

# **THE INFLUENCE OF HUMAN AND SOCIAL CAPITAL ON THE STRATEGIC ENTREPRENEURIAL BEHAVIOUR OF BUSINESSWOMEN**

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The crest of Stellenbosch University is centered behind the text. It features a shield with a red and white checkered pattern, a blue chief, and a red banner at the bottom with the Latin motto 'Pectora roburant cultus recti'. The shield is supported by two figures, and a red flag is held above the crest.

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**Date submitted:**

**March 2012**

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## ABSTRACT

The purpose of this study was to determine the type of decision-making approaches used by businesswomen, both intrapreneurs and entrepreneurs, under conditions of uncertainty, and how the human and social capital they possess influence their strategic entrepreneurial behaviour (SEB). Entrepreneurial decision making often takes place under uncertain conditions, in which rational models provide little guidance for decision makers. Effectuation is proposed as an alternative decision model to rationality, particularly for emerging opportunities. Although some exploratory work has been conducted on this school of thought, research gaps remain. Particularly, there is a lack of research on businesswomen, despite the fact that they are an important group of entrepreneurs within the economy with great potential to contribute to economic growth, development and employment generation.

The study population was South African businesswomen, and the membership register of the South African Businesswomen's Association (BWA) was used as a sampling frame. An online survey was sent to all members and a total of 269 usable responses were obtained. Data were analysed with SPSS using descriptive and inferential statistical techniques.

The findings indicate there are no significant differences between the decision-making approaches of intrapreneurs and entrepreneurs, and that they use both effectuation and causation when shaping and implementing new initiatives, while the literature argues that these two approaches are distinct and dichotomous. In using a causal approach, the respondents value planning and a systematic approach to new, uncertain projects, although they realise the benefit of flexibility and of limiting the downside loss to their decisions; therefore they also incorporate elements of effectual logic. Furthermore, businesswomen's ability to cultivate relationships plays an integral role in the SEB process for both effectuation and causation, with businesswomen emphasising their relationships with key stakeholders. Concerning businesswomen's human capital, the study finds that self-efficacy plays an important role in terms of businesswomen's confidence, and that it has an impact on both SEB decision-making approaches.

Several theoretical, practical and educational implications arise from these findings. Theoretically, this study contributes to the decision-making literature by showing that businesswomen utilise both decision-making styles and do not merely rely on one or the other. Furthermore, it also shows that relationship cultivation and self-efficacy are significantly related to both SEB approaches.

Practically, both businesswomen and other stakeholders, such as financial institutions, should recognise the relevance and importance of using both styles and not stress causation above effectuation, as is the case currently. Furthermore, entrepreneurial self-efficacy, which is relevant for both approaches to SEB, can be raised through investing in targeted training and education in female entrepreneurship.

For entrepreneurship educators, these findings emphasise that courses should incorporate both decision-making styles and that these skills should be developed in students. Business management students should be taught that, while logical, planned and prediction-based causal approaches are appropriate under stable conditions, effectuation provides resources to approach uncertain conditions more effectively. In addition, entrepreneurial initiatives with a low degree of innovativeness also would be more suited to a predictive, casual approach, while initiatives with a higher degree of innovativeness would benefit from using effectual principles.

## OPSOMMING

Die doel van hierdie studie was om die besluitnemingsmetodes van sakevroue, beide intrapreneurs en entrepreneurs, onder omstandighede van onsekerheid te bepaal en te bestudeer hoe die menslike en sosiale kapitaal wat hulle besit hul strategiese entrepreneuriese gedrag (SEG) beïnvloed. Entrepreneuriese besluitneming vind dikwels onder onsekere omstandighede plaas waar rasionele modelle min leiding aan besluitnemers verskaf. Effektuasie ("effectuation") word voorgestel as 'n alternatiewe besluitnemingsmodel tot rasionaliteit, spesifiek vir ontluikende geleenthede. Hoewel daar reeds verkennende navorsing in die veld gedoen is, is daar steeds navorsingsgapings. Daar is veral 'n tekort aan navorsing oor sakevroue ten spyte van die feit dat hulle een van die belangrikste groepe entrepreneurs binne die ekonomie is, met groot potensiaal om 'n bydrae tot ekonomiese groei, ontwikkeling en werkskepping te lewer.

Die studiebevolking was Suid-Afrikaanse sakevroue, en die lederegister van die Suid-Afrikaanse Sakevrouevereniging (BWA) is as steekproefraamwerk gebruik. 'n Aanlynopname is aan al die lede gestuur en 'n totaal van 269 bruikbare antwoorde is ontvang. Data is ontleed met behulp van SPSS deur gebruik te maak van beskrywende en inferensiële statistiese tegnieke.

Die bevindinge dui aan dat daar geen betekenisvolle verskil tussen die besluitnemingsbenaderings van intrapreneurs en entrepreneurs is nie en dat beide effektuasie ("effectuation") en kousaliteit ("causation") in die vorming en implementering van nuwe inisiatiewe gebruik word. Volgens die literatuur is hierdie twee besluitnemingsbenaderings egter duidelik onderskeibaar. In die gebruik van 'n kousale ("causal") benadering heg die respondente waarde aan beplanning en 'n sistematiese benadering tot nuwe, onseker projekte. Hulle besef egter die voordeel van buigsaamheid en die beperking van besluite wat met kousaliteit gepaard gaan; hulle neem dus ook elemente van effektuasie-logika in ag. Verder speel sakevroue se vermoë om verhoudings te kweek 'n integrale rol in die SEG-proses vir beide effektuasie ("effectuation") en kousaliteit ("causation"), met sakevroue wat hulle verhoudings met sleutel rolspelers beklemtoon. Met betrekking tot sakevroue se menslike kapitaal het die studie gevind dat self-doeltreffendheid 'n belangrike rol in

terme van sakevroue se vertrouwe speel en dat dit 'n impak op beide SEG-besluitnemingsbenaderings het.

Verskeie teoretiese, praktiese en opvoedkundige implikasies ontstaan uit hierdie bevindinge. Teoreties het hierdie studie bygedra tot besluitnemings-literatuur deur aan te toon dat sakevroue gebruik maak van albei besluitnemingstyle en nie net op een staatmaak nie. Die studie het ook gevind dat die kweek van verhoudings, asook selfdoeltreffendheid, beduidend verband hou met beide SEG-benaderings.

Prakties moet sakevroue en ander belanghebbendes, soos finansiële instellings, die toepaslikheid en belangrikheid van die gebruik van beide style herken, en nie op kousaliteit klem lê bo effektuasie nie. Verder kan entrepreneuriese selfdoeltreffendheid, wat vir beide benaderings tot SEG relevant is, verhoog word deur in geteikende opleiding en onderrig oor vroulike entrepreneurskap te belê.

Vir entrepreneurskapopvoeders beklemtoon hierdie bevindinge dat kursusse beide besluitnemingstyle in ag moet neem en dat hierdie vaardighede in studente ontwikkel moet word. Ondernemingsbestuurstudente moet leer dat hoewel logiese, beplande en voorspellingsgebaseerde kousaliteitsbenaderings onder stabiele omstandighede toepaslik is, effektuasie maniere bied om onsekere situasies meer effektief te benader. Entrepreneuriese inisiatiewe met 'n lae graad van innovasie is meer geskik vir 'n voorspellende, kousale benadering, terwyl inisiatiewe met 'n hoër mate van innovasie voordeel sal trek uit die gebruik van effektuasiebeginsels.

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*Praise and glory and wisdom and thanks and honour  
and power and strength be to our  
God for ever and ever. Amen!*  
*Revelation 7:12*



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# CHAPTER 1

## INTRODUCTION TO THE STUDY

### 1.1 INTRODUCTION

*"Entrepreneurs are entrepreneurial, as differentiated from managers or strategists, because they think effectually; they believe in a yet-to-be-made future that be substantially shaped by human action; and they realise that to the extent this human action can control the future, they need not expend energies trying to predict it. In fact, to the extent that the future is shaped by human action, it is not much use trying to predict it - it is much more useful to understand and work with the people who are engaged in the decisions and actions that bring it into existence."*

Saras Sarasvathy (2001b:9)

The notion that entrepreneurs create new firms and innovative initiatives is widely recognised. The idea, however, that entrepreneurs create opportunities in the absence of existing markets, or that they may not follow a linear strategic decision-making process, is a concept that is gaining ground with researchers (Dess, Lumpkin & Covin, 1997; Sarasvathy, 2001c; Shane & Venkataraman, 2000). Entrepreneurs often make decisions in an uncertain environment in which contingencies constantly arise and where rational decision-making models provide little guidance for them as individuals. Sarasvathy (2001c) has proposed effectuation as an alternative decision model for entrepreneurial decision making, particularly for emerging opportunities under conditions of uncertainty (Dew, Read, Sarasvathy & Wiltbank, 2009). In contrast to the effectual approach, rational decision-making models tend to focus on the causation approach, which reflects predictive reasoning.

Focusing on entrepreneurship through an effectuation lens locates the practical task and challenge of entrepreneurship in the finding and building of new initiatives and/or firms (Christensen, 2000:191). Although some exploratory work has been conducted on this school of thought (Dew *et al.*, 2009; Read, Dew, Sarasvathy, Song &

Wiltbank, 2009; Sarasvathy, 2008; Sarasvathy, 2001a), several research gaps remain.

There is a particular lack of research on businesswomen and their decision-making logic, in spite of the widely recognised fact that they are one of the most important groups of entrepreneurs within the economy with great potential to contribute to economic growth, economic development and employment generation (Ahl, 2006; Baker, Aldrich & Liou, 1997; Blumberg, 2005; Blumberg & Kenan, 2008; Negash, 2006; Republic of South Africa, 2005). Sarasvathy's (2008) initial sample of 27 expert entrepreneurs was mostly male and therefore the question arises whether female entrepreneurs use similar decision-making models. There thus is a lack of empirical evidence to show whether businesswomen will act in a similar fashion to their male counterparts, the 'expert' entrepreneurs Sarasvathy (2008) studied.

Previous research (Sarasvathy, 2008) has identified and articulated the constructs of effectuation and causation; however, a research gap remains in terms of the testing of proposed survey measures of both causation and effectuation in the process of entrepreneurial decision making. It is important that the empirical distinctions between effectual and causal reasoning are analysed and that the existing measures of effectuation and causation, as used in other studies such as Chandler *et al.* (2011), are developed and refined.

The purpose of this study was thus to determine the type of decision-making approaches used by businesswomen, both entrepreneurs and intrapreneurs, under conditions of uncertainty, and how the human and social capital they possess influences their strategic entrepreneurial behaviour (SEB). This chapter proceeds by providing the background and rationale for the research, followed by an outline of the theoretical framework of this study. Thereafter the research problem, the research question and the research objectives are discussed briefly. Lastly, the research methodology and an outline of the study are presented.

## **1.2 BACKGROUND AND RATIONALE FOR THE RESEARCH**

From the focus on female entrepreneurship, it is possible to derive both economic and social benefits. Firstly, from an economic perspective, entrepreneurship



invigorates and strengthens markets through the formation of new businesses that lead to job creation. Greater economic independence of women also facilitates women exercising greater decision-making power over the allocation of household resources (Von Broembsen, Wood & Herrington, 2005). Entrepreneurship thus has a multiplier effect on the economy.

From a social perspective, entrepreneurship empowers citizens, generates innovation and changes mindsets (Nicolaidis, 2011). Empowered women gain more equality and control over their own lives, while also contributing directly to the development of their children's human capital (nutrition, health and education), and thereby indirectly to their nation's income growth through their own (Blumberg, 2005; Blumberg & Kenan, 2008; Negash, 2006).

Empowering females thus have the potential to integrate developing countries into the global economy (United Nations Conference on Trade and Development [UNCTAD], 2002). However, these benefits can only be realised when adequate information and research, within a sound theoretical framework, can aid public policy and private decision making. One of the ways in which female entrepreneurial participation can be encouraged in order to achieve increased sustainable economic development is to create an awareness of the actions, behaviours and decision making of businesswomen by studying their entrepreneurial behaviour.

Research into the theoretical field of effectuation and causation has developed over the past decade. Most of the early research tended to utilise experimental studies of verbal protocols or field studies, using qualitative data analysis, with a number of recent studies using a more quantitative approach (Chandler *et al.*, 2011). In order to move the research stream beyond the developing phase, empirical research is needed to study the antecedents of causation and effectuation and how these influence businesswomen's decision making in the process of SEB.

While similarities have been found in the personal demographics of male and female entrepreneurs, there are differences in business and industry choices, financing strategies, growth patterns, and governance structures in female-led firms (Greene *et al.*, 2003). Businesswomen share many characteristics with their male colleagues, but they are unique in various aspects: they start and manage ventures in different

sectors, develop different products and services, pursue different goals and structure their ventures in a different manner (Carter, 2007). They also start with unique sets of motivation, human capital, social networks and tangible resources (Cowling & Taylor, 2001), suggesting that the decision-making processes they use would be a fruitful area of study. These differences between male and female entrepreneurs, the social value created by female entrepreneurs, together with the fact that businesswomen's importance in the global business environment is growing (Jesselyn & Mitchell, 2006), provide compelling reasons to study female entrepreneurial behaviour.

For the purposes of the present study, two groups of businesswomen who have used their knowledge and resources to develop or create new business opportunities were studied. These were self-employed female entrepreneurs in a new business venture context, and female intrapreneurs active in the corporate sector.

### **1.3 THEORETICAL FRAMEWORK**

In the following section, the theoretical background to SEB, contrasting effectuation and causation as two separate types of decision-making logics, will be outlined. In addition, a brief explanation is presented of the literature concerning human and social capital in the context of SEB.

#### **1.3.1 Strategic entrepreneurial behaviour: effectuation and causation**

SEB has been highlighted by several authors (Dess *et al.*, 1997; Ireland, Hitt & Sirmon, 2003), and has been conceptualised as distinct from traditional, rational strategic planning. SEB focuses on long-term behaviour that is opportunity seeking, innovative and proactive, and may be perceived as risk taking. Sarasvathy (2008, 2001a, 2001b, 2001c) has categorised SEB into two main types of reasoning used by entrepreneurs, namely effectuation and causation. The concepts of effectual and causal reasoning are explained in more detail in Section 3.4.

When studying the process of effectual and causal reasoning, Sarasvathy (2001a:250) points out that all entrepreneurs begin with three categories of "means". Although Sarasvathy (2001a) refers to an individual's human and social capital stocks as a given set of means, the present study referred to means as human and social capital.

### **1.3.2 Human and social capital**

Human and social capital provide the basis for entrepreneurial decisions and the recognition and exploitation of new opportunities (Sarasvathy, 2008:255). For the purpose of the present study, two types of human capital, namely the self-concept, or what Sarasvathy (2008) refers to as "who I am", and personal knowledge and experience, what Sarasvathy (2008) refers to as "what I know", were examined, together with social capital, namely networks, or what Sarasvathy (2001a:250) termed "whom I know", in order to build on the current theoretical body of knowledge of SEB (effectuation and causation), as recommended by Sarasvathy (2008). In other words, the identity and knowledge base of female entrepreneurs, as well as their social networks (Sarasvathy, 2008:78), were the focus of this study. These categories of capital are briefly outlined in the following section.

#### **1.3.2.1 Human capital: "Who I am"**

For the purpose of the present study, two images of self that are based on an individual's fears and on his/her own potential, were investigated, namely images of vulnerability and images of capability, as described by Mitchell and Shepherd (2001). Images of vulnerability are captured using a measure of fear of failure, while images of capability are captured using measures of entrepreneurial self-efficacy. The relevant literature (Mitchell & Shepherd, 2001) identifies these images of self as most likely to impact on decisions to act on opportunities and as most relevant to SEB.

#### **1.3.2.2 Human capital: "What I know"**

For the purpose of the present study, two types of prior knowledge were explored, namely knowledge as reflected by qualifications and training, as well as knowledge reflected in experience. The relevant literature (Shane, 2000) identifies these knowledge "stocks" as most relevant to SEB.

#### **1.3.2.3 Social capital: "Whom I know"**

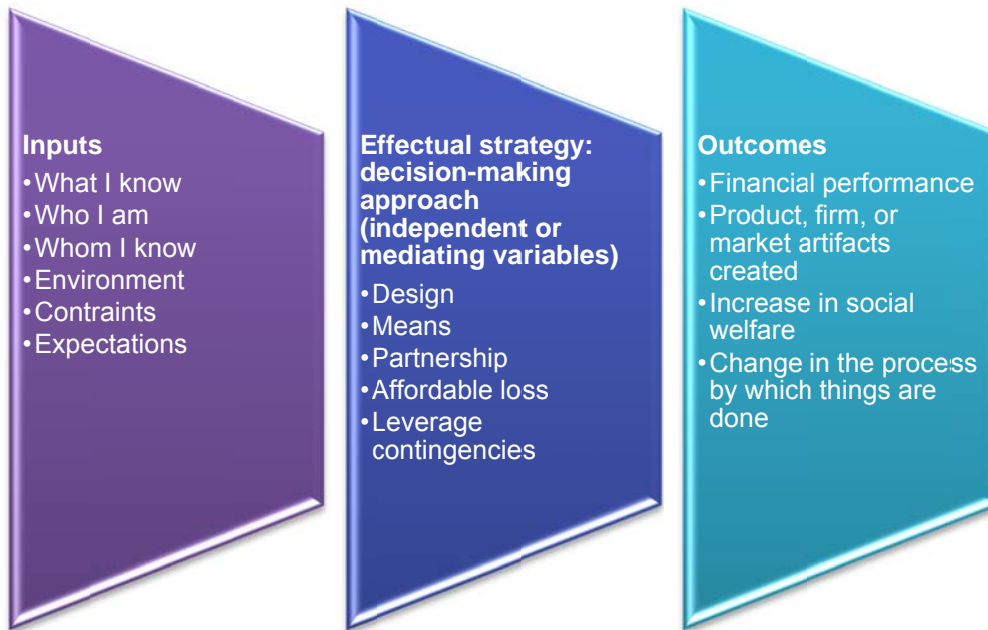
Social capital, namely networks, was termed "whom I know" by Sarasvathy (2001a:250). Social capital is about the value of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity (Social Capital Research, 2004). For the purpose of the present study, five types of social capital

were explored: coordination, relationship skills, partner knowledge, internal communication and building partnerships.

#### **1.4 RESEARCH PROBLEM**

There currently is a lack of understanding of how female entrepreneurs make decisions in the process of establishing new markets, firms and innovative opportunities. As mentioned in Section 1.2, an awareness of the actions and behaviours of these businesswomen is essential in order to grasp how an entrepreneurial economy functions (Chandler *et al.*, 2011:1). Due to rapidly changing business environments with increasingly high levels of uncertainty and change, it is vital to find decision-making approaches that will work well under these conditions. In these high-velocity environments, entrepreneurs use their human capital (identity and prior knowledge) and their social capital (networks) to act entrepreneurially in the decision-making process.

Human capital ("who I am" and "what I know") and social capital ("whom I know"), as discussed in Section 1.3, form part of Sarasvathy's (2008:273) general theoretical model to facilitate future research on SEB and effectual approaches. The model illustrates inputs and outcomes to develop an empirical understanding of the relationships that might initiate an effectual approach, as well as the results that can be expected, as illustrated in Figure 1.1. Human and social capital, as outlined in the input stage of Sarasvathy's (2008:274) model for further research, were isolated for the present study, as were the dominant SEB used by female entrepreneurs. It is important that an understanding of the entrepreneurial process is advanced by describing these two distinct approaches to strategic entrepreneurial decision making: causation and effectuation.



**Figure 1.1: General model for future research**

SOURCE: Adapted from Sarasvathy, 2008:274

Taking Sarasvathy's (2008) general theoretical model for future research into account, combined with the fact that the literature on the decision-making approaches of businesswomen in South Africa is rather limited (refer to Section 1.2), this study addresses an important research gap in terms of contributing to the understanding of how businesswomen make decisions in the process of SEB.

## **1.5 RESEARCH QUESTION AND OBJECTIVES**

Research objectives are derived from the research question, which in turn is derived from the research problem (Zikmund & Babin, 2007). The research problem was discussed in Section 1.4. Before the research objectives were formulated, the research question was first proposed.

Considering the problem statement for and background to the study, the research question that follows is:

To what extent does the human and social capital of businesswomen influence their strategic entrepreneurial behaviour?

Given the purpose of this study, the primary objective of the study was to assess the impact of human and social capital on the strategic entrepreneurial behaviour of businesswomen. The secondary objectives are listed below:

- to assess the impact of human capital - "who I am" - on the strategic entrepreneurial behaviour of businesswomen
- to assess the impact of human capital - "what I know" - on the strategic entrepreneurial behaviour of businesswomen
- to assess the impact of social capital - "whom I know" - on the strategic entrepreneurial behaviour of businesswomen

## **1.6 RESEARCH METHODOLOGY**

The research methodology that was applied to achieve the study's objectives is described briefly below.

### **1.6.1 Secondary research method**

Secondary research is data and information that have previously been collected to contribute to a knowledge base (Malhorta, 2004:102). To fulfil this purpose, a literature review was conducted (see Chapter 2, 3 and 4) to review published journal articles, books and conference papers discussing theories and past empirical studies concerning the theoretical component of this study.

### **1.6.2 Primary research method**

For the purposes of this study, quantitative research was conducted. Quantitative research can be defined as research that addresses research objectives through empirical assessments that involve numerical measurement and analysis (Zikmund *et al.*, 2010:134). The chosen quantitative research method for this study was the survey research technique, for which information was collected from a convenient sample of respondents by means of an online questionnaire.

### **1.6.3 Sampling**

Since this study was conducted in South Africa and aimed to determine the influence of human and social capital on the SEB of businesswomen, the target population relevant to this study included all South African businesswomen. With the target population being South African businesswomen, it was decided to employ the non-probability sampling technique of convenient sampling. Since there is no comprehensive database of businesswomen in South Africa, a list of the members of the South African Businesswomen's Association (BWA) was used as a sampling frame. Taking cost, time and the availability of a database into account, a sample of 300 respondents was chosen on the basis of judgement for the purpose of this study.

### **1.6.4 Data gathering**

An important step prior to the collection of data was to pilot the draft questionnaire and revise it where necessary. Following a pre-test of the questionnaire, respondents completed an online questionnaire with multiple-item Likert scale questions. Responses from the online questionnaires were automatically stored and tabulated as they were being collected by a web-based e-Survey service, CHECKBOX version 4.6.4.7. As the respondents completed the online questionnaires, data was recorded in Microsoft Office Excel 2007.

### **1.6.5 Data analysis**

The data collected during the study were processed and analysed by the researcher using the statistical analysis program, SPSS version 18.0. The appropriate reliability and validity tests were performed to assess the measurement quality of the questionnaire. Descriptive statistics were used to provide an overview of the sample and the data collected, while inferential statistical analysis was used to test the stated hypotheses (refer to Chapters 5 and 6 for a detailed discussion of the data analysis).

## **1.7 OUTLINE OF THE STUDY**

The study consists of seven chapters. This section briefly outlines and describes each of the chapters that are included in the study. Chapter 1 is an introduction to the study. This chapter outlines the background to and rationale for the study, briefly

discusses the theoretical framework, states the research question and objectives, and also discusses the research methodology used in the study.

The second chapter provides a perspective on entrepreneurship and the position of this study within the broad field of economics and business management. In this chapter, entrepreneurship and strategic management are distinguished, while the overlaps between these two fields are discussed.

The relevant literature regarding SEB is discussed in Chapter 3. Effectuation and causation are contrasted as two separate types of decision-making logics.

Thereafter, Chapter 4 examines the literature concerning human and social capital in the context of SEB. The chapter introduces two types of human capital relevant to this study, namely the image of self and prior knowledge and experience. The final section of this chapter examines entrepreneurs' social capital in the form of social networks.

Chapter 5 provides an overview of the research methodology used in this study. This chapter revisits the research question, followed by a discussion on the research design, the research methods, the measurement instrument and the sampling used. Finally, the data analysis methods are discussed.

Chapter 6 provides the results, interpretation and discussion of the data analysis. This chapter focuses on the implementation of the data analysis, including validity and reliability for both dependent and independent variables, and also other appropriate statistical tests. The descriptive statistics are presented, followed by the inferential statistics.

The study concludes with Chapter 7. This chapter provides an overview of the study by highlighting the objectives of the study and discussing the findings of the statistical analysis. The implications for business management, as well as managerial implications, are discussed. The chapter concludes with the limitations of the study and recommendations for future research.



## **1.8 CHAPTER SUMMARY**

This chapter provided the background to and rationale for this research study. The purpose of the study was pointed out, namely to determine the type of decision-making approaches used by businesswomen, both entrepreneurs and intrapreneurs, under conditions of uncertainty and how the human and social capital they possess influence their SEB.

In addition, a brief explanation of the literature concerning human and social capital in the context of SEB was presented. Thereafter, the research problem, the research question and the research objectives were discussed briefly. Lastly, the research methodology and an outline of the study were presented.

In the following chapter the position of this study within the broad field of economics and business management is discussed.

## CHAPTER 2

# ENTREPRENEURSHIP IN THE CONTEXT OF BUSINESS MANAGEMENT

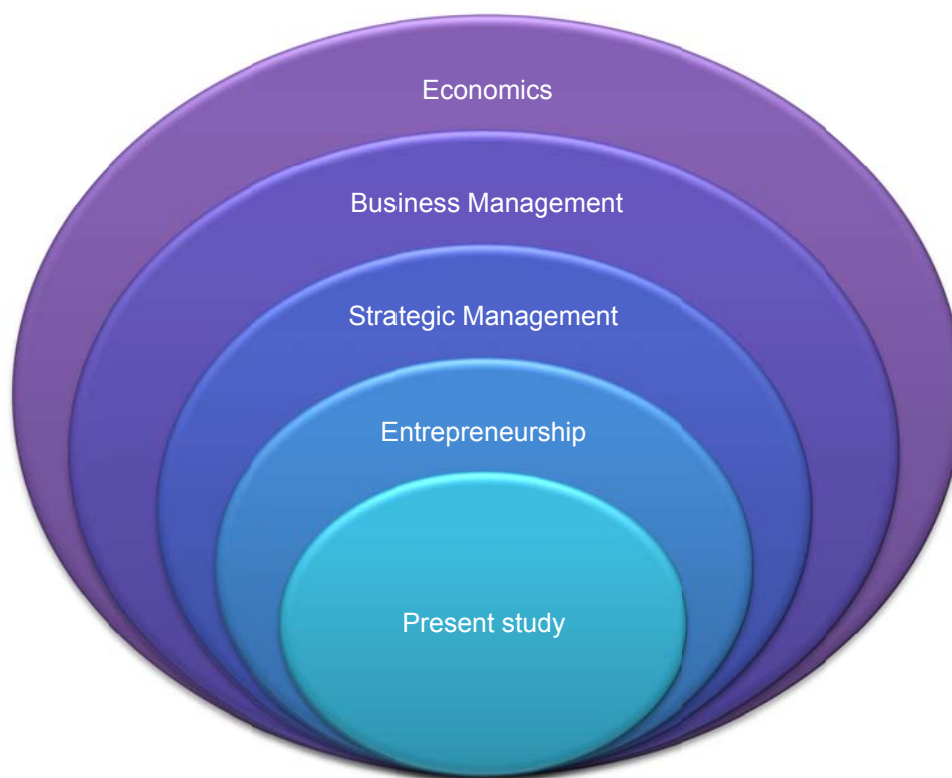
### 2.1 INTRODUCTION

The business world can be seen as a complex system of individuals and business organisations that, in a free market economy such as South Africa, involves the activity of transforming scarce resources into products and services in order to meet the needs of society (Du Toit, Erasmus & Strydom, 2007:4). Business organisations therefore solve the fundamental economic problem of how to ensure the highest possible satisfaction of needs with scarce resources (Cronje, Du Toit & Motlatla, 2001:23). In order to understand how the business organisation satisfies the needs of society in a free market economy, it is important to understand the driving force behind the business organisation, namely the entrepreneur (Du Toit *et al.*, 2007:37). The entrepreneur is at the heart of a free market economy, establishes business organisations and, in doing so, creates jobs and wealth (Cronje *et al.*, 2001:3).

Entrepreneurs and new business creation are fundamental to the growth of the South African economy and to the future socio-political stability of the country (Von Broembsen *et al.*, 2005:5). Due to low economic growth, high unemployment and an unsatisfactory level of poverty in South Africa, entrepreneurship becomes a critical solution (Rwigema & Venter, 2004:27). As mentioned in Chapter 1, one of the most important groups of entrepreneurs in the economy, with considerable potential to contribute to economic growth, economic development and employment generation, is businesswomen (Ahl, 2006; Baker *et al.*, 1997; Blumberg, 2005; Blumberg & Kenan, 2008; Negash, 2006; Republic of South Africa, 2005). Therefore, this study focuses on the strategic entrepreneurial behaviour (SEB) of businesswomen in South Africa.

An improved understanding of entrepreneurial behaviour and decision making would enable business management students to better understand how business organisations function in today's competitive environment. In this chapter the concept

of business management is addressed. The chapter firstly introduces the subject of economics, secondly, it provides an overview of business management as a discipline and, thirdly, it discusses the relationship between economics and business management. Finally, entrepreneurship and strategic management is distinguished, while the overlaps between these two fields are discussed. Special attention is given to entrepreneurship and strategic management in an attempt to clarify the position of this study in a business management context. The position of the study within the field of economics and business management is illustrated in Figure 2.1.



**Figure 2.1: The position of the study within the field of economics and business management**

## **2.2 ECONOMICS**

Economics has been defined in various ways in its more than 200-year history (Arnold, 2004:3). It therefore is useful to review a number of definitions of what economics entails. Alfred Marshall broadly defines economics as "the study of mankind in the ordinary business of life; it is the study of wealth and of man" (Arnold,

2004:3). Lionel Robbins's definition focuses on alternative outputs that can be achieved with scarce resources. He defines economics as "the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses" (Arnold, 2004:3). Similarly, Milton Friedman said that "economics is the science of how a particular society solves its economic problems". He then argues that "an economic problem exists whenever scarce means are used to satisfy alternative ends" (Arnold, 2004:3). It appears from the above definitions that economics is the study of how society manages its scarce resources (Mankiw, 2004:4). More comprehensively, economics is the study of how individuals and societies deal with the fact that wants are greater than the limited resources available to satisfy those wants (Arnold, 2004:3).

The condition under which wants are greater than the limited resources available to satisfy those wants is called scarcity (Arnold, 2004:3). The endeavour to achieve the highest possible satisfaction of needs with scarce resources is known as the fundamental economic principle (Smit *et al.*, 2007:20), and every economic system is subject to it (Cronje *et al.*, 2001:23). That being so, it follows that any component of an economic system, including a business organisation, is also subject to the economic principle (Cronje *et al.*, 2001:23; Nieman & Bennett, 2006:6).

In order to create wealth and satisfy wants, as implied in the definitions, resources are utilised (Nickels, McHugh & McHugh, 2008:9). Resources are divided into four broad categories, called factors of production. These factors of production are land, labour, capital and entrepreneurship (Arnold, 2004:5). Land includes all natural resources, such as minerals, forests, water and unimproved land. Labour, on the other hand, consists of the physical and mental talents people contribute to the production process. Capital consists of produced goods that can be used as inputs for further production. Entrepreneurship, the focus of this study, refers to the particular talent that some individuals have for organising the resources of land, labour and capital to produce goods, seek new business opportunities and develop new ways of doing things (Arnold, 2004:5). It furthermore refers to the initiative of putting together a range of production factors in various combinations in diverse businesses to satisfy the numerous needs of consumers (Nieman & Bennett, 2006:6).

The field of economics is traditionally divided into two broad subfields, namely microeconomics and macroeconomics (Mankiw, 2004:4). Microeconomics deals with human behaviour and choices as they relate to relatively small units, and studies interactions through individual markets, given scarcity and government regulation (Arnold, 2004:27). In other words, microeconomics is the study of how households and firms make decisions and how they interact in specific markets. Macroeconomics, on the other hand, deals with human behaviour and choices as they relate to highly aggregate markets or to the entire economy (Arnold, 2004:4). Macroeconomics is thus the study of economy-wide phenomena (Mankiw, 2004:27). The present study is related to microeconomics, as it deals with individuals, i.e. businesswomen and how they make decisions to allocate scarce resources.

Neoclassical economists are interested in decision making, especially the costs and incentives associated with economic choices (Hicks, 1937). The classical decision-making view of the decision maker, or "Economic Man", is seen as being entirely informed, infinitely sensitive and rational (Edwards, 1954). This concept of rationality is central to classical decision making. The decision maker is seen to act logically about a decision being taken (Caird-Daley & Harris, 2007:4). The decision-making process plays an important role in any business organisation and is of importance for problem solving, the development of business plans, and goal-directed behaviour (Gray, 2001). In macroeconomics, a neoclassical synthesis was developed in the early 1950s, based on an integration of John Maynard Keynes's (1883-1946) ideas and the ideas of earlier economists (Blanchard, 2006:576). These theories had a fundamental impact on the modern understanding of firms and their relation to the environment.

In economics, theories are useful for explaining and predicting economic behaviour. Theories are developed to explain observed phenomena in terms of a set of basic rules and assumptions (Pindyck & Rubinfeld, 2005:5). The theory of the firm consists of a number of economic theories that describe the nature of the firm, company or corporation, including its existence, its behaviour, and its relationship with the market (Coase, 1937), which have an impact on business management scholars' understanding of the field. The theory of the firm is based on a simple assumption, namely that firms try to maximise their profits (Pindyck & Rubinfeld, 2005:5). The theory of the firm furthermore provides an explanation of how a firm makes cost-

minimising production decisions and how its cost varies with output (Pindyck & Rubinfeld, 2005:188). In simplified terms, the theory of the firm attempts to answer questions regarding the existence of firms, the boundaries of firms and the organisation of firms, as well as questions concerning the heterogeneity of firm actions and performances (Coase, 1937).

To summarise, the field of economics focuses on how society manages its scarce resources, also called factors of production, to satisfy the needs of society. In order to understand how entrepreneurship, as one of the factors of production, influences wealth creation in the economy, one has to appreciate the role of business management, which is concerned with the management aspects of the factors of production.

### **2.3 BUSINESS MANAGEMENT AS A DISCIPLINE**

The origins of traditional management can be traced back to the need for efficiency and effectiveness (Weymes, 2004:340). The endeavour to achieve the highest possible satisfaction of needs with scarce resources is known as the fundamental economic principle (Smit *et al.*, 2007:20). Within economic and management sciences, traditional business management is subject to this principle, and management's task is thus to decide how an organisation can achieve the highest possible output with the least possible input (Scheepers, 2009:7; Smit *et al.*, 2007:20). More specifically, it entails an examination of the factors, methods and principles that enable a business to function as productively as possible in order to maximise its profits (Niemann, 2005:39). In short, the individual business enterprise should focus on realising the economic principle (Scheepers, 2009:7).

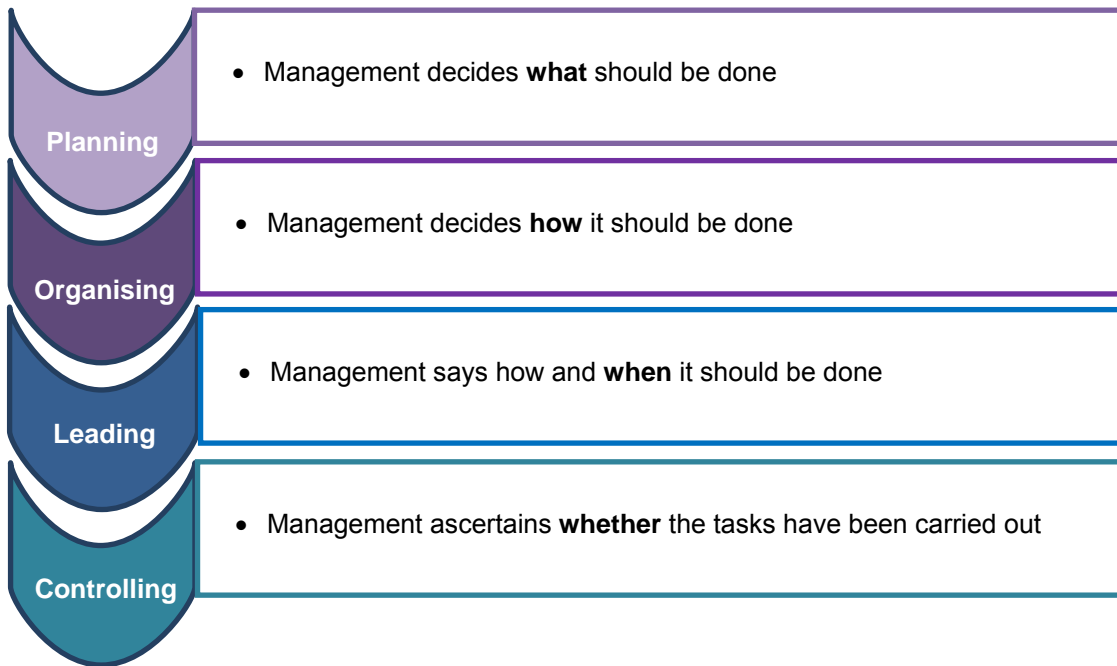
The study of business management depends on comprehensive and ongoing research and the examination of management problems, the testing of approaches and principles, as well as experimentation with methods and techniques. Business management is thus an applied science that studies how business organisations can best be directed towards realising their objectives given their limited resources (Du Toit *et al.*, 2007:27).

Klekamp (1968:54) defines business management as "achieving organisational goals through people". It is useful to consider this time-worn definition through the perspective of three fundamental schools of management. These schools are the traditional school of management, the behavioural school of management and the quantitative school of management.

It appears that the traditional school sees the achievement of organisational goals as a process. It further suggests that the process is universal, i.e. the distinguishing characteristic of a manager is the mastery of her discipline and the application of her art, rather than the environment in which it is practised. The behavioural school, on the other hand, also focuses on the achievement of goals, but dwells to a large extent upon why people act as they do when under the influence of the management process and in the company of people grouped together for the accomplishment of organisational goals. Alternatively, the quantitative school proposes that the achievement of goals depends to a large extent on the quality of the decisions made in the practice of the management science (Klekamp, 1968:54).

Although business management has been defined by a number of authors, fundamental to most definitions is the idea that management is a social process of planning, coordination, control and motivation (Hodgetts, 1981:114; Pettinger, 2002). One can infer that business management therefore involves satisfying needs with a limited amount of resources through planning, coordination, control and the motivation of these resources.

The many definitions offered in the literature on management demonstrate the wide differences of opinion among writers and experts about the tasks and activities of management. Figure 2.2 illustrates the four fundamental tasks that are singled out as the most important activities of the management process. These are planning, organising, leading and controlling (Du Toit *et al.*, 2007:129).



**Figure 2.2: The four fundamental management tasks represented as a process**

SOURCE: Adapted from Du Toit *et al.*, 2007:130

The following brief description of the fundamental management tasks clarifies the concept of management and the management process. The first fundamental task of management, namely planning, determines the mission and goals of the organisation, including the way goals are to be reached in the long term, and the resources needed for this task (Du Toit *et al.*, 2007:130). Strategic management is an integral part of planning and is the process of developing a vision, mission and long-term objectives for the organisation as a whole. According to Nieman and Bennett (2002:14), organisations succeed if their strategies are appropriate for the circumstances they face, and feasible in respect of their resources, skills and capabilities. Strategic management is discussed in more depth in Section 2.6.

The second fundamental task in the management process is organising. This task refers to the development of a framework or organisational structure to indicate how people, equipment and materials should be employed to reach the predetermined goals. Leading, the third fundamental task, entails directing the human resources of the business and motivating them (Du Toit *et al.*, 2007:130) in order to get them to perform in such a way that the organisational objectives can be achieved (Nieman & Bennett, 2006:99). The final fundamental task, namely control, implies that managers should constantly establish whether the business is on a proper course towards the



accomplishment of its goals (Du Toit *et al.*, 2007:131), as well as structure the activities of the organisation to facilitate the attainment of its objectives (Nieman & Bennett, 2006:93).

The fundamental task of business management, however, is not only to plan, organise, lead and control, but to study those factors, principles and methods that will lead a business organisation, as a component of the prevailing economic system, to reach its objectives against the background of limited resources (Du Toit *et al.*, 2007:28) within the microeconomic field of study. In the following section, the relationship between economics and business management is discussed. Particular attention is paid to the discussion of a business organisation as a component of the economic system, specifically how, as a need-satisfying institution in the free market economy, it provides for the needs of the community (Cronje *et al.*, 2001:32).

## **2.4 RELATIONSHIP BETWEEN ECONOMICS AND BUSINESS MANAGEMENT**

On the one hand, economics, as a social science, studies how humans and society exercise choices concerning different ways of utilising their scarce resources in order to satisfy unlimited needs. On the other hand, business management as an applied science is concerned with the study of those institutions in a particular economic system that satisfies the needs of a community. Economics examines the entire economic system, while business management limits its studies to one component of the economic system, namely the individual organisation (Cronje *et al.*, 2001:23).

Business management is thus closely linked with microeconomics and the theory of the firm, as the purpose of business management is to hold an organisation to the economic principle (Cronje *et al.*, 2001:23). Business management, as a field of study, is concerned with the management aspects of the inputs, the conversion process, and the outputs (Nieman & Bennett, 2006:6). More specifically, it entails an examination of the factors, methods and principles that enable a business to function as productively as possible in order to maximise profits (Nieman & Bennett, 2002:4).

In order to recognise how the business organisation satisfies the needs of society in a free market economy, such as South Africa, one has to understand one of the

driving forces behind the business organisation, namely the entrepreneur (Du Toit *et al.*, 2007:37).

## **2.5 ENTREPRENEURSHIP**

Economic development can be attributed directly to the level of entrepreneurial activity in a country (Schumpeter, 1983), as entrepreneurial businesses are responsible for growth and job creation in the economy (Nieman, Hough & Nieuwenhuizen, 2003:3). Entrepreneurship is the process that causes change in the economic system through the innovations of individuals who respond to opportunities in the market. Entrepreneurs challenge existing assumptions, as well as conventional rules of business, and create value in novel and creative ways for themselves and society (Morris, Kuratko & Covin, 2008:3). It therefore is important to study entrepreneurship in an increasingly globalised world, where survival often depends on people who are driven by opportunity and who seek to achieve their goals in a sustainable way (Rwigema & Venter, 2004:9).

Although the term entrepreneurship has been in use for over 200 years, considerable disagreement remains over its meaning. Although the disagreement seems greatest if definitions of entrepreneurship are compared between different disciplines, a consensus is found if definitions produced by specialists in the same field are compared (Nieman *et al.*, 2003:9). Economists, for example, tend to agree that entrepreneurs are associated with innovation and are seen as the driving forces of development (Filion, 1998). The behaviourists, on the other hand, try to understand the entrepreneur as a person and mainly subscribe to the characteristics of the flexible interpretative models. The behavioural approach places emphasis on explaining how decisions are taken within the firm. However, any theory of entrepreneurship must be flexible and multidimensional to reflect its multidisciplinary roots (Filion, 1998; Nieman *et al.*, 2003:9).

While multiple definitions of entrepreneurship could be found in the literature (Kirzner, 1973; Schumpeter, 1983; Sharma & Chrisman, 1999; Venkataraman, 1997), no single definition has been accepted by the whole field of entrepreneurship (Scheepers, 2007:25). For the purposes of the present study, entrepreneurship can be defined as "the process of creating value by bringing together a unique

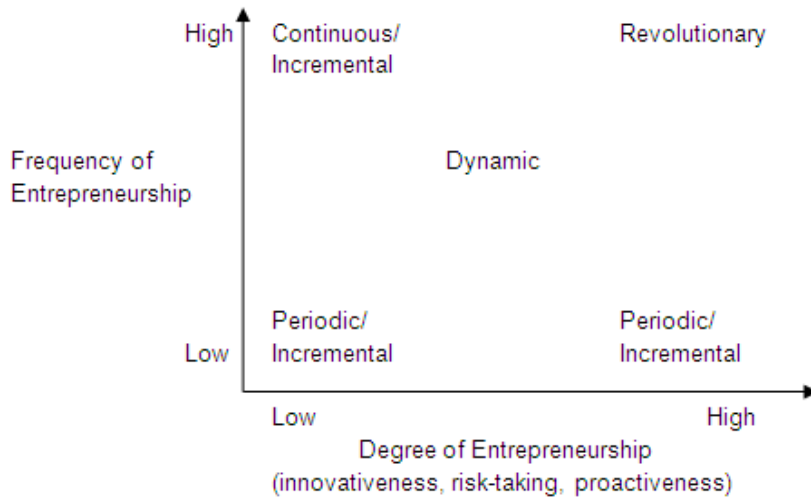
combination of resources to exploit an opportunity" (Barringer & Ireland, 2006:5). This definition implies that: (1) entrepreneurship may vary in terms of the extent and number of times it occurs; (2) entrepreneurship occurs in various contexts, for example start-ups and corporate firms; (3) it is a process that can be managed; and (4) it creates value and it is opportunity-driven (Scheepers, 2009).

Firstly, regarding the implication that entrepreneurship may vary in terms of the extent and number of times it occurs, it is useful to examine the concept of entrepreneurial intensity (EI). The term of EI was pioneered by Morris and Sexton (1996), who view EI as a function of the degree and frequency of entrepreneurship (Morris, 1998:42). The frequency of entrepreneurship refers to the number of times an enterprise acts entrepreneurially, thus the number of entrepreneurial events that take place over a given period of time (Morris, 1998:42; Morris *et al.*, 2008:69).

The degree of entrepreneurship could be assessed against the background of three dimensions: innovativeness, risk taking and proactiveness (Erasmus & Scheepers, 2008; Morris, 1998:37). Innovativeness, the first dimension of the degree of entrepreneurship, refers to the ability to generate ideas that will culminate in the production of new products, services and technologies. Risk taking, the second dimension, involves the determination and courage to make resources available for projects that have uncertain outcomes. Attempts are made to manage these risks by researching a market, and recruiting and employing skilled staff, among other strategies. Proactiveness, the third dimension, indicates top management's stance towards opportunities, and its encouragement of initiative, competitive aggressiveness and confidence in pursuing enhanced competitiveness (Morris, 1998:18, 41-43).

The concept of EI is illustrated in Figure 2.3. The two-dimensional matrix, referred to as the entrepreneurial grid, shows the frequency of entrepreneurial events on the vertical axis and the degree to which these events are innovative, risk taking and proactive on the horizontal axis (Morris *et al.*, 2008:69). EI must become a key activity ratio that is monitored on an ongoing basis within organisations. Assessment at the level of the organisation can be used for various purposes: to benchmark and track levels of entrepreneurship; to establish norms and draw industry comparisons; to establish entrepreneurship goals; to develop strategies; and to assess

relationships between EI and organisation performance variables over time (Morris *et al.*, 2008:78).



**Figure 2.3: The entrepreneurial grid**

SOURCE: Adapted from Morris *et al.*, 2008:70

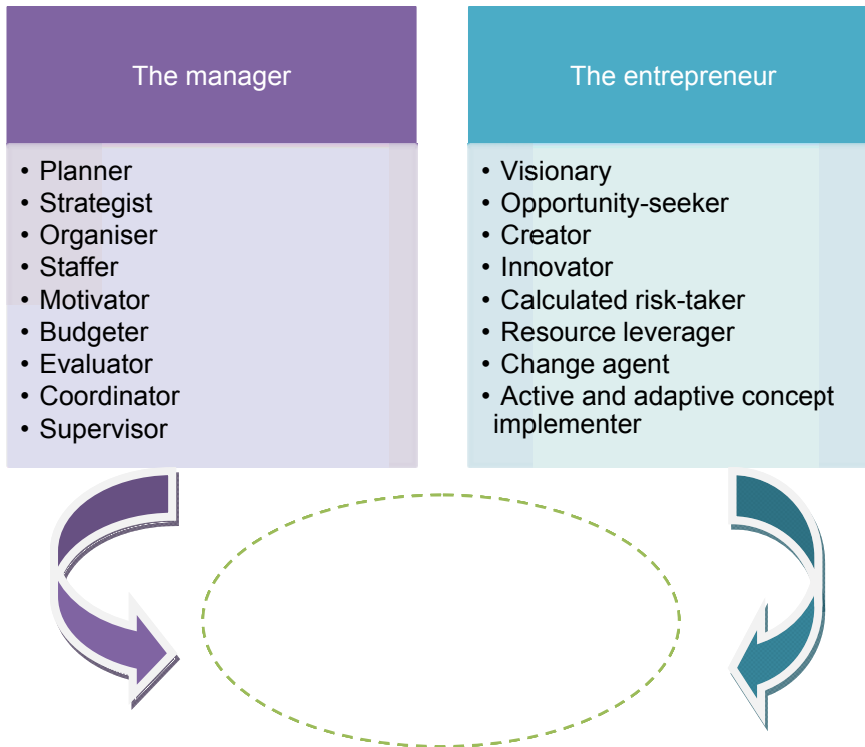
Secondly, as implied in the definition of Stevenson, Roberts and Grousback, (1989), entrepreneurship in reality can occur in various organisational contexts (Morris *et al.*, 2008:11). These organisational contexts may range from establishing a new enterprise, growing an existing small business, or innovation within large organisations (Scheepers, 2009:27). In other words, entrepreneurship can also be used to describe entrepreneurial actions within a firm. In this instance, an entrepreneurial firm creates wealth by concentrating on being innovative, proactive and risk taking (Ireland *et al.*, 2001:51). Corporate entrepreneurship is a term used to describe entrepreneurial behaviour inside existing organisations (Morris *et al.*, 2008:11). Within these different contexts, the definition above still applies, since the process and required inputs are similar, even if the outputs differ (Scheepers, 2009). Therefore, the female entrepreneurial behaviour examined in this study is still regarded as entrepreneurship, even though it may occur in two contexts, namely within an existing firm by intrapreneurs, or in an independent venture by entrepreneurs.

Thirdly, as stipulated in the definition, entrepreneurship can be viewed as a process. Therefore, even though entrepreneurship and innovation are inherently unpredictable and chaotic and create ambiguity, entrepreneurship is a process, and as such it can be managed. Entrepreneurial events are often characterised by different stages, such as opportunity identification, business concept definition, assessment of the resource requirements, acquisition of the needed resources, and then the management and harvesting of the business (Morris & Kuratko, 2002).

Finally, the ability to act entrepreneurially is linked to the perception of opportunity. The pursuit of opportunities also emphasises that those opportunities that create the greatest value could be exploited. Note that focusing on entrepreneurship through an effectuation lens may locate the practical task and challenge of entrepreneurship in the finding and building of new markets and/or firms, and is particularly suitable to an understanding of the commercialisation of new technologies (Christensen, 2000:191).

It is important to note that entrepreneurship differs from management. There are important differences between the entrepreneurial and managerial functions, as well as in the expertise and competence with regard to each (Nieman *et al.*, 2003:13). Management is a social process of planning, coordination, control and motivation (Pettinger, 2002). Management thus involves getting things done through other people and is, in a sense, a transformation process, where human, technical and conceptual skills are used to transform inputs into outputs (Morris *et al.*, 2008:12). Entrepreneurship, on the other hand, is the process of creating value by bringing together a unique combination of resources to exploit an opportunity (Barringer & Ireland, 2006:5; Stevenson *et al.*, 1989). Entrepreneurs envision the future, recognise emerging patterns, identify untapped opportunities, and create innovations to exploit those opportunities (Morris *et al.*, 2008:12).

Figure 2.4 contrasts the primary roles of the manager with those of the entrepreneur. The figure shows that managers are charged with the efficient and effective utilisation of the resources under their control. They tend to be focussed on optimising current operations. Entrepreneurs, alternatively, demonstrate creative capabilities in obtaining resources, overcoming obstacles, and persisting in implementing new ideas that represent change (Morris *et al.*, 2008:12).



**Figure 2.4: Comparing and combining key roles of managers and entrepreneurs**

SOURCE: Adapted from Morris *et al.*, 2008:13

One of the general approaches to management methods with the purpose of creating a sustainable competitive advantage is that of strategic management (Cronje *et al.*, 2001:24). According to Nieman and Bennett (2002:14), strategy is fundamentally about a fit between the organisation's resources and the markets targeted by it, as well as the ability to sustain fit over time and in changing circumstances, and to create and maintain a competitive advantage within a given market. Therefore, the nature and characteristics of strategic management are discussed in the following section.

## 2.6 STRATEGIC MANAGEMENT

Several schools of thought with different opinions about the nature and scope of strategy can be distinguished in the literature (French, 2009:13). There is also a lack of a universally accepted definition of strategic management. However, central to most definitions is the notion that strategic management is the process through which

managers formulate, implement and monitor action plans to optimise the achievement of key goals (Rwigema & Venter, 2004:195).

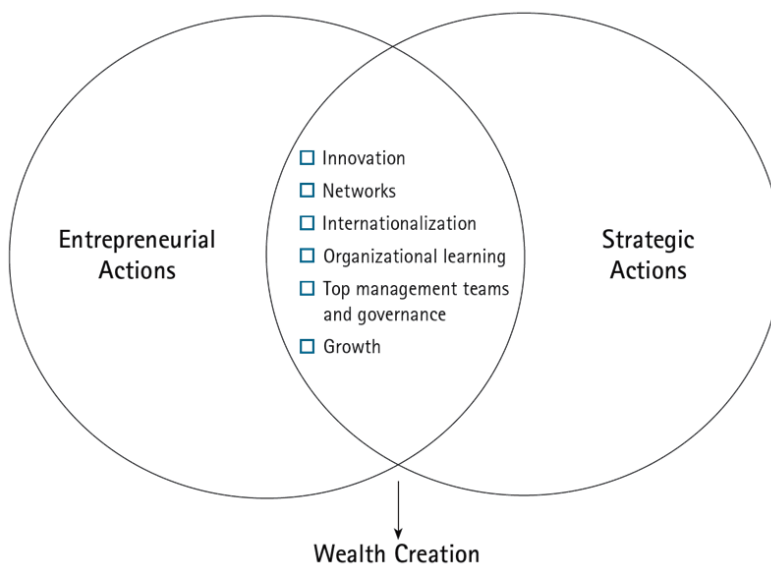
Barney and Arian (2001:140) define strategic management as "a firm's theory of how it can gain superior performance in the markets within which it operates". Venkataraman and Sarasvathy (2001:651) define the subject of strategic management as having to do with the methods used to create value and the ensuing struggle to capture a significant share of that value. Hough, Thompson, Strickland, and Gamble (2008:4) propose that strategy consists of the competitive moves and business approaches that managers employ in order to grow the firm, attract and please customers, compete successfully, conduct operations, and achieve the targeted levels of organisational performance. For the purpose of the present study, strategic management is defined as "a process that deals with the long-term entrepreneurial work of the organisation, with organisational renewal and growth, and more particularly, with developing and utilising strategy, which is a guide to the organisation's operations" (Lyles, 1990:363).

Strategic management has gained prominence in recent years as organisations compete in volatile environments (Rwigema & Venter, 2004:197). The dynamic environment in which organisations operate poses ongoing management and leadership challenges, marked by complexity, uncertainty and ambiguity (Rwigema & Venter, 2004:93). Traditional business models are often no longer applicable and some managers are abandoning conventional approaches to strategy as they search for new ways to achieve a competitive advantage in a turbulent environment. Strategic management paradigms have shifted from essentially static to more dynamic worldviews (Scheepers, 2007:46).

To summarise, in today's fast-paced competitive environment, firms face the need to be increasingly nimble and adaptive (Ireland & Webb, 2007:49). Ireland *et al.* (2001:53) state that successfully integrating entrepreneurial and strategic actions improves a firm's ability to grow and create wealth. The following section elaborates on the relationship between entrepreneurship and strategic management and how these two fields overlap.

## 2.7 RELATIONSHIP BETWEEN STRATEGIC MANAGEMENT AND ENTREPRENEURSHIP

While the fields of strategic management and entrepreneurship have developed largely independently of each other, they both focus on how firms adapt to environmental change and exploit opportunities created by uncertainties and discontinuities in the creation of wealth (Hitt *et al.*, 2001:480; Venkataraman & Sarasvathy, 2001:480). Creating wealth is at the heart of both entrepreneurship and strategic management. Figure 2.5 illustrates how firms create wealth by using entrepreneurial actions and strategic actions within different domains.



**Figure 2.5: Creating wealth through entrepreneurial and strategic actions**

SOURCE: Ireland *et al.*, 2001:51

As illustrated in Figure 2.5, firms can create wealth by using entrepreneurial actions and strategic actions within different domains. These domains are vital in the process of creating sustainable income streams by developing and exploiting competitive advantages (Ireland *et al.*, 2001:51).

Strategic management and entrepreneurship overlap in terms of their interest in venture creation, novel strategies, and the growth and performance of organisations (Scheepers, 2007:46). Entrepreneurship involves identifying and exploiting



entrepreneurial opportunities. However, to create the most value, entrepreneurial firms also need to act strategically. An integration of entrepreneurial and strategic thinking is therefore necessary (Hitt *et al.*, 2001:479).

In the previous section, entrepreneurship was defined as the process of creating value by bringing together a unique combination of resources in order to exploit an opportunity (Barringer & Ireland, 2006:5; Stevenson *et al.*, 1989). As such, entrepreneurial actions entail, on the one hand, creating new resources or combining existing resources in new ways to develop and commercialise new products, move into new markets, and/ or service new customers (Hitt *et al.*, 2001:480). On the other hand, strategic management entails the set of commitments, decisions and actions designed and executed to produce a competitive advantage and earn above-average returns (Hitt *et al.*, 2001:480). Strategic management thus provides the context for entrepreneurial actions (Ireland *et al.*, 2001). Entrepreneurship is about creating and seeking opportunities; strategic management is about how advantage is established and maintained from what is created (Venkataraman & Sarasvathy, 2001).

Entrepreneurship is concerned with how the opportunity to create value in society is discovered and acted upon by some individuals. Strategic management is concerned with the methods used to create this value, and the ensuing struggle to capture a significant share of that value by individuals and firms (Venkataraman & Sarasvathy, 2001:650-651). Strategic management has to do with the achievement of ends – obtaining market share, profit and sustained competitive advantage. Then again, entrepreneurship has to do with the achievement of beginnings – creating markets, firms and products (Venkataraman & Sarasvathy, 2001:651).

Thus, entrepreneurial and strategic perspectives should be integrated to examine entrepreneurial behaviour. For the purpose of the present study, this approach is called strategic entrepreneurial behaviour (SEB). SEB is entrepreneurial action and behaviour with a strategic perspective. It is the integration of entrepreneurial (i.e. opportunity-seeking behaviour) and strategic (i.e. advantage-seeking behaviour) perspectives in developing and taking actions to create wealth (Hitt *et al.*, 2001:480-481).

## 2.8 CHAPTER SUMMARY

This chapter attempts to provide a perspective on the position of this study within the broad field of economics and business management. It defines the concept of business management as satisfying consumer needs with a limited amount of resources, through the planning, coordination, control and motivation of these resources. Based on this definition of business management, the chapter provides an explanation of how business management stems from economics. Economics is defined as the allocation of scarce resources in order to fulfil the unlimited needs of society. This section leads to a discussion of the relationship between economics and business management. The main link between economics and business management is that the one studies the economic system as a whole, while the other studies a single component of that system.

The discussion of economics and business management is followed by a section on entrepreneurship. Entrepreneurship is viewed as the process of creating value by bringing together a unique combination of resources to exploit an opportunity. The importance of entrepreneurship is emphasised, as it contributes to growth and job creation and thus to economic development. Within this section, a clear distinction is made between entrepreneurship and management.

One of the general approaches to management methods, namely strategic management, was then reviewed. The purpose of strategic management is to create a sustainable, competitive advantage through a process in which managers formulate, implement and monitor action plans to optimise the achievement of key goals.

Then follows a section that elaborates on how entrepreneurship and strategic management overlap in terms of their interest in venture creation, novel strategies, and the growth and performance of an organisation. In this section, special attention is given to entrepreneurship and strategic management in an attempt to clarify the position of this study in the context of business management.

# CHAPTER 3

## STRATEGIC ENTREPRENEURIAL BEHAVIOUR

### 3.1 INTRODUCTION

Businesswomen are a driving force in today's modern economy and are considered to form one of the most important groups of entrepreneurs in the economy with great potential to contribute to economic growth, economic development and employment generation (Ahl, 2006; Baker *et al.*, 1997; Blumberg, 2005; Blumberg & Kenan, 2008; Negash, 2006; Republic of South Africa, 2005). As explained in Section 2.1, an improved understanding of the entrepreneurial behaviour and decision making of businesswomen would enable a better understanding of how business organisations function in today's competitive environment.

Businesswomen – both in the corporate sector, as well as female business owners – experience a unique set of barriers and impediments in the world of business (Mattis, 2004). They need to behave entrepreneurially over the long term to fulfil their dreams and aspirations. Dreams and aspirations are often translated into goals in business terms, and businesswomen use different reasoning to arrive at the decisions on which they base their behaviour.

Sarasvathy (2008) has suggested that experienced entrepreneurs would first consider who they are, what they know and whom they know, before deciding to act and pursue their dreams, while management science advocates the setting of goals first, and then determining what resources (people and networks) are needed to achieve these goals. However, there currently is a lack of empirical evidence to show whether businesswomen will act in a similar fashion to their male counterparts, the 'expert' entrepreneurs studied by Sarasvathy (2001). This chapter addresses the research gap by examining businesswomen's approach to SEB, contrasting effectuation and causation as two separate types of decision-making logics.

### 3.2 FEMALE ENTREPRENEURSHIP

Female entrepreneurship is an important contributor to economic development, the creation of employment opportunities and the diversity of entrepreneurship in the economic process (Ahl, 2006; Baker *et al.*, 1997; Blumberg, 2005; Blumberg & Kenan, 2008; Negash, 2006; Republic of South Africa, 2005; Verheul, Van Stel & Thurik, 2006:151). It is important to note that female entrepreneurs make a contribution to the growth of the world economy, particularly in low- and middle-income countries such as South Africa (Allen *et al.*, 2007:6).

Research on businesswomen points out that the returns on the investment in women are much higher than an investment in men. The reason is that women are more likely to share their gains in education and health, as well as resources and wealth, with members of their families and their communities (Allen *et al.*, 2007:6; Arai, 2001:1). In more explicit economic terms, investment in the businesswomen of a country is an important way to exponentially increase the impact of the creation of new ventures (Allen *et al.*, 2007:6).

There are also social benefits of encouraging female entrepreneurship. To begin with, several studies (Ardington & Lund, 1995; Duflo, 2000) in South Africa have indicated that the spending patterns of females are different to the spending patterns of males. While females tend to spend money on food and education for their children, and very little on their personal needs, men spend significantly more on their personal needs and wants (Bertrand, Mullainathan & Miller, 2003). In addition, economic independence allows women to have greater influence in decision making about the allocation of household resources (Duflo, 2000; Von Broembsen *et al.*, 2005:30). In addition, female entrepreneurs are more likely to employ women, thus providing employment opportunities not only for themselves, but also for other women, thereby helping to reduce the effect of discrimination against women in the labour market (Allen *et al.*, 2007:23).

Disregarding the established potential of female entrepreneurial activity means that countries place themselves at a disadvantage and reduce the prospect to increase economic development. Therefore, it is critical to find ways to successfully empower female entrepreneurial participation in order to achieve increased sustainable

economic development (Allen *et al.*, 2007:6). One of the ways to do this is to create an awareness of the actions, behaviours and decision making of businesswomen by studying their entrepreneurial behaviour.

### **3.2.1 Reasons for studying female entrepreneurial behaviour**

While several scholars have found that there are similarities in the personal demographics of male and female entrepreneurs, there are differences in the business and industry choices, financing strategies, growth patterns and governance structures of female-led firms (Greene *et al.*, 2003:1). Businesswomen share many characteristics with their male colleagues, but they are unique in various aspects: they start and manage ventures in different sectors, develop different products and services, pursue different goals, and structure their ventures in a different manner (Brush, 1992; Carter, 2007; Verheul *et al.*, 2006:151). They also start with unique sets of motivation, human capital, social networks and tangible resources (Carter *et al.*, 2003; Cowling & Taylor, 2001).

These differences between male and female entrepreneurs in the decision-making process, together with the fact that businesswomen's importance in the global business environment is growing (Jesselyn & Mitchell, 2006:349), provide compelling reasons to study female entrepreneurial decision-making. It is thus important to determine how and why businesswomen – both intrapreneurs and entrepreneurs – use different modes of reasoning and with what consequences.

Businesswomen – both in the corporate sector, as well as female business owners – also experience a unique set of barriers and impediments in the world of business (Mattis, 2004). These impediments to women's advancement in organisations are persistent and prevent organisations from retaining valuable businesswomen, at great cost to their existing business activities and to the talent pool for future management of their organisations (Mattis, 2004:161).

### **3.2.2 Barriers experienced by businesswomen**

According to the DTI, South African women comprise over half the business workforce, but their role has not been nurtured sufficiently (Republic of South Africa, 2005:2). Although women are historically perceived as having essential business

skills regarding collaborating, nurturing, adjusting, and persuading (Carter & Silva, 2010:19; Winn, 2004:143), a consistent finding of the influential Global Entrepreneurship Monitor (GEM) studies is that men are more probable to be involved in entrepreneurial activity (Herrington, Kew & Kew, 2009:68). It is estimated that men in South Africa are 1.5 times more likely to be involved in early-stage entrepreneurial activity than women (Herrington *et al.*, 2009:68). The Labour Force Surveys that are conducted by Statistics SA on a quarterly basis indicate that unemployment rates amongst women are higher than amongst their male counterparts, regardless of population group (Brown, 2010).

Nevertheless, in recent years improvement has been attained in advancing the cause of gender equality in the business world. Women have been moving increasingly into professional careers and occupations, as well as managerial positions formerly reserved for men. Their access to education and training continues to progress, providing many businesswomen with the essential qualifications to aspire to positions in senior management (Wirth, 2002:2). However, both female intrapreneurs and entrepreneurs still experience career progression barriers influencing their decision-making: difficulties with work-life balance; discrimination; inequality and gender-bias in the world of business (Carter, 2007; Carter & Silva, 2010; Mattis, 2004; Republic of South Africa, 2005; Von Broembsen *et al.*, 2005; Winn, 2004).

Several studies have been conducted on these impediments faced by businesswomen (Brush, 1992; Carter & Shaw, 2006; Greene *et al.*, 2003; Mattis, 2004; Stevenson, 1986; Wirth, 2002). Research comparing men and women in management proposes that women's career progression is a function of gender roles and bias (Kirchmeyer, 1998; Ragins, Townsend & Mattis, 1998), rather than assertiveness or capability.

Many women who become successful in their careers, as intrapreneurs or entrepreneurs, face work-life balance issues, i.e. the difficulties of balancing their families with their business obligations (Winn, 2004:148). For both intrapreneurs and entrepreneurs, the competitive environment and the demands of corporate life impose on the quality and quantity of family time (Winn, 2004:144). The lack of flexibility in the business world continues to be a reason for the attrition of high-potential businesswomen (Mattis, 2004:161).

Winn (2004:144) has also pointed out that harassment and discrimination are still significant barriers for women in management and that women have mentioned the lack of mentoring, lack of managerial experience, exclusion from informal networks and male stereotyping as the most important barriers to advancement.

One of the primary barriers faced by female entrepreneurs is a lack of access to capital (Gundry, Ben-Yoseph & Posig, 2002:72; Helms, 1997:18), including start-up funding and credit, cash flow management in the early stages of a new firm and financial planning and management (Nguyen, 2010:2). Another impediment often faced by female entrepreneurs is access to markets. Expertise, knowledge and networks are necessary for access to new markets. Female entrepreneurs frequently lack access to training on and experience in market participation, and consequently are unable to market goods and services strategically (Trade and Investment Division, 2005).

In summary, the diversity offered by businesswomen is needed for innovation in the business world, as is their ability to network, yet female talent is undervalued and underutilised. Organisations may lose these talented women, especially those interested in innovation and renewal. Both groups of businesswomen thus need to overcome these challenges and barriers whilst seizing opportunities, making decisions and achieving their long-term goals in the process of SEB.

### **3.3 STRATEGIC ENTREPRENEURIAL BEHAVIOUR**

Today's business environment can be characterised in terms of a unique competitive landscape that includes increasing risk, decreasing ability to forecast and predict, shifting firm and industry boundaries, new structural forms, and innovative managerial approaches (Kuratko & Audretsch, 2009:1). Firms are thus under constant pressure to change and adapt to stay ahead of their competitors (Ireland & Webb, 2007:49; Lee, Wong & Chong, 2005:9). In order to deal with rapidly changing and fast-paced competitive environments, as well as with increased uncertainty, management theorists have suggested that an entrepreneurial approach to strategy making may be vital for organisational success (Dess *et al.*, 1997:677; Ireland & Webb, 2009; Ireland *et al.*, 2011; Kuratko & Audretsch, 2009). SEB has been proposed as a means by which decision makers can manage uncertainty (Ireland &

Webb, 2009:469), and is a term used to capture firms' efforts to concurrently exploit existing competitive advantages while exploring for the innovations that will be the foundation for tomorrow's competitive advantages (Ireland & Webb, 2007:49).

SEB has been highlighted by several authors (Dess *et al.*, 1997; Ireland *et al.*, 2003) and has been conceptualised as distinct from traditional, rational strategic planning. SEB focuses on long-term behaviour that is opportunity seeking, innovative, proactive and may be perceived as risk taking. In order to gain a better understanding of what the term SEB entails, it is useful to consider the specific fields that compose the concept, namely strategic management and entrepreneurship.

Strategic management is "a process that guides how the basic work of the organisation is approached, ensures the continuous renewal and growth of the firm, and, more particularly, provides a context for developing and implementing the strategy that drives the firm's operations" (Morris *et al.*, 2008:192). Kuratko and Audretsch (2009:2) point out that the strategic management process is thus utilised to connect the circumstances of an ever-changing market and competitive structure with a firm's continuously developing resources, capabilities and core competencies (refer to Section 2.6).

For the purposes of the present study, entrepreneurship can be defined as "the process of creating value by bringing together a unique combination of resources to exploit an opportunity" (Barringer & Ireland, 2006:5). As such, entrepreneurial actions entail creating new resources or combining existing resources in new ways to develop and commercialise new products, move into new markets, and/or service new customers (Hitt *et al.*, 2001:480). As explained in Section 2.5, entrepreneurship can occur in various contexts (Morris *et al.*, 2008:11). These contexts may range from establishing a new enterprise, growing an existing small business, or innovating within large organisations (Scheepers, 2009:27). It is thus important to note that entrepreneurship is used to describe entrepreneurial behaviour within a new, growing or established firm.

While the fields of strategic management and entrepreneurship have mainly developed separately, they both focus on how firms adjust to environmental change and exploit opportunities created by uncertainties and discontinuities in the creation



of wealth (Hitt *et al.*, 2001:480; Venkataraman & Sarasvathy, 2001:480). Strategic management and entrepreneurship overlap in terms of their interest in venture creation, novel strategies, growth and performance of organisations (Scheepers, 2007:46). Ireland *et al.* (2001) argue that entrepreneurial and strategic actions are often aimed at discovering new markets or competitive space for firms to generate wealth. Firms attempt to discover fundamentally new ways of conducting business that will disrupt an industry's existing competitive rules, leading to the development of new business models that create new competitive life forms (Kuratko & Audretsch, 2009:3).

Thus, to create the most value, entrepreneurial firms, whilst identifying and exploiting entrepreneurial opportunities, also need to act strategically. An integration of entrepreneurial and strategic thinking, in other words SEB, therefore is necessary (Hitt *et al.*, 2001:479). Sarasvathy (2001a, 2001b, 2001c, 2008) proceeded to categorise SEB into two main types of reasoning used by entrepreneurs, namely effectuation and causation. Both effectuation and causation are important aspects of the strategic entrepreneurial decision-making process and are examined in the following section.

### **3.4 EFFECTUATION AND CAUSATION**

Effectuation and causation are both fundamental components of human reasoning that can occur simultaneously, overlapping and interlinking over various contexts of decision making and action. Although most of the literature in economics and management emphasises models representing causal reasoning, the existence of effectuation processes in entrepreneurial decision-making has recently been gaining ground with researchers (Dess *et al.*, 1997; Dew *et al.*, 2009; Read *et al.*, 2009; Sarasvathy, 2008; Shane & Venkataraman, 2000; Venkataraman & Sarasvathy, 2001).

The concepts of effectual and causal reasoning are relatively broad and can be defined in numerous ways. To facilitate a more concrete understanding of what these concepts entail, it is useful to compare effectuation and causation in terms of three components, namely the concepts, the processes and the principles.

### **3.4.1 The concepts of effectuation and causation**

The concept of effectual reasoning was pioneered by Sarasvathy (2001b), who studied 27 expert entrepreneurs, using a verbal protocol analysis, to establish how these entrepreneurs made decisions and what type of logic they used in solving problems when converting an idea into a firm. The reasoning that these entrepreneurs used was different from traditional management-based teachings, and it established a distinct type of rationality that has been termed as "entrepreneurial" (Sarasvathy, 2001b:2). The findings suggest the existence of a possible alternative to predictive rationality (Sarasvathy & Kotha, 2001:3). Therefore, Sarasvathy (2001b) labelled this type of logic as "effectual reasoning", also known as effectuation.

Effectuation can be described as a type of human problem solving that acknowledges that the future is changeable and can be shaped by human action; the environment can be fashioned by decisions people make and goals can emerge through cooperation agreements between stakeholders, rather than pre-determined alternatives (Read & Sarasvathy, 2010). Opposed to the effectuation approach, traditional business schools teach the "causation" approach, based on the rational school of thought and predictive reasoning (Sarasvathy, 2001b:2).

When studying the concept of effectual reasoning, it is important to note that the word 'effectual' is the inverse of 'causal' (Sarasvathy, 2001b:2). Effectual reasoning is not simply a deviation from causal reasoning, but rather a distinct type of reasoning based on a completely separate logic than the logic of causal reasoning (Sarasvathy, 2001c:1). In order to enable clearer theoretical exposition it is useful to contrast these concepts as a dichotomy (Sarasvathy, 2001:245).

Sarasvathy (2001c:2) states that "effectual reasoning does not begin with a specific goal. Instead it begins with a given set of means and allows goals to emerge contingently over time from the varied imagination and diverse aspirations of the founders and the people they interact with". An example to illustrate effectual reasoning would involve an expert entrepreneur who uses her marketing expertise, together with her social network or social capital, in order to create an untapped market space or unique consumer segment as a target market.

In contrast, "causal rationality begins with a pre-determined goal and a given set of means, and seeks to identify the optimal alternative to achieve the given goal" Sarasvathy (2001c:2). An example of causal reasoning may be selecting the target market with the greatest potential return on marketing investments, and then choosing the most efficient and optimal marketing technique to reach the chosen target market.

Thus, effectuation acknowledges that entrepreneurs have access to specific human and social capital stocks and focus on selecting between possible effects that can be created with the available human and social capital stocks (Sarasvathy, 2001a:245). Alternatively, causation regards a particular effect as pre-determined and focuses on choosing between different stocks of human and social capital to create that effect. The distinctive characteristic between effectuation and causation is thus the set of choices: choosing between many possible effects using a particular stock of human and social capital, versus choosing between different human and social capital stocks to generate a particular effect (Sarasvathy, 2001a:245). Venkataraman and Sarasvathy (2001:658) add that, while causation models include "many-to-one mappings", effectuation models involve "one-to-many mappings".

Although causal thinking could involve creativity and innovation, effectual reasoning is inherently creative and innovative (Sarasvathy, 2001b:3). Despite the fact that both effectual and causal reasoning involve domain-specific skills and training, effectual reasoning requires something additional – "imagination, spontaneity, risk-taking and salesmanship" (Sarasvathy, 2001b:3).

### **3.4.2 The process of effectuation and causation**

In contrast to the study of the concept of effectuation, when studying the process of effectual reasoning, Sarasvathy (2001a:250) points out that all entrepreneurs begin with three categories of resources or "means". Although Sarasvathy (2001a) refers to "who I am", "what I know" and "whom I know" as a given set of means, the present study will refer to means as stocks of human and social capital.

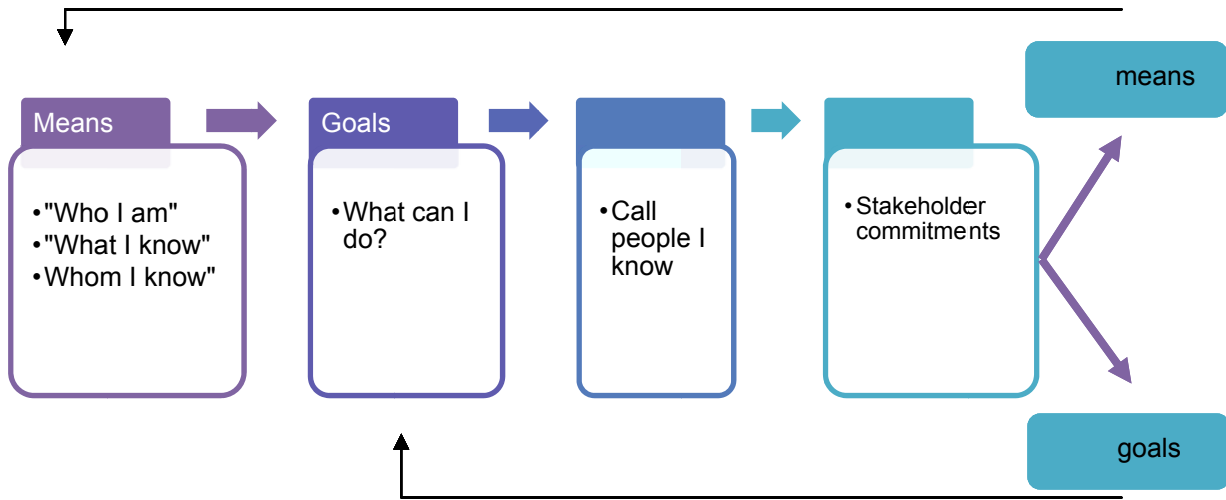
In the effectuation process, entrepreneurs use their human and social capital, combined with contingencies ("uncertainties pertaining to the future"), to create an effect that is not preselected but that is constructed as an integral part of SEB

(Sarasvathy, 2001a:249). While the causal reasoning process is characterised by careful planning and subsequent execution, the effectual reasoning process is characterised mainly by execution (Sarasvathy, 2001a:250).

The process of effectuation thus allows the entrepreneur to create various possible effects or outcomes, irrespective of the generalised end goal with which they started. The process allows a decision maker to change and adapt her goals, making use of contingencies as they arise (Sarasvathy, 2001a:247). The dynamic and interactive model of effectuation, graphically illustrated in Figure 3.1, summarises the effectual logic in the decision-making process. As shown in Figure 3.1, effectuation begins human capital ("who I am" and "what I know") and social capital ("whom I know") as a given set of means. Individuals thus begin with their identity, knowledge and networks to envisage the goals they can accomplish and the opportunities they can seize. As mentioned in Section 3.4.3.1, effectuation emphasises the future events that entrepreneurs can control, through their unique abilities, prior knowledge and their social network, rather than those future events that they can predict.

The process continues with entrepreneurs utilising their networks and gaining access to additional resources. Entrepreneurs thus form ties with outside stakeholders to obtain numerous critical resources, such as expert advice from other individuals or financial assistance (Katz & Gartner, 1988).

Entrepreneurs then obtain actual commitments from these potential stakeholders in their networks. Stakeholders thus commit resources in exchange for an influence over the goals and outcome of the initiative. As pointed out by Wiltbank *et al.* (2006), this process of negotiation start off two cycles in the simultaneous development of new initiatives. These are an expanding cycle, which expands the existing resources, and a converging set of limitations on the targets of the growing stakeholder network. It is important that entrepreneurs continually reconsider the balance of prediction logic (causation) and control logic (effectuation) in the decision-making process (Wiltbank *et al.*, 2006).



**Figure 3.1: A transformative approach – the effectual process**

SOURCE: Adapted from Wiltbank *et al.*, 2006

### 3.4.3 The principles of effectuation and causation

The third component in distinguishing between effectual and causal reasoning is to consider the principles of effectuation. These principles are clearly different from rational decision-making principles. Dew *et al.* (2009:292-293) propose five principles of effectual reasoning, as summarised in Table 3.1 and discussed subsequently.

**Table 3.1: The principles of effectuation and causation**

Principle	Effectuation	Causation
View of the future: <i>Principle 1</i>	Non-predictive	Predictive
Basis for taking action: <i>Principle 2</i>	Human and social capital-driven	Goal driven
Predisposition toward risk and resources: <i>Principle 3</i>	Affordable loss	Expected return
Attitude toward outsider: <i>Principle 4</i>	Collaborative partnerships	Competitive analysis
Attitude toward unexpected contingencies: <i>Principle 5</i>	Leveraging and exploit	Avoid and minimise

SOURCE: Adapted from Dew *et al.*, 2009:290

### **3.4.3.1 Non-predictive control vs. predictive control**

Effectual reasoning uses a logic of non-predictive control in order to transform the human and social capital available into new outcomes that might not initially have been visualised, while causal reasoning uses a logic of predictive control (Dew *et al.*, 2009:292). Wiltbank *et al.* (2006) define non-predictive control as avoiding predictive information and rather focussing on information that the decision maker and other relevant stakeholders can control.

On the one hand, the logic for using effectual processes is that, to the degree that the future can be controlled, there is no need to predict it (Sarasvathy, 2001a:252). Effectual logic is based on a "yet-to-be-made" future that is shaped by human action. It therefore is more useful to value networks and partnerships and work with individuals who are engaged in the decisions and actions that bring the future into existence (Tarko, 2006). Prediction is thus neither easy nor useful (Dew *et al.*, 2009:290). On the other hand, the logic for using causation processes is that, to the degree that the future can be predicted, it can be controlled. The future is thus often a projection of the past, in which managers could use scenario building to determine

goals for each of the different scenarios – thus planning for different futures, before acting.

Dew *et al.* (2009:290) propose a practical example of non-predictive control. Consider a fashion designer who uses effectual logic by signing exclusive contracts with clothing distributors and then designing the type of clothing the contracts have negotiated. Alternatively, consider a fashion designer who uses causal logic by attempting to forecast next season's fashion by means of market research, as well as research of previous fashion trends, and who then signs contracts only with appropriate distributors.

#### **3.4.3.2 Human and social capital-driven action vs. goal-driven action**

Effectual logic is based on human and social capital-driven action as opposed to goal-driven action. In other words, the process of effectual logic begins with a given or pre-determined stock of human and social capital and allows goals to materialise contingently over time (Sarasvathy, 2001b:2). Alternatively, causal logic prescribes deciding on a goal first, and then choosing between the given human or social capital to achieve the selected outcome (Dew *et al.*, 2009:293).

The simple task of planning a birthday party with a theme may be used to contrast the two types of reasoning. An individual who first decides on a theme, buys decorations and food according to the theme and then hosts the party is an example of casual reasoning. An example of effectual reasoning would involve an individual who would like to host a party, but first determines if any of her friends have decorations from previous parties, would be willing to pre-commit to the party and share their decorations (broadening the resource base), and then decides on the theme and hosts the party.

#### **3.4.3.3 Affordable loss vs. expected return**

In an effectual view, the choice of projects depends upon the decision makers' evaluations about what they are willing to lose – therefore affordable loss as opposed to expected return. Alternatively, decision makers, using causal logic, consider estimates of expected return when evaluating new opportunities or projects. Thus, in effectual reasoning, SEB rather concentrates on creating options that generate more

possibilities in the future, instead of options that maximise returns in the present (Sarasvathy, 2001a:252). Causal logic considers the scenario of new venture creation as one of following the maximum opportunity and raising the required resources to do so. Some of the most frequently used quantitative methods of evaluating opportunities for new ventures are discounted cash flow methods, such as net present value (NPV) or internal rate of return (IRR). These methods provide a basis for actual estimates of returns of new venture opportunities. Effectual logic, alternatively, considers the scenario as one of pursuing feasible opportunities without investing more resources than stakeholders can afford to lose. The focus here is on limiting downside potential (Dew *et al.*, 2009:290).

In practical terms, an individual who uses effectual logic calculates the amount that she is prepared to lose in order to start a new firm. She then builds partnerships with various stakeholders and innovatively utilises available resources, whilst continuously leveraging unforeseen events into new opportunities (Sarasvathy, 2006:1). The causal individual estimates the amount of money needed to start a new firm and then invests her efforts in accessing those funds.

#### **3.4.3.4 Building partnerships vs. competitive analysis**

The effectual entrepreneur advocates building partnerships and networks to generate new markets. Relationships, particularly partnerships, drive the character and path of the new venture. In contrast, the causal entrepreneur has a competitive approach toward outsiders such as suppliers and other players in the market. The relationships and networks of the latter entrepreneur are characterised by competitive analyses and the aim to remain in control as far as possible (Dew *et al.*, 2009:290).

Effectual logic emphasises building cooperative networks and partnerships, as opposed to competitive analysis. Effectuation emphasises strategic alliances and pre-commitments from stakeholders as a way to reduce uncertainty and erect entry barriers (Garud, Jain & Phelps, 1998; Sarasvathy, 2001a:252). The latter type of SEB enables entrepreneurs to achieve higher returns (Jo & Lee, 1996) and obtain otherwise inaccessible resources (Lin, Li & Chen, 2006; Smith & Lohrke, 2008).



### **3.4.3.5 Leveraging vs. avoiding contingencies**

Effectual logic focuses on avoiding forecasts and predictions, imaginative rethinking of possibilities and frequent renewal of targets. Contingencies are therefore seen as opportunities for innovation and need to be leveraged instead of avoided. Alternatively, causal logic focuses on accurate predictions, careful planning and unwavering focus on targets. Unforeseen events are therefore seen as obstacles to be avoided (Dew *et al.*, 2009:290).

The logic of effectual reasoning is based on leveraging both positive and negative contingencies (uncertainties concerning the future) into valuable components of new opportunities as an alternative to avoiding these unforeseen events. The effectual entrepreneur will thus rethink unexpected possibilities in order to transform the unexpected into new opportunities and to transform both constructive and unconstructive contingencies (Dew *et al.*, 2009:293; Read *et al.*, 2009:3).

Although causation and effectuation are inherently different in terms of concept, process and principles, it is important to note that the same individual can use both effectual and causal reasoning simultaneously, depending on the situation. In fact, most successful entrepreneurs are able to use both types of reasoning (Sarasvathy, 2001b:2), utilising the different stocks of human and social capital at their disposal.

## **3.5 CHAPTER SUMMARY**

Chapter 3 has addressed the research gap by examining the entrepreneurial behaviour of businesswomen, both intrapreneurs and entrepreneurs. The reasons for studying female entrepreneurial behaviour were discussed, and the barriers businesswomen experience were explored.

This chapter also provided an in-depth discussion of the theory of SEB. Both effectuation and causation are important aspects of the strategic entrepreneurial decision-making process and were examined. To clarify what these concepts entail, effectuation and causation were compared in terms of three components, namely concepts, processes and principles.

As mentioned in this chapter, all entrepreneurs begin with different stocks of human and social capital when discovering opportunities in the process of SEB. In order to understand the full extent of SEB it is important to consider these categories of capital in more depth. The literature concerning human and social capital (in the context of SEB) will be examined in the following chapter.

## CHAPTER 4

# HUMAN AND SOCIAL CAPITAL

### 4.1 INTRODUCTION

Entrepreneurship as an academic field is gaining importance as researchers try to understand why some individuals succeed in creating and discovering opportunities, while others do not, and how these innovative opportunities are assessed and exploited (Bhagavatula *et al.*, 2010:246; Sarasvathy, 2008:175). An improved understanding of opportunity identification can assist in ensuring that new knowledge is translated into tangible business innovations and practical solutions that add to economic and social growth (Ucbasaran, Westhead & Wright, 2009:100).

New opportunities may involve launching new goods and services, exploring new markets, developing new manufacturing methods as well as combining resources in novel ways (Shane & Venkataraman, 2000; Venkataraman, 1997). As mentioned in Chapter 3, all entrepreneurs begin with different stocks of human and social capital (Barringer & Ireland, 2006; Rwigema & Venter, 2004) when discovering opportunities in the process of strategic entrepreneurial behaviour (SEB). The importance of entrepreneurs' perceptions of their own skills, as well as the degree to which their social networks influence entrepreneurial activity, have been emphasised in several studies, such as the Global Entrepreneurship Monitor (GEM) reports (Herrington *et al.*, 2009:69). Thus, entrepreneurs' different stocks of human and social capital influence their ability to recognise opportunities and mobilise resources (Barringer & Ireland, 2006; Bhagavatula *et al.*, 2010:245).

For the purpose of the present study, two types of human capital, namely the self-concept, what Sarasvathy (2008) refers to as "who I am", and personal knowledge and experience, what Sarasvathy (2008) refers to as "what I know", will be examined; as well as social capital, namely networks, what Sarasvathy (2001a:250) termed "whom I know", in order to build on the current theoretical body of knowledge of SEB (effectuation vs. causation), as recommended by Sarasvathy (2008). In other words, the identity and knowledge base of female entrepreneurs, as well as their social

networks, are the focus of this chapter. Human and social capital provide the basis for entrepreneurial decisions and the creation, recognition and exploitation of new opportunity (Sarasvathy, 2008:255). These categories of capital are explained in more depth in the subsequent sections.

## 4.2 HUMAN CAPITAL

Human capital theory suggests that knowledge provides individuals with increased cognitive capabilities, leading to more productive and efficient potential activity (Becker, 1964; Davidsson & Honig, 2003; Dimov & Shepherd, 2005; Mincer, 1974; Schultz, 1959). Consequently, if profitable opportunities for new economic activity exist, individuals with more or higher quality human capital should be better at perceiving them. As a result, such individuals should have superior abilities in successfully exploiting opportunities in the entrepreneurial process (Davidsson & Honig, 2003:305). An individual's existing knowledge base, in other words their human capital, thus plays an important role in the process of identifying new opportunities for entrepreneurial initiatives, as it provides a foundation for interaction with new experiences (Kolb, 1984), and entrepreneurs use it as a base to interpret and understand new stimuli (Cohen & Levinthal, 1990).

The positive relationship between human capital and entrepreneurial actions is widely recognised (Mitchell & Shepherd, 2010:144). Numerous scholars (Brüderl, Preisendorfer & Ziegler, 1992; Cooper, Gimeno-Gascon & Woo, 1994; Dahlquist, Davidsson & Wiklund, 2000; Davidsson and Honig, 2003; Greene and Brown, 1997) have studied the influence of human capital within the process of entrepreneurship.

Several studies (Brüderl *et al.*, 1992; Cooper *et al.*, 1994; Dahlquist *et al.*, 2000) have focussed on the influence that human capital has on the failure, survival and potential for high growth of new ventures. Dahlquist *et al.*'s (2000) study confirmed the results obtained by Cooper *et al.* (1994) concerning the positive effect that general human capital has on the marginal survival probability of ventures, as well as the likelihood of becoming high-performance ventures. Correspondingly, Brüderl *et al.* (1992), in their study of human capital theory and organisational ecology, found that the human capital characteristics of the venture founder, especially years of schooling, work

experience and industry-specific experience, show strong direct and indirect effects on business survival.

Greene and Brown (1997) offered suggestions concerning the changing need for human capital across different types of entrepreneurs. They posited a model that considers the likely relationships between the resources business owners most need and business characteristics of orientation toward growth and innovation. According to the authors, social resources from individual and family sources are less important when firms pursue low growth, but relatively strong organisational, financial, physical, human and individual resources are important when firms pursue high growth (Benson-Rea, 2000:5).

Similarly, Davidsson and Honig (2003) considered the association between both human and social capital and entrepreneurial activities and opportunity exploitation in their study of nascent entrepreneurship. Their results varied, as they supported a relationship between both education and start-up experience and the nascent activity of opportunity search, but only weakly with carrying the start-up process towards successful completion.

In these studies, human capital has been related to outcomes such as entry and engagement in entrepreneurship, opportunity identification, and performance (Mitchell & Shepherd, 2010:144). In fact, it has been found that the actual discovery of specific opportunities depends on individual differences in human capital (Corbett, 2007; Shane, 2000). Prior knowledge, in terms of education and training as well as work experience, is the characteristic most often thought of in reference to human capital (Greene & Brown, 1997:164). However, in order to discover entrepreneurial opportunities it is required that individuals not merely possess prior knowledge and experience, but that they believe they can accomplish a particular task and exploit their knowledge (Corbett, 2007:97). Therefore, two types of human capital, namely the self-concept, what Sarasvathy (2008) refers to as "who I am", and personal knowledge and experience, what Sarasvathy (2008) refers to as "what I know", will be examined.

#### 4.2.1 Human capital: "Who I am"

Entrepreneurs often explain their actions and decisions in terms of something fundamental about "who they are", rather than in terms of their more established preferences (Sarasvathy, 2008:78). They utilise their stock of human capital, namely their self-concept, in SEB. Mitchell and Shepherd (2010:138) concur and point out that entrepreneurs base their decisions concerning opportunities on "fit with an ideal image of an opportunity". In other words, decisions about exploiting entrepreneurial opportunities are influenced by how well the opportunity at hand fits with an entrepreneur's ideal image of an opportunity.

Mitchell and Shepherd (2001) furthermore note that there is a difference between the images of experienced entrepreneurs as opposed to those of novice entrepreneurs. Novice entrepreneurs' images of opportunity are founded on "newness and uniqueness", while experienced entrepreneurs' images of opportunity are founded on "profitability and feasibility" (Mitchell & Shepherd, 2001:138). When novice entrepreneurs consider opportunities, and make decisions, they focus on such factors as newness and novelty of products or services, and on their own intuitions. In contrast, experienced entrepreneurs tend to focus to a greater extent on factors likely to influence business success, such as generation of cash flow and holding risk to manageable levels (Baron & Shane, 2007:91). Experienced entrepreneurs thus have richer and more relevant images of opportunity in comparison with novice entrepreneurs (Baron & Ensley, 2006). This allows them to identify more opportunities, although at a diminishing rate as their experience increases (Ucbasaran *et al.*, 2009:100).

Mitchell and Shepherd (2010:138) therefore suggest that there are distinctive differences among entrepreneurs, based on their self-concept, and that these differences influence their perceptions, assessments and decisions concerning opportunities. It is thus important to study how these personal differences affect entrepreneurs' decisions to exploit opportunities in the process of SEB. For the purpose of the present study two images of self will be studied, namely images of vulnerability and images of capability, as described by Mitchell and Shepherd (2010), because of the relevance of these images for opportunity recognition and exploitation.

More specifically, the consideration of a more comprehensive image of self is important for two reasons. Firstly, entrepreneurs often identify favourable prospects without identifying them as prospects that they themselves should exploit (Mitchell & Shepherd, 2010:139). In other words, they recognise potential opportunities but they do not consider themselves capable enough to exploit these prospects. In this way, it is important to investigate the extent to which entrepreneurs' perceptions of themselves influence their decision-making logic in the process of SEB. For this reason, the present study focuses on entrepreneurs' image of capability.

Secondly, and more generally, the consideration of a more comprehensive image of self is important because, as Sarasvathy (2008:10) points out, there is a fundamental difference in the logical frame used by causal entrepreneurs, who are engaged in the discovery and exploitation of opportunities, and the effectual entrepreneur, who ends up formulating opportunities from the everyday realities of her life and value system. Consequently, a more comprehensive view of entrepreneurs' images of self (in other words, not only images of capability but also images of vulnerability) would enable a better understanding of the SEB process.

Generally, images of self represent individuals' beliefs and attitudes toward themselves (Gecas, 1982:3). The nature of these beliefs and attitudes is seen as varying from individual to individual, depending on idiosyncratic life experiences (Morgan & Schwalbe, 1990:154). The two images of self that are found in entrepreneurs' doubts and fears and their individual potential, namely images of vulnerability and images of capability, will be studied in the following section.

#### **4.2.1.1 Images of vulnerability**

The first image of self to be studied, namely images of vulnerability (fears), is particularly significant in entrepreneurship research, as female entrepreneurs often have lower estimates of their own abilities. The GEM studies point out that men, compared to women, are generally more confident about their ability to start a business. In addition, the studies indicate that a higher percentage of females than males would let fear of failure prevent them from starting a business (Allen *et al.*, 2007:35).

Failure, broadly defined, is "the condition of non-attainment of one's level of aspiration" (Mitchell & Shepherd, 2010:143). Entrepreneurs desire to avoid the perceived outcomes of non-achievement, in other words they desire to avoid failure. This desire is identified as "fear of failure" and is fundamental to images of vulnerability (Mitchell & Shepherd, 2010:143). The present study focuses on the process of averting these negatively perceived consequences, as they could influence an entrepreneur's decision-making in the process of SEB. For the purposes of the present study, images of vulnerability are thus captured using a measure of fear of failure.

In previous research, such as the GEM studies, fear of failure is measured by asking respondents if their fear of failure would prevent them from starting up a business (Allen *et al.*, 2007:35). Efficiency-driven countries, such as South Africa, are those with the highest fear of failure rates and with the lowest intention rates (Bosma & Levie, 2009:16). This fear of failure could be due to environmental turbulence and instability, and is related to the fear of having an uncertain future. According to the Global GEM report of 2009, the fear of failure rate in South Africa is 31% and is measured as a percentage of the 18- to 64-year-old population who perceived good business opportunities and who indicated that their fear of failure would prevent them from setting up a business (Bosma & Levie, 2009:61).

The GEM report of 2007 found that women in all country groups were more likely to express a fear of business failure compared to their male counterparts (Allen *et al.*, 2007:10). This is also true for South Africa, as South African women generally do not believe that they are entrepreneurial (Herrington *et al.*, 2009:41). This is part of the reason why men in South Africa are 1.5 times more likely to be involved in early-stage entrepreneurial activity than women are (Herrington *et al.*, 2009:68).

Conroy (2001:432) explains that fear of failure, at its core, represents "a capacity for experiencing shame or humiliation as a consequence of failure". As follows, the prospect of failure involves a direct threat to an individual's self-esteem (Covington, 1985:390), which can cause individuals to be concerned that they do not have the capability to achieve internalised objectives. Fear of failure is motivated by this concern about whether one's individual capabilities are adequate, specifically as it



concerns the negative outcomes that are perceived to be related to failure (Conroy, 2001:432).

Fear of failure, as an image of self, involves certain sub-dimensions, as identified by Conroy, Metzler and Hofer, (2003:402), as well as by Conroy (2001:433). These include a fear of: (1) experiencing shame and embarrassment; (2) devaluing one's self-estimate; (3) having an uncertain future; (4) important others losing interest; and (5) upsetting important others. It should be noted that these fear-of-failure sub-dimensions reflects "the perceived internal, ability-based negative consequences of failure" (Mitchell & Shepherd, 2010:143). In other words, fear of failure is also the fear of being a failure. The present study will focus on two sub-dimensions: the fear of devaluing one's self-estimate and the fear of having an uncertain future, as these sub-dimensions relate most directly to the context of this study. The relationships between images of vulnerability and the dependent variables, effectuation and causation, were measured with hypotheses H<sub>02A</sub>, H<sub>02B</sub>, H<sub>2C</sub> and H<sub>02D</sub>, as well as hypotheses H<sub>03A</sub>, H<sub>03B</sub>, H<sub>3C</sub> and H<sub>03D</sub> (refer to Section 5.3.3).

#### **4.2.1.2 Images of capability**

The second image of self to be studied, namely images of capability, is captured using a measure of entrepreneurial self-efficacy. Wood and Bandura (1989:364) noted that success is not only dependent on one's skill set, but also on a strong self-belief in one's abilities to achieve goals. In other words, although many factors (for example access to education and training) may contribute to the successful exploitation of opportunities, entrepreneurial self-efficacy – the self-confidence that one has the required abilities to be successful – plays an important positive role in determining the level of interest in pursuing an entrepreneurial career (Kickul, Wilson & Marlino, 2004). Consequently, entrepreneurs with similar capabilities may perform adequately or inadequately, given that their self-assurance of efficacy improves or weakens their motivation and problem-solving attempts (Wood & Bandura, 1989:364).

Self-efficacy refers to entrepreneurs' confidence that they can achieve a certain assignment and can thus be linked to entrepreneurial outcomes (Mitchell & Shepherd, 2010:144), and therefore has an impact on decision making in the process

of SEB. Chen, Greene and Crick (1998) have suggested that self-efficacy, within the field of entrepreneurship, influences certain outcomes, such as entrepreneurial intentions and actions, as well as taking calculated risks (Krueger and Dickson, 1994). In fact, as Mitchell and Shepherd (2010:144) mention, entrepreneurs devote substantial time and effort to starting new initiatives or business ventures as a consequence of a determined belief that they can be successful in this decision-making process.

Encouraging experiences and positive incidents is likely to enhance self-efficacy, whereas failures and disappointments will decrease self-efficacy. Individuals with higher entrepreneurial self-efficacy tend to be involved in task-related actions, and tend persevere in their attempts to cope; consequently, additional experiences of success follow and, as a result, self-efficacy is enhanced. Alternatively, individuals with lower levels of self-efficacy are less persistent and show less perseverance in their efforts to cope; they thus tend to give up under difficulty and, as a result, experience less success, and therefore their low self-efficacy is reinforced (Bandura, 1982). Thus, as Westerberg, Singh and Hackner (1997:257) noted, individuals with higher levels of self-efficacy tend to achieve their goals more often, and will therefore be more successful in accomplishing their aims and intentions.

Entrepreneurs with higher self-efficacy consider themselves as having "what it takes" to successfully take part in the entrepreneurial process. Their perceptions about themselves have an influence on their belief that an opportunity can be successfully exploited. On the contrary, entrepreneurs with lower self-efficacy consider themselves as not having "what it takes" to be successful, and they think they offer little that will have an influence on the successful exploitation of opportunities (Mitchell & Shepherd, 2010:144). Therefore, individuals with higher entrepreneurial self-efficacy are less likely to be affected by "opportunity-based" risks than individuals with lower entrepreneurial self-efficacy. An opportunity-based risk is an intentional decision to acknowledge the identified risks related to an opportunity, and then to apply processes to minimise negative implications related to the risks (Krueger and Dickson, 1994).

Research on self-efficacy has shown convincing and consistent patterns, indicative of individuals with higher entrepreneurial self-efficacy having higher entrepreneurial

intentions (Chen *et al.*, 1998; Krueger, Reilly & Carsrud, 2000; Scott & Twomey, 1988; Segal, Borgia & Schoenfeld, 2002). Eccles (1994) found that women are likely to have lower expectations for success in a wide range of occupations, particularly in careers that have been seen in the past as "non-traditional" for women, such as starting one's own venture (Betz and Hackett, 1981; Scherer, Brodzinski & Wiebe, 1990). There is also significant evidence to suggest that women limit their career aspirations and interests because they believe they lack the necessary capabilities (Bandura, 1992).

In a study by Wilson *et al.* (2009), females were found to have both lower entrepreneurial self-efficacy and lower entrepreneurial intentions than their male counterparts. In addition, these authors found that the positive influence of entrepreneurship education on self-efficacy proved stronger for women than for men. Addressing both entrepreneurial knowledge and self-efficacy are thus crucial and especially important for females, because of their observed self-efficacy bias.

The relationships between images of capability and the dependent variables, effectuation and causation, were measured with hypotheses H<sub>01A</sub>, H<sub>01B</sub>, H<sub>1C</sub> and H<sub>01D</sub> (refer to Section 5.3.3).

To summarise, images of vulnerability are captured using a measure of fear of failure, while images of capability are captured using measures of entrepreneurial self-efficacy. The relevant literature (Mitchell & Shepherd, 2010) identifies these images of self as most likely to impact on entrepreneurs' decisions to exploit opportunities and most relevant to SEB. In the following section, the second type of human capital, namely personal knowledge and experience, what Sarasvathy (2008) refers to as "what I know", is discussed.

#### **4.2.2 Human capital: "What I know"**

As mentioned in Section 4.2, the actual discovery of specific entrepreneurial opportunities depends on individual differences in human capital (Corbett, 2007; Shane, 2000). Several scholars have suggested that prior knowledge, in terms of education and training as well as experience, plays an important role in the identification of opportunities (Corbett, 2007; Mitchell and Shepherd, 2010:144; Sarasvathy, 2008; Shane, 2000; Venkataraman, 1997; Wiklund & Shepherd, 2003)

and in intellectual performance (Davidsson & Honig, 2003:306) in the process of SEB. When identifying entrepreneurial opportunities, an individual's knowledge base is important for the recognition of opportunities, as it provides a foundation for interaction with new experiences (Corbett, 2007:101) and entrepreneurs use it as a foundation to interpret and understand new stimuli (Cohen & Levinthal, 1990). It furthermore assists in the integration and gathering of new knowledge and information, as well as integrating and adapting to new situations (Weick, 1996).

Therefore, different entrepreneurs will discover different opportunities in the process of SEB, as their stocks of prior knowledge are different (Venkataraman, 1997). Shane (2000:451) explains that these different stocks of prior knowledge are generated through entrepreneurs' idiosyncratic life experiences. Each entrepreneur's idiosyncratic prior knowledge generates a "knowledge corridor" that enables her to recognise particular opportunities (Venkataraman, 1997). Prior knowledge consequently has an effect on an entrepreneur's capacity to understand, interpret and utilise new knowledge in ways that individuals without that knowledge cannot copy (Shane, 2000:452).

Knowledge may be defined as being either tacit or explicit (Polanyi, 1967). Explicit knowledge is knowledge that can be articulated, codified and stored. It can also be readily transmitted across people and organisations (Dimov & Shepherd, 2005:6; Sanchez, 2005). Tacit knowledge, on the other hand, refers to know-how, the often non-codified components of activity (Davidsson & Honig, 2003:306), and tends to stick to particular individuals or firms that make their actions and decisions difficult to replicate (Dimov & Shepherd, 2005:6). Know-what consists of the explicit type of information normally conveyed in procedures, processes, formal written documents and educational institutions. Human capital, as developed through education and training as well as experience, contributes to both explicit and tacit knowledge.

Solving complex problems and making entrepreneurial decisions utilises an interaction of both tacit and explicit knowledge, as well as social structures and belief systems (Davidsson & Honig, 2003:306). Thus, individuals may be able to increase their stocks of prior knowledge as a result of formal education, such as university education, informal education, such as work experience and training, and acquiring

other valuable skills, such as emotional and intellectual abilities (Davidsson & Honig, 2003:306; Rwigema & Venter, 2004:185).

Prior knowledge has been termed "what I know" by Sarasvathy (2001a:250) and, for the purpose of the present study, two types of prior knowledge will be explored, namely knowledge as reflected by qualifications and training and knowledge reflected by experience. The relevant literature (Dimov & Shepherd, 2005; Shane, 2000) identifies these knowledge "stocks" as most relevant to SEB. The relationships between prior knowledge and the dependent variables, effectuation and causation, were measured with hypotheses H<sub>04A</sub>, H<sub>04B</sub>, H<sub>4C</sub> and H<sub>04D</sub>, as well as hypotheses H<sub>05A</sub>, H<sub>05B</sub>, H<sub>5C</sub> and H<sub>05D</sub> (refer to Section 5.3.3).

#### **4.2.2.1 Qualifications and training**

The first type of prior knowledge to be studied, namely qualifications and training, is one component of human capital that may assist in the accumulation of explicit knowledge that may provide skills useful to entrepreneurs (Davidsson & Honig, 2003:306). This is an important component in human capital theory, since it supplies entrepreneurs with the specific information required to accomplish given tasks (Lee *et al.*, 2005:60) and therefore facilitates the discovery and exploitation of opportunities in the process of SEB.

Empirical research has demonstrated a range of results regarding the relationship between education, entrepreneurship and success, with education often producing nonlinear effects in supporting the probability of becoming an entrepreneur, or in achieving success (Cooper & Gimeno-Gascon, 1992; Davidsson & Honig, 2003:306). A number of studies have found that, for men, returns on education, in terms of earnings, are conditional on both the industry and higher levels of education, such as college or graduate studies (Bates, 1995; Honig, 1998). For female entrepreneurs, education seems to be particularly important, as women are more likely to enter self-employment in skilled services fields. Consequently, advanced education and work experience are the strongest predictors of female entrepreneurship (Bates, 1995:143).

In an influential study, Brüderl *et al.* (1992) established that years of education, as well as the managerial and industry experience of entrepreneurs, have positive

effects on the survival and success of new ventures. A study by Robinson and Sexton (1994) supports these findings and also found that education does indeed have a close relationship with entrepreneurship, in that entrepreneurs have a higher level of education than people in the wage and salaried sector. In addition, higher levels of education increase both the probability of becoming self-employed and the success of individuals in that sector in terms of earnings. Consequently, it can be said that research suggests that entrepreneurs with more advanced qualifications and training have greater ability with regard to problem solving, as well as the ability to learn the content of particular disciplines more effectively (Lee *et al.*, 2005:60).

Training complements qualifications, because education on its own does not entirely prepare entrepreneurs to be successful in the world of business. It is important that learning occurs inside as well as outside of educational institutions so as to incorporate job training. This will enable entrepreneurs to obtain skills and expertise that will directly improve their productivity in the business world (Strober, 1990). Lee *et al.* (2005:60) note that, in today's rapidly changing world of business, where knowledge, skills and expertise are constantly required to be restructured and renewed, training is an important way to develop an individual's human capital.

#### **4.2.2.2 Experience**

The second type of prior knowledge to be studied, namely experience, provides entrepreneurs with frameworks that can be utilised to categorise new information, allowing greater clarity in decision making (Baron & Ensley, 2006:1331). It can thus be said that experience has an impact on an entrepreneur's ability to recognise entrepreneurial opportunities. Mitchell and Shepherd (2010:144) note that the more experience entrepreneurs have, the clearer and richer their images of opportunities related to the process of founding new ventures are. Experience also facilitates "pattern recognition", resulting in the discovery of opportunities (Mitchell & Shepherd, 2010:144).

Human capital is thus not only the result of formal education and non-formal education, such as specific training courses, but includes experience and practical learning that takes place on the job (Davidsson & Honig, 2003:306). Thus, broad labour market experience, as well as specific vocationally oriented experience, is

theoretically predicted to increase human capital (Becker, 1964). Although empirical results have been mixed, there are studies showing that labour market experience, management experience and previous entrepreneurial experience are as significantly related to entrepreneurial activity, particularly when controlling for factors such as industry and gender (Bates, 1995; Gimeno *et al.*, 1997; Robinson & Sexton, 1994).

In past studies, work experience has been measured in terms of years working in a particular occupation (McDaniel, Schmidt & Hunter, 1988; Quinones, Ford & Teachout, 1995; Tesluk & Jacobs, 1998). Several scholars (Schmidt, Hunter & Outerbridge, 1986; Tesluk & Jacobs, 1998) found that the duration of time spent on a job is positively associated with job performance, as individuals develop the necessary career knowledge, abilities and capabilities to do their job effectively over time. Therefore, the longer individuals work at an organisation, the more productive they tend to be, as they have work routines that would allow them to be successful in their occupation and be of value to the organisation (McEnrue, 1988). Consequently, there tends to be a positive correlation between experience and career success (Lee *et al.*, 2005:60).

#### **4.3 SOCIAL CAPITAL**

While an entrepreneur's self-concept ("who I am") and her prior knowledge and experience ("what I know") are important in the process of SEB, involvement in the knowledge-creation process with others ("whom I know") broadens an individual's own restricted perspective and ideas (Lee *et al.*, 2005:60). Interactions and relations with other individuals are not merely restricted to an entrepreneur's team of workers, but may include other individuals from within and/or external to the organisation (Bouty, 2000:50; Gupta, Wilemon & Atuahene-Gima, 2000:54). The process of interaction facilitates the generation and exchange of information and, thus, the development of intellectual capital by offering the individual the chance to combine and synchronise her knowledge with others (Lee *et al.*, 2005:60). Working with others allows the entrepreneur to combine her knowledge with other individuals and thus benefit from various perspectives (Adler & Zirger, 1998:51).

As entrepreneurs benefit from these various viewpoints through exchanging and combining different tacit knowledge and experience amongst different individuals



(Madhavan & Grover, 1998:1), social capital theory offers the theoretical foundation for explaining the incremental value of the knowledge development process beyond an individual's own abilities when she interacts with others. Current research on entrepreneurship emphasises the importance of social capital, and the ways in which individuals take advantage of their own social affiliations and network strategies in pursuit of their entrepreneurial goals (Hoang & Antoncic, 2003; Kwon & Arenius, 2010:315). Over time, as an individual interacts with others, she develops social capital as the interaction allows her to gain access to the other individual's knowledge and resources (Farr-Wharton & Brunetto, 2009:16; Lee *et al.*, 2005:60).

Social capital refers to the resources that an individual possesses through acquiring a network of relationships and personal contacts (Walker, Kogut & Shan, 1997:109). It can also be said that social capital is the relationships an entrepreneur accrues in her social network and the sum of potentialities of these relationships (Peverelli, 2000). Social capital is thus about the value of social relationships, connecting persons and establishing links between diverse individuals, with norms of reciprocity (Social Capital Research, 2004). Social capital, namely networks, was termed "whom I know" by Sarasvathy (2001a:250). "Whom I know", as articulated by effectuation theory, describes alternatives, opportunities and resources that become available through the entrepreneur's social network (Sarasvathy, 2008:268). The relationships between networks and the dependent variables, effectuation and causation, were measured with hypotheses H<sub>06A</sub>, H<sub>06B</sub>, H<sub>6C</sub> and H<sub>06D</sub>, as well as hypotheses H<sub>07A</sub>, H<sub>07B</sub>, H<sub>7C</sub> and H<sub>07D</sub> (refer to Section 5.3.3).

#### **4.3.1 Social capital: Networks**

Broad agreement exists amongst both strategy and entrepreneurship researchers that networks play an essential part in the successful emergence and development of organisations (Hansen, 1995; Hite & Hesterly, 2000; Larson & Starr, 1993; Sarasvathy, 2008; Stuart, Hoang & Hybels, 1999; Uzzi, 1997). Bhagavatula *et al.* (2010:246) furthermore point out that the network perspective, which investigates how the connections between entrepreneurs and their social contacts facilitate or constrain their businesses, has become a dominant concept in explaining the process of entrepreneurial decision making.



Previous research has identified that many female entrepreneurs utilise their social networks to discover new venture opportunities (Brunetto & Farr-Wharton, 2007). There is also evidence that businesswomen are more likely to apply a relational and less formal approach to management whilst building informal relationship with co-workers and employees in comparison to their male counterparts (Brush, 1992; Buttner, 2001; Verheul, Risseuw & Bartelse, 2002). In addition, Farr-Wharton and Brunetto (2009:16) note that businesswomen tend to use a consultative and empowering approach towards employees by focussing on information-sharing and networks.

Lee *et al.* (2005:60) note that networks give entrepreneurs access to other individuals' resources and thus decrease the time and effort entrepreneurs devote to assemble additional information and resources. Entrepreneurs recognise ideas for new products or services, and gain knowledge and financing as well as other resources through exchange transactions with various members of their social networks (Hansen, 1995:9). Performance is improved by the concentration of the network or the relative amount of network ties that connect entrepreneurs (Reagans & Zuckerman, 2001; Sparrowe *et al.*, 2001). The more relationships that connect one entrepreneur to another, the stronger the social capital and the more efficient the level of communication becomes (Adler & Zirger, 1998).

For the purpose of the present study, five types of social capital, in the form of network capabilities, are explored. Network capability is an individual's capability to expand and develop relationships in order to gain access to additional resources owned by others (Walter, Auer & Ritter, 2006). These network capabilities are coordination, relationship skills, partner knowledge, internal communication and building partnerships. The relevant literature (Walter *et al.*, 2006; Westerberg & Wincent, 2008) identifies these types of social capital as most likely to impact on decisions to act on opportunities and as most relevant to SEB.

#### **4.3.1.1 Coordination**

The first type of network capability to be studied, namely coordination, refers to the coordination activities between collaborating individuals, firms and partners (Westerberg & Wincent, 2008:573). Coordination also reflects the set of tasks each

party expects the other to perform (Mohr & Spekman, 1994:138). Narus and Anderson (1977) suggest that successful working partnerships can be characterised by coordinated actions directed at joint objectives that are consistent across organisations. Coordination activities thus connect the firm to other firms and connect different individual relationships into a network of mutually supportive interactions (Walter *et al.*, 2006:547).

Several scholars have studied the effect of coordination between individuals, firms and partners. Mohr and Spekman (1994) highlighted the coordination between collaborating firms. Their results indicate that coordination is one of the primary characteristics of partnership success. In another study, Walker *et al.* (1997) suggested cross-relational coordination and found strong support for the power of social capital in reproducing the network over time. Coordination is particularly relevant for businesswomen, as greater stability in uncertain business environments can be established through effective coordination between stakeholders (Pfeffer and Salancik, 1978).

#### **4.3.1.2 Relationship skills**

The second type of network capability to be studied, namely relationship skills, refers to an entrepreneur's ability for inter-personal exchange (Westerberg & Wincent, 2008:573). Baron and Markman (2000) noted that entrepreneurs' overall effectiveness in interacting with other individuals in face-to-face situations may have an influence on the success of their entrepreneurial ventures.

Relationship skills, also referred to as social competence (Baron & Markman, 2003:43), are seen as important to the management of relationships because entrepreneurs have to perceive and adjust to a broad range of social situations, and must be able to respond to a variety of information and social stimuli from inside and outside the firm (Walter *et al.*, 2006). Relationship skills include aspects such as the ability to communicate, skills to manage conflict, compassion, emotional stability, self-reflection, sense of justice, and cooperativeness (Marshall, Goebel & Moncrief, 2003).

Effective relationship skills have several valuable effects. For example, DePaulo (1994) suggests that the ability to perceive individuals accurately is valuable, as it

helps one to determine if someone is honest in business situations such as negotiations. Cialdini (1994) adds that being persuasive assist individuals in achieving their personal aspirations and goals. This is consistent with Gartner, Bird and Starr's (1992) suggestion that persuasiveness is one of the key actions performed by female entrepreneurs whilst convincing others to share their beliefs about what the new business venture can, and will, become. Kilduff and Day (1994) also note that intrapreneurs, who show a high level of social adaptability, tend to progress in the firm through promotions sooner than those who do not build relationships.

#### **4.3.1.3 Partner knowledge**

Partner knowledge, the third type of network capability to be studied, refers to the possession of organised and structured information about one's collaborating partners, firms and competitors (Li & Calantone, 1998; Walter *et al.*, 2006:547; Westerberg & Wincent, 2008:573). It is important that entrepreneurs have an in-depth understanding of their partners, firms and competitors, as partner knowledge can lead to stable and long-term relationships between different actors because they would understand each other's need and wants better (Westerberg & Wincent, 2008:575).

Entrepreneurs with knowledge about their partners can shape suitable exchange routines and governance arrangements, and these firms can avoid or handle instabilities in their partnerships (Das & Bing-Sheng, 2000). Partner knowledge thus allows for situation-specific management with a partner, such as the reduction of transaction control costs, and proactive and solution-oriented conflict management. Overall, partner knowledge stabilises a firm's position, where necessary within a network. This knowledge is a prerequisite for effective coordination and pre-commitments from stakeholders among whom, at the same time, it develops by coordination and internal communication (Walter *et al.*, 2006).

#### **4.3.1.4 Internal communication**

The fourth network capability to be studied, namely internal communication, is the firm's or entrepreneur's internal communication to attain organisational learning within partnerships (Westerberg & Wincent, 2008:573). Effective communication is an

integral part of network capabilities. From a relationship viewpoint in particular, it is important that everyone in the firm "speaks the same language". This will only be achievable when everyone is regularly updated on information of their partners, or any change in agreements (Westerberg & Wincent, 2008:575).

In several market orientation studies it is pointed out that internal communication is essential for being responsive (Kumar, Subramanian & Yauger, 1998). In another study, Narver and Slater (1990) found a substantial positive effect of market orientation on the profitability of businesses. In addition, Doz (1996) found that internal communication is essential for effective organisational learning within partnerships.

From a relational perspective, Sivadas and Dwyer (2000) also point to internal communication as an integrated part of collaborative competence. Assimilating and disseminating up-to-date information on partners, their resources and agreements with them to all involved departments helps to avoid redundant processes and miscommunication, as well as improves the detection of synergies between partners (Cohen & Levinthal, 1990). Firms must connect their many external relationships internally.

#### **4.3.1.5 Building partnerships**

The fifth type of social capital to be explored is the ability to build partnerships. While building partnerships is valuable in various contexts, it might be especially useful to entrepreneurs in SEB. Throughout the process of SEB and new business creation, entrepreneurs must build partnerships with a diverse range of people, including customers, suppliers, new employees and competitors (Baron & Markman, 2003:46). In addition, they must build these partnerships in highly volatile, uncertain and competitive environments (Gartner, 1988). It is thus in such contexts that the ability to building partnerships is most useful to entrepreneurs (Baron & Markman, 2003:46).

Network capabilities not only involve sustaining old relations, but also a firm's ability to locate and build new relations (Westerberg & Wincent, 2008:573). This would require firms to be proactive and initiate contact with new partners. A firm with high networking capability will thus be able to identify prospective partners, establish relationships, obtain pre-commitments and use and share each other's resources and

competences. Overall, it can be assumed that firms with a high networking capability will be able to make the best out of their network compared to other firms (Westerberg & Wincent, 2008:575).

Drawing from the above literature on the importance of human and social capital in the exploitation of entrepreneurial opportunities, a research model is developed that incorporates the self-image, knowledge and networks of entrepreneurs, as well as the process of SEB, namely effectuation and causation.

#### **4.4 PROPOSED RESEARCH MODEL**

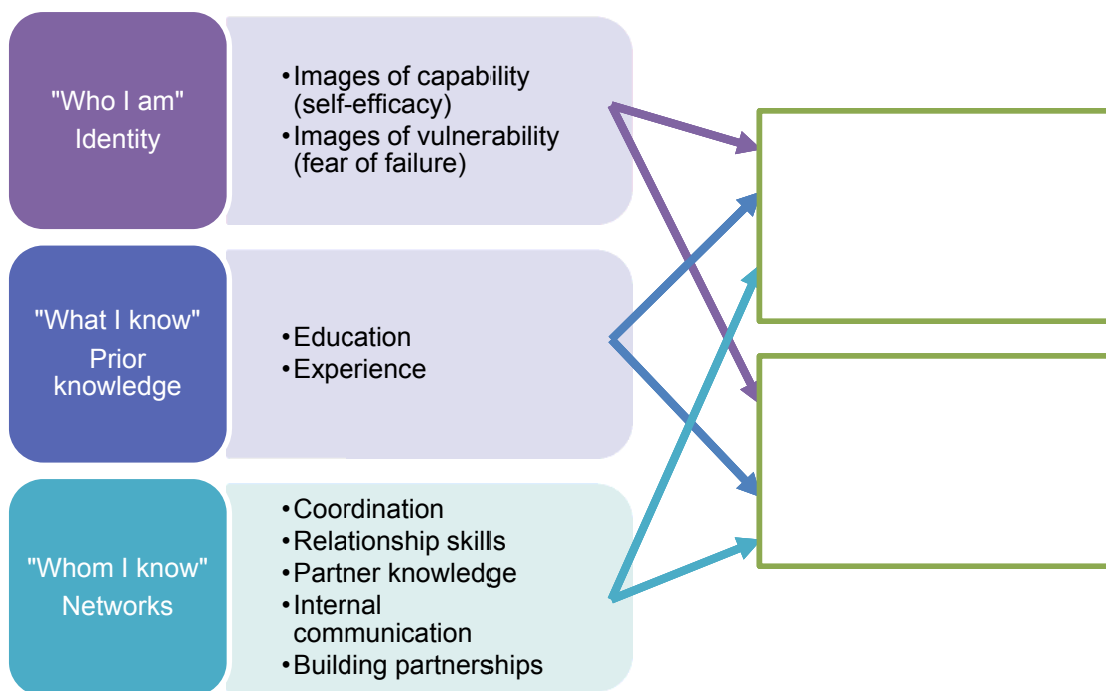
Figure 4.1 illustrates the focus of the present study. The proposed research model is aligned with the research gaps identified by Sarasvathy's (2008:274) general theoretical model to facilitate further research of SEB, as discussed in Chapter 1. The study determines how the human and social capital possessed by businesswomen influences their decision making in the process of SEB. SEB is categorised into two main types of reasoning used by entrepreneurs, namely effectuation and causation. Both effectuation and causation are important aspects of the strategic entrepreneurial decision-making process and were examined in Chapter 3.

An individual's existing knowledge base, in other words the individual's human capital, plays an important role in the process of identifying new opportunities for entrepreneurial initiatives, as it provides a foundation for interaction with new experiences (Kolb, 1984). Entrepreneurs use it as a base to interpret and understand new stimuli (Cohen & Levinthal, 1990). As discussed in Section 4.2, human capital consists of two main constructs: an entrepreneur's image of self, what Sarasvathy (2008) refers to as "who I am", and personal knowledge and experience, what Sarasvathy (2008) refers to as "what I know". The human capital of entrepreneurs influences their ability to recognise opportunities and mobilise resources (Barringer & Ireland, 2006; Bhagavatul *et al.*, 2010:245) and influences their decision making in the process of SEB, influencing individuals to follow an effectuation or causation approach (Sarasvathy, 2008).

While an entrepreneur's human capital is important in the process of SEB, interactions and relations with others, in other words social capital, broaden an

individual's own restricted perspective and ideas (Lee *et al.*, 2005:60). Social capital, namely networks, was termed "whom I know" by Sarasvathy (2001a:250). "Whom I know", as articulated by effectuation theory, describes alternatives, opportunities and resources that become available through the entrepreneur's social network (Sarasvathy, 2008:268). Together, human and social capital provide the basis for entrepreneurial decisions and the recognition and exploitation of new opportunities (Sarasvathy, 2008:255).

SEB is an emerging research field with growing importance in the global business environment. Although exploratory work has been conducted on effectuation and causation, several research gaps remain. This thesis will attempt to fill a research gap in the literature by providing more clarity on the research gaps (refer to Section 1.1).



**Figure 4.1: Proposed research model**

## 4.5 CHAPTER SUMMARY

Chapter 4 examined the literature concerning human and social capital in the context of SEB. The chapter began by introducing two types of human capital relevant to this study, namely the image of self, what Sarasvathy (2008) refers to as "who I am", and prior knowledge and experience, what Sarasvathy (2008) refers to as "what I know".

The chapter continued with an in-depth discussion of "who I am", in other words the entrepreneur's self-concept. Two images of self, which are founded upon an entrepreneur's doubts and fears and their individual potential, were discussed. These are images of vulnerability (captured using a measure of fear of failure) and images of capability (captured using measures of entrepreneurial self-efficacy). It is important to study how these personal differences affect entrepreneurs' decisions to exploit opportunities in the process of SEB.

In the following section, the second type of human capital, namely prior knowledge and experience, or what Sarasvathy (2008) refers to as "what I know", was considered. Two types of prior knowledge were explored, namely knowledge as reflected by qualifications and training, and knowledge gained by experience.

The final section of this chapter examined entrepreneurs' social capital in the form of social networks. Networks were termed "whom I know" by Sarasvathy (2001a:250). "Whom I know", as articulated by effectuation theory, describes alternatives, opportunities and resources that become available through the entrepreneur's social network (Sarasvathy, 2008:268). For the purpose of the present study, five types of social capital, in the form of network capabilities, were explored. These network capabilities are coordination, relationship skills, partner knowledge, internal communication and building partnerships.

The next chapter outlines the research methodology, highlights the research problem and hypotheses, discusses the research design, data collection and data analysis, and finally reviews reliability and validity issues.

# CHAPTER 5

## RESEARCH METHODOLOGY

### 5.1 INTRODUCTION

The previous chapter examined the literature concerning human and social capital in the context of strategic entrepreneurial behaviour (SEB). This chapter provides an overview of the methodology used to meet the objectives of the study. This discussion is conducted against the background of the primary objective of this study, namely to explore how the human and social capital of businesswomen influences their decision making in the process of SEB.

It is important to use the appropriate methodology, as it forms the basis from which scientifically valid findings and conclusions can be made. In order to evaluate whether the appropriate research methodology was used, the research question and the objectives of this study are revisited.

### 5.2 RESEARCH QUESTION REVISITED

As explained in Chapter 2, an improved understanding of the entrepreneurial behaviour and decision making of businesswomen would enable a better understanding of how business organisations function in today's competitive environment. In addition, the findings of the present study would enable better support and assistance to female entrepreneurs, increase effective communication, tailor-make financing packages to their benefit, and generally enable their businesses to operate more sustainably due to an improved understanding of how female entrepreneurs think and make decisions.

The purpose of this study was thus to determine the type of decision-making approaches used by businesswomen, both entrepreneurs and intrapreneurs, under conditions of uncertainty, and how the human and social capital they possess influence their SEB.

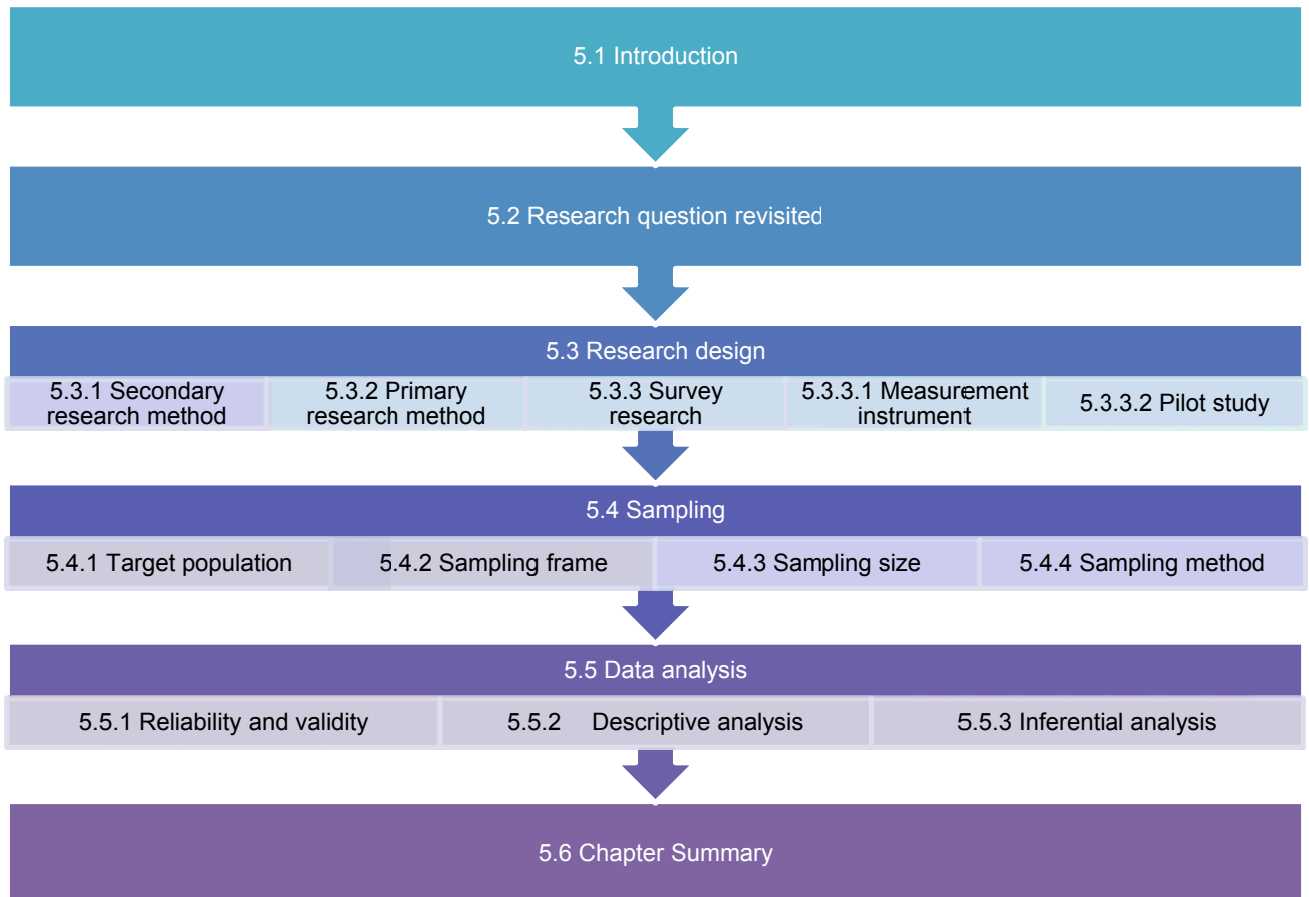


SEB was categorised into two main types of reasoning entrepreneurs use whilst making decisions, namely effectuation and causation. Both effectuation and causation are important aspects of the strategic entrepreneurial decision-making process and were discussed in Chapter 3. For the purpose of the present study, two types of human capital, namely the self-concept, what Sarasvathy (2008) refers to as "who I am", and personal knowledge and experience, what Sarasvathy (2008) refers to as "what I know", were examined; as well as social capital, namely networks, or what Sarasvathy (2001a:250) termed "whom I know". Against this background, Chapter 5 focuses on the research methodology of this study.

### **5.3 THE RESEARCH DESIGN**

A research design is a framework or blueprint for the collection, measurement and analysis of data (Malhorta, 2004:86). The research design is based on the research question (Blumberg, Cooper & Schindler, 2008:195) and, although it occurs at the beginning of a research project, it incorporates all the steps of the subsequent project (Babbie & Mouton, 2003:97).

Figure 5.1 illustrates the components of the research design and depicts how these components are discussed in this chapter, starting with the introduction, research question, research design, sampling, data analysis and the chapter summary.



**Figure 5.1: A graphical representation of the structure and layout of the research methodology**

### 5.3.1 Secondary research method

Secondary data are collected for purposes other than that of a present study and refer to the collection of existing, previously collected information and data used to contribute to a knowledge base (Malhotra, 2004:102). For this purpose, a literature review was conducted (see Chapters 2, 3 and 4) to review published journal articles, books and conference papers discussing theories and past empirical studies concerning the theoretical component of this study.

The work of Sarasvathy (2008) served as a theoretical basis for this study, as well as the work of several prominent scholars such as Chandler *et al.* (2011), Mitchell and Shepherd (2008), Chen *et al.* (1998) and Wincent and Westerberg (2005) on the influences of human and social capital on the SEB of businesswomen. The following two online databases were used, namely the EBSCOhost research database and the Emerald research database. Use was also made of several online journals. These

sources were explored using search terms such as business management, entrepreneurship, female entrepreneurship, businesswomen, decision-making, effectuation, causation as well as human and social capital.

### **5.3.2 Primary research method**

To address the objectives of this study, quantitative research was conducted. Quantitative research can be defined as research that addresses research objectives through empirical assessments that involve numerical measurement and analysis (Zikmund *et al.*, 2010:134). There are three basic quantitative methods of collecting and analysing the needed information, namely surveys, experiments and observations (Cant *et al.*, 2005:88). The method chosen for this study was selected by taking into account the objectives of the research, the available data sources, the urgency of the decision, and the cost of obtaining the data (Zikmund *et al.*, 2010:67). For the purposes of this study, the survey research technique was used, in terms of which information was collected from a convenience sample of respondents by means of an online questionnaire.

### **5.3.3 Survey research method**

A survey is a research technique in which a sample of respondents is interviewed in some form, or in which the behaviour of respondents is observed and described in some way (Zikmund *et al.*, 2010:67). The advantage of the survey technique is its versatility, as abstract information of all types can be collected by questioning respondents (Blumberg *et al.*, 2008:278).

The study focussed on South African businesswomen – both intrapreneurs and entrepreneurs. In order to reach this geographically diverse population, while considering time and financial constraints, it was decided to use an online survey. Using this method, the respondents provided answers to questions displayed onscreen by clicking on an icon or keying in an answer.

The use of an online survey allows the researcher to reach a large number of respondents, and to secure confidential answers quickly and cost-effectively. A further advantage of an online survey is that it eliminates the cost of paper, postage and data entry, as well as other administrative costs (Zikmund *et al.*, 2010:227).

A survey requires a measuring instrument. The next section describes the development of the instrument, namely the online questionnaire with which data were collected.

### **5.3.3.1 Measurement instrument**

Designing the questionnaire involved identifying the specific information needed to address this study's objectives, the correct phrasing of the questions, the sequence in which the questions would be arranged, and the layout of the questionnaire (Zikmund & Babin, 2010:368) Thus, the questionnaire had to be designed to measure the variables of interest, namely human and social capital (independent variables) and effectuation and causation (dependent variables). It furthermore included descriptive information, such as involvement in new projects or initiatives, the respondent's role in these projects or initiatives, as well as demographic information.

Since the study concerned the decision-making processes used by businesswomen in their SEB, and how their personal set of circumstances may have influenced their decisions, it was decided to ask respondents to consider a new initiative, project or business venture while they answered the questions. This was referred to as *Project X* throughout the questionnaire.

Each item had a pre-specified set of response alternatives, thus limiting the number of allowable responses (Zikmund *et al.*, 2010:196). The majority of items in the questionnaire were linked to a five-point Likert scale. The items that were used originated from published scales, but were adapted and modified where necessary. The published scales used in the design of this questionnaire were taken from previous studies concerning effectuation and causation (Chandler *et al.*, 2011), human capital (Chen *et al.*, 1998; Mitchell & Shepherd, 2001) and social capital (Westerberg & Wincent, 2008). Additional items were developed to adapt the questionnaire to the South African context and to assess effectuation and causation in a corporate entrepreneurship as well as new venture context. The opinions and recommendations of academic experts in the entrepreneurship field were used to supplement the items used in the questionnaire, as explained in Section 5.3.3.3.

The questionnaire made use of multiple-item Likert scale questions to measure these constructs. The multiple-item scale consisted of a number of statements to which the respondents had to indicate how strongly they agreed or disagreed with them (Zikmund, 2003:312). A score of 5 indicated that the respondents agreed strongly with a statement, while a score of 1 indicated that they disagreed strongly. Figure 5.2 illustrates the layout of the questionnaire (see Annexure A for the full questionnaire).



**Figure 5.2: Questionnaire layout**

### **5.3.3.2 Pilot study**

An important step prior to the collection of data was to pilot test the proposed questionnaire and revise it if necessary. Zikmund (2003:117) defines a pilot study as a small-scale exploratory research project that uses sampling but does not apply rigorous standards. A pilot study collects data from respondents similar to those who

will be used in the full study (Zikmund & Babin, 2010:61). The purpose of a pilot study is to ensure that the respondents have no difficulties in answering the questions and that there will be no problems in recording the data (Saunders, Lewis & Thornhill, 1997). Pilot studies are critical in refining measures and reducing the risk that the full study will be fatally flawed (Zikmund *et al.*, 2010:65).

The measurement instrument was pre-tested in a pilot study. Due to time and budget constraints, the pilot study was conducted among a total of 12 respondents. Although these respondents were not entirely representative of all businesswomen in South African, they were either self-employed or corporate entrepreneurs and were therefore similar to the sample being studied. The respondents were asked to notify the researcher of any inconsistency, irregularity or ambiguity experienced while completing the questionnaire.

The main focus of the pilot study was to ensure that the scales that were developed to measure the constructs in the study were reliable. Thus, the reliability of the measurement scales was tested using Cronbach's coefficient alpha, which measures internal consistency (Zikmund *et al.*, 2010:306). The coefficient alpha ranges from 0 to 1. A coefficient alpha of 0.7 or greater is generally regarded as a reliable measurement scale (Zikmund, 2003:551).

The majority of constructs revealed satisfactory as well as relatively high Cronbach's alpha scores (see Section 6.4 for details of the coefficient values); however, the following items, listed in Table 5.1, were cause for concern since the Cronbach's alpha scores were below 0.7:

**Table 5.1: Cronbach's alpha scores**

Items	Construct	Cronbach's alpha
4, 6, 10, 12, 14	Causation	0,550
17, 19, 21, 23	Fear of having an uncertain future	0,109
36, 41, 47	Partner knowledge	0,514

Considering that the items 4, 6, 10, 12 and 14 returned an unacceptably low Cronbach's alpha coefficient, an attempt was made to increase the reliability score by revising the wording of the statements in order to correct what appeared to be double-barrelled questions in items 4 and 6. A double-barrelled question may induce

bias because it covers two issues at once (Zikmund, 2003:341). These items were revised as follows (see Table 5.2):

**Table 5.2: Revision of double-barrelled items**

	Initial item	Revised item
4	When I made decisions on <i>Project X</i> , I analysed long-term opportunities and selected the alternative I thought would provide the best returns.	When I made decisions on <i>Project X</i> , I selected the long-run opportunity that I thought would provide the best returns.
6	When I made decisions on <i>Project X</i> , I designed and planned business strategies, before taking action.	When I made decisions on <i>Project X</i> , I planned business strategies, before taking action.

The items that measured the construct "fear of having an uncertain future" (items 17, 19, 21 and 23) contained one item that was phrased in the opposite direction as the others, which was the cause of the low Cronbach's alpha. For this reason item 23 was modified to be positively phrased as shown in Table 5.2.

**Table 5.3: Rephrased item**

	Initial item	Revised item
23	When I am failing, I am not worried about it affecting my future plans.	When I am failing, I am worried about it affecting my future plans.

With regard to items 36, 41 and 47, measuring the construct "partner knowledge", it seemed that the wording of item 47 might have confused respondents, resulting in a response error. The item was modified as follows:

**Table 5.4: Revision of a wording concern**

	Initial item	Revised item
47	I know my partners' markets.	I am aware of the target markets my partners operate in.

### 5.3.3.3 Revised questionnaire

The final questionnaire was adjusted for the abovementioned changes, and in order to avoid respondent fatigue it was decided to shorten the initial questionnaires as used by Chandler *et al.* (2011), Conroy (2001), Westerberg *et al.* (1997) and Walter *et al.* (2006). The questionnaire's content validity was assessed by two academic

experts in the fields of marketing research and entrepreneurship respectively. Table 5.4 provides a summary of the questionnaire used in this study.

**Table 5.5: Constructs measured in the questionnaire**

	Item	Construct	Source
3	When I made decisions on <i>Project X</i> , I reduced the amount of uncertainty by using a substantial number of agreements with customers, suppliers and other organisations.	Effectuation (pre-commitments)	Chandler <i>et al.</i> (2011)
15	When I made decisions on <i>Project X</i> , I made use of agreements with business partners to reduce uncertainty.		
5	When I made decisions on <i>Project X</i> , I considered different business models for my project/initiative/business venture.	Effectuation (experimentation)	
7	When I made decisions on <i>Project X</i> , I tried a number of different approaches until I found one that worked.		
8	When I made decisions on <i>Project X</i> , I was careful not to risk more money than I am willing to lose with the initial idea.	Effectuation (affordable loss)	
11	When I made decisions on <i>Project X</i> , I was careful not to commit more resources than I could afford to lose.		
9	When I made decisions on <i>Project X</i> , I took advantage of opportunities as they arose.	Effectuation (flexibility)	
13	When I made decisions on <i>Project X</i> , I adapted what I was doing to the resources available for the project.		
4	When I made decisions on <i>Project X</i> , I selected the long-run opportunity that I thought would provide the best returns.	Causation	
6	When I made decisions on <i>Project X</i> , I planned business strategies, before taking action.		
10	When I made decisions on <i>Project X</i> , I implemented control processes to make sure objectives were met.		
12	When I made decisions on <i>Project X</i> , I had a clear vision of where I wanted to end up.		
14	When I made decisions on <i>Project X</i> , I developed a strategy to best take advantage of resources and capabilities.		
16	When I am failing, it is often because I am not smart enough to perform successfully.	Fear of devaluing one's self-estimate	Conroy (2001)
18	When I am failing, I blame my lack of talent.		



	Item	Construct	Source
20	When I am failing, I fear that I might not have enough talent.	Fear of having an uncertain future	
22	When I am failing, I dislike the fact that I am not in control of the outcome.		
17	When I am failing, my future seems uncertain.		
19	When I am failing, my future plans will change.		
21	When I am failing, it upsets my "plan" for the future.		
23	When I am failing, I am worried about it affecting my future plans.		
24	I am able to achieve most of the goals that I have set for myself.	Self-efficacy	Westerberg <i>et al.</i> (1997)
25	When facing difficult tasks, I am certain that I will accomplish them.		
26	In general, I think that I can obtain outcomes that are important to me.		
27	I believe I can succeed at most any endeavour to which I set my mind.		
28	I am confident that I can perform effectively on many different tasks.		
29	My education is closely related to my current occupation.	Education	Researcher
32	Only parts of my formal education are useful for the job I am currently doing.		
30	I have acquired extensive management experience.	Experience	Researcher
31	I have often started new businesses and projects.		
33	I have worked on entrepreneurial projects before.		
34	I have started and managed several businesses.		
35	I develop relations with each business partner based on what they can contribute.	Coordination	Walter <i>et al.</i> (2006)
39	I analyse what I would like to achieve with each partner.		
45	I regularly discuss with my partners how we can support each other.		
38	Managers and employees often give feedback to each other regarding new initiatives.	Internal communication	

	Item	Construct	Source
48	Employees develop informal contacts among themselves.		
42	I have regular meetings with all stakeholders for every project.		
37	I have the ability to build good personal relationships with my business partners.	Relationship skills	
43	I almost always solve problems constructively with my partners.		
46	I can deal flexibly with my partners.		
44	I am constantly open to new relations with new partners.	Building partnerships	
40	I have the ability to initiate a mutual relationship with new partners.		
49	I continually search for new partners.		
47	I am aware of the target markets my partners operate in.	Partner knowledge	
41	I know my partners' strengths and weaknesses.		
36	I know our partners' products/ procedures/ services.		

The reliability and validity of these constructs are discussed in more detail in Chapter 6 (Sections 6.3 and 6.4).

## 5.4 SAMPLING

Sampling entails any procedure that draws conclusions based on measurements of a proportion of the population (Zikmund *et al.*, 2010:658). In the following section, four important steps in the sampling process are discussed.

### 5.4.1 Target population

The target population is the complete group of specific population elements relevant to the research project (Zikmund, 2003:373). In order to answer the research question, information is gathered from the collection of these elements or objects (Cant *et al.*, 2005:164). It is important to carefully define the target population so that the proper source from which the data are to be collected can be identified (Zikmund, 2003:373). Since this study was conducted in South Africa to assess the influence of

human and social capital on the SEB of businesswomen, the target population relevant to this study included all South African businesswomen.

#### **5.4.2 Sampling frame**

A sampling frame represents the elements from which the sample may be drawn. In order to reduce the costs of the sampling process, an existing list was used as the sampling frame for this study. Although no complete list of all South African businesswomen exists, the membership list of the South African Businesswomen's Association (BWA) was used as a sampling frame. The BWA is one of the largest and most prominent associations of business and professional women in South Africa and is supported by the Department of Trade and Industry (DTI) and by financial services providers such as Nedbank. The BWA was thus deemed as a suitable sampling frame. This study could thus be classified as making use of a non-probability sample. Non-probability sampling is a sampling technique in which units of the sample are selected on the basis of personal judgement or convenience (Zikmund, 2003:380).

#### **5.4.3 Sample size**

The sample size refers to the total amount of elements included in the research (Cant *et al.*, 2005:177). The determination of a sample size requires knowledge of basic statistics, including variance, mean, normal distribution and standard deviation (Zikmund *et al.*, 2010:440). Since population parameters, such as the standard deviation, were not available, the sample size of this sampling procedure could not be calculated using statistical methods. Taking cost, time and the availability of a database into account, a convenience sample was used.

#### **5.4.4 Sampling method**

A convenience sampling technique was used, which is the sampling procedure of obtaining those people or units that are most conveniently available (Zikmund *et al.*, 2010:396). Convenience samples were used to obtain a large number of completed questionnaires quickly and economically (Zikmund, 2003:380).

This study made use of the survey research method, as explained in Section 5.3.3. The questionnaires were distributed online and arrived as a link attached to an e-mail

that introduced the study. The respondents had to click on the link to complete the questionnaire. The questionnaire took approximately 20 to 25 minutes to complete. Data were collected from January to April 2011.

An initial e-mail was sent to the BWA in order to obtain permission to send the questionnaire to its members. Once permission was granted, an e-mail with the survey link attached was sent to all BWA members. Thereafter, three reminder e-mails were sent to all members in an attempt to increase the response rate (refer to Annexures B and C).

## **5.5 DATA ANALYSIS**

The process of transferring data from a research project, such as answers to a questionnaire, to computers is called data entry (Zikmund *et al.*, 2010:477). In this research study, which used online questionnaires, responses were automatically stored and tabulated, as they were collected by a web-based e-survey service called CHECKBOX version 4.6.4.7. Direct data capture substantially reduces clerical errors that occur during the editing and coding process (Zikmund, 2003:467). A number of steps were taken in order to prevent respondents from making errors while completing the questionnaire. The data capture software was written so that the respondents were able to go forward to the next page of the questionnaire, but were not be able to go back to a previous page after completing it. In order to prevent omissions and missing data, respondents were prevented from moving on to a next section without completing all the questions in the preceding section. As the respondents completed the online questionnaires, the data were recorded in Microsoft Office Excel 2007. Thereafter all the values were converted to SPSS version 18.0 to statistically analyse the data. The results are discussed in Chapter 6. The first step in the data analysis was to examine the reliability and validity of the questionnaire.

### **5.5.1 Reliability and validity**

Good measures should be both consistent and accurate. Reliability measures how consistent a measure is. Accuracy deals with how a measure assesses the intended concept. Validity is the accuracy of a measure or the extent to which a score truthfully

represents a concept (Zikmund *et al.*, 2010:307). The reliability and validity of the questionnaire were tested, and the results are discussed in Sections 6.3 and 6.4.

Zikmund (2003:740) defines reliability as the degree to which measures are free from error and therefore yield consistent results. In order to determine the reliability of the scale questions, the coefficient alpha was calculated. The coefficient alpha is the most commonly applied estimate of a multiple item scale's reliability (Zikmund *et al.*, 2010:649). Cronbach's coefficient alpha is a measure of the internal consistency of a measurement and shows the degree to which all items in a measurement scale measure the same attribute (Blumberg *et al.*, 2008:458). The coefficient ranges in value from 0, meaning no consistency, to 1, meaning complete consistency. Scales with a Cronbach's alpha of 0.70 and higher are considered to have good reliability (Zikmund *et al.*, 2010:306).

Validity is defined as the ability of a scale or measuring instrument to measure what it is intended to measure (Zikmund, 2003:743). A measure demonstrates discriminant validity when it has low correlation with measures of dissimilar concepts (Zikmund, 2003:304). For the purposes of the present study, discriminant validity was assessed using exploratory factor analysis (EFA). Factor analysis is a technique of statistically identifying a reduced number of factors from a larger number of measured variables (Zikmund *et al.*, 2010:625). The reasons for conducting an EFA, for both dependent and independent variables, was to firstly assist in increasing the reliability of the theoretical constructs by ensuring that each item loads significantly on only one factor; and secondly to reveal the underlying factor structure of the various constructs.

The next step in the data analysis involved descriptive and inferential analysis.

### **5.5.2 Descriptive analysis**

Descriptive analysis is the elementary transformation of raw data in a way that describes and summarises the data. The purpose of descriptive statistics is to provide the researcher with an overview of the sample and the data collected (Zikmund *et al.*, 2010:486). Section 6.2 thus provides a profile of the sample in a simple and understandable manner by means of frequency tables.

### 5.5.3 Inferential analysis

Inferential statistics is the use of statistics to project characteristics from a sample onto an entire population (Zikmund *et al.*, 2010:653). In this study, inferential statistical analysis was used to test the stated hypotheses. It is possible to make inferences about a population by means of hypothesis testing. The main aim in testing hypotheses is to examine whether a particular proposition concerning a population is likely to hold or not (Diamantopoulos & Schlegelmilch, 1997) and thus to decide on whether or not to reject the null hypotheses.

The statements for the null hypotheses tests for this study were formulated as follows:

- H<sub>01a</sub>: Businesswomen's images of capability (self-efficacy) have no relationship with their causal reasoning.
- H<sub>01b</sub>: Businesswomen's images of capability (self-efficacy) have no relationship with affordable loss, a dimension of effectual reasoning.
- H<sub>01c</sub>: Businesswomen's images of capability (self-efficacy) have no relationship with flexibility, a dimension of effectual reasoning.
- H<sub>01d</sub>: Businesswomen's images of capability (self-efficacy) have no relationship with pre-commitments, a dimension of effectual reasoning.
- H<sub>02a</sub>: Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with their causal reasoning.
- H<sub>02b</sub>: Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with affordable loss, a dimension of effectual reasoning.
- H<sub>02c</sub>: Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with flexibility, a dimension of effectual reasoning.
- H<sub>02d</sub>: Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with pre-commitments, a dimension of effectual reasoning.

- H<sub>03a</sub>: Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with their causal reasoning.
- H<sub>03b</sub>: Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with affordable loss, a dimension of effectual reasoning.
- H<sub>03c</sub>: Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with flexibility, a dimension of effectual reasoning.
- H<sub>03d</sub>: Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with pre-commitments, a dimension of effectual reasoning.
- H<sub>04a</sub>: Businesswomen's prior knowledge, as reflected by education, has no relationship with their causal reasoning.
- H<sub>04b</sub>: Businesswomen's prior knowledge, as reflected by education, has no relationship with affordable loss, a dimension of effectual reasoning.
- H<sub>04c</sub>: Businesswomen's prior knowledge, as reflected by education, has no relationship with flexibility, a dimension of effectual reasoning.
- H<sub>04d</sub>: Businesswomen's prior knowledge, as reflected by education, has no relationship with pre-commitments, a dimension of effectual reasoning.
- H<sub>05a</sub>: Businesswomen's prior knowledge, as reflected by experience, has no relationship with their causal reasoning.
- H<sub>05b</sub>: Businesswomen's prior knowledge, as reflected by experience, has no relationship with affordable loss, a dimension of effectual reasoning.
- H<sub>05c</sub>: Businesswomen's prior knowledge, as reflected by experience, has no relationship with flexibility, a dimension of effectual reasoning.
- H<sub>05d</sub>: Businesswomen's prior knowledge, as reflected by experience, has no relationship with pre-commitments, a dimension of effectual reasoning.
- H<sub>06a</sub>: Businesswomen's ability to cultivate relationships has no relationship with their causal reasoning.
- H<sub>06b</sub>: Businesswomen's ability to cultivate relationships has no relationship with affordable loss, a dimension of effectual reasoning.

- H<sub>06c</sub>: Businesswomen's ability to cultivate relationships has no relationship with flexibility, a dimension of effectual reasoning.
- H<sub>06d</sub>: Businesswomen's ability to cultivate relationships has no relationship with pre-commitments, a dimension of effectual reasoning.
- H<sub>07a</sub>: Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with their causal reasoning.
- H<sub>07b</sub>: Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with affordable loss, a dimension of effectual reasoning.
- H<sub>07c</sub>: Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with flexibility, a dimension of effectual reasoning.
- H<sub>07d</sub>: Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with pre-commitments, a dimension of effectual reasoning.
- H<sub>8</sub>: There is no significant difference between the two groups of businesswomen in terms of their entrepreneurial involvement.

Multiple regression analysis was used to assess the relationships between the dependent and independent variables as implied in the abovementioned hypotheses. Multiple regression analysis is an analysis of association, in which the effects of two or more independent variables on a single, interval-scaled dependent variable are investigated simultaneously (Zikmund *et al.*, 2010:584). Whilst evaluating the results of the regression analysis it is important to pay attention to the obtained R<sup>2</sup> to see to what extent the independent variables explain the variance in the dependent variables. The coefficient of determination (R<sup>2</sup>) can assume any value between 0 and 1. The closer R<sup>2</sup> is to 1 the better. The R<sup>2</sup> is obtained by squaring the correlation coefficient. In other words, R<sup>2</sup> measures what proportion of the total variation of the dependent variable is explained by the combination of independent variables. It is also important to note the statistical significance of the overall regression model and the individual regression coefficients and their t-statistics to establish which are statistically significant (Zikmund *et al.*, 2010). The results of the regression analysis to



address hypotheses  $H_{01A-D}$ ,  $H_{02A-D}$ ,  $H_{03A-D}$ ,  $H_{04A-D}$ ,  $H_{05A-D}$ ,  $H_{06A-D}$  and  $H_{07A-D}$  are discussed in Section 6.5.1.

Independent sample t-tests were conducted to address hypothesis  $H_8$ . The independent samples t-test tests the differences between means taken from two independent samples or groups (Zikmund & Babin, 2010:565).

The significance level ( $\alpha$ ) is a critical probability associated with a statistical hypothesis test that indicates how likely an inference supporting a difference between an observed value and some statistical expectation is true (Zikmund *et al.*, 2010:658). For the purpose of this study, a significance level of  $\alpha = 0.05$  was used.

## **5.6 SUMMARY**

This chapter focussed on the methodology used to address this study's research objectives. The research question was revisited, followed by a discussion of the research design, the research methods, the measurement instrument and the sampling. Finally, the data analysis methods were discussed. The empirical results, findings, conclusions and recommendations are discussed in Chapters 6 and 7.

# **CHAPTER 6**

## **RESEARCH RESULTS**

### **6.1 INTRODUCTION**

Chapter 5 presented the methodology that was followed in order to collect the data and provided an overview of the statistical procedures utilised. Chapter 6 describes the results, interpretation and discussion of the data analysis. This chapter therefore focuses on the implementation of the data analysis, including of the validity and reliability of both the dependent and independent variables, and also other appropriate statistical tests. First, the descriptive statistics are presented, followed by the inferential statistics.

### **6.2 DESCRIPTIVE STATISTICS**

The purpose of descriptive statistics is to describe or summarise information about a population or sample (Zikmund, 2003:736). This section offers a profile of the sample in a simple and understandable manner by means of frequency tables.

#### **6.2.1 Profile of sample**

As shown in Table 6.1, a total of 269 usable responses (response rate of 5,38%) were obtained from the respondents that participated in this study. This was sufficient to conduct the relevant statistical tests to determine relationships between the dependent and independent variables. Table 6.1 shows the respondents' age, language and population group.

**Table 6.1: Composition of the sample**

<b>Age category</b>	<b>Number</b>	<b>Percentage (%)</b>
23-29	22	8.18
30-39	88	32.71
40-49	106	39.41
50-59	47	17.47
60+	6	2.23
<b>Language category</b>		
Afrikaans	47	17.47
English	157	58.36
African language	61	22.68
European language	4	1.49
<b>Population group</b>		
White South Africans	143	53.16
Black South Africans	74	27.52
Coloured South Africans	19	7.06
Indian South Africans	19	7.06
Asian South Africans	1	0.37
Non-South Africans	13	4.83
<b>Total</b>	<b>269</b>	<b>100</b>

The respondents in this study consisted of adults aged 23 and older. The largest portion of respondents were older than 40 (59.11%) and English speaking (58.36%), followed by 22.68% of respondents who spoke African languages and 17.47% who spoke Afrikaans. This can possibly be attributed to the fact that English is considered the business language in a multicultural society such as South Africa. Table 6.1 also indicates that the main population group participating in this study was that of white South Africans (53.16%), followed by black South Africans (27.52%), coloured South Africans (7.06%), Indian South Africans (7.06%) and Asian South Africans (0.37%). The remainder of the sample were non-South Africans (4.83%).

The respondents' level of education and years of tertiary studies completed are reported in Table 6.2.

**Table 6.2: Level of education**

Level of education	Number	Percentage (%)
Secondary school (Grade 12/ Matric)	18	6.69
Tertiary (Certificate)	31	11.52
Tertiary (Diploma/ Degree)	90	33.46
Postgraduate degree/ diploma	130	48.33
<b>Years of tertiary studies</b>		
1 year	35	13.01
2 to 3 years	66	24.54
4 to 6 years	104	38.66
7 to 8 years	33	12.27
9 +	31	11.52
<b>Total</b>	<b>269</b>	<b>100</b>

The majority of the respondents had completed some tertiary education (93.31%), and the largest portion of respondents (86.99%) had completed more than two years of tertiary education.

Table 6.3 presents the years of fulltime paid work experience, as well as the years of management experience.

**Table 6.3: Years of fulltime paid work experience**

Years of fulltime paid work experience	Number	Percentage (%)
1 year	4	1.49
2 to 3 years	9	3.35
4 to 6 years	24	8.92
7 to 8 years	19	7.06
9 +	213	79.18
<b>Years of management experience</b>		
1 year	18	6.69
2 to 3 years	38	14.13
4 to 6 years	58	21.56
7 to 8 years	35	13.01
9 +	120	44.61
<b>Total</b>	<b>269</b>	<b>100</b>

Table 6.3 shows that the majority (79.18%) of the respondents had more than nine years of paid work experience, while 44.61% had more than nine years of management experience.

Table 6.4 presents the number of workshops or courses that the respondents had attended in order to enhance their entrepreneurial knowledge.

**Table 6.4: Enhancing entrepreneurial knowledge**

Number of workshops or courses attended to enhance entrepreneurial knowledge	Number	Percentage (%)
0	30	11.15
1 – 4	83	30.86
5 – 8	70	26.02
9 – 13	32	11.90
14 or more	54	20.07
<b>Total</b>	<b>269</b>	<b>100</b>

A large number of respondents (30.86%) had completed between one and four workshops or courses to enhance their entrepreneurial knowledge, followed by 26.02% of respondents who had completed between five and eight workshops or courses and 20.07% who had completed 14 or more, showing evidence of these businesswomen's focus on continuous learning. The remainder of the sample had completed nine to 13 workshops or courses (11.90%), and the smallest portion of respondents (11.15%) had not completed any workshops or courses to enhance their entrepreneurial knowledge.

Table 6.5 presents the role that respondents played in the initiative or project they were involved in. This was referred to as *Project X*.

**Table 6.5: Role in Project X**

Role in Project X	Number	Percentage (%)
Team leader or manager	115	42.75
Part of the team	42	15.61
Sole responsibility	112	41.64
<b>Total</b>	<b>269</b>	<b>100</b>

Only 41.64% of the respondents indicated that they had sole responsibility for *Project X*, whilst 58.36% were either part of the team, the team leader or the team manager.

The respondents' entrepreneurial involvement in *Project X* is reported in Table 6.5.

**Table 6.6: Entrepreneurial involvement**

<b>Entrepreneurial involvement</b>	<b>Number</b>	<b>Percentage (%)</b>
New product or service introduction	40	14.87
New project	42	15.61
New human resource or training initiative	26	9.67
New marketing initiative	24	8.92
New business development	30	11.15
New process	18	6.69
New business venture	89	33.09
<b>Total</b>	<b>269</b>	<b>100</b>

The majority of the respondents (66.91%) indicated their entrepreneurial involvement in corporate entrepreneurial activities (i.e. intrapreneurship), such as new projects, whereas 33.09% of the respondents indicated that they were independent entrepreneurs.

In the following section, the descriptive statistics for interval-scaled data are discussed.

### **6.2.2 Descriptive statistics for interval-scaled data**

The descriptive statistics concerning the interval-scaled data are presented in Table 6.7. The interval-scaled data include all multiple-item Likert scale questions (items 3 to 49). The minimum and maximum for these items are 1 to 5 respectively, where 1 indicates that the respondents strongly disagreed with a statement and 5 indicates that they strongly agreed.

**Table 6.7: Descriptive statistics for interval-scaled data**

	N	Minimum	Maximum	Mean	Standard deviation
Relationship cultivation	269	1.00	5.00	4.05	0.66
Partner knowledge	269	1.00	5.00	3.91	0.75
Experience	269	1.00	5.00	3.50	0.93
Education	269	1.00	5.00	3.29	1.17
Self-efficacy	269	1.00	5.00	4.26	0.57
Fear of an uncertain future	269	1.00	5.00	2.91	1.00
Fear of devaluing one's self-estimate	269	1.00	5.00	1.84	0.85
Causation	269	1.00	5.00	4.07	0.71
Affordable loss	269	1.00	5.00	3.87	0.98
Flexibility	269	1.00	5.00	4.17	0.73
Pre-commitments	269	1.00	5.00	3.59	0.95

The minimum, maximum, mean and standard deviation of each construct measured are presented in Table 6.7. The mean refers to the average response for the construct by the sample. Self-efficacy had the highest mean score, which seems to indicate that the women in this sample are confident of their own abilities to succeed. As Chen *et al.* (1998:295) proposed, entrepreneurial self-efficacy could predict the likelihood of an individual acting in an entrepreneurial manner, and this also contributes to explaining why the lowest mean of 1.84 was recorded for fear of devaluing one's self-estimate, and 2.91 was recorded for fear of an uncertain future. This would suggest that, while businesswomen are aware of uncertainties in their environment, they feel confident (indicated by the high self-efficacy) that they can overcome future challenges. Higher mean scores were recorded for experience (3.50) than for education (3.29).

The respondents also scored high on average for the social capital construct of relationship cultivation (4.05), which could be explained by the fact that all women in this study were part of the BWA, and therefore considered networks and relationships as important. The mean score for partner knowledge (3.91) was also relatively high.

For the dependent variables causation, affordable loss, flexibility and pre-commitments, the highest mean scores were attained for flexibility (4.17) and

causation (4.07). The mean scores for affordable loss (3.87) and pre-commitments (3.59) were also above the midpoint of the five-point scale. In general, all three effectuation constructs thus showed high mean scores. It is interesting that both causation and effectuation show relatively high mean scores simultaneously. The literature on strategic entrepreneurial behaviour (SEB) presents causation and effectuation as theoretical dichotomies, while the empirical results of this study suggest that businesswomen use both types of reasoning when making decisions.

The standard deviation indicates the degree of dispersion in response to the mean. As shown in Table 6.7, the data returned low standard deviation scores, ranging from 0.57 to 1.17. The lower standard deviations indicate that there was low discrepancy in relation to the mean.

The validity of the data is discussed in Section 6.3.

### **6.3 VALIDITY**

For the purposes of the present study, discriminant validity was assessed using a statistical technique known as exploratory factor analysis (EFA).

The EFA was conducted to determine whether the constructs used to measure effectuation and causation (dependent variables), as well as human and social capital (independent variables), demonstrated sufficient discriminant validity. A measure has discriminant validity when it has low correlation with measures of dissimilar concepts (Zikmund, 2003:304). In other words, an exploratory factor analysis was conducted to determine whether the underlying constructs existed in the data, as expected.

In order to determine whether the data were appropriately scaled for factor analysis, a validity assessment was done by means of the KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy and Bartlett's test of sphericity. The closer the KMO score is to 1.00, the more appropriate the data is for exploratory factor analysis. Where the significance level was below 0.05, the data were appropriate to be subjected to an exploratory factor analysis.



The constructs were not expected to correlate. The principal axis method of extraction was applied as an estimation method, as it was assumed that the data would be distributed normally.

### 6.3.1 Validity of dependent variables

The KMO measure of sampling adequacy returned a score of 0.77, and Bartlett's test of sphericity was significant ( $p < 0.00$ ). It was thus concluded that the data were appropriately scaled for factor analysis.

Several factor solutions were considered when analysing the constructs measuring effectuation and causation. The most appropriate factor solutions are depicted in Table 6.8. Factor loadings greater than 0.35 were regarded as significant. In the initial factor solution, three items, namely items 4, 9 and 7, had a loading below 0.35 and were therefore removed. The factor analysis was re-run after the three items had been removed.

**Table 6.8: Pattern matrix – dependent variables**

Items	Factor 1	Factor 2	Factor 3	Factor 4
	Causation	Affordable loss	Flexibility	Pre-commitments
Causation [item 6]	<b>0.930</b>	-0.015	0.060	-0.048
Effectuation [item 5]	<b>0.415</b>	0.143	-0.018	0.098
Causation [item 10]	<b>0.395</b>	-0.022	-0.171	0.248
Causation [item 4]	<b>0.368</b>	-0.035	-0.223	-0.006
Effectuation [item 11]	-0.086	<b>0.771</b>	-0.123	-0.014
Effectuation [item 8]	0.100	<b>0.738</b>	0.059	0.024
Causation [item 14]	0.078	0.017	<b>-0.796</b>	0.034
Effectuation [item 13]	0.000	0.071	<b>-0.597</b>	0.016
Effectuation [item 15]	-0.039	-0.058	-0.136	<b>0.678</b>
Effectuation [item 3]	0.034	0.061	0.093	<b>0.572</b>

The secondary factor solution produced four clear factors and there were no cross-loadings on any factor. The exploratory factor analysis thus revealed four factors instead of the expected five, namely causation and the latent construct, effectuation as measured by pre-commitments, experimentation, affordable loss and flexibility. The factor analysis of this study therefore revealed that there were in fact four

categories into which SEB could be categorised instead of five, as depicted in Table 6.8. Not one of the items expected to measure the construct experimentation loaded as expected, and this construct and its associated items were removed from subsequent analyses.

The respondents who participated in this study viewed items 4, 5, 6 and 10 as measures of the same construct, namely causation. Items 8 and 11 were both viewed as measures of the same construct, namely affordable loss. The respondents furthermore viewed items 13 and 14 as the same construct, namely flexibility. Items 3 and 15 were considered measures of one construct, i.e. pre-commitments. All four factors extracted had an Eigen value of 1 and more and explained 67.75% of the total variance. This result was satisfactory, since the aim of the factor analysis was not to explain an optimal amount of variance in the different constructs, but rather to assess the discriminant validity of the measuring instrument.

As mentioned above, the items subjected to the factor analysis revealed four as opposed to five factors when assessing the items measuring SEB. The items measuring each construct are listed below.

### ***Causation (Factor 1)***

Items 4, 5, 6 and 10 loaded on Factor 1. The items included the following statements:

- When I made decisions on *Project X*, I selected the long-run opportunity that I thought would provide the best returns. [item 4]
- When I made decisions on *Project X*, I considered different business models for my project/ initiative/business venture. [item 5]
- When I made decisions on *Project X*, I planned business strategies, before taking action. [item 6]
- When I made decisions on *Project X*, I implemented control processes to make sure objectives were met. [item 10]

From the above it can be concluded that the four items that loaded on Factor 1 reflects causal behaviour as it shows planned, deliberate actions with an end goal in mind.

### ***Affordable loss (Factor 2)***

Items 8 and 11 loaded on Factor 2. The items included the following statements:

- When I made decisions on *Project X*, I was careful not to risk more money than I am willing to lose with the initial idea. [item 8]
- When I made decisions on *Project X*, I was careful not to commit more resources than I could afford to lose. [item 11]

From the above it can be concluded that the two items that loaded on Factor 2 reflect the affordable loss construct. These items indicate the incremental commitment of resources and commitment choices that depend upon the decision makers' evaluations about what they are willing to lose.

### ***Flexibility (Factor 3)***

Items 13 and 14 loaded on Factor 3. The items included the following statements:

- When I made decisions on *Project X*, I adapted what I was doing to the resources available for the project. [item 13]
- When I made decisions on *Project X*, I developed a strategy to best take advantage of resources and capabilities. [item 14]

The two items that loaded on Factor 3 reflect flexibility, as they link to the adaptability and logic of non-predictive control where the resources at hand are transformed into new outcomes that may not initially have been visualised.

### ***Pre-commitments (Factor 4)***

Items 3 and 15 loaded on Factor 4. The items included the following statements:

- When I made decisions on *Project X*, I reduced the amount of uncertainty by using a substantial number of agreements with customers, suppliers and other organisations. [item 3]
- When I made decisions on *Project X*, I made use of agreements with business partners to reduce uncertainty. [item 15]

From the above it can be concluded that the two items that loaded on Factor 4 reflect pre-commitments, as they emphasise strategic alliances and pre-commitments from stakeholders as a way to reduce uncertainty.

Therefore, one construct measured in this study reflects a causal decision-making style and three constructs are indicative of effectual reasoning, namely affordable loss, flexibility and pre-commitments. Experimentation could not be adequately measured with the items used. The items intended to measure experimentation were not perceived by the respondents as reflective of that construct and were deleted.

In the following section, the validity of the independent variables is discussed.

### **6.3.2 Validity of independent variables**

Further factor analyses were conducted to assess whether the independent variables used in this study were one-dimensional in that each item loads on only one factor. The constructs that were subjected to a factor analysis were those measuring human capital ("who I am" and "what I know") and social capital ("whom I know"). A separate factor analysis was conducted for each construct. All scales were subjected to the KMO's measure of sampling adequacy and Bartlett's test of sphericity.

#### **6.3.2.1 "Who I am"**

The KMO's measure of sampling adequacy returned a score of 0.85 and Bartlett's test of sphericity was significant ( $p < 0.00$ ). Based on these two indices it was concluded that the data measuring "who I am" were appropriately scaled for factor analysis. Several factor solutions were considered when analysing the constructs measuring "who I am". All items had a factor loading above the recommended 0.35 (Hair *et al.*, 1998). Item 19 was therefore deleted, as it had a loading below 0.35. The analysis was re-run after removing the items. The most appropriate factor solution is depicted in Table 6.9.

**Table 6.9: Pattern matrix – "Who I am"**

Items	Factor 1	Factor 2	Factor 3
	Self-efficacy	The fear of having an uncertain future	The fear of devaluing one's self-estimate
Self-efficacy [item 26]	<b>-0.847</b>	0.007	0.076
Self-efficacy [item 25]	<b>-0.828</b>	-0.006	0.003
Self-efficacy [item 27]	<b>-0.815</b>	0.031	-0.029
Self-efficacy [item 24]	<b>-0.644</b>	-0.053	0.031
Self-efficacy [item 28]	<b>-0.572</b>	0.024	-0.070
Fear of failure [item 23]	-0.047	<b>0.776</b>	0.097
Fear of failure [item 22]	-0.025	<b>0.728</b>	-0.110
Fear of failure [item 21]	0.075	<b>0.643</b>	0.074
Fear of failure [item 17]	0.131	<b>0.435</b>	0.253
Fear of failure [item 18]	-0.047	-0.007	<b>0.745</b>
Fear of failure [item 20]	0.008	0.132	<b>0.740</b>
Fear of failure [item 16]	0.044	-0.031	<b>0.539</b>

As anticipated, the exploratory factor analysis revealed three factors that were used to measure "who I am", namely self-efficacy, the fear of having an uncertain future and the fear of devaluing one's self-estimate.

### ***Self-efficacy (Factor 1)***

Items 24, 25, 26, 27 and 28 loaded on Factor 1. The items included the following statements:

- Considering new projects, I am able to achieve most of the goals that I have set for myself. [item 24]
- Considering new projects, I am certain that I will accomplish difficult tasks when facing them. [item 25]
- Considering new projects, in general, I think that I can obtain outcomes that are important to me. [item 26]
- Considering new projects, I believe I can succeed at most any endeavour to which I set my mind. [item 27]

- Considering new projects, I am confident that I can perform effectively on many different tasks. [item 28]

The five items that loaded on Factor 1 reflect self-efficacy, as they were intended to measure.

### ***The fear of having an uncertain future (Factor 2)***

Items 17, 21, 22 and 23 loaded on Factor 2. The items included the following statements:

- When I am failing, my future seems uncertain. [item 17]
- When I am failing, it upsets my "plan" for the future. [item 21]
- When I am failing, I dislike the fact that I am not in control of the outcome. [item 22]
- When I am failing, I am worried about it affecting my future plans. [item 23]

The items that loaded on Factor 2 consisted of three items (17, 21 and 23) that were intended to measure the fear of having an uncertain future, and one item (22) that was intended to measure the fear of devaluing one's self-estimate. The respondents thus considered item 22 as part of the fear of having an uncertain future.

### ***The fear of devaluing one's self-estimate (Factor 3)***

Items 16, 18 and 20 loaded on Factor 3. The items included the following statements:

- When I am failing, it is often because I am not smart enough to perform successfully. [item 16]
- When I am failing, I blame my lack of talent. [item 18]
- When I am failing, I fear that I might not have enough talent. [item 20]

The three items that loaded on Factor 3 reflect the fear of devaluing one's self-estimate, as they were intended to measure.

### 6.3.2.2 "What I know"

The KMO's measure of sampling adequacy returned a score of 0.65 and Bartlett's test of sphericity was significant ( $p < 0.00$ ). Based on these two indices it was concluded that the data measuring "what I know" were appropriately scaled for factor analysis. A factor analysis was run to analyse the constructs measuring "what I know". No items were removed, as all items had a factor loading above 0.35. The most appropriate factor solutions are portrayed in Table 6.10.

**Table 6.10: Pattern Matrix – "What I know"**

Items	Factor 1	Factor 2
	Experience	Education
Experience [item 31]	<b>0.764</b>	0.062
Experience [item 34]	<b>0.757</b>	-0.250
Experience [item 33]	<b>0.660</b>	-0.113
Experience [item 30]	<b>0.363</b>	0.221
Education [item 29]	0.071	<b>0.745</b>
Education [item [32]	-0.112	<b>0.503</b>

#### ***Experience***

Items 30, 31, 33 and 34 loaded on Factor 1. The items included the following statements:

- I have acquired extensive management experience. [item 30]
- I have often started new businesses and projects. [item 31]
- I have worked on entrepreneurial projects before. [item 33]
- I have started and managed several businesses. [item 34]

The four items that loaded on Factor 1 reflect experience as they were intended to measure by the questionnaire.

#### ***Education***

Items 29 and 32 loaded on Factor 2. The items included the following statements:

- My education is closely related to my current occupation. [item 16]
- Only parts of my formal education are useful for the job I am currently doing. [item 32]

As intended to measure by the questionnaire, the two items that loaded on Factor 2 reflect education.

### 6.3.2.3 "Whom I know"

The KMO's measure of sampling adequacy returned a score of 0.94 and Bartlett's test of sphericity was significant ( $p < 0.00$ ). Based on these two indices it was concluded that the data measuring "whom I know" were appropriately scaled for factor analysis.

Several factor solutions were considered when analysing the constructs measuring "whom I know". Item 48 had a factor loading below 0.35 and was therefore deleted. The instrument measuring "building partnerships" displayed poor discriminant validity, and items 40, 44 and 49 were consequently removed. The most appropriate factor solutions are represented in Table 6.11. Due to the fact that the items subjected to the factor analysis revealed two as opposed to five factors when assessing the items measuring "who I am", the classification of these factors were revised, as indicated in Table 6.11.

**Table 6.11: Pattern Matrix – "Whom I know"**

Items	Factor 1	Factor 2
	Relationship cultivation	Partner knowledge
Relationship skills [item 46]	<b>0.902</b>	-0.073
Relationship skills [item 43]	<b>0.782</b>	-0.084
Internal communication [item 42]	<b>0.657</b>	0.073
Partner knowledge [item 47]	<b>0.644</b>	0.100
Internal communication [item 38]	<b>0.609</b>	-0.012
Coordination [item 39]	<b>0.548</b>	0.171
Relationship skills 1 [item 37]	<b>0.467</b>	0.265
Partner knowledge [item 36]	-0.040	<b>0.838</b>
Coordination [item 35]	0.066	<b>0.471</b>
Partner knowledge [item 41]	0.310	<b>0.444</b>



The items measuring each construct are discussed below.

### ***Relationship cultivation***

Items 37, 38, 39, 42, 43, 46 and 47 loaded on Factor 1. The items included the following statements:

- I have the ability to build good personal relationships with my business partners. [item 37]
- Managers and employees often give feedback to each other regarding new initiatives. [item 38]
- I analyse what I would like to achieve with each partner. [item 39]
- I have regular meetings with all stakeholders for every project. [item 42]
- I almost always solve problems constructively with my partners. [item 43]
- I can deal flexibly with my partners. [item 46]
- I am aware of the target markets my partners operate in. [item 47]

The data analysis revealed that the respondents considered relationship skills (items 37, 43 and 46), internal communication (items 38 and 42), coordination (item 39) and partner knowledge (item 47) as one construct.

### ***Partner knowledge***

Items 35, 36 and 41 loaded on Factor 2. The items included the following statements:

- I develop relations with each business partner based on what they can contribute. [item 35]
- I know our partners' products/ procedures/ services. [item 36]
- I know my partners' strengths and weaknesses. [item 41]

The three items that loaded on Factor 2 reflect partner knowledge (items 36 and 41) and coordination (item 35).

Once the validity of the data had been confirmed, the next step in the data analysis was to evaluate the reliability of the data.

## 6.4 RELIABILITY

A multi-item questionnaire was developed for measuring all the variables in the theoretical model, namely causation, effectuation, fear of failure, self-efficacy, education, experience, coordination, internal communication, relationship skills, building partnerships and partner knowledge. These variables were subjected to a reliability analysis.

Cronbach's coefficient alpha was calculated to assess the internal consistency of each of the multiple-scale questions, measuring all the constructs in the theoretical model.

### 6.4.1 Reliability of dependent variables

Table 6.12 represents the reliability coefficients for each of the dependent variables following the EFA (explained in Section 6.3.1).

According to Hair *et al.* (1998:118), lower Cronbach's alpha values may be accepted in exploratory research. In line with this guideline, Nunnally (1978) suggested that the minimally acceptable reliability for exploratory research should be in the range of 0.5 to 0.6. The low Cronbach's alpha (0.56) for the construct, Pre-commitments, is therefore acceptable, as this study can be regarded as exploratory research on effectuation. The results related to pre-commitments should, however, be interpreted with caution.

**Table 6.12: Reliability scores of dependent variables**

Construct	Cronbach's alpha coefficient	Number of items
Causation	0.70	4
Affordable loss	0.74	2
Flexibility	0.70	2
Pre-commitments	0.56	2

### 6.4.2 Reliability of independent variables

In Table 6.13 the reliability coefficients for each of the independent variables are depicted. Note that "who I am" is now portrayed by three factors instead of two, namely self-efficacy, the fear of having an uncertain future and the fear of devaluing one's self-estimate. "Whom I know" is now represented by only two factors instead of five; these are relationship cultivation and partner knowledge.

**Table 6.13: Reliability scores of independent variables**

Relation to theoretical model	Construct	Cronbach's alpha coefficient	Number of items
Who I am	Self-efficacy	0.86	5
	The fear of having an uncertain future	0.78	4
	The fear of devaluing one's self-estimate	0.73	3
What I know	Experience	0.72	4
	Education	0.56	2
Whom I know	Relationship cultivation	0.84	7
	Partner knowledge	0.71	3

The last step in the data analysis was to test the research hypotheses using a number of inferential statistical analyses. These statistical techniques included multiple regressions and independent t-tests.

## 6.5 INFERENCE STATISTICS

Inferential statistics is the use of statistics to project characteristics from a sample onto an entire population (Zikmund *et al.*, 2010:653). In this study, inferential statistical analysis was used to address the stated hypotheses.

### 6.5.1 Regression analysis

Multiple regression analysis was used to assess the relationships between dependent and independent variables, as implied in the hypotheses (see Section 5.3.3). The first multiple regression assessed the relationship between causation as dependent variable and the seven independent variables as shown in Table 6.14.

**Table 6.14: Regression analysis results: Causation**

Independent variables	Beta coefficient	t-value	Level of significance
Relationship cultivation	0.292	3.394	0.001 **
Partner knowledge	-0.118	-1.480	0.140
Experience	0.049	0.763	0.446
Education	-0.003	-0.053	0.958
Self-efficacy	0.230	3.210	0.001 **
The fear of having an uncertain future	-0.015	-0.226	0.821
The fear of devaluing one's self-estimate	-0.043	-0.657	0.551

\*\*  $p < 0.01$

It is apparent from Table 6.14 that relationship cultivation ( $\beta = 0.292$ ;  $p < 0.05$ ) and self-efficacy ( $\beta = 0.230$ ;  $p < 0.05$ ) have a significant positive relationship with causation. Null hypotheses  $H_{06A}$  and  $H_{01A}$  are thus rejected. In other words, businesswomen's ability to cultivate relationships and their self-efficacy will have a positive relationship with their causal reasoning.

The relationship between partner knowledge ( $\beta = -0.118$ ;  $p > 0.05$ ), experience ( $\beta = 0.049$ ;  $p > 0.05$ ), education ( $\beta = -0.003$ ;  $p > 0.05$ ), the fear of having an uncertain future ( $\beta = -0.015$ ;  $p > 0.05$ ), the fear of devaluing one's self-estimate ( $\beta = -0.043$ ;  $p > 0.05$ ), and causation is not statistically significant. In other words, null hypotheses  $H_{05A}$ ,  $H_{07A}$ ,  $H_{04A}$ ,  $H_{02A}$  and  $H_{03A}$  cannot be rejected. Businesswomen's experience, partner knowledge, education, fear of having an uncertain future and fear of devaluing themselves have no significant relationship with their causal reasoning.

The coefficient of determination ( $R^2$ ) indicates that the independent variables in this multiple regression analysis explain 19.40% of the variance in the dependent variable, causation.

The second multiple regression assessed the relationship between affordable loss as dependent variable and the seven independent variables, as depicted in Table 6.15.

**Table 6.15: Regression analysis results: Affordable loss**

Independent variables	Beta coefficient	t-value	Level of significance
Relationship cultivation	0.258	2.773	0.006 **
Partner knowledge	-0.032	-0.374	0.709
Experience	0.029	0.417	0.677
Education	-0.020	-0.330	0.742
Self-efficacy	-0.009	-0.116	0.908
The fear of having an uncertain future	0.019	0.272	0.786
The fear of devaluing one's self-estimate	0.017	0.247	0.805

\*\* p < 0.01

Table 6.15 shows that relationship cultivation ( $\beta = 0.258$ ;  $p < 0.05$ ) has a significant positive relationship with affordable loss. Therefore null hypothesis  $H_{06B}$  is rejected. In other words, businesswomen's ability to cultivate relationships has a positive relationship with effectual reasoning (as measured by affordable loss).

The relationship between partner knowledge ( $\beta = -0.032$ ;  $p > 0.05$ ), experience ( $\beta = 0.029$ ;  $p > 0.05$ ), education ( $\beta = -0.020$ ;  $p > 0.05$ ), self-efficacy ( $\beta = -0.009$ ;  $p > 0.05$ ), the fear of having an uncertain future ( $\beta = 0.019$ ;  $p > 0.05$ ), the fear of devaluing one's self-estimate ( $\beta = 0.017$ ;  $p > 0.05$ ) and affordable loss is not statistically significant. In other words, null hypotheses  $H_{07B}$ ,  $H_{05B}$ ,  $H_{04B}$ ,  $H_{01B}$ ,  $H_{02B}$  and  $H_{03B}$  cannot be rejected. It can thus be concluded that affordable loss, a dimension of effectual reasoning, was not influenced by businesswomen's partner knowledge, experience, education, self-efficacy, fear of having an uncertain future or fear of devaluing their selves.

The independent variable in this multiple regression analysis explains 5.70% of the variance in the dependent variable, affordable loss.

The third multiple regression assessed flexibility as dependent variable and the seven independent variables, as shown in Table 6.16.

**Table 6.16: Regression analysis results: Flexibility**

Independent variables	Beta coefficient	t-value	Level of significance
Relationship cultivation	0.247	2.953	0.003 **
Partner knowledge	0.013	0.174	0.862
Experience	-0.057	-0.918	0.359
Education	-0.020	-0.369	0.712
Self-efficacy	0.288	4.136	0.000 **
The fear of having an uncertain future	0.015	0.242	0.809
The fear of devaluing one's self-estimate	-0.077	-1.216	0.225

\*\*  $p < 0.01$

It is evident from Table 6.16 that relationship cultivation ( $\beta = 0.247$ ;  $p < 0.05$ ) and self-efficacy ( $\beta = 0.288$ ;  $p < 0.05$ ) have a significant positive relationship with flexibility. Null hypotheses  $H_{01C}$  and  $H_{06C}$  are thus rejected. Consequently, businesswomen's self-efficacy and their ability to cultivate relationships have a positive relationship with flexibility, a dimension of effectual reasoning.

The relationship between partner knowledge ( $\beta = 0.113$ ;  $p > 0.05$ ), experience ( $\beta = -0.057$ ;  $p > 0.05$ ), education ( $\beta = -0.020$ ;  $p > 0.05$ ), the fear of having an uncertain future ( $\beta = 0.015$ ;  $p > 0.05$ ), the fear of devaluing one's self-estimate

( $\beta = -0.077$ ;  $p > 0.05$ ) and flexibility is not statistically significant. In other words, null hypotheses  $H_{02C}$ ,  $H_{03C}$ ,  $H_{04C}$ ,  $H_{05C}$  and  $H_{07C}$  are not rejected. Flexibility, a dimension of effectual reasoning, was not influenced by businesswomen's fear of having an uncertain future, their fear of devaluing themselves, their education, experience or partner knowledge.

The coefficient of determination ( $R^2$ ) indicates that the independent variables in this multiple regression analysis explain 23.90% of the variance in the dependent variable, causation.

The last multiple regression assessed pre-commitments as dependent variable and the seven independent variables, as shown in Table 6.17.

**Table 6.17: Regression analysis results: Pre-commitments**

Independent variables	Beta coefficient	t-value	Level of significance
Relationship cultivation	0.400	4.509	0.000 **
Partner knowledge	-0.067	-0.820	0.413
Experience	-0.113	-1.714	0.088
Education	0.041	0.696	0.487
Self-efficacy	0.109	1.467	0.144
The fear of having an uncertain future	0.083	1.230	0.220
The fear of devaluing one's self-estimate	0.059	0.871	0.384

\*\*  $p < 0.01$

Table 6.17 shows that relationship cultivation ( $\beta = 0.400$ ;  $p < 0.05$ ) has a significant positive relationship with pre-commitments. Therefore, null hypothesis  $H_{06D}$  is rejected and businesswomen's ability to cultivate relationships has a positive relationship with pre-commitments, as a dimension of effectual reasoning.

The relationship between partner knowledge ( $\beta = -0.067$ ;  $p > 0.05$ ), experience ( $\beta = -0.113$ ;  $p > 0.05$ ), education ( $\beta = 0.041$ ;  $p > 0.05$ ), self-efficacy ( $\beta = 0.109$ ;  $p < 0.05$ ), the fear of having an uncertain future ( $\beta = 0.083$ ;  $p > 0.05$ ), the fear of devaluing one's self-estimate ( $\beta = 0.059$ ;  $p > 0.05$ ) and pre-commitments is not statistically significant. In other words, null hypotheses  $H_{07D}$ ,  $H_{05D}$ ,  $H_{04D}$ ,  $H_{01D}$ ,  $H_{02D}$  and  $H_{03D}$  are not rejected. Pre-commitments, as a dimension of effectual reasoning, was not influenced by businesswomen's partner knowledge, experience, education, self-efficacy, fear of having an uncertain future or fear of devaluing their selves.

The independent variable in this multiple regression analysis explain 14,40% of the variance in the dependent variable, pre-commitments.

### 6.5.2 Independent sample t-tests

An independent sample t-test was conducted to determine whether there is a significant difference, in terms of entrepreneurial involvement, between the two groups of businesswomen, namely self-employed and corporate entrepreneurs. The results of the independent sample t-test are shown Table 6.18.

**Table 6.18: Independent sample t-tests**

Groups of businesswomen	N	Mean	Standard deviation	Significance
Self-employed entrepreneurs	160	4.04	0.74	0.33
Corporate entrepreneurs	109	4.11	0.68	

The mean scores revealed that there is no statistically significant difference between the two groups of businesswomen and their entrepreneurial involvement. The p-value of the difference between the mean of the two groups of businesswomen is 0.33. In other words, when examining the entrepreneurial involvement of businesswomen, both in a new venture and in the corporate sector context, there are no distinct difference between self-employed and corporate entrepreneurs, and hypothesis H<sub>8</sub> is not rejected.

## 6.6 SUMMARY OF STATISTICAL TESTS

Table 6.19 provides a summary of the hypotheses, the statistical tests used to analyse them and the results of each test.

**Table 6.19: Summary of statistical tests for null hypotheses**

	Null hypotheses	Statistical test	Result
H <sub>01A</sub>	Businesswomen's images of capability (self-efficacy) have no relationship with their causal reasoning.	Regression analysis	Reject hypothesis
H <sub>01B</sub>	Businesswomen's images of capability (self-efficacy) have no relationship with affordable loss, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>01C</sub>	Businesswomen's images of capability (self-efficacy) have no relationship with flexibility, a dimension of effectual reasoning.	Regression analysis	Reject hypothesis
H <sub>01D</sub>	Businesswomen's images of capability (self-efficacy) have no relationship with pre-commitments, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>02A</sub>	Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with their causal reasoning.	Regression analysis	Do not reject hypothesis
H <sub>02B</sub>	Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with affordable loss, a dimension	Regression analysis	Do not reject hypothesis



	<b>Null hypotheses</b>	<b>Statistical test</b>	<b>Result</b>
	of effectual reasoning.		
H <sub>02c</sub>	Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with flexibility, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>02d</sub>	Businesswomen's images of vulnerability (fear of having an uncertain future) have no relationship with pre-commitments, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>03A</sub>	Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with their causal reasoning.	Regression analysis	Do not reject hypothesis
H <sub>03B</sub>	Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with affordable loss, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>03c</sub>	Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with flexibility, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>03d</sub>	Businesswomen's images of vulnerability (fear of devaluing one's self) have no relationship with pre-commitments, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>04A</sub>	Businesswomen's prior knowledge, as reflected by education, has no relationship with their causal reasoning.	Regression analysis	Do not reject hypothesis
H <sub>04B</sub>	Businesswomen's prior knowledge, as reflected by education, has no relationship with affordable loss, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>04c</sub>	Businesswomen's prior knowledge, as reflected by education, has no relationship with flexibility, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>04d</sub>	Businesswomen's prior knowledge, as reflected by education, has no relationship with pre-commitments, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>05A</sub>	Businesswomen's prior knowledge, as reflected by experience, has no relationship with their causal reasoning.	Regression analysis	Do not reject hypothesis
H <sub>05B</sub>	Businesswomen's prior knowledge, as reflected by experience, has no relationship with affordable loss, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>05c</sub>	Businesswomen's prior knowledge, as reflected by experience, has no relationship	Regression analysis	Do not reject hypothesis

	<b>Null hypotheses</b>	<b>Statistical test</b>	<b>Result</b>
	with flexibility, a dimension of effectual reasoning.		
H <sub>05D</sub>	Businesswomen's prior knowledge, as reflected by experience, has no relationship with pre-commitments, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>06A</sub>	Businesswomen's ability to cultivate relationships has no relationship with their causal reasoning.	Regression analysis	Reject hypothesis
H <sub>06B</sub>	Businesswomen's ability to cultivate relationships has no relationship with affordable loss, a dimension of effectual reasoning.	Regression analysis	Reject hypothesis
H <sub>06C</sub>	Businesswomen's ability to cultivate relationships has no relationship with flexibility, a dimension of effectual reasoning.	Regression analysis	Reject hypothesis
H <sub>06D</sub>	Businesswomen's ability to cultivate relationships has no relationship with pre-commitments, a dimension of effectual reasoning.	Regression analysis	Reject hypothesis
H <sub>07A</sub>	Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with their causal reasoning.	Regression analysis	Do not reject hypothesis
H <sub>07B</sub>	Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with affordable loss, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>07C</sub>	Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with flexibility, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>07D</sub>	Businesswomen's partner knowledge of collaborating partners, firms and competitors has no relationship with pre-commitments, a dimension of effectual reasoning.	Regression analysis	Do not reject hypothesis
H <sub>8</sub>	There is no significant difference between the two groups of businesswomen in terms of their entrepreneurial involvement.	Independent t-test	Do not reject hypothesis

## 6.7 SUMMARY

This chapter investigated the study's research objectives by addressing the research hypotheses with the appropriate statistical analyses. This chapter thus provided the results, interpretation and discussion of the data analysis.

Firstly, the descriptive statistics were discussed by presenting a profile of the sample. The chapter further focused on the data analysis, including the validity and reliability of both the dependent and independent variables. Lastly, inferential analyses were employed to test the research hypotheses. These analyses included regression analyses and independent sample t-tests.

The implications of the findings, limitations of the study, and areas for further research are discussed in Chapter 7.

# CHAPTER 7

## CONCLUSIONS AND IMPLICATIONS

### 7.1 INTRODUCTION

This purpose of this study was to determine how the human and social capital that businesswomen possess influences their strategic entrepreneurial behaviour (SEB). This was done by determining the impact of human and social capital through examining the entrepreneurial behaviour of businesswomen, both intrapreneurs and entrepreneurs. SEB was considered while contrasting effectuation and causation as two separate types of decision-making logics.

In the first four chapters, introductory perspectives on the research problem and a literature review were presented to refine the theoretical point of departure for the study. In the fifth chapter, the research methodology was explained. The results, interpretation and discussion of the data analysis were presented in the sixth chapter.

This chapter provides an overview of this study by highlighting the objectives of the study and discussing the findings of the statistical analyses. The implications for business management and managerial implications are discussed. The chapter concludes with the limitations of the study and recommendations for future research.

### 7.2 OVERVIEW OF THE STUDY

Taking Sarasvathy's (2008) general theoretical model for future research into account, combined with the fact that the literature on the decision-making approaches of businesswomen in South Africa is rather limited (refer to Section 1.2), this study addresses an important research gap in terms of contributing to the understanding of how businesswomen make decisions in the process of SEB.

The study determined how the human and social capital that businesswomen possess influence their decision making in the process of SEB. SEB was categorised into two main types of reasoning used by entrepreneurs, namely effectuation and

causation. Both effectuation and causation are important aspects of the strategic entrepreneurial decision-making process and were examined in Chapter 3.

While previous research (Sarasvathy, 2008) has identified and articulated the constructs of effectuation and causation, this study addressed one of the next critical steps in advancing the research on effectuation – the testing of proposed survey measures of both causation and effectuation in the process of SEB on a sample of female entrepreneurs and intrapreneurs. This study also makes a contribution by analysing the empirical distinctions between effectual and causal reasoning. Specifically, this study makes several key contributions. Firstly, the research was conducted in a South African context with the focus on businesswomen. This proves to be significant, as there is a particular lack of research on businesswomen, in spite of the widely recognised fact that they are one of the most important groups of entrepreneurs within the economy with great potential to contribute to economic growth, economic development and employment generation (refer to Section 3.2).

Secondly, by using data from two field samples (including the pilot study), the existing measures of effectuation and causation, as used in other studies such as that by Chandler *et al.* (2011), were adapted, developed and refined in order to avoid double-barrelled questions and to remove items with low factor loadings. This study thus broadens the decision-making literature on effectuation and causation by using validated and developed measures of these constructs.

Thirdly, the present study adopted the lens of effectuation and causation and applied it to both the corporate and independent context of entrepreneurship in order to make meaningful contributions to the burgeoning literature on effectuation and causation. The logic of effectuation is particularly suitable for establishing a conceptual basis in the context of both entrepreneurship and intrapreneurship, since both groups of businesswomen face high levels of uncertainty in entrepreneurial decision making.

The findings of this study have important implications for practising and aspiring entrepreneurs, as they represent a merging of the academic study of entrepreneurial decision making and practice that could facilitate mutual understanding and learning. This research therefore helps to make academic research more credible and useful

to practitioners, as it practically aligns entrepreneurship theory and decision-making logic to the business environment in which businesswomen operate.

In addition, the results of this study suggest that businesswomen may benefit from examining the approach they use in entrepreneurial decision making, and the assumptions that underlie those approaches. In line with suggestions by Chandler *et al.* (2011), the results of this study indicate that businesswomen who tend to engage only in causation-related activities might benefit from considering effectuation-related activities, and vice versa. By exploring different decision-making approaches, businesswomen might find greater compatibility and understanding with partners who prefer to work using a different approach.

Finally, this research suggests that the ability to cultivate relationships is an activity that is relevant for SEB, and consistent with both entrepreneurial approaches. This finding supports current research suggesting that network relationships play an integral role in entrepreneurial success (refer to Section 7.3.3).

### **7.3 FINDINGS OF THE STUDY**

The primary research objective of this study was to assess the impact of human and social capital on the SEB of businesswomen. In order to address the primary research objective, three secondary research objectives were set. Firstly, the study aimed to assess the impact of human capital ("who I am") on SEB. Secondly, the study aimed to assess the impact of human capital ("what I know") on SEB, and thirdly, the impact of social capital ("whom I know") on SEB. The human and social capital of entrepreneurs influence their decision making and their ability to recognise opportunities for new initiatives (Barringer & Ireland, 2006; Bhagavatula *et al.*, 2010:245), and also provides the basis for entrepreneurial decisions and the recognition and exploitation of new opportunities (Sarasvathy, 2008:255) in the SEB process. In other words, the identity and knowledge base of female entrepreneurs, as well as their social networks (Sarasvathy, 2008:78), were the focus of this study.

Each of the study's secondary research objectives was addressed by means of the appropriate statistical tests. The results of these were reported in Chapter 6. The findings and implications of these results are discussed in the context of the primary

research objectives and thereafter in the context of each secondary research objective.

### **7.3.1 The impact of human and social capital on the SEB**

In order to address the primary research objective, that is to determine the impact of human and social capital on the SEB of businesswomen, SEB was categorised into two main types of reasoning used by entrepreneurs, namely effectuation and causation.

The findings suggest that businesswomen use both effectuation and causation in their decision-making approaches when shaping and implementing new initiatives, while the literature proposes that these two decision-making approaches are distinct and dichotomous. In using a causal approach, the respondents value planning and a systematic approach to new, uncertain projects, although they realise the benefit of flexibility and limiting the downside loss of their decisions, and therefore also incorporate elements of effectual logic.

When examining the relationships between decision-making logic and its antecedents, social capital is found to be related the most strongly to both effectuation and causation, with businesswomen emphasising their relationships with key stakeholders. Self-efficacy also showed significant relationships with both causal and effectual decision-making approaches. The implication of these findings is that businesswomen utilise both decision-making styles, rather than just one or the other style.

### **7.3.2 Human capital: The influence of an entrepreneur's image of self ("who I am") on SEB**

One of the secondary objectives of this study was to determine the impact of human capital on the SEB of businesswomen. As discussed in Chapter 4, the first construct of human capital, an entrepreneur's image of self, or what Sarasvathy (2008) refers to as "who I am", consists of two images of self, which are found in an entrepreneur's individual potential and in an entrepreneur's doubts and fears. These are images of capability and images of vulnerability.

Images of capability were captured using measures of entrepreneurial self-efficacy, as the relevant literature indicated this as the most relevant to SEB and pointed out that it should most likely have an impact on an entrepreneur's decisions to exploit opportunities. In line with the findings of this study, research on self-efficacy has shown that it plays an important positive role in determining the level of interest in pursuing an entrepreneurial career.

Several hypotheses were used to test this research objective. The findings indicate that businesswomen's images of capability (self-efficacy) have a relationship with their causal reasoning. Furthermore, this relationship was positive, which means that the higher businesswomen's self-efficacy, the more likely they will use causal reasoning in their SEB. As mentioned in Chapter 3, causation is consistent with planned strategy approaches, including such activities as opportunity recognition and business plan development. In order to succeed in causal reasoning it is important that entrepreneurs pursue and persist in these activities. Self-efficacy thus plays an important role in terms of businesswomen's confidence that they can achieve these planned strategy approaches and has an impact on the process of causal decision making in the process of SEB.

The findings furthermore indicate that businesswomen's images of capability (self-efficacy) have a relationship with their flexibility, a dimension of effectual reasoning. This finding could indicate that women who are confident in their own abilities to succeed will be more flexible when making decisions in the process of effectual reasoning. Flexibility is integral in the unpredictable, ever-changing entrepreneurial environment where contingencies continually arise. Increasing entrepreneurial self-efficacy is therefore likely to be an important mechanism in improving businesswomen's ability to be flexible and to adapt to change in the process of effectual decision making.

The second image of self that was studied, namely images of vulnerability (fears), is particularly significant in entrepreneurship research, as female entrepreneurs often have lower estimates of their own abilities. For the purposes of the present study, images of vulnerability were captured using a measure of fear of failure. Fear of failure, as an image of self, involves certain sub-dimensions, which have been identified by Conroy *et al.* (2003:402), as well as Conroy (2001:433). The present



study focused on two sub-dimensions: the fear of devaluing one's self-estimate and the fear of having an uncertain future, as these sub-dimensions relate most directly to the context of this study.

All the hypotheses used to test the impact of images of vulnerability on businesswomen's SEB were rejected. In other words, businesswomen's fear of having an uncertain future and their fear of devaluing themselves showed no relationship with their causal reasoning. In addition, it was concluded that effectual reasoning (as measured by affordable loss, flexibility and pre-commitments) was not influenced by businesswomen's fear of having an uncertain future or their fear of devaluing themselves.

In contrast to earlier research, the findings of this study indicate that images of vulnerability (as measured by fear of failure) have no relationship with effectuation and causation. However, this study covered only two sub-dimensions of the original measure, fear of failure, identified by Conroy *et al.* (2003:402) and Conroy (2001:433). In order to validate this finding, it is suggested that future research develop a more in-depth measure of images of vulnerability to confirm the findings of this study.

### **7.3.3 Human capital: The influence of an entrepreneur's prior knowledge ("what I know") on SEB**

An additional secondary objective of this study was to assess the impact of human capital on the SEB of businesswomen. An entrepreneur's prior knowledge was the second construct of human capital measured in this study. Prior knowledge was termed "what I know" by Sarasvathy (2001a:250) and, for the purpose of the present study, two types of prior knowledge were explored, namely knowledge as reflected in qualifications and training and knowledge reflected in experience.

The findings point out that businesswomen's prior knowledge, as reflected in education and experience, has no relationship with their SEB. In other words, the level of education and the years and type of experience that businesswomen possess do not influence their decision making in the process of SEB. There could be several reasons for these findings. Firstly, measurement problems might have occurred, as a limited number of items were used to measure education and

experience. It should also be noted that, although the majority of the respondents had completed some tertiary education and had more than nine years of paid work experience, the nature of the respondents' education and experience may have differed significantly from the nature of their entrepreneurial involvement, e.g. businesswomen who obtained a science degree but were involved in an entrepreneurial initiative relating to children's education. The respondents might thus have viewed their prior education and experience as irrelevant to their entrepreneurial decision making in *Project X*.

#### **7.3.4 Social capital: The influence of networks ("whom I know") on SEB**

The last secondary objective of this study was to determine the impact of social capital on the SEB of businesswomen. Social capital, namely networks, was termed "whom I know" by Sarasvathy (2001a:250). For the purpose of the present study, five types of social capital, in the form of network capabilities, were explored. An abbreviated version of the scales developed by Westerberg and Wincent (2008) and Walter *et al.* (2006) were used. The network capabilities were coordination, relationship skills, partner knowledge, internal communication and building partnerships.

The data analysis, however, revealed two rather than five factors when assessing the items measuring social capital. These factors were reclassified as relationship cultivation and partner knowledge.

The findings indicate that businesswomen's ability to cultivate relationships has a positive relationship with both modes of reasoning (effectuation and causation) in the process of SEB. In other words, regardless of the decision-making approach adopted by businesswomen, their ability to cultivate relationships, and thus their ability to build networks, played an important role in the process of SEB.

This is in line with current research, which proposes that the ability to cultivate positive relationships with other individuals or firms plays a dominant role in the process of entrepreneurial decision making (refer to Section 4.3 in Chapter 4). Current research on entrepreneurship emphasises the importance of social capital and the ways in which individuals take advantage of their own social affiliations and network strategies in pursuit of their entrepreneurial goals. Cultivating effective

relationships provides entrepreneurs with avenues for negotiation and persuasion, enabling them to gather a variety of resources held by other actors.

The ability to cultivate relationships and the strategy of using informal networks are especially prevalent in emerging economies, such as South Africa, given the ineffective institutional environment (Shaw, 2011). Transaction costs will be high in an economy with an ineffective institutional environment, as pointed out by Shaw (2001). For this reason, informal networks might need to substitute for contract enforcement.

## **7.4 IMPLICATIONS**

In the following section, the implications of the findings of this study for the field of business management are discussed. Thereafter, specific managerial implications are highlighted.

### **7.4.1 Implications for business management**

The study of business management depends on comprehensive and ongoing research and the examination of management problems, the testing of approaches and principles, as well as experimentation with methods and techniques. Business management is thus an applied science that studies how business organisations can best be directed towards realising their objectives, given their limited resources. Business management is thus particularly relevant in an entrepreneurial context, as entrepreneurs often have limited access to resources such as financing and business skills (Du Toit *et al.*, 2007:27). In order to recognise how the business organisation satisfies the needs of society in a free market economy, such as South Africa, one has to understand one of the driving forces behind the business organisation, namely the entrepreneur (Du Toit *et al.*, 2007:37).

The findings of this study contribute to an understanding of how businesswomen, both intrapreneurs and entrepreneurs, make decisions in the process of SEB. An improved understanding of entrepreneurial behaviour and decision making enables business management students to better understand how business organisations function in today's competitive environment.

It should be noted that effectuation not only adds value in practice, but also in business management and entrepreneurship education. The findings indicate that businesswomen utilise both these decision-making styles (effectuation and causation), as opposed to focusing on merely one or the other approach. For entrepreneurship educators, this finding suggests that courses should incorporate both decision-making styles and develop these skills in students. Business management students should be taught to differentiate between entrepreneurial initiatives with a low and a high degree of innovativeness. While a logically planned and prediction-based causal approach is appropriate under entrepreneurial conditions with low uncertainty, effectuation provides means to approach high-uncertainty situations more effectively.

#### **7.4.2 Managerial implications**

Beyond the implications for business management, this research also has implications for practitioners. The path to new entrepreneurial initiatives within a corporate or independent context may follow a well-defined causation approach, in which those who identify opportunities, bring together resources efficiently and work according to a plan may achieve competitive advantage; however, the path to new entrepreneurial initiatives may also be a process of experimentation, affordable loss and flexibility that results in entrepreneurial success. While it will be up to future research to determine the circumstances under which each approach is more appropriate for a particular individual or opportunity, the findings of this study should be validating for businesswomen following the less expected effectual approach, together with a causal approach, when making decisions in the process of SEB.

The findings of the present study would enable financial institutions and business development organisations to better support and assist businesswomen, increase effective communication by compiling more effective information and marketing messages, tailor-make financing packages to their benefit, and generally enable these businesses to operate more sustainably due to an improved understanding of how female entrepreneurs think and make decisions, and of the important role their relationships and networks play in the entrepreneurial process. This study contributes to the limited research on businesswomen and the importance of their networks. The findings therefore increase the level of awareness of female entrepreneurship and

enhance the understanding of the decision-making approaches followed by businesswomen in South Africa.

The findings furthermore highlight that entrepreneurial self-efficacy plays an important role in businesswomen's decision making in the process of SEB. Increasing entrepreneurial self-efficacy is thus likely to be an important mechanism for improving entrepreneurial decision making. One potential method of raising entrepreneurial self-efficacy is through targeted training and education in entrepreneurship. This may play a role in the development of entrepreneurial self-efficacy and, therefore, of entrepreneurial intentions.

In addition, the findings show that businesswomen's ability to cultivate relationships plays an integral role in the process of SEB. Independent entrepreneurs starting their own ventures, as well as corporate entrepreneurs starting with entrepreneurial initiatives within an existing firm, should note the importance of networks. Cultivating relationships and building networks give businesswomen access to other individuals' resources, enables them to recognise ideas for new products or services, and provides them with additional knowledge and financing, and other resources, through exchange transactions with various members of their social networks.

## **7.5 LIMITATIONS OF THE STUDY**

Notwithstanding the useful contributions, some limitations concerning this exploratory study should be noted, many of which suggest areas for future research. Firstly, a representative sample of all South African businesswomen could not be drawn, as only members of the Businesswomen's Association (BWA) were included in the study in order to reduce the costs of the sampling process. For this reason, the findings of this study cannot be generalised to all South African businesswomen based on this study alone.

A second limitation is the fact that the statistical analyses revealed that not one of the items that were expected to measure the construct experimentation loaded as expected. This construct could thus not be measured reliably and its associated items were consequently removed from subsequent analyses. This could be

expected for a study at this stage in the development of the field of effectuation and causation.

Lastly, a relatively low Cronbach's alpha (0.56) was obtained for the construct pre-commitments. Although lower Cronbach's alpha values may be accepted in exploratory research, the results related to pre-commitments had to be interpreted with caution.

## **7.6 RECOMMENDATIONS FOR FUTURE RESEARCH**

When reflecting on the conceptual framework used in this study, a few areas may be noted for further research.

Firstly, other independent variables, such as the environment, constraints and expectations, could be included to assess their impact on the SEB of businesswomen. These independent variables are highlighted in Sarasvathy's (2008:273) general theoretical model to facilitate future research on SEB and effectual approaches. The model illustrates inputs and outcomes to develop an empirical understanding of the relationships that might initiate an effectual approach, as well as the results that can be expected. Only human capital ("who I am" and "what I know") and social capital ("whom I know"), as outlined in the input stage of Sarasvathy's (2008:274) model for further research, were isolated for this study, as well as the dominant SEB used by female entrepreneurs.

The findings of this study are positioned in strategic entrepreneurship literature. Entrepreneurial and strategic perspectives were integrated to examine entrepreneurial behaviour and were called SEB. SEB is entrepreneurial and opportunity-seeking action and advantage-seeking behaviour with a strategic perspective. This study thus proposes that scholars undertake a research stream to examine entrepreneurial processes utilising the measures developed and tested in this study. The research stream should utilise the existing items used to measure effectuation and causation in a South African context when conducting further research.

This study could be repeated to include a representative sample of all South African businesswomen, and not only members of the BWA. In this way one would be able to

make inferences about all South African businesswomen, and not only those who form part of a prominent association of business and professional women in South Africa. This study could also be repeated to include male and female entrepreneurs in a South African context.

In further research, the research instrument should be refined, firstly, to construct an improved scale for pre-commitments, as this item returned a low Cronbach's alpha coefficient (0.56) in the present study. Secondly, additional items should be developed to measure the construct experimentation, as not one of the items expected to measure the construct loaded as expected, and this construct and its associated items were consequently removed from subsequent analyses. Thirdly, the findings of this study indicate that education and experience do not have an impact on the SEB of businesswomen. These items should be revised to determine if these constructs do in fact have an impact on the SEB of businesswomen, as the findings of this study contrasted with those of other research. Lastly, future research could include additional independent variables to explain the variance in the dependent variables, as indicated in the regression analysis of this study.

Future research could also employ other research methods to test effectuation theory and to validate the findings of this study. These methods could include conjoint analysis or experimental research.

Overall, this study covered a broad field of human and social capital to determine their impact on SEB and in order to get to an empirical foundation for the key constructs of effectuation and causation in the context of corporate and independent entrepreneurship. However, this approach was carried out at the expense of a more detailed analysis of each dimension of human and social capital, and it is thus suggested that an additional, in-depth analysis of each dimension is addressed in future research opportunities.

## **7.7 CONCLUSION**

This study aimed to determine how the human and social capital that South African businesswomen possess influence their SEB. This was done by determining the impact of human and social capital through examining the entrepreneurial behaviour

of businesswomen, both in a new venture and in the corporate sector context; and by considering SEB while contrasting effectuation and causation as two separate types of decision-making logics.

In order to build on the current theoretical body of knowledge of SEB (effectuation and causation), as recommended by Sarasvathy (2008), two types of human capital were examined, namely the self-concept, what Sarasvathy (2008) refers to as "who I am", and personal knowledge and experience, what Sarasvathy (2008) refers to as "what I know". Social capital, namely networks, or what Sarasvathy (2001a:250) termed "whom I know", was also examined. Five types of social capital, in the form of network capabilities, were explored. These network capabilities are coordination, relationship skills, partner knowledge, internal communication as well as building partnerships.

The path to new entrepreneurial initiatives, within a corporate or independent context, may follow a well-defined causation approach, in which those who identify opportunities, bring together resources efficiently and work according to a plan may achieve competitive advantage; however, the path to new entrepreneurial initiatives may also be a process of experimentation, affordable loss and flexibility that results in entrepreneurial success. From this study it is evident that self-efficacy plays an important role in terms of businesswomen's confidence and has an impact on both approaches to decision making in the process of SEB. It was also confirmed that, regardless of the decision-making approach adopted by businesswomen, their ability to cultivate relationships, and thus their ability to build networks, played an important role in the process of SEB.



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## **ANNEXURE A**

## THE QUESTIONNAIRE

Thank you for agreeing to take part in this study on the ENTREPRENEURIAL BEHAVIOUR OF BUSINESSWOMEN. Your contribution to this research project is greatly appreciated.

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Please indicate your gender:

- Male
- Female

If male: Thank you for your interest in this study. This study, however, focuses solely on women. You are welcome to view the results of this study in 2011.

---

Think of an initiative you recently introduced, or a new project you launched, or perhaps a business you started. This research project concerns the decision processes you used and how your personal set of circumstances may have influenced your decision.

1. Indicate what type of initiative or project you were involved in:

1	New product or service introduction
2	New project
3	New human resource or training initiative
4	New marketing initiative
5	New business development
6	New process
7	New business venture

2. What was your role in this project?

1	I was the team leader or manager.
2	I was part of the team.
3	I had sole responsibility.

We'll refer to this project as *Project X* throughout the rest of the questionnaire.

---

For each of the following statements, please consider *Project X*. Indicate your agreement or disagreement with the statements below, by making a cross on the appropriate alternative on the 5 point scale. By ticking a 1 you strongly disagree with the statement and by ticking a 5 you strongly agree with the statement:

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

When I made decisions on *Project X*, I...

3.	reduced the amount of uncertainty by using a substantial number of agreements with customers, suppliers and other organisations.	1	2	3	4	5
4.	selected the long-run opportunity that I thought would provide the best returns.	1	2	3	4	5
5.	considered different business models for my project/ initiative/business venture.	1	2	3	4	5
6.	planned business strategies, before taking action.	1	2	3	4	5
7.	tried a number of different approaches until I found one that worked.	1	2	3	4	5
8.	was careful not to risk more money than I am willing to lose with the initial idea.	1	2	3	4	5
9.	took advantage of opportunities as they arose.	1	2	3	4	5
10.	implemented control processes to make sure objectives were met.	1	2	3	4	5
11.	was careful not to commit more resources than I could afford to lose.	1	2	2	4	5
12.	had a clear vision of where I wanted to end up.	1	2	3	4	5
13.	adapted what I was doing to the resources available for the project.	1	2	3	4	5
14.	developed a strategy to best take advantage of resources and capabilities.	1	2	3	4	5
15.	made use of agreements with business partners to reduce uncertainty.	1	2	3	4	5

When I am failing,

16.	it is often because I am not smart enough to perform successfully.	1	2	3	4	5
17.	my future seems uncertain.	1	2	3	4	5
18.	I blame my lack of talent.	1	2	3	4	5
19.	my future plans will change.	1	2	3	4	5

20.	I fear that I might not have enough talent.	1	2	3	4	5
21.	it upsets my "plan" for the future.	1	2	3	4	5
22.	I dislike the fact that I am not in control of the outcome.	1	2	3	4	5
23.	I am worried about it affecting my future plans.	1	2	3	4	5

Considering new projects....

24.	I am able to achieve most of the goals that I have set for myself.	1	2	3	4	5
25.	When facing difficult tasks, I am certain that I will accomplish them.	1	2	3	4	5
26.	In general, I think that I can obtain outcomes that are important to me.	1	2	3	4	5
27.	I believe I can succeed at most any endeavour to which I set my mind.	1	2	3	4	5
28.	I am confident that I can perform effectively on many different tasks.	1	2	3	4	5
29.	My education is closely related to my current occupation.	1	2	3	4	5
30.	I have acquired extensive management experience.	1	2	3	5	5
31.	I have often started new businesses and projects.	1	2	3	4	5
32.	Only parts of my formal education are useful for the job I am currently doing.	1	2	3	4	5
33.	I have worked on entrepreneurial projects before.	1	2	3	4	5
34.	I have started and managed several businesses.	1	2	3	4	5
35.	I develop relations with each business partner based on what they can contribute.	1	2	3	4	5
36.	I know our partners' products/ procedures/ services.	1	2	3	4	5
37.	I have the ability to build good personal relationships with my business partners.	1	2	3	4	5
38.	Managers and employees often give feedback to each other regarding new initiatives.	1	2	3	4	5
39.	I analyse what I would like to achieve with each partner.	1	2	3	4	5
40.	I have the ability to initiate a mutual relationship with new partners.	1	2	3	4	5
41.	I know my partners' strengths and weaknesses.	1	2	3	4	5
42.	I have regular meetings with all stakeholders for every project.	1	2	3	4	5
43.	I almost always solve problems constructively with my partners.	1	2	3	4	5
44.	I am constantly open to new relations with new partners.	1	2	3	4	5
45.	I regularly discuss with my partners how we can support each other.	1	2	3	4	5



46.	I can deal flexibly with my partners.	1	2	3	4	5
47.	I am aware of the target markets my partners operate in.	1	2	3	4	5
48.	Employees develop informal contacts among themselves.	1	2	3	4	5
49.	I continually search for new partners.	1	2	3	4	5

A number of questions appear below. Please tick the appropriate box to indicate your answer to the questions.

50. Indicate the highest level of education you have completed:

Primary school (Grade 7)	Secondary school (Grade 12/ Matric)	Tertiary (Certificate)	Tertiary (Diploma / Degree)	Postgraduate degree/ diploma
1	2	3	4	5

51. How many years of fulltime paid work experience do you have?

1 year	2 to 3 years	4 to 6 Years	7 to 8 years	9 or more years
1	2	3	4	5

52. How many years of management experience do you have?

1 year	2 to 3 years	4 to 6 Years	7 to 8 years	9 or more years
1	2	3	4	5

53. If you have completed tertiary studies, indicate the number of years you studied:

1 year	2 to 3 years	4 to 6 Years	7 to 8 years	9 or more years
1	2	3	4	5

54. I have attended or participated in \_\_\_\_\_ workshop(s) or course(s) to enhance my entrepreneurial knowledge:

0	1-4	5-8	9-13	14 or more
1	2	3	4	5

55. Which of the following best describes you:

- (1) I prefer to start a new initiative/ project/ business venture on my own
- (2) I prefer to start a new initiative/ project/ business venture within an existing organisation

56. How old are you today? \_\_\_\_ years

57. Please indicate your first (home) language:

- (1) Afrikaans
- (2) English
- (3) African language
- (4) European language

58. Please indicate which of the categories below best describes you:

- (1) White South African
- (2) Black South African
- (3) Coloured South African
- (4) Indian South African
- (5) Asian South African
- (6) Non-South African

## **ANNEXURE B**

## THE INITIAL E-MAIL

Dear respondent,

You have been invited to take part in this study on the ENTREPRENEURIAL BEHAVIOUR OF BUSINESSWOMEN. This survey is being conducted by Ms Marli Oostenbrink, a Master's (Business Management) student at Stellenbosch University. The research is done under the supervision of Dr MJ Scheepers and Prof. C Boshoff.

Participation in this survey is voluntary. If at any stage you do not wish to continue with the survey you may withdraw your consent by simply not completing the questionnaire. The questionnaire will take you approximately 20 minutes to complete. By completing the questionnaire it will be understood that you have agreed to participate in the project. Your responses will be treated as strictly confidential. Please take a moment to complete the questionnaire by clicking on the following link:

<https://surveys.sun.ac.za/Survey.aspx?s=b30d19ca92fc44e485ecfad1ec249607>

If you have any questions about the survey, please contact us at 14888971@sun.ac.za or call 073 456 4956.

Kind regards,

Ms Marli Oostenbrink

Master's (Business Management) student at Stellenbosch University

Supervisors: Dr MJ Scheepers and Prof. C Boshoff

## THE FIRST FOLLOW-UP E-MAIL

Dear Respondent,

You have been invited to take part in this study on the ENTREPRENEURIAL BEHAVIOUR OF BUSINESSWOMEN. This survey is being conducted by Ms Marli Oostenbrink, a Master's (Business Management) student at Stellenbosch University. The research is done under the supervision of Dr MJ Scheepers and Prof. C Boshoff.

We need your feedback in order to do increase the understanding of how businesswomen make decisions and to increase the level of awareness of businesswomen's creative behaviour. Please take a moment to volunteer for this important project.

If you have already completed the questionnaire, we thank you for your response. If you have not yet had the opportunity, please take a moment to do so by clicking on the following link. If you do not complete the survey and wish to return at a later time, please use this same link.

<https://surveys.sun.ac.za/Survey.aspx?s=b30d19ca92fc44e485ecfad1ec249607>

Participation in this survey is voluntary. If at any stage you do not wish to continue with the survey you may withdraw your consent by simply not completing the questionnaire. The questionnaire will take you approximately 20 minutes to complete. By completing the questionnaire it will be understood that you have agreed to participate in the project. Your responses will be treated as strictly confidential.

If you have any questions about the survey, please contact us at 14888971@sun.ac.za or call 073 456 4956.

Your participation will make a difference in giving us the information we need to help our future businesswomen. Thank you again for volunteering to make a difference.

Kind regards,

Ms Marli Oostenbrink

Master's (Business Management) student at Stellenbosch University

Supervisors: Dr MJ Scheepers and Prof. C Boshoff

## THE SECOND FOLLOW-UP E-MAIL

Dear Respondent,

You probably received an email a few weeks ago, inviting you to take part in a study on the ENTREPRENEURIAL BEHAVIOUR OF BUSINESSWOMEN.

I'd like to kindly request that all of you who haven't completed the questionnaire yet to please click on the link below:

<https://surveys.sun.ac.za/Survey.aspx?s=b30d19ca92fc44e485ecfad1ec249607>

We need your feedback in order to do increase the understanding of how businesswomen make decisions and to increase the level of awareness of businesswomen's creative behaviour.

If you have already completed the questionnaire, we thank you for your response, you do not need to complete the questionnaire again.

Participation in this survey is voluntary. If at any stage you do not wish to continue with the survey you may withdraw your consent by simply not completing the questionnaire. The questionnaire will take you approximately 20 minutes to complete. By completing the questionnaire it will be understood that you have agreed to participate in the project. Your responses will be treated as strictly confidential.

If you have any questions about the survey, please contact us at [14888971@sun.ac.za](mailto:14888971@sun.ac.za) or call 073 456 4956.

Your participation will make a difference in giving us the information we need to help our future businesswomen. Thank you again for volunteering to make a difference.

Kind regards,

Ms Marli Oostenbrink

Master's (Business Management) student at Stellenbosch University

Supervisors: Dr MJ Scheepers and Prof. C Boshoff

## THE THIRD FOLLOW-UP E-MAIL

Dear Respondent,

You probably received an email last week, inviting you to take part in a study on the ENTREPRENEURIAL BEHAVIOUR OF BUSINESSWOMEN. It appears that Murphy's Law struck and the wrong link was provided in the email. To everyone who completed the survey last week by clicking on that link, thank you very much, but I'm afraid I can't access your responses.

I'd like to kindly request that all of you who completed the questionnaire last week, as well as those who are still planning to complete it, to please click on the link below:

<https://surveys.sun.ac.za/Survey.aspx?s=b30d19ca92fc44e485ecfad1ec249607>

We need your feedback in order to do increase the understanding of how businesswomen make decisions and to increase the level of awareness of businesswomen's creative behaviour.

If you have already completed the questionnaire, we thank you for your response, you do not need to complete the questionnaire again.

Participation in this survey is voluntary. If at any stage you do not wish to continue with the survey you may withdraw your consent by simply not completing the questionnaire. The questionnaire will take you approximately 20 minutes to complete. By completing the questionnaire it will be understood that you have agreed to participate in the project. Your responses will be treated as strictly confidential.

If you have any questions about the survey, please contact us at 14888971@sun.ac.za or call 073 456 4956.

Your participation will make a difference in giving us the information we need to help our future businesswomen. Thank you again for volunteering to make a difference.

Kind regards,

Ms Marli Oostenbrink

Master's (Business Management) student at Stellenbosch University

Supervisors: Dr MJ Scheepers and Prof. C Boshoff

## **ANNEXURE C**



## **INITIAL LETTER TO THE BUSINESSWOMEN'S ASSOCIATION (BWA)**

Dear Cheryl,

I am a research Master's Degree student at the University of Stellenbosch, Department of Business Management. We are currently undertaking a study to determine how the self-perception (Who I am), knowledge and experience (What I know) and networks (Whom I know) of businesswomen influence their strategic behaviour at work. Recent research internationally have shown that some experienced businesswomen do not follow the logical, linear process in implementing new initiatives, as taught in many business schools, rather they use "effectual logic" as strategic behaviour, by utilising their knowledge, experience, networks and self-perception to creatively achieve their goals.

Against this background we have embarked on a study to determine to what extent businesswomen in South Africa base their strategic behaviour on a linear logic versus an "effectual logic" process.

Therefore we seek the cooperation of a well-respected, active women's business network and believe the Businesswomen's Association is the most suitable partner.

The findings of this research project would:

- Increase the understanding of how businesswomen make decisions;
- Increase the level of awareness of businesswomen's creative behaviour;
- Compile more effective information and marketing messages directed at businesswomen;
- Develop more realistic management education programmes targeted at businesswomen in South Africa.

We would like to request a selected group of 20 BWA members participate in a pilot study; and subsequently a questionnaire be sent out to all the other members, which should entail a sacrifice of 20 to 25 minutes of their time. All responses will be treated with the utmost confidentiality. The advice of the BWA is also sought to ensure a high response rate to the questionnaire.

Would it be possible to schedule a meeting on Monday afternoon to discuss issues arising from this request?

Kind regards,

Marli Oostenbrink