies when I am working	.579	.427	
When I am working, I forget everything else around me	.512	.553	
I feel happy when I am working intensely	.515	.452	
I am immersed in my work	.716		
I get carried away when I am working	.583	.521	
It is difficult to detach myself from my job	.612		
I have overcome setbacks to conquer an important challenge	.586		

I finish whatever I begin	.552		.566
Setbacks at work don't discourage me	.597		.487
I am a hard worker	.624		.400
I am diligent in my work	.701		.417
I am good at creating new ways of doing business	.690	-.447	
I can easily come up with new product ideas	.644	-.464	
I regularly come up with new product-market ideas and projects	.684	-.410	
I am good at generating and implementing new ideas	.764	-.472	
I always try to combine resources and capabilities in novel ways	.734		
I am good at coming up with novel solutions for specific problems of the company	.748		

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Rotated Component Matrix^a

	Component		
	1	2	3
Time flies when I am working		.645	
When I am working, I forget everything else around me		.824	
I feel happy when I am working intensely		.713	
I am immersed in my work		.727	
I get carried away when I am working		.769	
It is difficult to detach myself from my job		.700	
I have overcome setbacks to conquer an important challenge			.633
I finish whatever I begin			.761
Setbacks at work don't discourage me			.733

I am a hard worker			.680
I am diligent in my work			.737
I am good at creating new ways of doing business	.824		
I can easily come up with new product ideas	.817		
I regularly come up with new product-market ideas and projects	.833		
I am good at generating and implementing new ideas	.844		
I always try to combine resources and capabilities in novel ways	.732		
I am good at coming up with novel solutions for specific problems of the company	.765		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	.648	.547	.530
2	-.674	.736	.063
3	-.356	-.398	.846

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

Appendix 4.4: Exploratory Factor Analysis Results for Business Performance

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
Market share	3.50	1.706	218
Sales volume	3.79	1.693	218
Profitability	4.10	1.503	218
Cash flows	4.09	1.452	218
Return on investments	3.87	1.585	218

Correlation Matrix^a

		Market share	Sales volume	Profitability	Cash flows	Return on investments
Correlation	Market share	1.000	.725	.517	.503	.414
	Sales volume	.725	1.000	.572	.497	.381
	Profitability	.517	.572	1.000	.764	.611
	Cash flows	.503	.497	.764	1.000	.649
	Return on investments	.414	.381	.611	.649	1.000
Sig. (1-tailed)	Market share		.000	.000	.000	.000
	Sales volume	.000		.000	.000	.000
	Profitability	.000	.000		.000	.000
	Cash flows	.000	.000	.000		.000
	Return on investments	.000	.000	.000	.000	

a. Determinant = .067

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.785
Bartlett's Test of Sphericity	Approx. Chi-Square
	579.534
	df
	10
	Sig.
	.000

Anti-image Matrices

		Market share	Sales volume	Profitability	Cash flows	Return on investments
Anti-image Covariance	Market share	.443	-.261	-.003	-.047	-.046
	Sales volume	-.261	.421	-.100	-.004	.024
	Profitability	-.003	-.100	.350	-.188	-.095
	Cash flows	-.047	-.004	-.188	.355	-.148
	Return on investments	-.046	.024	-.095	-.148	.542
Anti-image Correlation	Market share	.757 ^a	-.606	-.007	-.119	-.095
	Sales volume	-.606	.740 ^a	-.261	-.009	.050
	Profitability	-.007	-.261	.795 ^a	-.533	-.217
	Cash flows	-.119	-.009	-.533	.785 ^a	-.338
	Return on investments	-.095	.050	-.217	-.338	.865 ^a

a. Measures of Sampling Adequacy(MSA)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.262	65.238	65.238	3.262	65.238	65.238
2	.836	16.721	81.959			
3	.405	8.103	90.062			
4	.280	5.605	95.667			
5	.217	4.333	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
Market share	.777
Sales volume	.782
Profitability	.867
Cash flows	.853
Return on investments	.753

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

**Appendix 4.5: Inter-Item, Item-Scale Correlations and Cronbach's Alpha
for all constructs**

Scale: Harmonious Passion

Case Processing Summary

		N	%
Cases	Valid	218	100.0
	Excluded ^a	0	.0
	Total	218	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.728	.740	3

Item Statistics

	Mean	Std. Deviation	N
My work allows me to live various experiences	6.08	1.230	218
The new things that I discover with my work allow me to appreciate it even more	5.28	1.587	218
My work allows me to live memorable experiences	5.72	1.494	218

Inter-Item Correlation Matrix

	My work allows me to live various experiences	The new things that I discover with my work allow me to appreciate it even more	My work allows me to live memorable experiences
My work allows me to live various experiences	1.000	.513	.542
The new things that I discover with my work allow me to appreciate it even more	.513	1.000	.404
My work allows me to live memorable experiences	.542	.404	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Covariances	.985	.957	1.002	.045	1.047	.000	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
My work allows me to live various experiences	10.99	6.664	.629	.397	.574
The new things that I discover with my work allow me to appreciate it even more	11.80	5.738	.515	.286	.694
My work allows me to live memorable experiences	11.36	6.036	.532	.315	.664

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
17.08	12.174	3.489	3

Scale: Obsessive Passion**Case Processing Summary**

		N	%
Cases	Valid	218	100.0
	Excluded ^a	0	.0
	Total	218	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.904	.905	4

Item Statistics

	Mean	Std. Deviation	N
The urge is so strong I can't help myself from doing my work	3.89	1.927	218
I have difficulty imagining my life without my work	4.30	2.029	218
I have a tough time controlling my need to do my work	3.81	1.903	218
I have almost an obsessive feeling for my work	3.24	1.984	218

Inter-Item Correlation Matrix

	The urge is so strong I can't help myself from doing my work	I have difficulty imagining my life without my work	I have a tough time controlling my need to do my work	I have almost an obsessive feeling for my work
The urge is so strong I can't help myself from doing my work	1.000	.703	.739	.720
I have difficulty imagining my life without my work	.703	1.000	.680	.598
I have a tough time controlling my need to do my work	.739	.680	1.000	.784
I have almost an obsessive feeling for my work	.720	.598	.784	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Covariances	2.700	2.406	2.959	.553	1.230	.030	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
The urge is so strong I can't help myself from doing my work	11.35	27.657	.810	.656	.867
I have difficulty imagining my life without my work	10.94	28.116	.723	.550	.899
I have a tough time controlling my need to do my work	11.43	27.582	.830	.704	.860
I have almost an obsessive feeling for my work	11.99	27.622	.779	.658	.878

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.23	47.793	6.913	4

Scale: Engagement**Case Processing Summary**

		N	%
Cases	Valid	218	100.0
	Excluded ^a	0	.0
	Total	218	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.823	.826	4

Item Statistics

	Mean	Std. Deviation	N
I feel happy when I am working intensely	4.75	1.782	218
I am immersed in my work	5.03	1.586	218
I get carried away when I am working	4.65	1.758	218
It is difficult to detach myself from my job	4.22	1.888	218

Inter-Item Correlation Matrix

	I feel happy when I am working intensely	I am immersed in my work	I get carried away when I am working	It is difficult to detach myself from my job
I feel happy when I am working intensely	1.000	.602	.468	.478
I am immersed in my work	.602	1.000	.550	.588
I get carried away when I am working	.468	.550	1.000	.570
It is difficult to detach myself from my job	.478	.588	.570	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Covariances	1.661	1.467	1.892	.425	1.289	.022	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I feel happy when I am working intensely	13.90	19.547	.607	.400	.796
I am immersed in my work	13.62	19.766	.709	.508	.754
I get carried away when I am working	14.00	19.397	.632	.409	.784
It is difficult to detach myself from my job	14.43	18.193	.653	.442	.776

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.65	32.278	5.681	4

Scale: Persistence**Case Processing Summary**

		N	%
Cases	Valid	218	100.0
	Excluded ^a	0	.0
	Total	218	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.786	.788	3

Item Statistics

	Mean	Std. Deviation	N
Setbacks at work don't discourage me	5.63	1.413	218
I am a hard worker	5.57	1.453	218
I am diligent in my work	5.79	1.331	218

Inter-Item Correlation Matrix

	Setbacks at work don't discourage me	I am a hard worker	I am diligent in my work
Setbacks at work don't discourage me	1.000	.448	.562
I am a hard worker	.448	1.000	.649
I am diligent in my work	.562	.649	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Covariances	1.077	.919	1.255	.336	1.365	.023	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Setbacks at work don't discourage me	11.36	6.392	.553	.328	.785
I am a hard worker	11.43	5.882	.617	.431	.719
I am diligent in my work	11.20	5.944	.712	.513	.619

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
16.99	12.341	3.513	3

Scale: Opportunity Creation**Case Processing Summary**

		N	%
Cases	Valid	218	100.0
	Excluded ^a	0	.0
	Total	218	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.915	.918	6

Item Statistics

	Mean	Std. Deviation	N
I am good at creating new ways of doing business	4.71	1.669	218
I can easily come up with new product ideas	4.24	1.854	218
I regularly come up with new product-market ideas and projects	4.72	1.727	218
I am good at generating and implementing new ideas	4.78	1.541	218
I always try to combine resources and capabilities in novel ways	5.17	1.445	218
I am good at coming up with novel solutions for specific problems of the company	5.13	1.389	218

Inter-Item Correlation Matrix

	I am good at creating new ways of doing business	I can easily come up with new product ideas	I regularly come up with new product-market ideas and projects	I am good at generating and implementing new ideas	I always try to combine resources and capabilities in novel ways	I am good at coming up with novel solutions for specific problems of the company
I am good at creating new ways of doing business	1.000	.691	.675	.672	.590	.642
I can easily come up with new product ideas	.691	1.000	.686	.696	.482	.555
I regularly come up with new product-market ideas and projects	.675	.686	1.000	.711	.581	.608
I am good at generating and implementing new ideas	.672	.696	.711	1.000	.727	.715

I always try to combine resources and capabilities in novel ways	.590	.482	.581	.727	1.000	.757
I am good at coming up with novel solutions for specific problems of the company	.642	.555	.608	.715	.757	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Covariances	1.673	1.292	2.196	.904	1.699	.080	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I am good at creating new ways of doing business	24.04	45.556	.774	.611	.898
I can easily come up with new product ideas	24.51	44.254	.733	.617	.907
I regularly come up with new product-market ideas and projects	24.03	44.923	.773	.611	.899
I am good at generating and implementing new ideas	23.98	45.893	.839	.720	.890
I always try to combine resources and capabilities in novel ways	23.58	49.096	.721	.655	.906
I am good at coming up with novel solutions for specific problems of the company	23.62	49.016	.763	.656	.901

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
28.75	65.785	8.111	6

Scale: Performance**Case Processing Summary**

		N	%
Cases	Valid	218	100.0
	Excluded ^a	0	.0
Total		218	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.863	.866	5

Item Statistics

	Mean	Std. Deviation	N
Market share	3.50	1.706	218
Sales volume	3.79	1.693	218
Profitability	4.10	1.503	218
Cash flows	4.09	1.452	218
Return on investments	3.87	1.585	218

Inter-Item Correlation Matrix

	Market share	Sales volume	Profitability	Cash flows	Return on investments
Market share	1.000	.725	.517	.503	.414
Sales volume	.725	1.000	.572	.497	.381
Profitability	.517	.572	1.000	.764	.611
Cash flows	.503	.497	.764	1.000	.649
Return on investments	.414	.381	.611	.649	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Covariances	1.410	1.023	2.094	1.071	2.047	.089	5

Item-Total Statistics

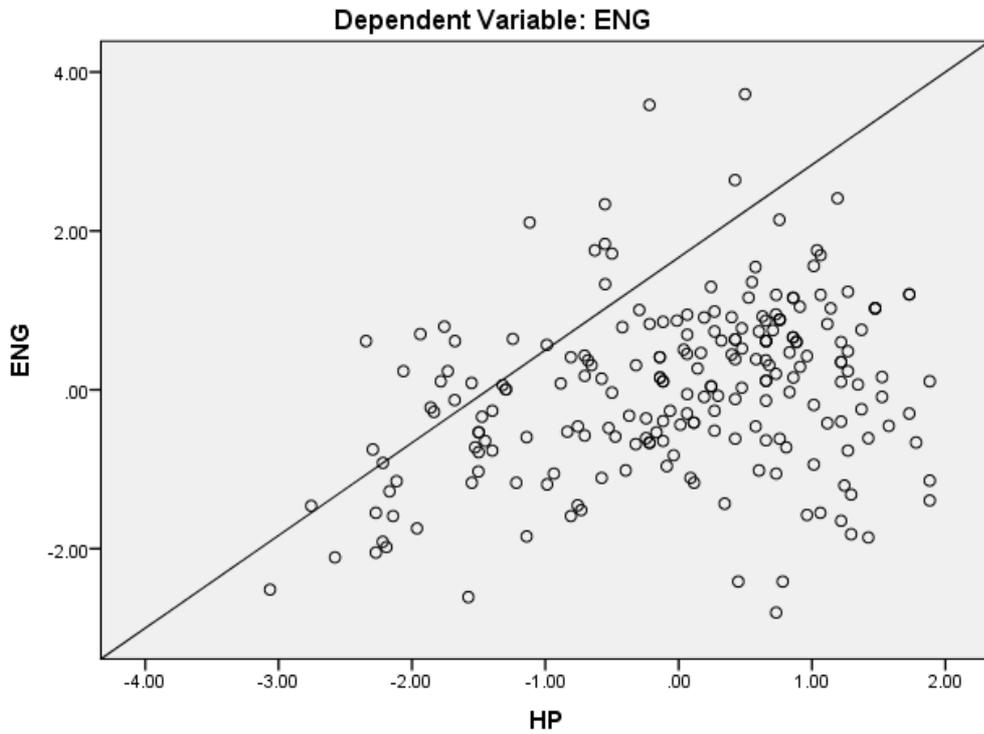
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Market share	15.84	26.375	.660	.557	.841
Sales volume	15.54	26.410	.666	.579	.839
Profitability	15.23	26.791	.759	.650	.816
Cash flows	15.24	27.497	.739	.645	.822
Return on investments	15.47	28.167	.605	.458	.853

Scale Statistics

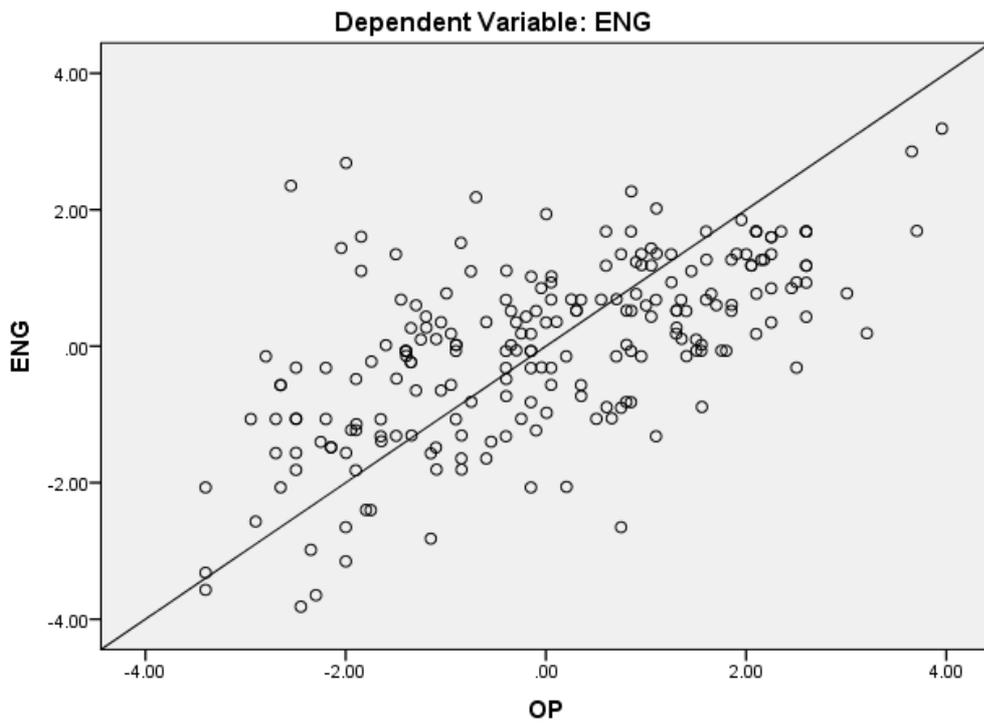
Mean	Variance	Std. Deviation	N of Items
19.33	40.861	6.392	5

Appendix 4.6: bivariate Scatterplots for Linearity and Homoscedasticity checks

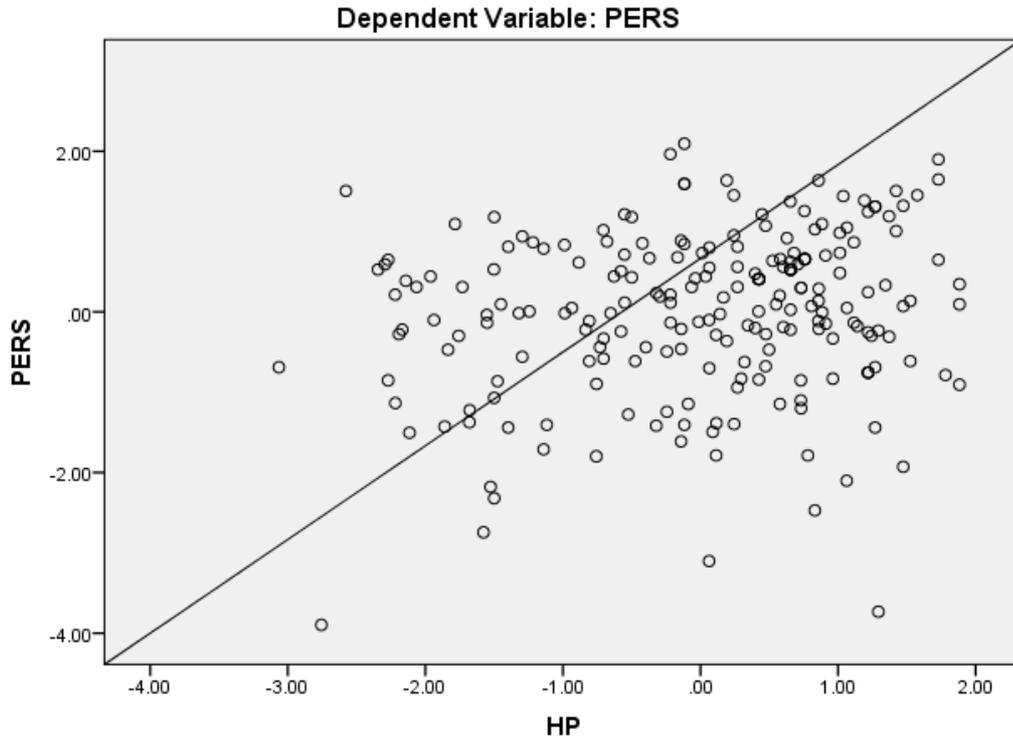
Harmonious Passion and Engagement



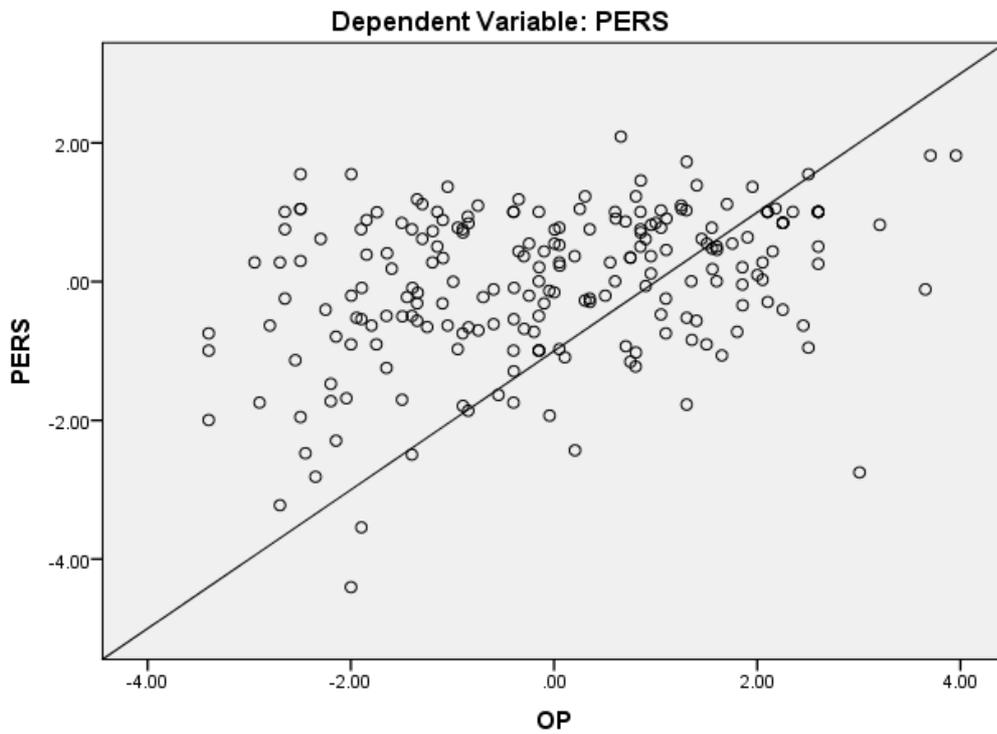
Obsessive Passion and Engagement



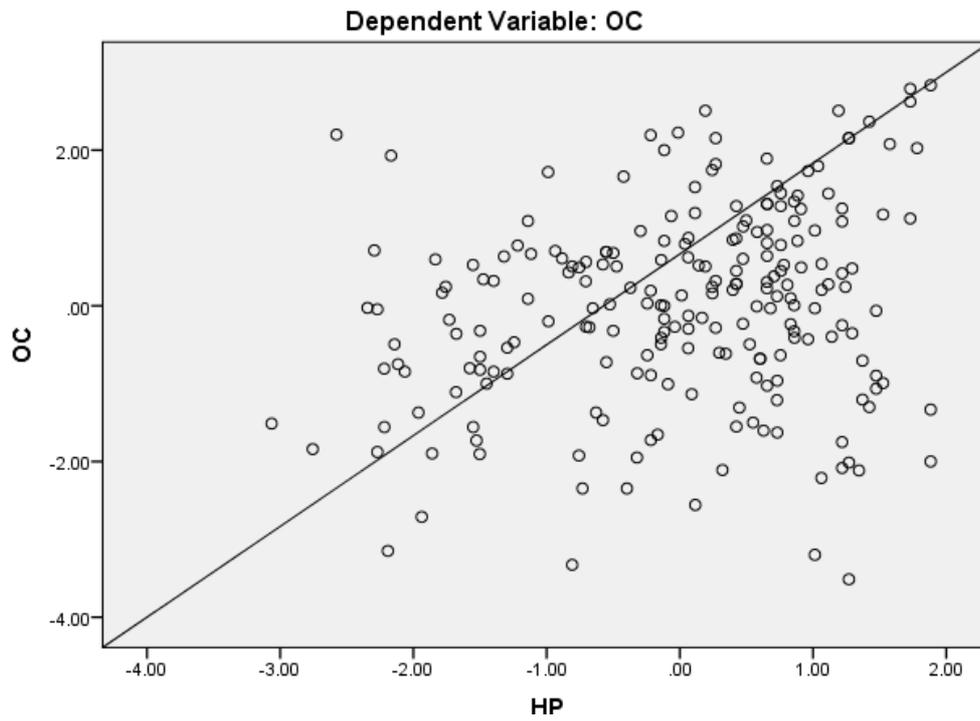
Harmonious Passion and Persistence



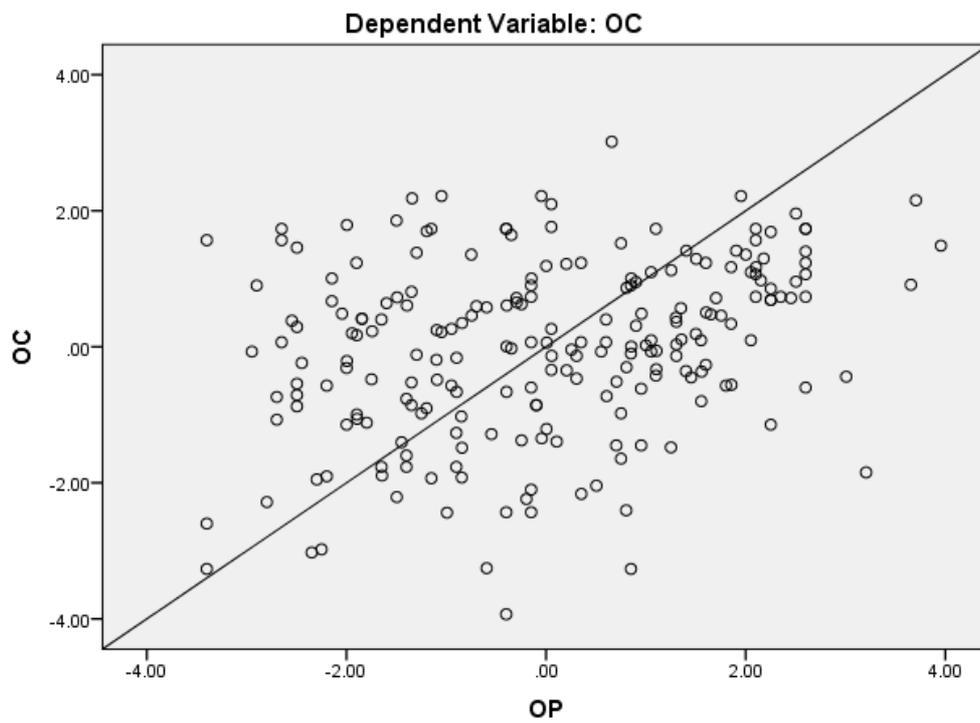
Obsessive Passion and Persistence



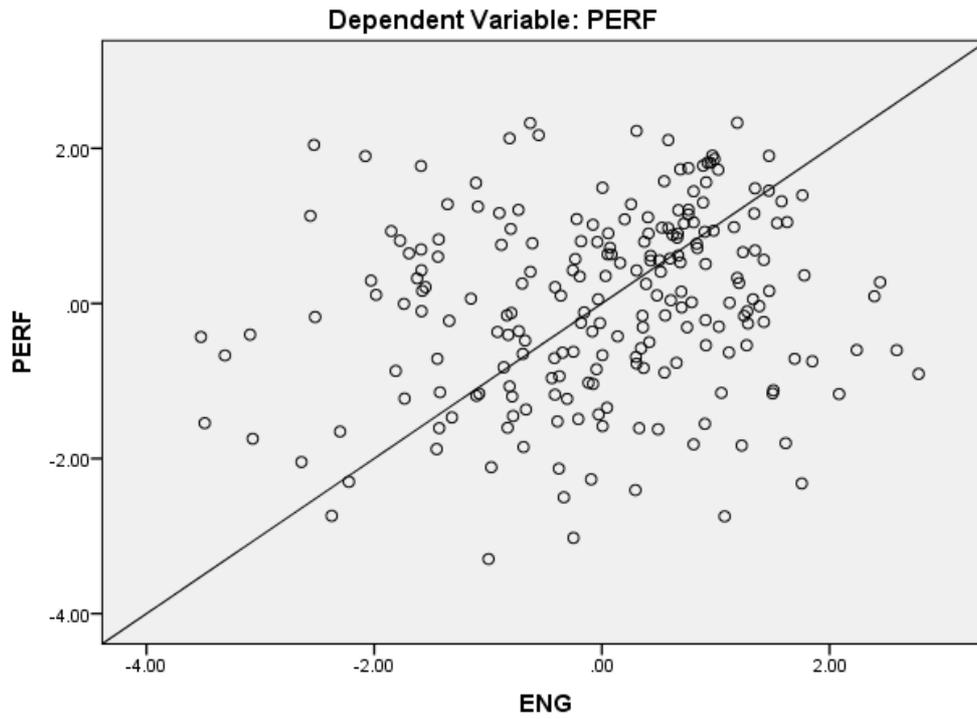
Harmonious Passion and Opportunity Creation



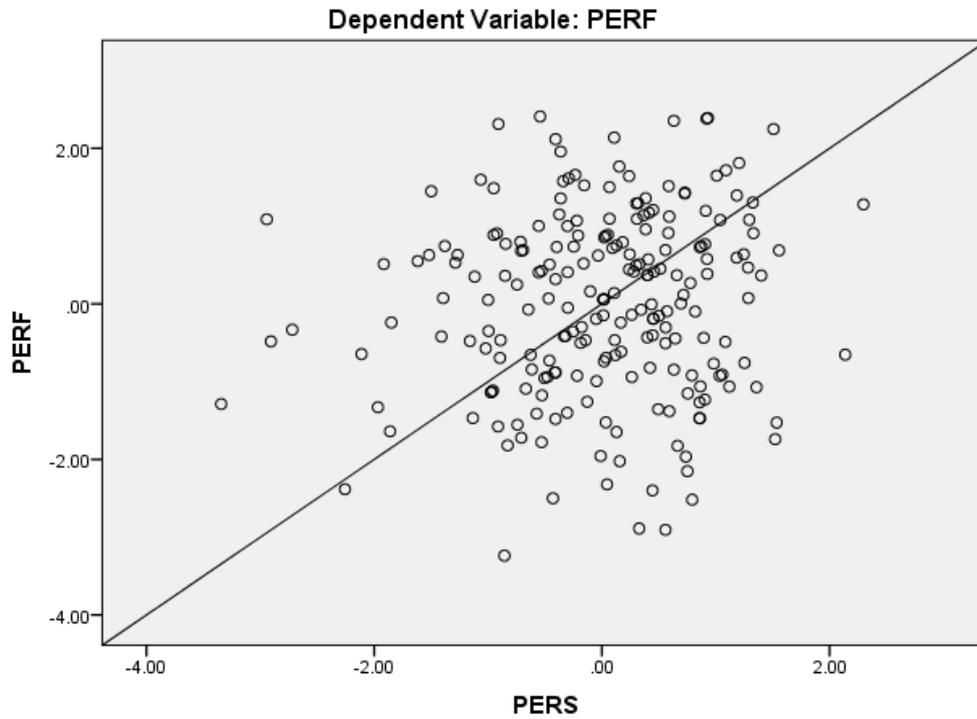
Obsessive Passion and Opportunity Creation



Engagement and Business Performance



Persistence and Business Performance



Opportunity Creation and Business Performance

