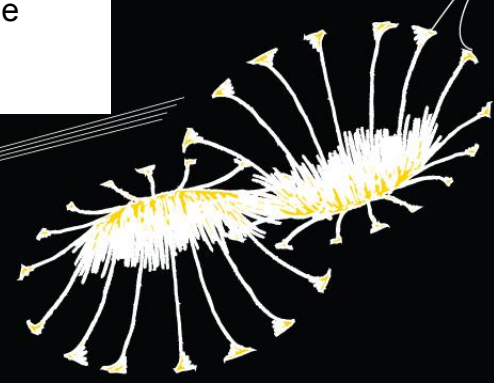


THE INFLUENCE OF NATIONAL  
CULTURE ON ENTREPRENEURIAL  
PROCESSES

'A comparison between Vietnam and the  
Netherlands'



# University of Twente

Management and Governance

NIKOS

Master Thesis

## **The influence of national culture on entrepreneurial processes**

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## **Abstract and Keywords**

With a predominant use of causal logic in education, and therefore predominantly used by managers and MBA students alike, the emergence of the theory of effectuation shed new light on entrepreneurial processes. Effectuation, as part of the 'school of learning' lacks empirical evidence of the influence of national culture on effectuation. In this thesis I contribute to filling this gap by making a comparison between Dutch and Vietnamese novice entrepreneurs, and analyzing if differences in the use of effectual logic can be explained by differences in their national culture.

In this study the Think Aloud method was used to collect data of 17 Vietnamese and 17 Dutch novice entrepreneurs who are all related to an university in respectively Hanoi and Enschede. To code the collected protocols, a coding scheme based on the work of Sarasvathy (2001) was used. The findings contribute to theory for providing empirical evidence. Furthermore, they enrich practice by showing that national culture is a factor which influences the extent of use of effectual and causal logic. Results showed significant differences on six out of twelve elements of effectuation. As expected, the Dutch novice entrepreneurs were more focused on effectual logic as their Vietnamese counterparts which has implications for education, consulting, and doing business in which national culture is a factor to be aware of.

*Keywords: effectuation, national culture, novice entrepreneurs, Dutch, Vietnamese*

# Table of Contents

Foreword and Acknowledgements .....	I
List of Tables.....	II
List of Figures.....	III
List of Abbreviations.....	IV
<b>CHAPTER 1: INTRODUCTION AND RESEARCH DESIGN .....</b>	<b>1</b>
1.1    Background.....	1
1.2    Research objectives.....	6
1.3    Research questions.....	7
1.4    Research structure and methodology .....	7
1.5    Outline of the thesis .....	9
<b>CHAPTER 2: LITERATURE REVIEW.....</b>	<b>10</b>
2.1    From Entrepreneurship to International Entrepreneurship .....	10
2.1.1    Opportunity recognition: discovery and creation .....	11
2.2    Entrepreneurial processes.....	14
2.3    Effectuation .....	16
2.3.1    Introduction.....	16
2.3.2    The characteristics of Effectuation.....	17
2.3.3    Expert and novice entrepreneurs.....	21
2.4    The private sector in Vietnam .....	23
2.5    The Context .....	24
2.6    Culture .....	26
2.6.1    Levels and Layers of culture .....	26
2.6.2    Cultural Guru's.....	28
2.6.3    Hofstede: criticism and response .....	34
2.6.4    Vietnam compared to The Netherlands: a focus within Hofstede's dimensions.....	38
2.6.5    Individualism and collectivism.....	42
2.7    Hypotheses.....	43
<b>CHAPTER 3: METHODOLOGY.....</b>	<b>50</b>
3.1    Introduction.....	50
3.2    The sample and the setting .....	50
3.3    Operationalization.....	51
3.3.1    The case .....	51
3.3.2    The think aloud method .....	52

3.3.3	The impact of language and culture on the think aloud method .....	53
3.3.4	The execution of the research.....	55
3.3.5	Control variables.....	57
3.4	Method of analysis .....	57
3.4.1	Statistical method.....	57
3.4.2	The VSM model .....	58
CHAPTER 4:	RESULTS .....	60
4.1	Analysis.....	60
4.1.1	Hypothesis 1 .....	64
4.1.2	Hypothesis 2 .....	64
4.1.3	Hypothesis 3 .....	65
4.1.4	Hypothesis 4 .....	65
4.1.5	Hypothesis 5 .....	66
4.1.6	Hypothesis 6 .....	66
4.2	Questionnaire results and case results compared .....	67
4.3	Other independent factors.....	68
4.3.1	Gender .....	69
4.3.2	Age.....	70
4.3.3	Educational background .....	71
4.4	Results Value Survey Module 1994 .....	72
CHAPTER 5:	DISCUSSION, CONCLUSION, LIMITATIONS AND FURTHER RESEARCH .....	74
5.1	Discussion .....	74
5.2	Conclusion .....	78
5.3	Limitations and future research .....	79
REFERENCES	.....	82
Appendix 1:	Contrasting effectual against causal reasoning .....	88
Appendix 2:	VSM94 and Formula's .....	89
Appendix 3:	Effect of language .....	97
Appendix 4:	Normality distributions .....	98
Appendix 5:	Questionnaire and Case compared.....	99

## Foreword and Acknowledgements

This master thesis is carried out by Ronald van den Ham at the NIKOS institute, School of Management and Governance of the University of Twente. It entails a study of the relationship between entrepreneurial processes and national culture, using a sample of novice (student) entrepreneurs in Vietnam and the Netherlands.

My fascination for other cultures started approximately six years ago, when I was in Vancouver (Canada) to write my bachelor's thesis, where I met people from many different nationalities, and where I first experienced working in another country. After graduating I have been working which enabled me to travel to different countries with their own habits. This was for me the reason to choose the 'International Management' track within the master study of Business Administration. Being able to graduate on a topic that deals with national culture therefore is a great chance to 'feed' my fascination.

My thanks go out to many people. First of all to Martin Stienstra and dr. Rainer Harms, for giving me the opportunity to be part of this project and providing me with critical reviews that helped me finishing this research.

The members of Tomorrow Entrepreneurs Club from the Foreign Trade University in Hanoi, who helped me finding a place to stay and provided some of the research subjects. Furthermore they have been very helpful with translating some work from English to Vietnamese, and the other way around.

My family and my girlfriend who supported me during my stay abroad for a period of four months. Last but not least, my fellow graduate students who were always willing to discuss findings and give some new insights on a variety of topics.

Ronald van den Ham

May 25th, 2012, Enschede

## List of Tables

Table 1: Value dimensions in mainstream literature.....	p. 29
Table 2: Index scores of Vietnam and the Netherlands.....	p. 41
Table 3: Coding scheme.....	p. 56
Table 4: The use of causal and effectual elements compared.....	p. 62
Table 5: Results ‘independent samples t-test’ and ‘Mann Whitney U test’ for the factor ‘national culture’ .....	p. 63
Table 6: Questionnaire and case results compared.....	p. 67
Table 7: Use of causal and effectual reasoning of Vietnamese for the independent factors gender, age, and educational background.....	p. 68
Table 8: Results ‘independent samples t-test’ and ‘Mann Whitney U test’ for the factor ‘gender’ .....	p. 69
Table 9: Results ‘independent samples t-test’ and ‘Mann Whitney U test’ for the factor ‘age’ .....	p. 70
Table 10: Results ‘independent samples t-test’ and ‘Mann Whitney U test’ for the factor ‘educational background’ .....	p. 71
Table 11: Results of the Vietnamese participants.....	p. 72
Table 12: Results of the Dutch participants.....	p. 72

## List of Figures

Figure 1: The population of private enterprises in Vietnam (1990 – 2010).....	p. 4
Figure 2: Religion in the Netherlands in a percentage of the total population.....	p. 5
Figure 3: Research structure.....	p. 8
Figure 4: The constitution of an organizational path.....	p. 13
Figure 5: Dynamic model of effectuation.....	p. 19
Figure 6: The predictive process.....	p. 20
Figure 7: Causal vs. effectual reasoning.....	p. 21
Figure 8: Type of reasoning approach with respect to experience and firm lifecycle.....	p. 22
Figure 9: The “Onion Diagram”.....	p. 27
Figure 10: Impact of language.....	p. 60
Figure 11: Overall use of causation and effectuation by Vietnamese and Dutch participants.....	p. 62



## List of Abbreviations

IB	International Business
IE	International Entrepreneurship
VSM	Value Service Module
MBA	Master of Business Administration
PDI	Power distance
IDV	Individualism
MAS	Masculinity
UAI	Uncertainty avoidance
LTO	Long-term orientation
TA	Think Aloud

## CHAPTER 1: INTRODUCTION AND RESEARCH DESIGN

### 1.1 Background

In the last two decades International Entrepreneurship (IE), which arose at the border of entrepreneurship and international business, (McDougall & Oviatt, 2000) gained more importance (Jones, Coviello, & Tang, 2011). Research on what factors influence entrepreneurship are seen as significant, since entrepreneurship is important in developed, as well as in developing countries. Creation of jobs, the growth in entrepreneurship programs and courses, and the recognition by the business press of the importance of entrepreneurship in the larger economy makes entrepreneurial processes an interesting topic (Finkle & Deeds, 2001). Next to this, scholars recognize the difference in entrepreneurial activity between countries, and the importance of those activities as a source of innovation and economic growth (Hayton, George, & Zahra, 2002). However, comparative research needs more attention since the body of comparative IE research provides limited theoretical insights regarding the entrepreneurial processes that underlie these cross national variations (Baker, Gedajlovic, & Lubatkin, 2005). Therefore, the focus will lie on entrepreneurial processes.

What is an entrepreneurial process? Bygrave and Hofer (1991, p. 14), define entrepreneurial processes as follows: *“The entrepreneurial process involves all the functions, activities, and actions associated with the perceiving of opportunities and the creation of organizations to pursue them”*. Research on entrepreneurial processes has been conducted by (e.g.) Kodithuwakku and Rosa (2002), who researched the impact of the entrepreneurial process on economic and business success. Next to this, Baron (2008) researched the influence that affect (i.e. the feelings and moods individuals experience) has on important elements of the entrepreneurial process.

As shown above, many scholars did research about the entrepreneurial process which created multiple perspectives. The research of Morroz and Hindle (2011) evaluated all models of the entrepreneurial process. At the time of their investigation they found 32 models of entrepreneurial processes. Among these models relatively older models can be

found, like the model of Gartner (1985) which is a four dimensional (i.e. Individuals, environment, organization, process) conceptual framework. Also relatively new models can be identified like bricolage (Baker & Nelson, 2005), effectuation (Sarasvathy, 2001), and non-linear thinking (Groves, Vance, & Choi, 2011).

Bygrave and Hofer (1991) explain in their definition of entrepreneurial processes that it involves functions, activities, and actions. These functions, activities, and actions can be influenced by many factors, of which the influence of affect on the entrepreneurial process is one of these factors (Baron, 2008). Additionally, factors like institutional and political factors, and economical factors have their effect on entrepreneurship (Baker, et al., 2005; Gartner, 1985). Next to this, it is recognized that national culture has a significant influence on the internationalization of entrepreneurs (Hayton, et al., 2002), and on entrepreneurial processes (Kreiser, Marino, Dickson, & Weaver, 2010). Culture is a pattern of learned behavior, which influences daily life, and therefore also the decisions entrepreneurs take. Linton (1945) states: "A culture is a configuration of learned behaviors and results of behavior whose component elements are shared and transmitted by the members of a particular society" (Linton, 1945, p. 32 as cited in Sugai et al., 2011, p. 3). Thus, it can be expected that national culture, next to entrepreneurship, also influences entrepreneurial processes and create differences in entrepreneurial behavior among countries. Countries differ, for example, on hierarchy, and how to deal with uncertainty (Hofstede, 2001). Therefore, it can be expected that these differences between countries affect the behavior of entrepreneurs and the decisions they take.

An increase of interest for entrepreneurial processes not only arose in the Western world, but also in the Eastern world where economies have been developing in a rapid pace. Independent start-ups are seen as a viable alternative to state-owned companies in countries undergoing a transition from socialist central planning to a market economy (Thomas & Mueller, 2000). Entrepreneurs in developing countries in Asia, Africa, and Latin America are trained by international agencies and governments to support this transition. The majority of these entrepreneurial programs are based on entrepreneurship and management theories which originated in the US and Western Europe (Ardichvili & Gasparishvili, 2003). The transferability of these theories to other regions in the world is questionable (Hofstede, 2001). Western theories are grounded in Protestant work ethic

assumptions and related cultural attributes, while these assumptions and attributes are not embraced by people in other parts of the world. This is the main criticism to transfer attempts (Jaeger and Kanungo, 1990 as referred to in Ardichvili & Gasparishvili, 2003, p.30).

Effectuation (Sarasvathy, 2001) is an example of a 'Western' theory. Sarasvathy created her theory by doing research in the United States among American expert entrepreneurs. Is her theory also transferable to, for example, an Eastern country like Vietnam? Vietnam is a country in South-East Asia with a population of approximately 90 million people, and bordered by China in the North, Laos and Cambodia in the West, and to the South China Sea in the East. Due to communism, religious activities are closely monitored and not encouraged (Bouquet, 2010). Although the majority of the population does not practice a religion on daily basis, the influence of Buddhism and especially Confucianism are significant on the culture of the country. Due to Confucianism relationships are hierarchical, the maintenance of harmony is important, and there is a strong emphasis on society and group (C. T. Nguyen, 2011; T.V. Nguyen, Bryant, Rose, Tseng, & Kapasuwan, 2009).

Being a communist country influenced the entrepreneurial environment of Vietnam.

Previously the communist government encouraged a centrally planned economy, discouraging private businesses. However, Vietnam was almost bankrupt in 1986 and this changed their policy towards private businesses with the introduction of 'Doi Moi' (H. H. D. Nguyen & Nguyen, 2008). Figure 1 shows that entrepreneurship in Vietnam has grown significantly in the past twenty years.

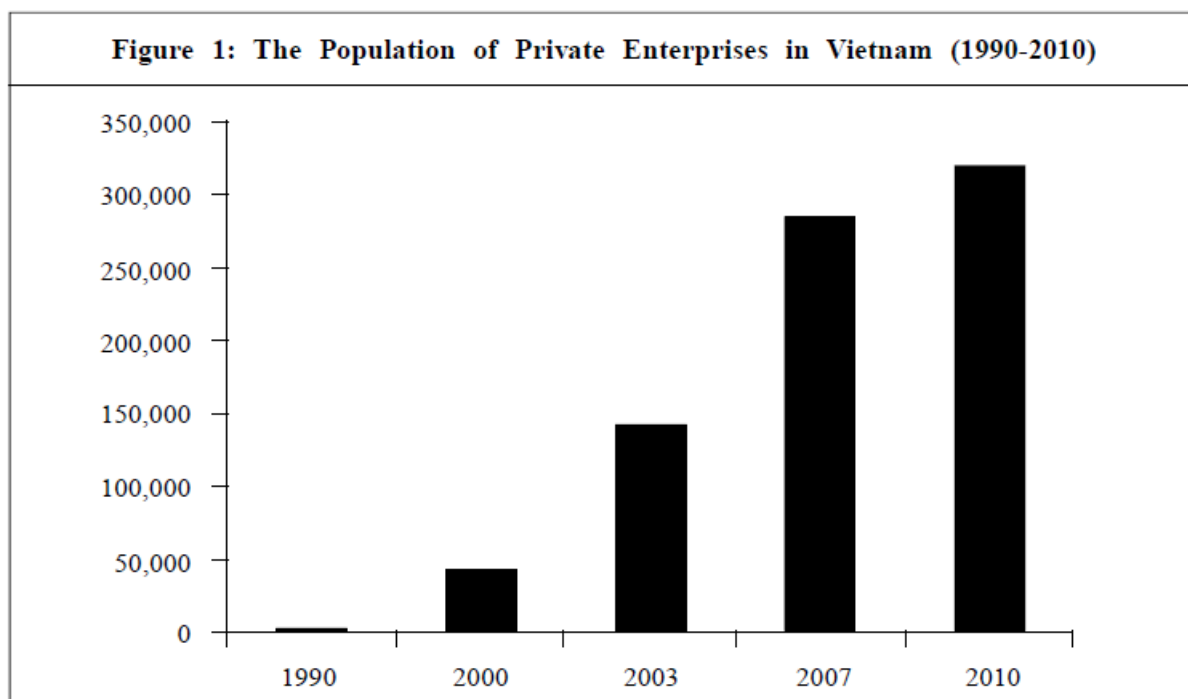


Figure 1: The population of private enterprises in Vietnam (1990-2010), (source: (Vuong & Tran, 2009)

Vietnam is a country where Confucianism instead of Protestantism impacts daily life (C. T. Nguyen, 2011), and can be seen as a transition economy (McMillan & Woodruff, 2002). A country where Protestantism did impact daily life is the Netherlands. The Netherlands is bordered by Germany, Belgium and the North Sea in North-West Europe. In history, religion always played an important role and it even has been responsible for a 'pillar system' which provided separate organizations for Catholics, Protestants, but also for Socialists and Liberals (Need & Graaf, 1996). Nowadays, religion in the Netherlands can be depicted as in figure 2. Since the 1980s the rate of entrepreneurship in The Netherlands has been increasing. Especially during the last decade the growth has been high (Okamuro, van Stel, & Verheul, 2011). Okamuro et al. (2011) give multiple reasons for this growth in entrepreneurial activity among the Dutch of which cultural reasons are important. Dutch prefer more autonomy and self-realization, which can be explained by the high score on individualism in Hofstede's index. This 'drive' for autonomy and self-realization explains the growth in entrepreneurial activity from a cultural perspective.

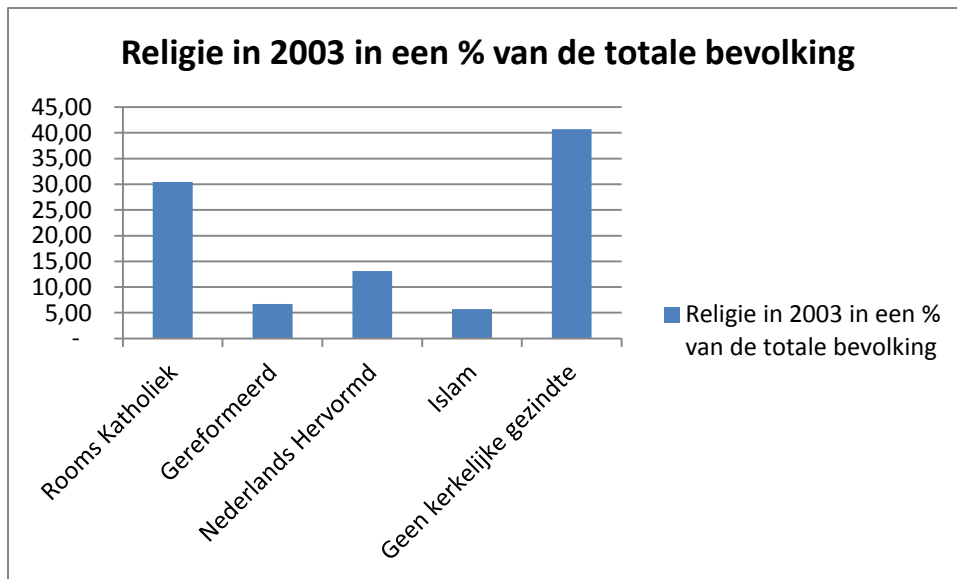


Figure 2: Religion in the Netherlands in a percentage of the total population (source: www.cbs.nl)

Vietnam is a transition economy, where only recently entrepreneurial activity is stimulated, and Confucian instead of Protestant thinking affects daily life. This is opposite to the Netherlands, where other religions have been influencing in history and which is a market economy for decades. Hence, a comparison between Vietnam and the Netherlands is interesting to test whether national culture has an influence on entrepreneurial processes.

Empirical evidence of a possible influence of national culture on effectuation theory will be a great contribution to research. Effectuation (Sarasvathy, 2001) is, together with bricolage (Baker & Nelson, 2005) and non-linear thinking (Groves, et al., 2011), an emergent theory in entrepreneurship, and so far no empirical research has been done on this topic. In terms of practical value, proof or disproof of national culture causing differences among entrepreneurial behavior in decision making during the start up of new firms is key to new and existing entrepreneurs. This is of utmost importance for foreign entrepreneurs willing to invest in Vietnam. National culture offers striking differences in values which influence entrepreneurial behavior (Ralston, Van Thang, & Napier, 1999). Knowledge about how a national culture influences entrepreneurial behavior might solve a lot of problems related to, for example, International joint Ventures. Furthermore, to suit a particular target group, education and consulting would have to be adapted. Easterby-Smith et al. (1995, as referred to in Fan, 1999, p.203) carried out a comparative study to investigate the sensibility of HRM

theory to culture, and concluded that strong cultural factors will limit the adoption of Western HRM in China. Hence, it can be expected that other Western theories are not suitable for Eastern cultures.

## 1.2 Research objectives

As explained in the previous paragraph (i.e. background), a gap is identified. This gap is: a lack of empirical evidence of a possible influence of national culture on the use of causal and effectual logic. This question is the empirical question that will be addressed in this thesis.

The objectives to be achieved, are twofold:

- To discover whether entrepreneurial processes, and in specific the use of causal and effectual reasoning in decision making, differ between Vietnamese and Dutch novice entrepreneurs;
- To identify if Hofstede's cultural dimension of individualism can explain possible differences between Vietnamese and Dutch novice entrepreneurs in entrepreneurial processes, and in specific in the use of causal and effectual reasoning.

If we can discover a relationship between entrepreneurial processes used by novice entrepreneurs and the national culture of the country they live in, it would be an important step in entrepreneurship research. Besides empirically proving that the emergent theory of effectuation is influenced by national culture, the implications for practice and theory are many.

### 1.3 Research questions

In order to achieve the abovementioned research objectives, the following central research question of this thesis is:

*To what extent do entrepreneurs in Vietnam and the Netherlands differ on the use of effectual and causational logic, and to what extent is national culture influencing the entrepreneurial process?*

To answer this central research question, it is subdivided into the following research questions. These research questions will provide an answer to the central research question:

- I. What entrepreneurial processes can be distinguished, and what is the difference between causational reasoning and effectual reasoning?
- II. What is national culture, and how do we define the national culture of Vietnam and the Netherlands?

After answering these questions, the central research question will be addressed in chapter 5, the conclusion.

### 1.4 Research structure and methodology

The research structure of this thesis is based on the work of Verschuren and Doorewaard (1999). Figure 3 depicts the structure, which is designed according to the theory of Verschuren en Doorewaard. The different colors, represent the phases discussed in this thesis. The orange block presents the introduction to the research, the green blocks present the theoretical part, the red blocks present the practical part, and the purple block present the discussion of the previous parts. Finally, the white blocks represent the conclusion, the limitations and future research. As the beam under the diagram shows, the whole process is iterative. This means that while working in a next phase, adaptations can be in the previous phase due to new knowledge. In the paragraph 'outline of the thesis' is explained what will be discussed in each phase.



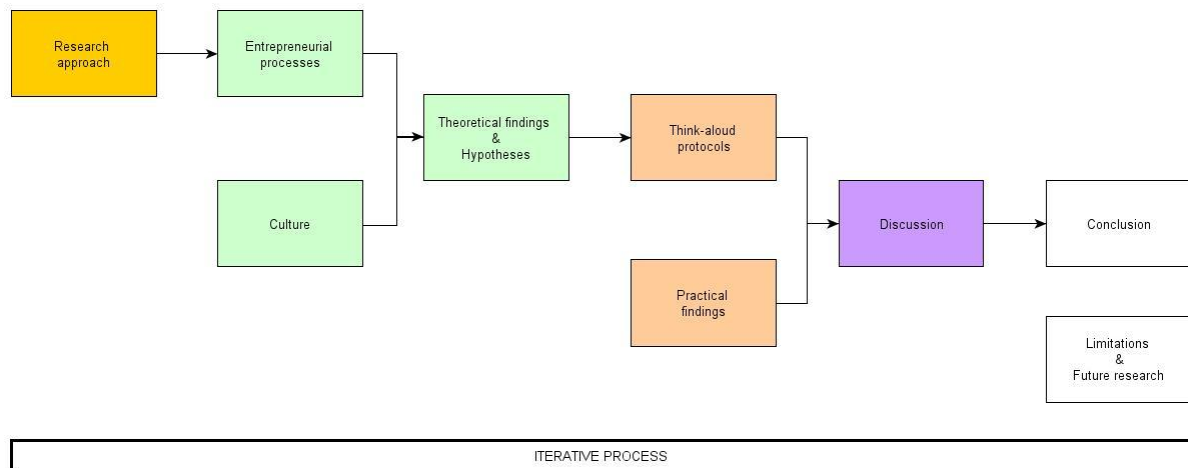


Figure 3: Research structure, based on (Verschuren & Doorewaard, 1999)

To get insight in the culture among novice entrepreneurs in Vietnam and the Netherlands, the VSM model of Hofstede is used. Both in Vietnam and The Netherlands a minimum of 20 male and 20 female university students are asked to fill in the survey set up by Hofstede. To measure the approach the entrepreneur takes, the think-aloud method is used while they work on a fictive case about setting up a firm. These verbal think-aloud protocols will be transcribed and coded before analyzed.

This research will be both qualitative and quantitative. The think-aloud process will make up the qualitative part of this research. The quantitative aspect of the research is the VSM survey of Hofstede, which is used to calculate the national scores on Hofstede's dimensions.

More detailed information about the methodology can be found in Chapter 3.

## 1.5 Outline of the thesis

In this first chapter a motivation for the research is given, the research objectives and research questions formulated, and the approach to follow in this research is explained. Furthermore, background information gives a preview of the research topics that will be addressed. In Chapter 2 a theoretical framework is set up which answers the two research questions. Next to these answers, hypotheses are formulated. Chapter 3 explains which methods are used and how we try to proof or disproof the hypotheses, which have been set up in the previous chapter. Chapter 4 contains the data analysis, and reports the results of the study, thus providing results to the hypotheses. Chapter 5 concludes the thesis by discussing the theoretical findings with the practical findings, and drawing a conclusion. Furthermore the limitations and possibilities for further research will be addressed in this final chapter.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 From Entrepreneurship to International Entrepreneurship

Schumpeter (1934) has been important in the field of entrepreneurship with his book “The theory of economic development”, which is well cited according to Harzing’s Publish or Perish. He recognized the importance of the entrepreneur, as his main function is to overcome the difficulties caused by uncertainty (J. Schumpeter, 1928). However, it took many years since the seminal work of Schumpeter (1934) before entrepreneurship became a potentially promising field of scholarly research in the 1980s, and a legitimate field of research at the end of that decade (Bygrave & Hofer, 1991). How then can entrepreneurship be defined? A definition of entrepreneurship is given by Shane and Venkataraman (2000), who say the following: *“We define the field of entrepreneurship as the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited. Consequently, the field involves the study of sources of opportunities; the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them (p. 218)”*.

Entrepreneurship is more and more seen as a significant and relevant field of research (McDougall & Oviatt, 2000). Not only in Europe and North America, but also in Asia and South America (Thomas & Mueller, 2000). In the advanced industrialized nations, government policy makers and business leaders worldwide share a renewed interest in entrepreneurship as they see entrepreneurial activity as a means to revitalize stagnating industries (Thomas & Mueller, 2000). Entrepreneurship can be seen as a compensation for employment problems created by corporate restructuring and downsizing, and to generally enhance economic flexibility and growth (Birley, 1986). In developing countries entrepreneurial activity is often encouraged for stimulating economic growth and creating job opportunities (Harper 1991, as cited by Peredo & Chrisman, 2006). Due to these positive effects national incentives and education programs, to stimulate new venture development, have been set up by a large number of Asian countries (Thomas & Mueller, 2000). Entrepreneurship focuses primarily on venture creation and the management of SMEs in the

domestic context, whereas international business focuses more on established, large multinational companies (McDougall & Oviatt, 2000). However, the line between entrepreneurship and international business (IB) has begun to erode. At this intersection a new field arose: the field of international entrepreneurship (McDougall & Oviatt, 2000). International Entrepreneurship, like entrepreneurship, focus on the discovery, evaluation and exploitation of market opportunities (Baker, et al., 2005). As compared to International Business, IE comprises an internationalization stream, in which focus is placed on how, why, when and where firms internationalize their operations. The second stream is a comparative stream that examines how and why business processes differ across national contexts. Next to that, this second stream examines the implications of these differences. These two streams of research are related, but distinct. The conceptual domain of IE, therefore, can be defined as the study of processes related to the discovery, evaluation and exploitation of market opportunities that take place across national boundaries, as well as cross-national comparisons of these three entrepreneurial processes (Baker, et al., 2005, p. 492).

Next to Baker et al. (2005), Jones et al. (2011) also distinct between types of research. They found three types of IE research, namely: entrepreneurial internationalization, international comparisons of entrepreneurship, and comparative entrepreneurial internationalization. In this research we will focus on the stream of cross-national comparisons, as Vietnam and the Netherlands are compared to each other.

Entrepreneurs who are thinking of starting a new venture might see or create an opportunity. Scholars ask questions if opportunities exist to be discovered, or that opportunities are created by the actions of the entrepreneur (Alvarez & Barney, 2007). In this research we will think of opportunity recognition in the light of comparative international entrepreneurship.

### **2.1.1 Opportunity recognition: discovery and creation**

A substantial amount of literature can be found on topics like opportunity recognition (Baron, 2006; Baron & Ensley, 2006), opportunity development (Blume & Covin, 2011), discovery and creation (Alvarez & Barney, 2007; Edelman & Yli-Renko, 2010) which try to

explain why some entrepreneurs are successful while others are not. In their articles, the abovementioned scholars provide factors that may influence (e.g.) the recognition of opportunities, or why one entrepreneur is able to discover or create an opportunity and another entrepreneur might not be successful in this. Factors like alertness, experience and cognition are given to explain the difference in performance. Furthermore, intuition might also be a factor that could influence the entrepreneurial process (Blume & Covin, 2011). 'Opportunity recognition can be defined as the cognitive process (or processes) through which Individuals conclude that they have identified an opportunity' (Baron, 2006, p. 107). Jones, Coviello and Tang (2011) state that, 'opportunity recognition is new to the field of International Entrepreneurship (IE), and can be linked to the personal initiatives of the managers, i.e. entrepreneurs who try to create the best possible (and realistic) solution for problems by trying to interpret, change or create products and markets with their partners'. Sometimes opportunities are 'discovered' and in other cases an opportunity is 'created'. This is called the discovery theory and creation theory (Alvarez & Barney, 2007). The discovery theory predominantly is about search, by scanning the environment. Skills like alertness are important within this theory, since opportunities already exist and wait to be discovered. Opposite to the discovery theory, opportunities in the creation theory are created due to the actions, reactions and enactment of entrepreneurs exploring ways to produce new services or products (Alvarez & Barney, 2007; Zahra, Korri, & Yu, 2005).

In their article, Alvarez and Barney (2007) link creation theory to the resource-based theory and state that it points to the central theory of path dependence. Path dependence means that the entrepreneur is not driven by goals, but by path dependency. Schreyögg and Sydow give a clear example about how they see path dependence. According to them it can be seen as a process (Schreyögg & Sydow, 2011). This process consists out of three phases: a predominant phase, the formation phase and the lock-in phase. It can be seen as a process of narrowing down. In the first phase, the predominant phase, the entrepreneur is not bounded by a restricted scope of action. The decision taken, may turn out to be a 'small event' and could, often unintentionally, sets of a self-reinforcing process. When this happens the first phase is ended and the entrepreneur will enter the second phase, which is the formation phase. In the formation phase a dominant pattern will emerge, which means that

the range of options narrows, and it becomes more difficult to reverse the process. When this dominant pattern gets fixed or locked-in, the entrepreneur entered the third phase.

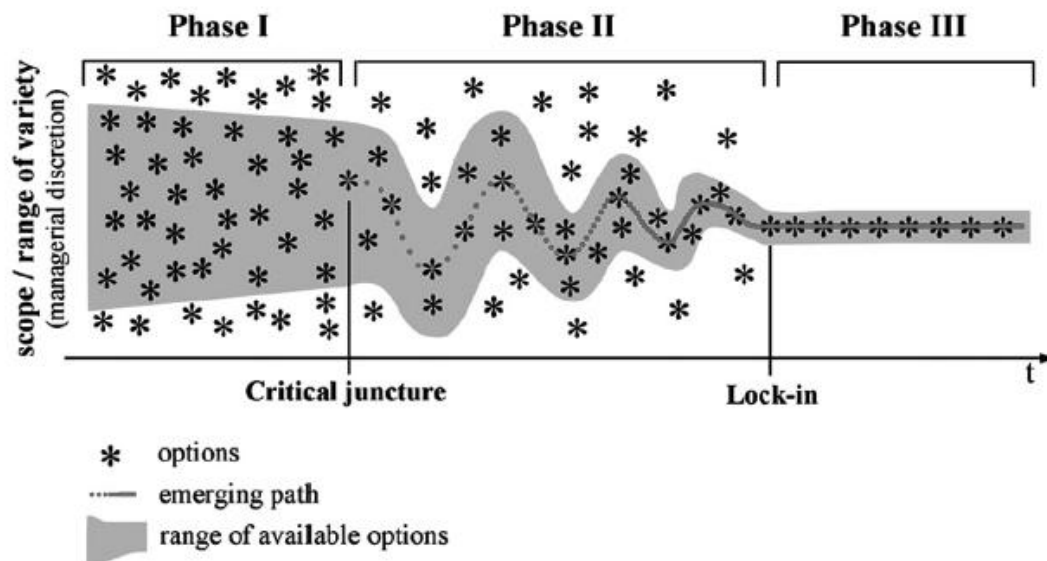


figure 4: The constitution of an organizational path (Schreyögg and Sydow, 2011, p. 323)

Path dependence is not only found in the creation theory, but can also be recognized in discovery theory and is important for both theories (Alvarez & Barney, 2007). Alvarez and Barney, however, claim that there are important differences between the concept of path dependence as it is applied in these two theories. They state that path dependence in discovery theory might be thought of as first order path dependence. By this they mean that the entrepreneur links an opportunity to knowledge and information of an already existing path which influences the actions of the entrepreneur. This first order path can also be recognized in creation theory, however, in creation theory it is also possible that a path is created. This means that in creation theory entrepreneurial action can be both the dependent variable – the thing affected by the path an entrepreneur takes over time – and the independent variable – the actions taken by the entrepreneur that creates this path in the first place (p. 23).

This paragraph provided an insight of factors that can influence the entrepreneurial processes an entrepreneur uses in business. What entrepreneurial processes are and which can be identified will be elaborated on in the next paragraph.

## 2.2 Entrepreneurial processes

What exactly is an entrepreneurial process? *“The entrepreneurial process involves all the functions, activities, and actions associated with the perceiving of opportunities and the creation of organizations to pursue them”* (Bygrave & Hofer, 1991).

In entrepreneurship research two main approaches, related to entrepreneurial processes, emerged and have been reason for a fierce debate. On the one side one can recognize the ‘school of planning’ which implies that planning generally improves effectiveness of human action and facilitates goal achievement (Ansoff, 1991). Components like evaluation and decision among alternatives are key to business planning (Brinckmann, Grichnik, & Kapsa, 2010). Market research, forecasts, and detailed analysis are necessary to evaluate and take decisions among alternatives and are used to make predictions.

In many business schools a goal-driven model, of decision making is used and thus can be seen as the predominant entrepreneurial decision model. These rational, or intentional (Bird, 1988), decision making models employed by neoclassical economics make up the main body of entrepreneurship research (Perry, Chandler, & Markova, 2011). Sarasvathy (2001), calls this goal-driven decision making a causation model. A business plan is a good example of this. An entrepreneur makes a detailed plan in which he explains where he stands now and where he want to be after a certain time. He sets a goal, and driven by this goal the entrepreneur step by step works towards accomplishment (Chandler, DeTienne, McKelvie, & Mumford, 2011). Making a business plan is a primary deliverable in many university entrepreneurship programs which helps a company to predict better and to prepare for future challenges (Chandler, et al., 2011).

The advantage of planning is that it allows more rapid decision-making than actuation without prior planning (Delmar & Shane, 2003 as referred to in Brinckmann et al., 2010). Planning allows anticipation to, and closure of information gaps, without expending the resources assumptions can be tested, resource flows can be optimized, and bottlenecks can be avoided. Furthermore, planning enables firms to control goal achievement and deviations can be identified when deviations from the plan occur (Delmar & Shane, 2003 as referred to in Brinckmann et al., 2010).

The other main approach in entrepreneurship is the 'school of learning'. Scholars who are followers of this approach plea for more adaptive and incremental entrepreneurial processes. Effective strategies can be emergent patterns that do not necessarily follow a predefined, explicit or formal plan (Mintzberg, 1994 as cited in Brinckmann et al., 2010). Their way of thinking opposes the way of thinking of the 'school of planning', in that they state that being flexible and focus on learning, instead on planning, is how a company should deal with high degrees of environmental uncertainty (Hough & White, 2003). Furthermore, it is also argued that in the face of dynamic external conditions, formalized and predictive behavior might create internal rigidities. When a firm is committed to plans and regulations it can cause a negative effect which can result in lower performance and lower degrees of adaption to external changes (Haveman, 1992).

In literature, several theories to the entrepreneurial processes are introduced. Morroz and Hindle (2011) did a review of existing processes and describe theories like bricolage (Baker, 2007; Baker & Nelson, 2005), opportunity discovery (Kirzner, 1997 as cited in Morroz & Hindle 2011), effectuation (Sarasvathy, 2001), intentions (Krueger, Reilly, & Carsrud, 2000), counterfactual thinking (Gaglio, 2004), and innovation (Drucker, 1985). They discovered thirty-two works in literature, which focuses on the entrepreneurial process. Among the discovered works, processes can be found which belong to the causation-based theories. However, more emergent theories like bricolage (Baker & Nelson, 2005), effectuation (Sarasvathy, 2001), and non-linear thinking (Groves, et al., 2011) are getting more attention. These theories build on causation-based theories, however, in the last decade they provided new insights and reflect in what situations other strategies can be more useful instead of planning. Effectuation questions the universal applicability of causation-based models of entrepreneurship to the entrepreneurial process (Perry, et al., 2011). Among these emergent theories effectuation distinct itself by not simply making a distinction between causal logic and effectual logic. Instead of a one-dimensional distinction, Sarasvathy makes a comparison by using five separate dimensions (Sarasvathy, 2001; Sarasvathy, 2008). This makes effectuation relevant to the areas of entrepreneurship research and teaching, and therefore I will focus on effectuation as the entrepreneurial process to use in my research. I will elaborate on the theory of effectuation in the next paragraph.



## 2.3 Effectuation

### 2.3.1 Introduction

Effectuation is a relatively new theory on decision-making in the field of entrepreneurship research and opposes the traditional causal logic (Brinckmann, et al., 2010; Jones, et al., 2011; Perry, et al., 2011). Sarasvathy was intrigued by and based her effectuation model on the work of several scholars (e.g. Knight, March, Mintzberg, Simon, and Weick). 'March's ideas on exploration and the challenge to preexistent goals, Mintzberg's gathering of evidence against planning and prediction, and Weick's emphasis on enactment and living forward are all integrated in a model of effectual reasoning' (Ansoff, 1991; Sarasvathy, 2001). Effectual reasoning integrates the work of Knight, March and Weick. Knight's (1921, as referred to in Sarasvathy 2008) uncertainty point to an unknown future. In such an unknown future, an entrepreneur is not able to predict the chances of success. If predictions are not possible, for example in the case of a non-existing market, the entrepreneur needs other ways than causal (i.e. planning, market research) reasoning to guide his activities. According to March (1978), rational choice involves two guesses. One of these two is a guess about uncertain future consequences. Modifications in the way the theory deals with this has become organized into conceptions of bounded rationality (March, 1978). If this is related to causation and effectuation, than in the effectuation model goals are initially ambiguous. They will become more specific over time. In the causational model a goal is set from the beginning. Finally, the Weickian enactment is important for effectual reasoning (Weick 1979, as cited in Sarasvathy, 2008). With this, Weick implies that entrepreneurs deal with ambiguity through social construction (Santos & Eisenhardt, 2009), which means that they create their environment through their actions. Effectuation addresses a logic of control, rather than prediction, endogenous goal creation, and a (partially) constructed environment (Sarasvathy, 2008).

### 2.3.2 The characteristics of Effectuation

In her theory, Sarasvathy (2001) defines that effectual processes “take a set of means as given and focus on selecting between possible effects that can be created with that set of means”, while defining that causation processes “take a particular effect as given and focus on selecting between means to create that effect” (p. 245). When analyzing these definitions, it is easy to relate them to path dependency (Schreyogg & Sydow, 2011), and the ‘school of planning’ and ‘school of learning’ (Ansoff, 1991). Path dependence can be linked to effectual reasoning, since the entrepreneur is not driven by goals and thus is not bounded by a restricted scope of action. Effectual reasoning can also be linked to the ‘school of learning’, where being flexible instead of planning ahead is key to deal with an uncertain environment. Logically, causational reasoning can be linked to the ‘school of planning’ where market research and forecasts are used as input for a goal-driven model. The abovementioned explanation of causation and effectuation led to a first list of distinguishing characteristics, which is presented in Sarasvathy’s (2001) paper. The research on this topic has continued after Sarasvathy’s breakthrough, and other scholars like Dew, Read, and Wiltbank cooperated with Sarasvathy to expand research on the topic of effectuation. Hence, the list with distinguishing characteristics has been updated through the years. At the moment of writing this thesis the list of Sarasvathy and Dew (2005) is the one most elaborated and last known (see appendix 1). Effectuation, as the alternative model to causation, is characterized by five categories of differentiation (Dew, Read, Sarasvathy, & Wiltbank, 2009; Sarasvathy, 2001):

- **Means-driven as opposed to goal-driven.** This category makes a distinction between means-driven and goal-driven action. The effectual approach starts from the means, and suggests that the entrepreneur should start taking action based on what is readily available: who you are, what you know, and who you know. Based on this, multiple goals can be reached. Conversely, the causational approach is goal-driven. This means that the specific goal determine the actions the entrepreneur take. Entrepreneurs have visions of a desired world, which determine their goals.

- **The affordable-loss as opposed to expected returns.** This category opposes affordable loss to expected return, where affordable loss fits to effectual reasoning. What an entrepreneur is willing to lose determines the choice of projects. Therefore, an entrepreneur will calculate the downside potential and will risk no more than he can afford to lose. In a causal approach calculations of the expected return drive the choice of projects.
- **Partnerships as opposed to competitive analysis.** Forming partnerships with people, suppliers, or even with competitors is strongly favored in effectual logic. Stakeholders are brought on board even before clarifying the markets they will serve and what other goals for the venture are going to be. It is seen as a way to reduce, or even eliminate, uncertainty and erect entry barriers. Instead, in causal logic focus is on competitive analysis and strategic planning. The market and segments are chosen based on detailed research, before stakeholders are acquired.
- **Leveraging as opposed to avoiding contingencies.** This category suggests that contingencies should be leveraged opposed to avoiding them. Avoiding unexpected surprises, while working to a specific goal, fits to causal logic. Unexpected surprises are seen as a threat, whereas in effectual logic it is seen as an opportunity. Effectual entrepreneurs see uncertainty as a resource, and have the ability to turn the unexpected into the valuable and the profitable.
- **Non-predictive as opposed to predictive control.** In the last category non-predictive control is opposed to predictive control. Causation focuses on the predictability of an uncertain future, while effectuation focuses on the controllable aspects of an uncertain future. For example, an airplane manufacturer who seeks to establish exclusive contracts with carriers and then build the kind of planes which they negotiated (effectual), versus an airplane manufacturer who tries to predict the desired aircrafts through market research, invest in developing designs that match the market research outcomes, and then tries to sell it to the carriers (causal).

As shown in the categories and appendix 1, causation and effectuation are more relevant in certain contexts. Causation processes are more useful in static environments, whereas effectuation processes are more useful in dynamic environments. Hence, Sarasvathy & Dew (2005) label effectuation as a dynamic process which can create new markets. They depicted this in figure 5.

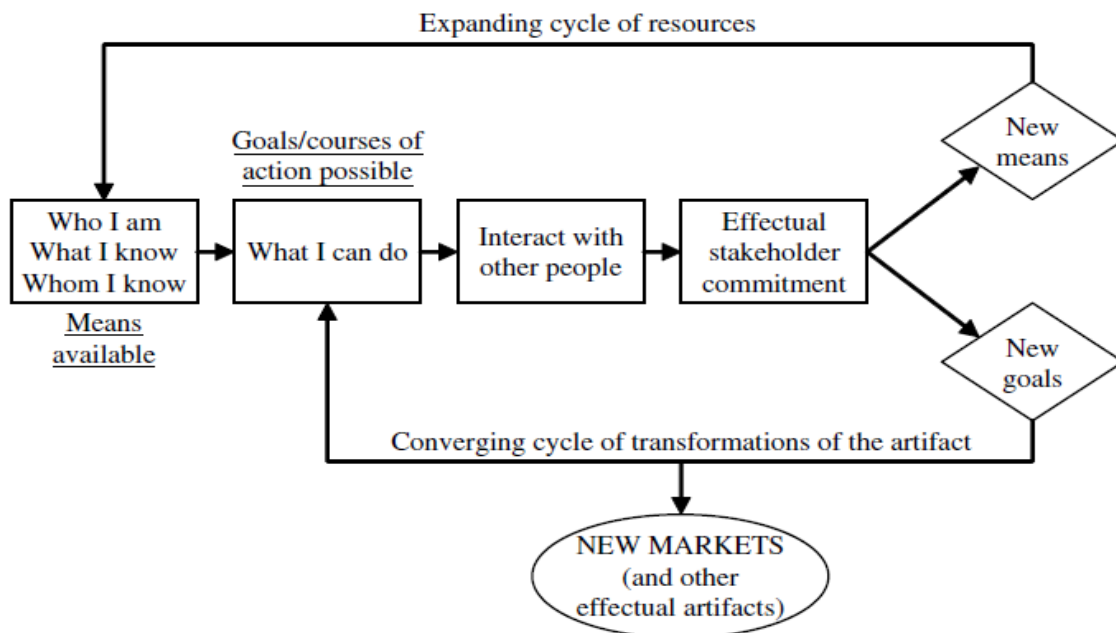


Figure 5: Dynamic model of effectuation (source: Sarasvathy, 2008, p. 101)

As shown in figure 5 the dynamic effectual model of entrepreneurship starts with the means available, followed by asking yourself what you can do with them, then contact people you know, and start setting up partnerships. Out of this process new means and new goals might arise which results in two loops. The first loop increasing the means, and the second loop changing the available goals of where the process starts again.

Opposed to the dynamic process of effectuation Read, Dew, Sarasvathy, Song & Wiltbank (2009) present a causal process in figure 6. As explained in the 'non-predictive as opposed to predictive control' category, causation focuses on the predictability of an uncertain future. Here an opportunity is discovered after which research is done to create a business plan. This business plan contains the goal of the firm and explains how to reach this

goal by acquiring the necessary resources and stakeholders. In the end the company has to adapt to the environment to stay competitive.

Both figure 5 and figure 6 are in line with the discovery and creation theory by Alvarez and Barney (2007) already discussed in this thesis (see p. 11). They show that effectuation is part of the creation theory, whereas causation is part of the discovery theory.

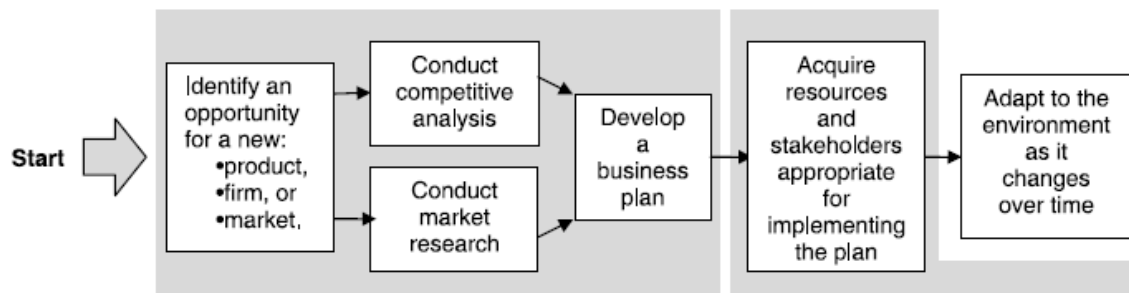


Figure 6: The predictive process (source: Gartner, 1985 as cited in Read et al., 2009, p. 4)

Verbal think-aloud protocols of 27 expert entrepreneurs were used in Sarasvathy's research. These expert entrepreneurs build companies that ranged in annual sales between \$200 million to \$6.5 billion. In the think-aloud protocols, participants were asked to express their thinking while identifying the market for an imaginary new product. In the years following on Sarasvathy's (2001) article more research has been done, and a comparison has been made between expert and novice entrepreneurs. The 27 expert entrepreneurs were compared with 37 MBA students, to see what expert entrepreneurs know that MBA's don't, and might be taught (Dew, et al., 2009). The research showed that "over 63% of the expert entrepreneurs used effectuation more than 75% of the time. 78% of the MBA students did not use effectuation at all" (Sarasvathy, Dew, Read, & Wiltbank, 2008, p. 4). These results show a clear distinction between the use of effectuation and causation. The theory of effectuation is founded and based on empirical findings in The United States. The subjects used in Sarasvathy's research came from 17 states across the USA, and 90% of them had the American nationality. However, can the results be generalized to entrepreneurs in other countries? Figure 7 visualizes this difference between causation and effectuation.

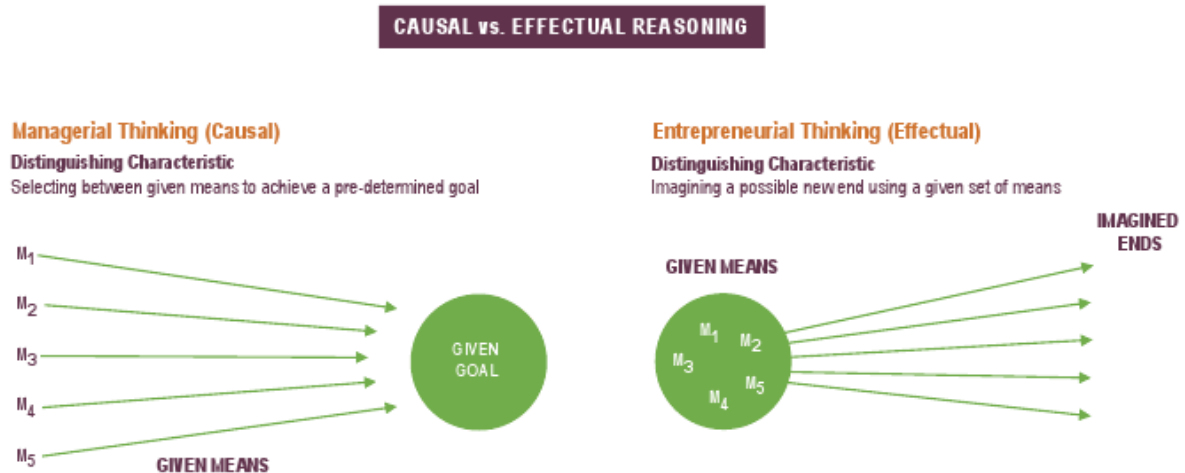


Figure 7: Causal vs. Effectual reasoning (source: <http://www.effectuation.org/about-effectuation>)

### 2.3.3 Expert and novice entrepreneurs

The causal approach is used in most MBA courses, and is used in most business school literature (Chandler, et al., 2011). Hence, it is expected that novice entrepreneurs, as they are still familiar with the knowledge gained at MBA courses, are more focused on causal logic. However, effectuation is an emergent strategy and can be useful in situations where causal reasoning is not that effective (i.e. in uncertain and unpredictable situations). In these situations it is hard to take decisions based on market research, and therefore the use of effectual reasoning might be successful (Read & Sarasvathy, 2005).

A factor like experience of the entrepreneur influence the use of effectual or causal logic (Dew, et al., 2009). The difference between a novice and expert entrepreneur is the years of experience one has (Read, Wiltbank, & Sarasvathy, 2003). An expert entrepreneur has attained a high level of performance due to this experience, and uses a routine and patterns in his decision process. Sarasvathy (2008) defines expert entrepreneurs as, “a person who, either individually or as part of a team, had founded one or more companies, remained a full-time founder/entrepreneur for 10 years or more, and participated in taking at least one company public (p. 21)”.

Effectual logic, like mentioned before, is based on Knight, March, and Weick (Sarasvathy,

2001). Hence, it assumes an unpredictable future, goal ambiguity, and entrepreneurs that enact their environment. These situations arise when new products are made for new markets. In the path dependence model of Schreyögg and Sydow (2011), it is clearly depicted that a routine is created by the entrepreneur after he gained more experience. The first phase in the model can be seen as the new market where new products are made. However, after a while the products and the market are not that new anymore and the entrepreneur created a routine or a path to deal with the situation. In situations which do not satisfy the abovementioned requirements, a causal logic is more useful or even necessary. This is often the case when a firm has grown significantly (Read & Sarasvathy, 2005). Figure 8 visualizes this firm lifecycle.

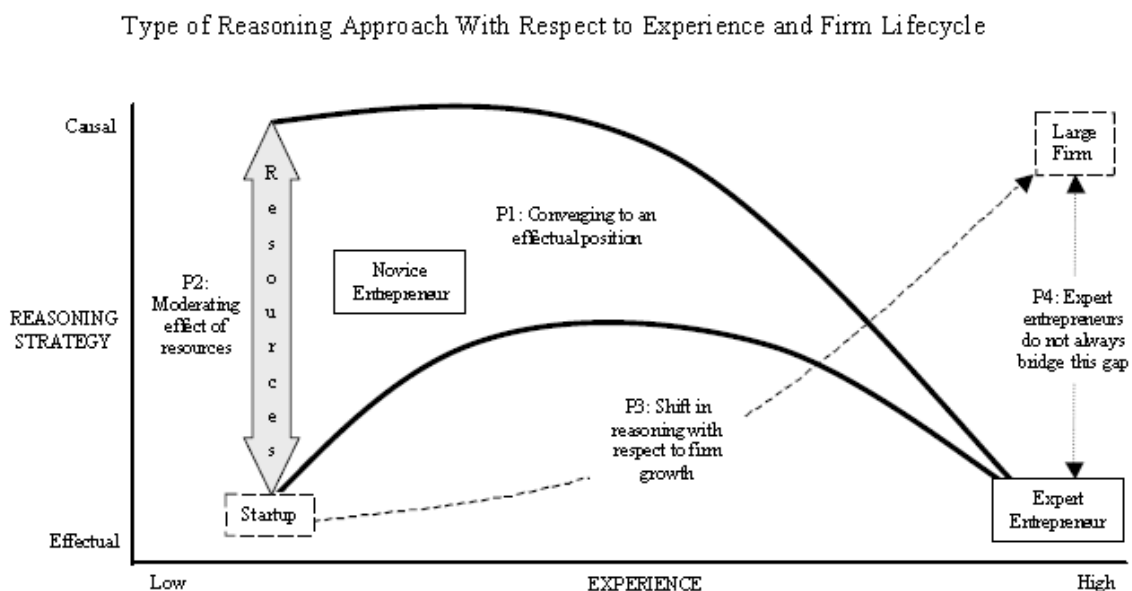


figure 8: Type of reasoning approach with respect to experience and firm lifecycle (source: Read & Sarasvathy, 2005)

As can be derived from figure 8, both firm life cycle and experience of the entrepreneur is correlated with the use of causal and effectual logic. Entrepreneurial expertise is positively related to effectual reasoning (Read, et al., 2003). However, Read et al. (2003) did not find any empirical proof for a negative relation between entrepreneurial expertise and the level of causal reasoning. This is empirical proof of Sarasvathy's (2001, p. 245) remark that both causation and effectuation are integral parts of human reasoning. Causal and effectual logic

can therefore occur simultaneously, overlapping and intertwining over different contexts of decision and actions.

So far, a decent amount of literature on the emergent theory of effectuation has been published. However, most of this scientific work is based on existing theory. More empirical evidence, and thus new data, will be an important addition to this scientific theory. Additionally, none of this existing empirical studies on the topic of effectuation considers a possible influence of culture. Therefore, culture is the topic to be addressed in paragraph 2.6. Before linking the categories of effectuation to culture and the research case, an insight is given of the context of this study. Afterwards a link between effectuation, culture, and the research case will be established in paragraph 2.7.

## **2.4 The private sector in Vietnam**

Vietnam is making a transition from a centrally planned economy to a market economy. Entrepreneurship in Vietnam has grown significantly in the last two decades which is shown in figure 1 of this thesis. The rise of private enterprises in Vietnam can be explained by the 'Doi Moi', which is the economic reform that started in 1986. This reform brought a transition to a market-oriented model, where people are stimulated to start their own business (H. H. D. Nguyen & Nguyen, 2008; Vuong & Tran, 2009).

Since the new enterprise law in 2000, more than 120.000 new enterprises have been registered (Hakkala & Kokko, 2007). However, the non-official sector (e.g. house-hold businesses) accounts for around half of the activities in the private sector (Hansen, Rand, & Tarp, 2009) which makes it hard to have exact figures. The private sector almost entirely exist of small and micro sized companies, where the large companies are still state owned. The Vietnamese government, next to allowing private businesses, has been supporting the private sector. This has been done by introducing temporary tax exemptions, providing resources, and receiving help with licenses and registration (Hansen, et al., 2009). This support only counts for the formal enterprises, since the informal enterprises mostly are operating 'below the radar' and are not paying any taxes. Next to this, rules and regulations are not the same for every company, and the state owned enterprises sector is still



dominant and in a favored position to access resources (Hakkala & Kokko, 2007). Although reforms have been going slow, as the state tries to remain a central position in the country's economic development, new private enterprise registrations have increased every year. How many are actually new is unknown, since it is expected that much of the newly registered private enterprises are former household enterprises.

What about education supporting the private sector? In July 2008 an 'APEC workshop on embedding entrepreneurship in university curriculum' was held in Hanoi (Group, 2008). Attention to the importance of entrepreneurship has been provided with conferences like this. However, when analyzing educational programs and courses given at some of the most influential universities in Vietnam (e.g. Can Tho University, HCM university of economics, Vietnam National University), no courses focusing on entrepreneurship can be found. In a Western country like the Netherlands this is the opposite, where at the first two universities (University of Twente and the University of Groningen) entrepreneurial courses/programs were found on their websites.

Although the government is supporting the private sector, many problems exist. Legal documents are inconsistent, there is no policy transparency, regulations for business licenses are poor, the quality of the labor force is at low level, and corruption is part of daily business. On these points a gap can be identified between Vietnam and Western countries like the Netherlands where the influence of the state is relatively low, transparent regulations have been introduced, low taxes are in place, the level of education is high, and support is provided (CBS, 2009).

## **2.5 The Context**

Entrepreneurship has been researched in the light of different contexts. Politics influence entrepreneurship, (e.g.) a political environment maximizing experimentation has a positive influence to entrepreneurial solutions (York & Venkataraman, 2010). In addition to, and related to a political context, entrepreneurship can be seen in an institutional context (Peng, 2003), and in the context of national culture (Hayton, et al., 2002; Kreiser, et al., 2010). Peng

(2003) discuss in his article the interaction between organizations and institutions, which he calls the 'rules of the game'. Kreiser et al. (2010) explain in their article the influence of culture on entrepreneurial behavior. In my research the focus lies on national culture, since no empirical evidence exist on the influence of national culture on an emergent entrepreneurial theory like effectuation. Furthermore, entrepreneurial theories are often developed in Western countries and therefore it is questionable if such a theory can be generalized to Eastern countries like Vietnam due to cultural differences.

Nowadays there are approximately 200 countries in the world. None of these countries are exactly the same. Comparisons are made, like the Western and the Eastern world. In that case a country like The Netherlands is compared to a country like Vietnam. However, for cultural differences to exist, a large distance of X kilometers is not required. Cultural differences also exist between neighboring countries like The Netherlands and Belgium, while in parts of nowadays Belgium even the same language is spoken as is in The Netherlands. Furthermore, both countries have a 'Western orientation', and the political and economical situation is relatively the same. Relative similarities do exist between these two countries, but if you would ask them if they are the same they will probably start laughing and explain to you that they are quite different due to cultural differences. Even within countries cultural differences exist. Especially large nations like India, Indonesia or Brazil comprise different cultural regions (Lenartowics & Roth, 2001).

The word culture derives from the Latin word 'colere'. If translated, this would mean 'to build', 'to care for', or 'to cultivate', and therefore culture is usually referred to something that is derived from, or created by the intervention of humans (Dahl, 2005).

## 2.6 Culture

### 2.6.1 Levels and Layers of culture

Culture consists of several levels. When you scan 'web of science' or 'Google scholar' by using 'culture' as your keyword, many articles will pass by which name terms like national culture and organizational culture. Hofstede (2001) and Trompenaars (2011) describe levels of culture in their books. Hofstede distinguishes the individual level, the organizational level and the level on societies (p.10). Trompenaars (2011) describes national culture as the highest level, followed by corporate culture and professional culture (p.7). There is no difference between entrepreneurs and non-entrepreneurs regarding the influence of national culture (Mueller & Thomas, 2001). Thus it can be expected that national culture is influencing everybody in a society. Not only individuals, but also the corporate culture of a firm. This influence of national culture on organizational culture is supported by Kogut and Sing (1988), who say that the more distant two national cultures are, the more differences there will be between organizational characteristics. The following definition of national culture by Hofstede is the most cited in social sciences research (Newburry & Yakova, 2006): 'Culture is the collective programming of the mind that distinguishes members of one group from another (Hofstede, 2001, p. 1)'. Thus, when we talk about culture from now on we mean 'national culture'.

If a comparison has to be made between culture and an object, an onion could be chosen. Why is this? An onion consist, just like culture, of multiple layers. If you would peel it, you have to peel through a couple of layers before you reach the core of the union. Culture also has a core surrounded by a few layers (Dahl, 2005; Leung, Bhagat, Buchan, Erez, & Gibson, 2005). Culture is not completely visible and therefore scholars refer to an 'iceberg model' to explain this (Dahl, 2005). The idea of the 'iceberg model' is, that there is a visible area as well as an area that is not immediately visible. This 'non-visible' area can be derived by careful attention to the visible elements of the cultural system (Dahl, 2005).

Hofstede (2001) symbolizes the layers of culture by his 'Onion Diagram' (see figure 9), which consists of four layers: values, rituals, heroes and symbols (from the core to the outer layer).

Values can be seen as the not immediately visible part of the iceberg model, whereas the other three elements are the visible part.

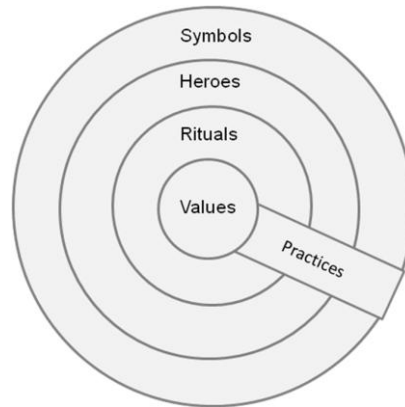


Figure 9: The “Onion Diagram” (Hofstede 2001, p. 11).

Trompenaars (2011) also emphasize that, what he calls the outer layer, is the observable reality. Things like language, food, houses, monuments, fashions and art are the observables or symbols of a deeper level of culture. A man walking on clogs (wooden shoes) is probably seen by foreigners as someone who is part of the ‘Dutch culture’. Another example could be religion. People who go to the church every Sunday or go to a mosque are supposed to be followers of a certain religion. The reason why people wear, build or do things leads us to the next layer of culture. This middle layer of culture could answer the ‘why question’, since it reflects the norms and values of an individual group. Norms are the mutual sense a group has of what is “right” and “wrong”, and values determine the definition of “good” and “bad” (Trompenaars & Hampden-Turner, 2011). The last layer he is discussing in his book is the core layer, which is about basic assumptions. According to Trompenaars survival is the most basic assumption. The Dutch used to fight the water, the Swiss the mountains and snow, and the people living in deserts the drought. The different geographic regions in the world influenced groups of people to organize themselves in such a way that they increase the effectiveness of their problem-solving processes. These differences in development, therefore, also formed different sets of logical assumptions (Trompenaars & Hampden-Turner, 2011)

In this research we are interested in these logical assumptions or values. Symbols are not going to explain why people from a certain culture make specific choices. If people make

different choices or decisions, it might be explained by the difference in values they have. For this reason the focus in this research will be on the values.

## 2.6.2 Cultural Guru's

For decades culture has been a topic in international research, e.g. the impact of national culture on risk taking and proactiveness in SMEs (Kreiser, et al., 2010), and a review of innovative advances in culture and international business (Leung, et al., 2005). Leung et al. (2005) states that national culture has become increasingly important, in the last two decades. The world is globalizing more and more thanks to, amongst others, technical advances. Satellites, internet, and transport are factors that make it possible to reach distant places and to do business with those places. Financial companies like banks are getting bigger and bigger and open subsidiaries at multiple continents. Manufacturing companies move their production factories to cheap labor countries. By expanding their business beyond their home country, they get in touch with different national cultures.

Since the topic of national culture has become increasingly important, several scholars developed cultural theories. Other scholars reviewed theories and have given overviews of the main concepts and theories (Dahl, 2005; Fink, Neyer, & Kölling, 2006). In a time span of approximately forty years the researchers mentioned in table 1 conducted research on culture. All gave definitions for culture. In his book 'Culture's consequences', Hofstede refers to a well known definition on which he based his earlier mentioned definition:

*'Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values (Kluckhohn, 1951, p. 86, n. 5 as cited in Hofstede 2011, p. 9)'*

Below a short overview of the cultural guru's is given in table 1, and thereafter some further information is given related to this research.

Researchers (sources)	Dependent variable	Independent variables	Method	Sample/context
Kluckhohn and Strodtbeck (1961)	Human problem solutions	<i>Five dimensions:</i> <ul style="list-style-type: none"> <li>- Human nature orientation</li> <li>- Man – nature orientation</li> <li>- Time orientation</li> <li>- Activity orientation</li> <li>- Relational orientation</li> </ul>	Quantitative questionnaire, qualitative report	106 persons: Navaho Indians, Pueblo Indians, Spanish American village, Texan and Oklahoman farming village, and a Mormon village
Hall and Hall (1990)	Communication at work	<i>Four dimensions:</i> <ul style="list-style-type: none"> <li>- Fast and slow messages</li> <li>- High and low context</li> <li>- Space</li> <li>- Time</li> </ul>	Qualitative open interviews	180 employees and managers in the field of economy
Hofstede (1980)	National cultural difference within one organization	<i>Four dimensions:</i> <ul style="list-style-type: none"> <li>- Power distance</li> <li>- Individualism / collectivism</li> <li>- Masculinity / femininity</li> <li>- Uncertainty avoidance</li> </ul>	Quantitative questionnaire	Approximately 116.000 IBM employees
Trompenaars (1993)	Management-relevant problem solutions	<i>Seven dimensions:</i> <ul style="list-style-type: none"> <li>- Time status</li> <li>- Achievement / status ascription</li> <li>- Individualism / collectivism</li> <li>- Universalism / particularism</li> <li>- Emotional / neutral</li> <li>- Specific / diffuse</li> <li>- Man – nature relationship</li> </ul>	Quantitative questionnaire with scales	15.000 employees in companies
Schwartz (1992)	Present and future in society	<i>Eleven dimensions:</i> <ul style="list-style-type: none"> <li>- Self direction</li> <li>- Stimulation</li> <li>- Hedonism</li> <li>- Achievement</li> <li>- Power</li> <li>- Security</li> <li>- Conformity</li> <li>- Tradition</li> <li>- Spirituality</li> <li>- Benevolence</li> <li>- Universalism</li> </ul>	Quantitative questionnaire with nine-point Likert scales	Approximately 200 teachers and 200 students per country, in 20 countries
House et al. (2004) - GLOBE	Business leadership present and future	<i>Nine dimensions:</i> <ul style="list-style-type: none"> <li>- Performance orientation</li> <li>- Future orientation</li> <li>- Assertiveness</li> <li>- Humane orientation</li> <li>- Gender egalitarianism</li> <li>- Power distance</li> <li>- Institutional</li> </ul>	Quantitative questionnaire with seven-point scales and analysis of qualitative data with content analysis	17.000 middle managers in 61 countries

		collectivism - In-group collectivism - Uncertainty avoidance		
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Table 1: Value dimensions in mainstream literature (source: Fink, Kölling and Neyer, 2005, p.7-8)

### ***Kluckhohn and Strodtbeck***

Kluckhohn was one of the ‘early birds’ who attempted to quantify various aspects of culture by doing research in the American Southwest among five communities. Although all communities were situated in the United States, Kluckhohn claimed there were significant cultural differences among them (Kluckhohn & Strodtbeck, 1961). However, real interest in measuring culture was experienced after Hofstede’s “Culture’s Consequences” in 1980 which resulted in more models of culture, amongst others (House, 2004; Trompenaars & Hampden-Turner, 2011). The culture-comparison projects also grew to large scale projects compared to previous works (e.g. the work of Kluckhohn). The project of Trompenaars consisted of a sample size of 8841, the GLOBE project of House et al. (2004) up to 17.370, and the IBM project of Hofstede (1980) had a sample size of around 116.000. The number of different countries included in the data collection process also grew in importance. In 35% of recent international comparisons of countries in leading journals, only one or two countries are examined. This can create a bias for generalizations. Hence it is advised that a minimum of 7 – 10 countries is necessary in order to support credible international generalizations (Franke & Richey, 2010). Next to the fact of the small sample size from a single country, the framework of Kluckhohn and Strodtbeck is relatively old and used as a principal foundation for several later models (Nardon & Steers, 2006). Therefore we will not continue to use this cultural framework to explain differences in the use of causal and effectual logic.

### ***Hall***

Context, space, and time are the three elements which make up the study of Hall and Hall. Edward T. Hall based these elements on his experience in the Foreign Service. Hall distinguishes between monochronic cultures and polychronic cultures, where members of the first are low-context and need information and members of the latter are high-context and programmed to a larger degree (Kittler, Rygl, & Mackinnon, 2011).

Despite the lack of available statistical data, the elements can be very useful when cultures are compared which are not seen as relatively close (Dahl, 2005; Yeganeh, Zhan, & Sauers, 2009). Although it can be useful, with a sample size of only 180 this is compared to other

frameworks very low. Next to this, major concerns with Hall's framework are: they are not mutually exclusive and seem subjective, it does not distinguish any ranking, and does not provide objective yardsticks for cross-cultural comparison (Yeganeh, et al., 2009).

Furthermore, Hall's idea of high context or low context are subject to criticism like overgeneralization, lack of empirical evidence, and oldness (Dahl, 2005; Kittler, et al., 2011). For these reasons we will not continue to use this cultural framework to explain differences in the use of causal and effectual logic.

### ***House et al. (GLOBE)***

Another author with a high citation score is Robert J. House. His, and that of his colleagues, research took place in 62 different countries (House, 2004). The research was conducted in the mid 1990s and was meant to replicate and expand on Hofstede's (1980) work. Since it was, just like the work of Hofstede, a massive project which took place in more than 50 countries comparisons in literature are often made between the two works (Javidan, House, Dorfman, Hanges, & Luque, 2006; Shi, 2011; Smith, 2006). The data was collected by 160 scholars who conducted focus groups and individual interviews with managers to discuss their views on outstanding leadership behavior (Javidan, et al., 2006). In their research they identified nine culture level dimensions: performance orientation, assertiveness orientation, future orientation, humane orientation, institutional collectivism, family collectivism, gender egalitarianism, power distance, and uncertainty avoidance (House, 2004). The GLOBE project adopted a theory-based approach and therefore is primarily based on other research like Hofstede's dimensions, and values described by Kluckhohn and Strodtbeck (1961) (Leung, et al., 2005). This is confirmed by Yeganeh et al. (2009) who say that GLOBE does not offer any conceptual novelty. Some of the GLOBE dimensions are not broad enough to be considered as pure cultural values, and the model falls short in applicability as it deals only with work-related values (Yeganeh, et al., 2009). Another criticism to GLOBE is that it is US inspired (Hofstede, 2006). Next to this, the GLOBE authors are aware of the role of national wealth but do not rightly control for it, which causes significant correlations with their dimensions (Hofstede, 2006; Smith, 2006). For these reasons we will not continue to use this cultural framework to explain differences in the use of causal and effectual logic.



### ***Trompenaars***

Trompenaars and Hampden-Turner (2011) collected data within 55 different national cultures, where they tested their seven dimensions of which some are seen as identical to Hofstede's dimensions. They classify culture along a mix of behavioral and value patterns. Like Hofstede, Trompenaars and Hampden-Turner derived their data from questionnaires which were distributed among professionals. Difference is, that in Hofstede's project all the professionals were working for one organization. Trompenaars and Hampden-Turner collected data from different organizations (Dahl, 2005). The seven value dimensions of Trompenaars and Hampden-Turner are: universalism versus particularism, communitarianism versus individualism, neutral versus emotional, defuse versus specific cultures, achievement versus ascription, Human-Time relationship, and Human-Nature relationship. The model of Trompenaars and Hampden-Turner is quite similar to the work of Hofstede, and Kluckhohn and Strodtbeck (Dahl, 2005; Yeganeh, et al., 2009). Some dimensions such as individualism/collectivism have blurring borders which is a shortcoming that decrease the applicability in cross-cultural research. Next to this, it is complicated to use in empirical research, and the framework does not provide a practical approach to measure culture (Yeganeh, et al., 2009). For these reasons we will not continue to use this cultural framework to explain differences in the use of causal and effectual logic.

### ***Schwartz***

Schwartz (1992) did a massive research in 63 countries where he used schoolteachers and college students as his research subjects. Out of his collected data, he derived seven different value types, which can be summarized in three value dimensions (Dahl, 2005).

These three value dimensions are: Conservatism/Autonomy, Hierarchy/Egalitarianism, and Mastery/Harmony.

The work of Schwartz is based on other studies presented in this paragraph, however the measure instrument is different (values vs. preferred states or behavior). This may have two consequences (Dahl, 2005, p. 18). Firstly, it eliminates, at least potentially, the possibility of situational variables having a strong impact on respondents. Secondly, it opens the argument that when asked about values (rather than specific outcomes) respondents may be inclined to choose a more utopian answer, which in turn may not be reflected in their actual behavior.

Yeganeh et al. (2009) also mention the commonalities with the dimensions proposed by Hofstede and Trompenaars. Furthermore, although Schwartz's model analyzed cultural traits in a novel way, the model was not developed to be used in cross-cultural management research. Value types represent broad notions with blurring borders which makes it hard to incorporate in a research design, and which value types are more or less essential in each culture is not indicated in the framework (Yeganeh, et al., 2009). For these reasons we will not continue to use this cultural framework to explain differences in the use of causal and effectual logic.

### ***Hofstede***

Programming of the mind, is what Hofstede refers to as the values which are imprinted in our mind during the first years of our lives before we reach adolescence. Hofstede makes a clear distinction between national culture and organizational culture, because he thinks that these types of culture are completely different. Family, living environment and school provide the mental software where national culture is part of. This mental programming takes place during the first ten years of our lives (Hofstede, 2001; Minkov & Hofstede, 2011). When we enter a work organization as young or not-so-young adults organizational cultures are acquired, by which time our values are firmly in place (Minkov & Hofstede, 2011). Hofstede's work is perhaps the most cited in the field. According to Harzing's "Publish or Perish" citation index, his work is cited over 50.000 times. Such a high citation rate suggests it is likely that Hofstede made a significant impact on the field.

The framework of Hofstede is the most widely used model in cross-cultural research, due to its simplicity in framing a complex and abstract notion such as culture in clear dimensions (Yeganeh, et al., 2009). The work of Hofstede as Triandis claims it, "has become the standard against which new work on cultural differences is validated" (Triandis 2004: 89). It has been remarkably influential (Kirkman, Lowe, & Gibson, 2006), other authors mention it is still very useful (Schimmack, 2005; Shi, 2011; Taras, Kirkman, & Steel, 2010; Westwood & Everett, 1987), and Hofstede's work has been validated (Shi, 2011). Additionally, Hofstede provides an instrument to measure culture which is essential to the necessity of collecting primary data (Smith, 2006).

Due to its validity, its simplicity, being the only research where national culture has been the dependent variable of the study, and the availability of an instrument to measure culture in both Dutch and Vietnamese I will use the theory of Hofstede in the remainder of this chapter to elaborate on culture. Possible limitations of his theory will be explained in the next paragraph. Furthermore, I will link Hofstede's theory to entrepreneurial processes and the elements of effectuation in general.

### **2.6.3 Hofstede: criticism and response**

While Hofstede worked in IBM he became aware of the cultural differences among employees, working for the same company, from different countries and regions. Therefore he explored the differences in thinking and acting among members of more than 50 nations. Hofstede identified five main dimensions along which dominant value systems in the more than 50 countries can be ordered and that affect human thinking, feeling, and acting in predictable ways (Hofstede, 2001). To arrive at his theory, he conducted a survey around 1968 and around 1972, producing a total of more than 116.000 questionnaires which resulted in five dimensions.

These five dimensions were empirically found and validated (Hofstede, 2001, p. 29). However, besides the frequent use of his theory, there also has been criticism. It is not in the scope of this thesis to review all the criticism on Hofstede's work, but I will discuss the main criticism found in literature and cite Hofstede's answers.

Brendan McSweeney probably wrote one of the most cited criticism on the work of Hofstede. McSweeney evaluated the research methodology, and concluded it has many flaws. One of those flaws mentioned by McSweeney is the quantity of respondents in each country and the 'homogeneity assumption' by Hofstede (McSweeney, 2002). The number of questionnaires, around 117.000 sounds astonishing. However, in only six of the included countries the number of respondents were more than 1000. Hofstede's response to this criticism is that there is not much to gain in reliability over an absolute sample size of 50 when a sample is really homogeneous. In Hofstede's view a research on 40 countries with 50

respondents per country, and two survey rounds (a total of 4000 respondents) would be sufficient (Hofstede, 1981 as referred to in McSweeney, 2002, p. 94).

This 'homogeneity assumption' might not be a valid condition. McSweeney (2002) argues that those 50 respondents, of one single organization, might not be representative for the whole population. He states that it is not right to assume that members of the same occupation each share an identical world-wide occupational culture, since national culture could cause national differences in occupational or organizational cultures. Therefore, conducting research in only one organization could be seen as a problem. All in all McSweeney concludes that "the on-going unquestioning acceptance of Hofstede's national culture research by his evangelized entourage suggests that in parts of the management disciplines the criteria for acceptable evidence are far too loose" (2002, p. 112). Hofstede replied to this comment that what he measured were differences between national cultures. For measuring this a set of functionally equivalent samples from national populations are needed to provide information about such differences. This is what he did within IBM, which was a well matched sample for a large number of countries. Next to this, Hofstede states that the country scores he obtained correlated highly with other data. This other data included results gained from representative samples of entire populations (Hofstede, 2002).

Other frequently heard criticism is that the research is, outdated (Soares, Farhangmehr, & Shoharn, 2007; Tung & Verbeke, 2010; Venaik & Brewer, 2008), based on one corporation (McSweeney, 2002; Soares, et al., 2007), and should be used in a more critical manner (Ailon, 2008; Javidan, et al., 2006; Smith, 2006). Concerning criticisms to the effect that his data are old, Hofstede (2002) responds that the dimensions found are based on centuries-old roots, and only data which remained stable across two subsequent surveys were maintained. Next to this, the dimensions have been validated against external elements and have been replicated. Replications did not show any loss of validity. Furthermore, Minkov and Hofstede (2011) defended the opinion that cultures tend to move together in more or less one and the same cultural direction while they are evolving. Since this is the case they think that cultural differences between them are not necessarily lost, and can still be explained by the dimensions.

Other often cited critique is the work of Ailon (2008). She mirrored the book against itself, using the value dimensions that it explicates as a means for revealing the underlying values that it implicitly endorses. Although she criticized the book, she also acknowledges it by using his mirroring strategy. She communicates critical concerns at the level of methodology and theory (e.g. paradigm boundaries, and political subtext) (Ailon, 2008). Ailon (2008) illustrates in her article how Hofstede's book is bounded by the researcher's cultural milieu, but also how it builds and serves this milieu's power and status in relation to the other cultures it claims to represent (p. 887). In a response to the critique of Ailon, Hofstede states that Ailon misinterpreted his book (Hofstede & Ailon, 2009). Hofstede acknowledges that his style, compared to that of his colleagues, is reflexive. He thinks that there is no value-free science, and therefore his 1980 book contains an appendix about the author's values, which makes it exceptional. He further emphasizes that he does not stem from the U.S. academic mainstream tradition, since he is Dutch and while he wrote the 1980 book he traveled a lot in Europe and Asia but never studied or taught in the United States. Besides that, his sources were British, Dutch, French, and German, in addition to American, and he used his own findings to emphasize that there is no such thing as "the West". Hofstede never followed conventions which reviewers of U.S. international journals expect a scholar to follow, which gave him trouble publishing his articles in these journals (Hofstede & Ailon, 2009).

Considering all these critiques, why then did I choose to use Hofstede's model? I choose the model of Hofstede for the reasons mentioned at page 26. Furthermore, Hofstede counters these critiques in his book 'Culture's Consequences: comparing values, behaviors, institutions, and organizations across nations' (2001: 73), as well as in articles written by, or with assistance of, him (Hofstede, 2002; Hofstede & Ailon, 2009; Minkov & Hofstede, 2011).

Culture's Consequences: comparing values, behaviors, institutions, and organizations across nations (2001)' describes the five dimensions in detail. Below, a summary of his ideas coming from his book is given.

*Power distance index(PDI)* is the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally. This represents inequality (more versus less), but defined from below, not from above. It suggests that a society's level of inequality is endorsed by the followers as much as by the

leaders. Power and inequality, of course, are extremely fundamental facts of any society and anybody with some international experience will be aware that 'all societies are unequal, but some are more unequal than others'.

*Individualism (IDV)* on the one side versus its opposite, *collectivism*, that is the degree to which individuals are integrated into groups. On the individualist side we find societies in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side, we find societies in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts and grandparents) which continue protecting them in exchange for unquestioning loyalty. The word 'collectivism' in this sense has no political meaning: it refers to the group, not to the state. Again, the issue addressed by this dimension is an extremely fundamental one, regarding all societies in the world.

*Masculinity (MAS)* versus its opposite, *femininity*, refers to the distribution of roles between the genders which is another fundamental issue for any society to which a range of solutions are found. The IBM studies revealed that (a) women's values differ less among societies than men's values; (b) men's values from one country to another contain a dimension from very assertive and competitive and maximally different from women's values on the one side, to modest and caring and similar to women's values on the other. The assertive pole has been called 'masculine', and the modest, caring pole 'feminine'. The women in feminine countries have the same modest, caring values than the men; in the masculine countries they are somewhat assertive and competitive, but not as much as the men, so that these countries show a gap between men's values and women's values.

*Uncertainty avoidance index (UAI)* deals with a societies tolerance for uncertainty and ambiguity; it ultimately refers to men's search for Truth. It indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Unstructured situations are novel, unknown, surprising, different from usual. Uncertainty avoiding cultures try to minimize the possibility of such situations by strict laws and rules, safety and security measures, and on the philosophical and religious level by a belief in absolute Truth; 'there can only be one truth and we have it'. People in uncertainty avoiding countries are also more emotional, and motivated by inner nervous energy. The

opposite type, uncertainty accepting cultures, are more tolerant of opinions different from what they are used to; they try to have as few rules as possible, and on the philosophical and religious level they are relativist and allow many currents to flow side by side. People within these cultures are more phlegmatic and contemplative, and not expected by their environment to express emotions.

*Long-term Orientation (LTO) versus short-term orientation:* this fifth dimension was found in a study among students in 23 countries around the world, using a questionnaire designed by Chinese scholars. It can be said to deal with virtue regardless of Truth. Values associated with Long-term orientation are thrift perseverance; values associated with short-term orientation are respect for tradition, fulfilling social obligations, and protecting one's face. Both the positively and negatively rated values of this dimension are found in the teachings of Confucius, the most influential Chinese philosopher who lived around 500 B.C.; however, the dimension also applies to countries without a Confucian heritage.

In theory, all of these five dimensions can be used to make a comparison between Vietnam and the Netherlands. However, it is expected that certain dimensions show a clearer difference between these two countries than other dimensions. In the next paragraph we will make a comparison between Vietnam and the Netherlands to see whether or not this is the case.

#### **2.6.4 Vietnam compared to The Netherlands: a focus within Hofstede's dimensions**

Values in Vietnam will differ to values in the Netherlands as a logical result of differences on Hofstede's dimensions which is depicted in table 3. As discussed in the background of this thesis, entrepreneurship in both countries is growing. Where the 'Doi Moi' is responsible for entrepreneurial stimulation in Vietnam (Vuong & Tran, 2009), in the Netherlands a 'drive' for autonomy and self-realization explains the grow during the last decade (Okamuro, et al., 2011). Autonomy and self-realization among Dutch emphasize an individual focus, while Vietnamese emphasize a collectivistic focus. Vietnam has for long been tied to Chinese cultural roots, which brought with it a strong influence of Confucianism which values still can be found in the Vietnamese population (Ralston, Van Thang, et al., 1999; Vuong & Tran,

2009). The Netherlands has been influenced by other religions than Confucianism in history. However, since the 1960s there has been a trend of secularization and decline of church membership in the Netherlands. Today, almost 50% of the population are not church members (Need & Graaf, 1996), and being a church member does not mean being a regular visitor.

After several era's of Chinese domination and dynasties ruling the country, the French colonized Vietnam between 1860 and 1954. Vietnam then became a communist country, where private entrepreneurship was punished instead of stimulated. On April 30, 1975, Vietnam was reunified. Since the South of Vietnam has been influenced by Americans for over two decades, they had to be re-educated. In North Vietnam, opposed to the re-education of the South, an effect of the 'new Hanoi attitude' arose (Ralston, Van Thang, et al., 1999). People from the North were saying to their government: "We supported you during the war years, and now we deserve something in return". This caused a small economic revolution throughout the years, which is described by a Hanoi manager as: "Sometimes we seem like crabs, crawling all over each other for personal gain" (Ralston et al., 1999, p.667). Nowadays, Vietnam is still influenced by China which serves as an example of economic development and with which trade is still significant (Ralston et al., 1999).

The 'evolution' of entrepreneurship after the 'Doi Moi' clearly shows the influence that Confucianism has on entrepreneurial behavior in Vietnam. According to Vuong (2007, as cited in Vuong & Tran, 2009), herd behavior is common among Vietnamese entrepreneurs as a consequence of the Confucianism-affected culture. Business ideas are simply copied, behavior is copied, investment is copied, and so on. Even on the stock markets behavior is copied, and people just invest in something because their family or friends also invest in certain companies. Confucian teaching consist of the following key principles (Hofstede, 2001, p. 354):

- *The stability of society is based on unequal relationships between people.* These relationships (master-follower, father-son, elder brother- younger brother, husband-wife, and senior friend-junior friend) are based on mutual and complementary obligations. For example, the junior partner owes the senior respect and obedience; the senior owes the junior partner protection and consideration.



- *The family is the prototype of all social organizations.* A person is not primarily an individual; rather, he or she is a member of a family. Children should learn to restrain themselves, to overcome their individuality so as to maintain harmony in the family (if only on the surface; one's thoughts remain free). Harmony is found in the maintenance of everybody's face, in the sense of dignity, self-respect, and prestige.
- *Virtuous behavior toward others consists of not treating others as one would not like to be treated oneself.* There is a basic human benevolence toward others, but it does not go as far as the Christian injunction to love one's enemies. Confucius is reputed to have said that if one should love one's enemies, what would remain for one's friends?
- *Virtue with regard to one's tasks in life consists of trying to acquire skills and education, working hard, not spending more than necessary, being patient, and persevering.* Conspicuous consumption is taboo, as is losing one's temper. Moderation is prescribed in all things.

These key principles are rooted in the Vietnamese society, and therefore has its influence on entrepreneurial behavior even now the economical situation is changing in Vietnam. Despite an economical change, cultural facets of a Confucian society like Vietnam change very slowly, and its features continue to be present in every corner of life (Vuong & Tran, 2009, p. 69). In business, besides the previously mentioned 'herd-behavior', Confucianism affect Vietnamese entrepreneurs by making them relatively risk averse. Furthermore 'trust' is very important in every business relationship, and between banker and entrepreneur. This is confirmed by Nguyen and Rose (2009), who acknowledge that entrepreneurs in a transition economy rely on trust-based partnerships. Finally, hierarchy is found to be an important factor in the Vietnamese entrepreneurial culture (Vuong & Tran, 2009).

All dimensions of Hofstede could be used to make a comparison between Vietnam and The Netherlands. This does not mean that every single dimension is able to explain clearly recognizable differences between the national culture of both countries. As seen in table 2 the main difference in scores between the two countries can be found within the IDV dimension. Since the widest gap between The Netherlands and Vietnam is on the IDV dimension, it can be expected that this dimension has more influence on creating differences between practices in these two countries. Furthermore, the IDV dimension has

become the most important dimension (Triandis, 2004), and a valid and reliable dimension (Schimmack, 2005) in studying cultural differences. The LTO dimension is seen as weak, because it consist flaws and methodological weaknesses (Fang, 2003). The other three dimensions show a less significant difference.

<b>Dimension</b>	<b>Scores The Netherlands</b>	<b>Scores Vietnam<sup>1</sup></b>	<b>Difference in score</b>
PDI	38	70	<b>32</b>
IDV	80	20	<b>60</b>
MAS	14	40	<b>26</b>
UAI	53	30	<b>23</b>
LTO	44	80	<b>36</b>

Table 2: index scores of The Netherlands and Vietnam (Hofstede, 2001, p. 500 & p. 502)

Hofstede (2001) states that the four dimensions of PDI, IDV, MAS and UAI should represent independent dimensions. In the case that the country scores on these dimensions are systematically correlated, cultural impact could be explained in more than one way. In the case of IDV a correlation exist between IDV and PDI of  $-.68$  (Hofstede, 2011, p. 63). Despite this correlation Hofstede is dealing with these dimensions as separate dimensions. To back this up he gives three reasons (Hofstede 2001, p. 216):

- “They are conceptually different. Power distance refers to emotional dependence on more powerful people; individualism to emotional (in)dependence on groups, organizations, or other collectives”;
- “Although most high-PDI countries are also low-IDV countries, and vice versa, this is not always the case. The Latin European countries (in particular France and Belgium) combine large power distances with strong individualism; Costa Rica is collectivist with a relatively small power distance; Austria and Israel combine small power distance with only medium individualism. Collapsing PDI and IDV into one dimension would obscure the unique value patterns of these countries’;

<sup>1</sup> The score’s of Vietnam is an index score estimate for countries not in the IBM set.

- Most important, PDI and IDV are both correlated – the first negatively, the second positively – with a third variable, national wealth. If we control for (eliminate the influence of) wealth, the correlation coefficient between PDI and IDV across 50 countries is reduced to an marginally significant  $r = -.32$ .

As explained above, the IDV dimension can be seen as an independent dimensions which is not correlated. Next to this, the construct of individualism can be found in most cultural frameworks which indicates the significance of the construct (Oyserman & Lee, 2008). Furthermore, scholars acknowledge the importance of the construct (Schimmack, 2005; Triandis, 2004), and call the utility of the construct indisputable (Triandis & Gelfand, 1998) For these reasons, next to ‘showing the widest gap’, the IDV dimension is used in our comparison of Vietnam and The Netherlands. From now on the dimension of IDV will be used and I will elaborate on this in the next paragraph.

### **2.6.5 Individualism and collectivism**

The IDV dimension explains a difference between people from individualistic countries and collectivistic countries. Behavior and perceptions among inhabitants of these countries are different. People in collectivistic countries are more focused on context instead of content, which is emphasized in individualistic countries. A great example of this is shown by Triandis (2004). As an example he refers to the events which happened in Geneva 1991, where Secretary of State James Baker told the Iraqis: “We will attack you if you do not get out of Kuwait” (Triandis, 2004). For Baker the content of his message was very clear, however, he said it in a calm and non-aggressive way which resulted in the thinking of the Iraqis that he did not really mean this. The Iraqis focus is more on the context of a message, so that is why they perhaps did not take this message as serious as it was intended to be.

People from an individualistic society tend to primarily look after themselves and ignore group interests if they conflict with personal desires. People from collectivistic countries do the opposite. The demands and interests of the group are more important than the desires and needs of the individual (Wagner, 1995).

Hofstede is making a comparison between human beings and animals to explain individualism. In his view, humans should be classified with the gregarious (e.g. wolves) animals. However, there are different degrees of gregariousness between human societies. Therefore a society will not be individualistic or collectivistic, but will score 'high' or 'low' on individualism. The ties between individuals in a society which scores high on IDV are loose, whereas in a low scoring society people from birth onwards are integrated into strong, cohesive in-groups (Hofstede, 2001).

There are many indicators which can describe if a society is individualistic or collectivistic. This is not measured as one general aspect, but multiple aspects in a society can be distinguished in which a society scores low or high on individualism. A society might score high on the aspect 'family', while scoring low on the aspect 'politics'.

In the next paragraph we will describe the relation between culture and effectuation.

## 2.7 Hypotheses

In this chapter the topics 'entrepreneurial processes' and 'culture' are discussed, and the expectance of a possible influence of national culture on entrepreneurial processes is pronounced. This expectance is backed up by previous work (Kreiser, et al., 2010). The goal of this thesis is to research if national culture has an influence on a specific theory about entrepreneurial processes, called effectuation. As mentioned before, the concepts of causation and effectuation are relatively new. Therefore research about a possible influence of culture on this theory is lacking.

To prove or disprove an influence of national culture on causation and effectuation a link has to be made between culture and these two concepts. Since the dimension of individualism is, according to Hofstede's (2001) work, showing the most difference in culture between the Netherlands and Vietnam, it is expected that this dimension can be best used to research a possible influence.

In order to construct hypotheses, the following five elements of effectuation are used:

1. 'Goal – driven' vs. 'Means – based'
2. 'Expected returns' vs. 'Affordable loss'
3. 'Competitive analysis' vs. 'Use of alliance or partnerships'
4. 'Existing market knowledge' vs. 'Exploration of contingency'
5. 'Predictions of the future' vs. 'Non-predictive control'
6. 'Emphasis on analysis of data' vs. 'Distrusting or opposing (marketing) research'

### **'Goal-driven' versus 'Means-based'**

Causal entrepreneurs tend to be more goal-driven, whereas effectual entrepreneurs tend to be more means-based (Sarasvathy, 2008). When linked to the cultural dimension of individualism, elements of high individualism can be linked to the element means-based. Hofstede (2001) states that within cultures that score low on individualism there is more importance attached to training and skills, and the purpose of education is learning how to do. Whereas in cultures that score high on individualism there is more importance attached to freedom, and the purpose of education is learning how to learn. Additionally, herd behavior is common in Vietnamese culture. This can be linked to 'learning how to do', which implies that Vietnamese need 'a way' of doing business which they can follow. Therefore, it can be expected that entrepreneurs in collectivistic cultures have a tendency to gain knowledge and training to achieve their goal. On the other hand, entrepreneurs in an individualistic culture use their existing knowledge and freedom to achieve multiple goals which were not known in advance. In this process they learn, which can be used to achieve even more different goals.

Furthermore, the Netherlands can be seen as a being-oriented culture (Adler, 1997 as referred to in Kemelgor, 2002, p. 68). To stress release is important in a being oriented culture, where an individual works only as much is needed to live. Characteristically for a member of a being-oriented culture is that he or she may resist goal-oriented behavior (Kirkman & Shapiro, 1997). This includes developing personal goals and strategies for meeting them. Since The Netherlands scores high on individualism and Vietnam scores low,

it is expected that Dutch entrepreneurs are more effectual since they are more means-based.

**Hypothesis 1: The more individualistic a culture is, the more means-based the entrepreneur will be.**

### **'Expected returns' versus 'Affordable loss'**

Where causal models are more focused on the expected returns, effectual reasoning begins with an entrepreneur determining how much he is willing to lose (Sarasvathy, 2001). In the research case multiple situations are given where the entrepreneur is asked to make a decision where costs play a role in the decision making process. Therefore it can be logically expected that the costs that are related to a decision will influence that decision.

According to Sarasvathy (2008), the 'affordable loss as opposed to expected returns' category creates more creative entrepreneurs as they have to bring a product to the market with limited financial resources. This means that entrepreneurs need stakeholders who invest in the new firm. In the research case decisions on whether or not to accept stakeholders to invest in the firm have to be made.

When linked to the cultural dimension of individualism, elements of low individualism can be linked to the element affordable loss. Hofstede (2001) states that within cultures that score low on individualism interesting work is as important as earnings. Whereas in cultures that score high on individualism earnings are more important than interesting work. Therefore we can say that the high individualistic cultures are more focused on returns. Furthermore, Vietnam is heavily cultural influenced by Confucianism. Confucianism is closely related to collectivism (Ralston, Egri, Stewart, Terpstra, & Yu, 1999), and Confucianism promotes a lifestyle where not more than necessary is spent (Hofstede, 2001). This supports the link between low individualistic cultures and the element of affordable loss. Since the Netherlands scores high on individualism and Vietnam scores low, it is expected that Dutch entrepreneurs are more causal since they are more focused on expected returns.

**Hypothesis 2: The more individualistic a culture is, the more focused on expected returns the entrepreneur will be.**

### **'Competitive analysis' versus 'Use of alliance or partnerships'**

As mentioned before causal logic is frequently taught in academic programs, and therefore models in strategic management emphasize detailed competitive analysis (Sarasvathy, 2001). Thus, causal entrepreneurs tend to be more focused on competitive analysis, whereas effectual entrepreneurs tend to be more focused on the use of alliances or partnerships (Sarasvathy, 2008). Those alliances or partnerships are used to reduce and/or to eliminate uncertainty. In the research case the novice entrepreneurs are forced to make decisions about whether or not to create alliances or partnerships. Problem four asks the entrepreneur to decide whether or not to cooperate with a venture capitalist, a friend of the family who is willing to invest, or to continue with the company on his own.

When linked to the cultural dimension of individualism, elements of low individualism can be linked to the element of the use of alliances or partnerships. In low individualistic cultures knowing the right people is most important. Whereas in cultures that score high on individualism, ability is more important (Hofstede, 2001). In high individualistic cultures the emphasis is more on differentiation and comparison so that certain choices can be made. This is different in cultures which score low on individualism. They are more focused on cooperation (Bankston, 2004). Additionally, in a low individualistic culture where the in-group is important it can be logically expected that help from and to in-group members is more accepted. Thus, an entrepreneur living in a collectivistic culture like that of Vietnam is logically expected to use an option where a family member offers his help. In individualistic cultures this could be the opposite. This is backed up by Hofstede (2001) who states that in low individualistic countries relatives of employer and employees are preferred in hiring. In high individualistic cultures family relationships are seen as a disadvantage in hiring. Furthermore, if national wealth increases, members of a society have access to resources that allow them to be more independent. Wealthy, industrialized, nations consequently tend to be much more individualistic than developing countries (Steensma, Marino, & Weaver, 2000) which make them more independent. In individualistic cultures self-interest is pursued, while in a collectivistic society conformity and harmony are the norm. Self-serving behavior is likely to bring shame in a collectivistic culture (Steensma, et al., 2000). Therefore, it can be expected that entrepreneurs in collectivistic cultures, which are less independent, are more focused on alliances to gather necessary resources. Since the Netherlands scores

high on individualism and Vietnam scores low, it is expected that Dutch entrepreneurs are more causal since they are more focused on competitive analysis.

**Hypothesis 3: The more individualistic a culture is, the more focused on competitive analysis the entrepreneur will be.**

### **'Existing market knowledge' versus 'Exploration of contingency'**

Causal entrepreneurs tend to be more focused on existing market knowledge, whereas effectual entrepreneurs tend to be more focused on exploration of contingencies (Sarasvathy, 2001). Unexpected situations are seen as opportunities and/or resources by effectual entrepreneurs, since they do not have pre-set goals to which they want to stick to (Sarasvathy, 2008). In the research case the participating novice entrepreneur is asked to give feedback to, and make decisions in uncertain situations.

When linked to the cultural dimension of individualism, elements of high individualism can be linked to the element of exploration of contingency. If the elements of Hofstede's (2001) dimension of individualism are analyzed one can find effectual elements like 'staying with company undesirable'. In low individualistic countries it is desirable to stay with one company. In this contrast you can feel the desire to explore contingencies in high individualistic countries opposed to a desire to stick with the familiar in low individualistic countries. Therefore it can be logically expected that someone living in a high individualistic culture is willing to take a chance, while someone from a low individualistic culture will more often stick to the familiar. Next to this, interpersonal competition, common in individualistic cultures, may generate new ideas for innovative change (Morris, Davis, & Allen, 1994). Furthermore, herd behavior in the Vietnamese culture can explain a need for following existing market knowledge provided by others. Since the Netherlands scores high on individualism and Vietnam scores low, it is expected that Dutch entrepreneurs are more effectual since they are more focused on exploration of contingency.

**Hypothesis 4: The more individualistic a culture is, the more focused on exploration of contingencies the entrepreneur will be.**



### **'Emphasis on analysis of data' versus 'Distrusting or opposing (marketing) research'**

Effectual entrepreneurs do not try to predict the future and therefore are flexible to react to opportunities, while causational entrepreneurs prefer to predict and plan the future (Sarasvathy, 2001). In the research case this is tested by how the participating novice entrepreneurs react to questions like 'How will you find out this information?'

Causal entrepreneurs tend to have an emphasis on analysis of data, whereas effectual entrepreneurs tend to distrust or oppose (marketing) research (Sarasvathy, 2008). When linked to the cultural dimension of individualism, elements of high individualism can be linked to the element of distrusting/opposing (marketing) research. As mentioned before, Confucianism is an important factor in Asian collectivistic countries and also in Vietnam (Vuong & Tran, 2009). In these collectivistic cultures 'face' is very important. Loss of face is something that people from collective cultures try to avoid, and therefore they are more risk averse in business (Begley & Tan, 2001). The risk of failure is a threat to face, and will be avoided since this can create shame.

While in individualistic cultures autonomy is important, individual decisions are encouraged and considered superior, this is not the same for collectivistic cultures. Members from collectivistic cultures rate security as more important, and group decisions are considered better (Thomas & Mueller, 2000). Security and group decisions are more in line with predicting the future, where predictions may feed a feeling of security which is backed-up by the knowledge of a group instead of an individual. A fear among people from collectivistic cultures is shame and becoming an outcast due to behavior which is not contributing the group (Adler, 1997 as referred to in Kirkman & Shapiro, 1997, p. 740). Therefore, it can be logically expected that members of a collectivistic society try to predict the future, to avoid shame and feed a feeling of security. According to Hofstede (2001), low individualistic cultures can be seen as shame cultures. Therefore, it can be logically expected that cultures that score low on individualism are more risk averse, and put an emphasis on the analysis of data to predict the future and avoid shame. Since the Netherlands scores high on individualism and Vietnam scores low, it is expected that Dutch entrepreneurs are more effectual since they are more focused on distrusting or opposing (market) research.

**Hypothesis 5: The more individualistic a culture is, the more (marketing) research will be distrusted by the entrepreneur.**

**'Predictions of the future' versus 'Non-predictive control'**

All the five categories of effectuation embodies techniques of non-predictive control, which can be explained as reducing the use of predictive strategies to control uncertain situations (Sarasvathy, et al., 2008, p. 16). Out of the five previous hypotheses it is obvious that we expect that individualistic cultures tend to be more effectual driven as collectivistic cultures. Thus, considering this tendency it can be logically expected that an individualistic culture tend to use more non-predictive strategies. Next to this, collectivistic cultures seek security (Thomas & Mueller, 2000), and can be seen as shame cultures (Hofstede, 2001) which we expect will feed their need to predict the future. Since the Netherlands scores high on individualism and Vietnam scores low, it is expected that Dutch entrepreneurs are more effectual since they are more focused on non-predictive control.

**Hypothesis 6: The more individualistic a culture is, the more focused on non-predictive control the entrepreneur will be.**

Based on the literature six hypotheses were created. Out of these six hypothesis it is expected that Dutch entrepreneurs, and therewith low individual cultures, on average make more use of effectual reasoning than Vietnamese entrepreneurs which are part of a collectivistic culture. In Chapter 4 this will be tested.

## **CHAPTER 3: METHODOLOGY**

### **3.1 Introduction**

This study is a comparative case study. According to Babbie (2010) a case study is, “the in-depth examination of a single instance of some social phenomenon, such as a village, a family, or a juvenile gang.” In this case the single instance is a national culture, that of Vietnam and the Netherlands which are compared in this research. By examining these national cultures we try to explore if differences in entrepreneurial behavior are present due to a difference in national culture.

The hypotheses in this study were derived in a deductive way. A literature research has been done on the topics of entrepreneurial processes, and more specific effectuation, and culture. By studying this literature and linking it, hypotheses were derived. These hypotheses have been tested by conducting an experiment in Vietnam and the Netherlands. More about this case study is mentioned in the next paragraph.

### **3.2 The sample and the setting**

For this research, the case study was executed at universities. In Vietnam participants linked to The Foreign Trade University, Vietnam National University, Hanoi University, or RMIT were used to conduct the problem-case. In the Netherlands participants are linked to the University of Twente. As data was collected at university level in both countries, the participants could be compared to each other. This can be seen as a control variable. Furthermore, they all should be student entrepreneurs (i.e. students who already have employed entrepreneurial activities), or have been graduated in the past five years and thus have no more than five years of entrepreneurial experience. As explained on page 17 of this thesis the subjects in this research all are novice entrepreneurs, according to the definition of Sarasvathy (2008). Novice entrepreneurs are used, since we did not have any access to expert entrepreneurs. However, we measure the same constructs as Sarasvathy (Sarasvathy,

2001) did in her study.

In this research seventeen Vietnamese (student) entrepreneurs of one of the Vietnamese universities participated in the research. It is important that they are no expert entrepreneurs, since routines and patterns can influence a decision making process (Read, et al., 2003). All research subjects have less than five years of entrepreneurial experience and therefore can be seen as novice entrepreneurs. This is the case for the seventeen Dutch research subjects who follow courses at the University of Twente and recently deployed entrepreneurial activities, as well as for the seventeen Vietnamese participants.

The reason why university students are used in this study has several reasons (Mueller & Thomas, 2001). First of all, they are all novices. Secondly, they represent the future entrepreneur since the need for university trained entrepreneurs is increasing. Thirdly, sampling only participants in economics, engineering and business fields enhances cross-national comparability. In this way important variables such as age, literacy, work experience, and education are controlled for (Mueller & Thomas, 2001). Furthermore, as explained in 3.2.3, Vietnamese students have been taught in a 'Western fashion', just like their Dutch counterparts.

Politis (2011) agrees with Mueller and Thomas on this topic and state that universities nowadays are expected to be a seed bed for new knowledge-intensive firms, and therefore they become a more entrepreneurial university. A good example of an entrepreneurial university is the University of Twente which has many spinoffs each year (Lazzeretti & Tavoletti, 2005).

How the research was executed is described in the following paragraph.

### **3.3 Operationalization**

#### **3.3.1 The case**

The case study was executed by presenting the students with a problem-case which is inspired by Sarasvathy's case (Sarasvathy, 2001; Sarasvathy, 2008). Sarasvathy's original case

has been slightly altered. This to prevent cultural biases and too much focus on technology. The case invented for the EPICC Project is about starting a coffee-corner at the university the subjects are studying, or have been studying. Inspiration for this idea came from the fact that the student was not able to get a fresh cup of coffee when desired. In the university buildings coffee was available, however this coffee is provided by machines which is not appreciated by the student. Another motive for the student to start a coffee-corner, is that the amount of money paid for a machine-coffee is in no relation to the quality of the coffee. The entrepreneur has been working in a coffee corner in his home town for five years, so he<sup>2</sup> knows what goes around.

The entrepreneur noticed successes of other coffee corners. These coffee-corners were from expensive franchisers, so he thinks that it should be possible to still start his own. In several reports in newspapers and magazines the entrepreneur read that there is an increasing demand for drinking coffee in his home country.

Starting a new (fictitious) company involves taking all kinds of decisions for problems arising in the start-up phase of the company and while it grows. The coffee-corner case consists of 10 problems which lead the participant through several phases the company is going through. These problems range from starting up the company, to problems where the subject is confronted with a well established company going public. These problems correspond with several phases a company normally go through.

### **3.3.2 The think aloud method**

The participants of the research were assigned with the task to solve ten problems in setting up a coffee corner. But how do you measure if their national culture is of any influence on the entrepreneurial process? For analyzing this, the 'think aloud' method is selected. By using this method we try to 'catch' their cognitive processes at the moment they are performing the case.

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<sup>2</sup> When I write 'he' this can also be read as 'she'

There will always be the possibility that information which is retrieved at the time of the verbal report is different from the information retrieved while actually performing the experimental task. This can occur even when subjects are asked to report their cognitive processes during the many trials of an experiment. The problem arises due to accessing information at two different times. First the subject will access information during the actual cognitive processing. Secondly, the subject will access information at the time of the report. To avoid this problem, it is proposed that, whenever possible, concurrent verbal reports should be collected, so that processing and verbal report would coincide in time (Ericsson & Simon, 1984).

In our research we are going to use this method in a concurrent way, for the reasons explained above, instead of in a retrospective way, where the participants explain after finishing the case why they took certain decisions. This method is one of the best ways in getting insight in the way people think when solving a problem (Ericsson & Simon, 1993; Van Someren, Barnard, & Sandberg, 1994).

Since the nationality of the researcher is Dutch, the Dutch participants can think aloud in their mother tongue. The Vietnamese participants, however, are expected to think aloud in English. In the next paragraph the impact of language and culture on the think aloud method is discussed to see whether this has implications for the Vietnamese participants.

### **3.3.3 The impact of language and culture on the think aloud method**

The coffee-corner case is set up in English, which is not the mother tongue of the Vietnamese student entrepreneurs. Since the experimenter is not able to speak or understand the Vietnamese language, participants have to finish the case in English. Could the fact that they have to read, perhaps translate their readings to Vietnamese, translate their thinking to English, and speak in English affect their performance? Furthermore, is it in every culture as common to think aloud?

One can imagine that performing a problem-solving case in a language which is not your mother tongue doesn't make it easier. Clemmenson (2008) is referring in his article to the research of Ji et al. (2004) to make a statement that the language spoken during a TA session

may affect the outcome. They found that if a person grows up in an environment which is dominated by one language and culture, it matters whether the test language is in that language or in the language of the culture which they later learned. They found that when Chinese participants were tested in Chinese, their responses were more in line with a Chinese mode of thinking as when they were tested in English (Ji, Zhang, & Nisbett, 2004)

As Vietnamese participants are bilingual and have been grown up in an environment dominated by one language and culture where they later learned English, it is important for the researcher to be sure that this is not causing a problem. To test this, we set up a pilot case where a participant first had to think aloud in English and afterwards in Vietnamese. Another person was asked to first think aloud in Vietnamese and afterwards in English. These results were analyzed and compared. The results can be found in chapter 4, where the results of the pilot case show that language did not negatively affect the think aloud results.

In literature cultural analyses have been done of the effect of talking on thinking (Kim, 2002), and cultural cognition on TA (Clemmensen, Hertzum, Hornbaek, Shi, & Yammiyavar, 2008). According to Kim (2002), talking aloud is not common in every culture. In Western cultural contexts, talking is seen as a positive act because it is an expression of the individual which can be seen as the core value of, for example, the American and Dutch culture (Kim, 2002). Furthermore, talking is often taken to mean that the speaker is engaged in thinking (Kim, 2002).

In the East Asian cultural context talking and thinking are not the same, as they do not see a connectedness between talking and thinking. Contrary to Western culture, they believe that silence can be considered beneficial for high levels of thinking (Kim, 2002). According to Nisbett (2003), Westerners do not have much trouble to verbalize their thoughts, whereas to Easterners this could be a problem. The way Easterners explain their thoughts is explained by him as holistic thought. Nisbett defines this as: *“Holistic thought, which responds to a much wider array of objects and their relations, and which makes fewer sharp distinctions among attributes or categories, is less well suited to linguistic representation (p. 211).”* According to this, it is reasonable to think that the task performance of Easterners on the think aloud method is negatively affected by talking (Kim, 2002). However, developing

countries in Asia, like Vietnam and Indonesia, are importing educational programs and institutions from in particular Western countries. Western academic norms, conventions and standards are gaining familiarity due to the introduction of the imported programs and institutions (Futao Huang, 2007). Next to this, now Vietnam is exposed to the Western mass media for years, idiocentrism increases (Triandis, 2004). Furthermore, in the study of Ji et al. (2004) they researched Chinese participants who have been learning English in another culture, while the Vietnamese participants learned English in their own culture and are still living in Vietnam. Thus, we expect no problems in using the think aloud method for Vietnamese participants.

### **3.3.4 The execution of the research**

The research was done with one subject at a time, and the whole session was recorded. Recording the session was necessary for the researcher to enable him to find, and not missing any, relevant factors regarding this research. In order to make the participants feel at ease, it is important that the room where the case is conducted is as quiet as possible and a glass of water is available for the subject (Van Someren, et al., 1994).

The subjects were told they had to solve ten problems in the case which was presented to them. The case was about setting up a new company, and more specifically: a coffee-corner. The problems were sequentially, so they had to start and finish the first problem before starting with the second problem.

The participants were told that it was expected they had to vocalize their thoughts. To make this more understandable and ensure the participant felt more comfortable, thinking aloud was practiced with a simple example. A 'warming-up' therefore was used for the participants to practice thinking aloud (Van Someren, et al., 1994). Furthermore, students were asked to read the background of the case to make it more understandable.

Before starting the actual case study, it was made clear that the experimenter was only present to make sure that the subject verbalize his thoughts and record the session.



Additional information was not provided, and it was made clear that during the case the researcher cannot answer questions. Reminding to keep thinking aloud was the only input of the researcher during the session. The case session was followed up by an interview with questions referring to the case. This interview acts as a review where the participant is asked questions about the session (e.g. if the subject would do anything differently if he could do the case again?). By conducting an interview as a review, very useful additional information could be provided (Van Someren, et al., 1994).

Finally, after recording the session the data had to be transcribed. According to Van Someren (1994) it means typing it out as verbatim as possible. These transcripts were then used to create coding schemes.

Causal	Effectual
G – Goal-driven	M – Means-based
R – Expected returns	L – Affordable loss
B – Competitive analysis	A – Use of alliances or partnerships
K – Existing market knowledge	E – Exploration of contingency
P – Predictions of the future	C – Non-predictive control
Z – Emphasis on analysis of data	D – Distrusting or opposing (marketing) research
X – Causal (no subcategory given)	N – Effectual (no subcategory given)

Table 3: Coding scheme

The coding scheme used in this research is based on Sarasvathy (2008), and is depicted in table 3. It is important that, before the coding scheme and procedure are applied, it is evaluated by others. In this research this frequently happened with my fellow researchers who are part of the EPIC-C project and gather their data in other countries. Next to this, the data has been checked by Mr. Stienstra, from NIKOS at the University of Twente who is leading this project. There was a 80% similarity between my coding and the coding of Mr. Stienstra. Furthermore, coding was checked by multiple other members of the EPICC team collecting data in other countries. This improves the interrater reliability (Dew, et al., 2009; Van Someren, et al., 1994).

Next to this, 10 of the Vietnamese participants filled in a questionnaire with a five-point-likert-scale about their own company. In this questionnaire the participants were confronted with statements which reflect the way they run their business. They could choose between

five answers to each statement, running from 'Do not agree' to 'Fully agree'. The first nine questions are set up in a way that the more a participant agrees with the statement, the more causal logic he is using. Thus, the more a participant disagrees with a statement, the more effectual logic he is using. For the rest of the questions it is the other way around.

### **3.3.5 Control variables**

By choosing a sample in Vietnam and in the Netherlands which are as similar as possible we control for variances in age, literacy, and work experience.

By doing some statistical tests we present a possible influence of other independent factors like gender, age, and educational background. The sample for this test are the Vietnamese subjects since at the moment data of the Dutch subjects is missing.

## **3.4 Method of analysis**

### **3.4.1 Statistical method**

In this study the mean scores of the Vietnamese and Dutch novice entrepreneurs will be compared and analyzed. This is one of the most often conducted kind of analysis in cross-cultural research (Davidov, Schmidt, & Billiet, 2011). When comparing means, researchers still rely on traditional methods (e.g., analysis of covariance (ANOVA) and t-test) when comparing means (Davidov, et al., 2011, p. 85). Where the t-test is not useable for more than 2 means, the ANOVA test can be used for comparing three or more means. Depending on the amount of dependent and independent variables, a bivariate or multivariate test is used to test significance. However, in this study the sample size is too small to use a multivariate test (Field, 2009). Therefore, I will use a bivariate test to compare the mean scores of Vietnamese and Dutch entrepreneurs. Next to this, there are assumptions to be met before this test can be used. It is important that the two groups are independent of each other. In this study that is the case, since the Vietnamese and Dutch entrepreneurs are independent of each other. Furthermore, the samples should be normally distributed. To check this the Shapiro-Wilk test is used. In case the outcome of the Shapiro-Wilk test is

significant, the sample is not normally distributed and a non-parametric test instead of a standard parametric test needs to be used. As non-parametric test the 'Mann Whitney U test' will be used in this research, and as a parametric test the 'independent samples t-test' (Field, 2009).

Next to analyzing the difference between means using nationality as independent factor, I also will check whether independent factors like gender, age and educational background can influence whether an entrepreneur tends to be more causal or effectual. This will be checked within the Vietnamese sample, since for the Dutch sample many biographic data is missing. Gender is split up in 'male' and 'female', age in '0 – 24' and '25 – 30', and educational background in 'economical background' and 'IT background'. To check the statistical significance for differences for the independent factors gender, age and educational background, the same method is used as described for the factor nationality. To control for independent variables like gender, age and educational background it is analyzed if the bivariate relations continue to exist. This is ideally tested with a multivariate analysis. However, with a  $N = 17$  our Vietnamese sample size is too small to properly use a multivariate test. Per cell 15 – 20 observations are needed (Dugard, Todman, & Staines, 2010). Hence, bivariate tests for the independent variables gender, age and educational background are used.

In this study a significance level of 5% is used ( $\alpha=0.05$ ), which is a frequent used significance level and means that when the p-value is lower than 0.05 we can reject the Null-hypotheses ( $\mu_1 = \mu_2$ ) (Field, 2009).

Since our hypotheses are one-sided, and the significance scores in the 'independent samples t-test' and the 'Mann Whitney U test' are two-sided we have to divide the score by two.

### **3.4.2 The VSM model**

In this research we are going to make a comparison between Vietnamese entrepreneurs and Dutch entrepreneurs and try to find out if differences between them can be explained by differences in national culture. Hofstede's dimensions and national scores on these dimensions are used for this purpose. However, it is good not to rely totally on these scores (Taras, et al., 2010). If we use secondary data (i.e. Hofstede's country scores) we actually

assign country scores to individuals. Therefore, according to Taras et al. (2010) it is better to use primary data. This is backed up by Smith (2006), who emphasizes that the inclusion of a modest number of conceptually based measures rather than relying on existing nation scores is a prerequisite.

Therefore, I will use Hofstede's VSM94 model (appendix 2) to collect primary data from university students in Vietnam and the Netherlands. In its manual it is stated that you need at least 20 respondents, with an ideal number of 50 respondents. It is even better to use more than one respondent sample per country, such as men and women; or people of higher, middle, and lower education. I will only be using respondents studying at a university, but I will try to get a respondent sample of at least 20 men studying and a respondent sample of at least 20 women studying at a Dutch and Vietnamese university. This will add up to a total between 40 to 100 respondents per country.

The reason I choose to use the VSM94 instead of VSM08 is primarily for the reason that the VSM94 model is available in Vietnamese. The available VSM94 model in Vietnamese and Dutch is used to prevent students and/or entrepreneurs misunderstand questions which might lead to answers not meant by them.

## CHAPTER 4: RESULTS

In chapter 3 the method of gathering all the necessary data has been explained. This data will now be analyzed, in such a comparison between Vietnamese entrepreneurs and Dutch entrepreneurs can be compared.

### 4.1 Analysis

All the Vietnamese and Dutch coding schemes have been collected in Excel to analyze the results. In this way it is possible to compare the entrepreneurs of both countries. Before a comparison is made the results of the 'pilot', to test the influence of language, and the results of the questionnaire will be discussed.

The pilot was set up to see whether or not language has an influence on the case performance. Therefore, two of the Vietnamese entrepreneurs conducted the case in both English as Vietnamese. The results, which are shown in figure 10, show that language did not have an influence on the outcome of the pilot. In appendix 3 it is shown how these percentages are derived.

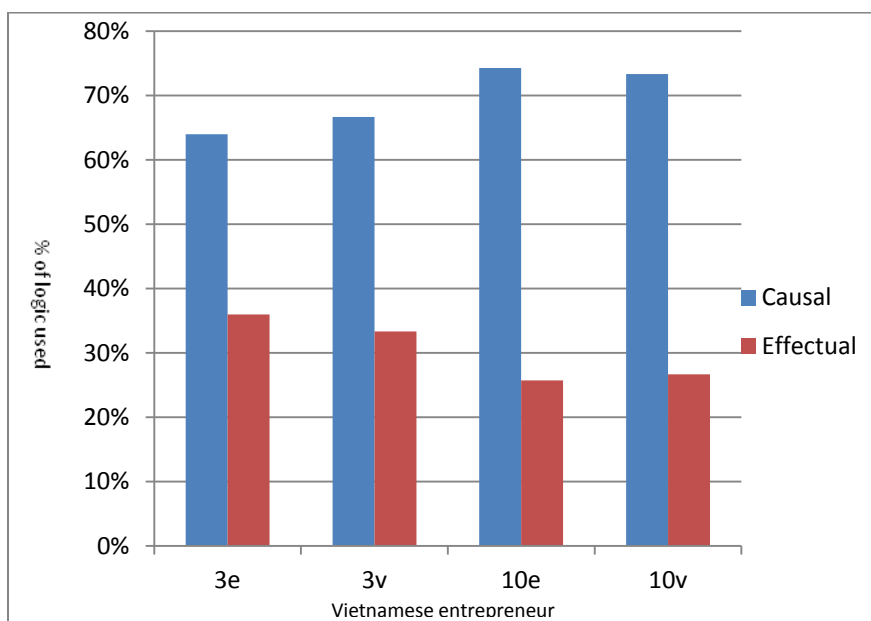


figure 10: Impact of language

Vietnamese entrepreneur 3-NTC used 64% of the time causal logic when performing the case in English, to 67% of the time when performing the case in Vietnamese. Vietnamese entrepreneur 10-NTTH used causal logic 74% of the time when performing the case in English, to 73% of the time when performing the case in Vietnamese. This is confirming theory, that language will not influence the outcome of the case-results.

Now we can conclude that language does not affect the outcome of the case, and the results of the questionnaire showed that the outcomes of the case correspond with the general behavior of the entrepreneur in its own company I continue with the comparison. First, a comparison is made between the overall use of causal reasoning and effectual reasoning. This is depicted in figure 11 which shows that, in our sample, Vietnamese entrepreneurs use causal reasoning 68% of the time, while they use effectual reasoning 32% of the time. For the Dutch entrepreneurs this is respectively 57% and 43% of the time. In general this means that Dutch entrepreneurs are less focused on causal reasoning than their Vietnamese counterparts. However, when a single entrepreneur is using an 'extreme' amount of causal logic this can strongly influence the total percentage of causal logic used by Vietnamese entrepreneurs. To avoid this, we also used the Borda count technique (Saari, 1994, as referred to in Sarasvathy, 2008, p. 31). If for an entrepreneur more causal elements are coded, causational logic scores a 1 while effectual logic scores a 0, and vice versa. When applying this technique, the Vietnamese sample of 17 entrepreneurs scored 17 on causal logic and 0 on effectual logic, while the Dutch sample scored 13 on causational logic and 4 on effectual logic. This also implies that Dutch novice entrepreneurs are using more effectual logic.

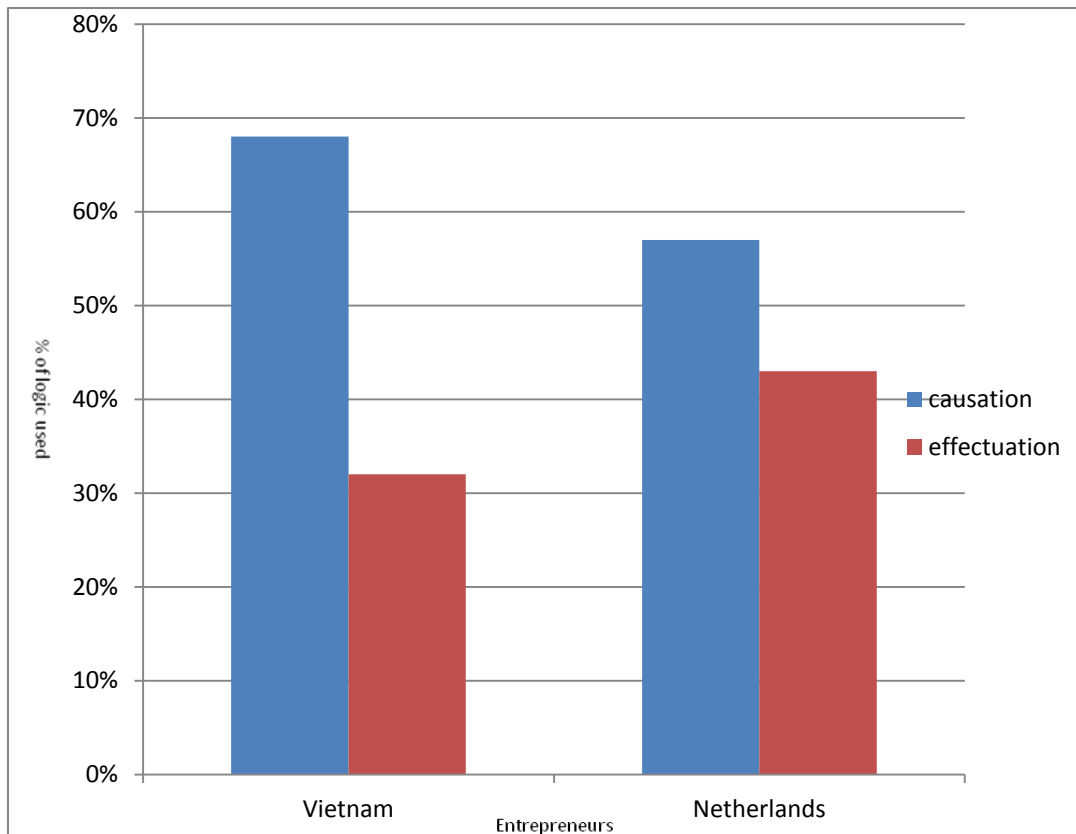


Figure 11: Overall use of causation and effectuation by Vietnamese and Dutch participants

Next to an overall comparison, I also made a comparison between Vietnamese and Dutch entrepreneurs considering all the causal and effectual elements. This resulted in the following table:

	G	R	B	K	P	Z	X
Vietnam	94%	21%	57%	46%	95%	96%	79%
Netherlands	52%	57%	51%	61%	65%	75%	47%

	M	L	A	E	C	D	N
Vietnam	6%	80%	43%	54%	6%	4%	21%
Netherlands	48%	43%	49%	39%	35%	25%	53%

Table 4: The use of causal and effectual elements compared

This table shows that Vietnamese entrepreneurs, in most cases, more often use causal reasoning as their Dutch counterparts. For the effectual elements this is the other way around.

As can be derived from the Shapiro-Wilk test in appendix 4 the following elements are not significant (normally distributed) with an  $\alpha > 0,05$ , and therefore will be tested with an 'independent sample t-test': affordable loss, use of alliances, existing knowledge, and emphasis on data. The other elements have significant score, and therefore will be tested with the Mann Whitney U test. The result of these test are shown in table 5.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
affordable_loss	Equal variances assumed	,320	,576	,000	32	1,000	,000	,696	-1,418	1,418
	Equal variances not assumed			,000	30,617	1,000	,000	,696	-1,420	1,420
use_of_alliances	Equal variances assumed	3,496	,071	-2,954	32	,006	-2,294	,776	-3,876	-,712
	Equal variances not assumed			-2,954	27,526	,006	-2,294	,776	-3,886	-,702
existing_knowledge	Equal variances assumed	4,097	,051	-2,151	32	,039	-2,529	1,176	-4,925	-,134
	Equal variances not assumed			-2,151	25,929	,041	-2,529	1,176	-4,947	-,112
emphasis_on_data	Equal variances assumed	,965	,333	1,173	32	,249	1,235	1,053	-,910	3,380
	Equal variances not assumed			1,173	28,490	,251	1,235	1,053	-,920	3,391

	Goal_based	Means_based	expected_returns	competitive_analysis	exploration_of_contingency	predicting_future	non_predictive_control	distrusting_research
Mann-Whitney U	106,500	14,500	48,500	96,000	114,000	141,500	56,000	107,000
Wilcoxon W	259,500	167,500	201,500	249,000	267,000	294,500	209,000	260,000
Z	-1,325	-4,692	-3,378	-1,700	-1,067	-,105	-3,365	-1,558
Asymp. Sig. (2-tailed)	,185	,000	,001	,089	,286	,916	,001	,119
Exact Sig. [2*(1-tailed Sig.)]	,193 <sup>a</sup>	,000 <sup>a</sup>	,001 <sup>a</sup>	,099 <sup>a</sup>	,306 <sup>a</sup>	,919 <sup>a</sup>	,002 <sup>a</sup>	,205 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: Nationality

Table 5: results independent sample t-test and Mann Whitney U for the factor 'national culture'

As can be seen in figure 11 and table 4 there are differences between Vietnamese and Dutch entrepreneurs in the use of causal and effectual reasoning. To test whether these differences are significant or not, an independent samples t-test or Mann Whitney U test for comparing the difference between means is used to derive a 'p-value'. When the p-value is smaller than 0,05, the difference is significant which results in a rejection of the Null-hypothesis (i.e.  $H_0: \mu_{\text{Vietnamese}} - \mu_{\text{Dutch}} = 0$ ). The p-values, which have to be divided by two, of all the elements are shown in table 5. It can be derived from table 5 that six out of 12 elements show a significant difference between the use of causal and effectual reasoning between Vietnamese and Dutch novice entrepreneurs.



Based on the percentages given in table 4 and the p-values (Sig.) given in table 5 I will discuss the results of the six hypotheses which were set up in paragraph 2.6.

#### **4.1.1 Hypothesis 1**

*The more individualistic a culture is, the more means-based the entrepreneur will be.*

Considering table 4 Dutch novice entrepreneurs are more means based compared to Vietnamese novice entrepreneurs. On the 'goal-based vs. means-based' element, the Dutch score respectively 52% and 48%. The Vietnamese entrepreneurs score respectively 94% to 6%. This is in line with the hypothesis, since the Netherlands is a more individualistic country opposed to Vietnam and is using more frequently effectual logic within this element. The Mann Whitney U test, which is conducted to check whether there is a significant difference for the 'means-based' element, has a p-value of 0,000. With  $p < 0.05$ , there is a significant difference between the two means. Therefore hypothesis 1 can be accepted.

#### **4.1.2 Hypothesis 2**

*The more individual a culture is, the more focused on expected returns the entrepreneur will be.*

Dutch novice entrepreneurs score 57% on 'expected returns', within the element 'expected returns vs. affordable loss'. This is higher than their Vietnamese counterparts, who score 21% on 'expected returns'. This makes Dutch novice entrepreneurs focus more on the causal element, which is in line with the hypothesis. To check the significance of the difference, a Mann Whitney U test is conducted for the 'expected returns' element. The p value is 0.000. With a  $p < 0.05$ , there is a significant difference between the two means. Therefore hypothesis 2 can be accepted.

### 4.1.3 Hypothesis 3

*The more individual a culture is, the more focused on competitive analysis the entrepreneur will be.*

With 57%, the Vietnamese novice entrepreneurs score higher on the element of 'competitive analysis' as the Dutch novice entrepreneurs who scores 51%. This is not in line with the hypothesis, which can be rejected. It was expected that the Dutch, who are more individualistic, would use more causal logic on this element. Due to these percentages in table 4, hypothesis 3 can be rejected. After conducting a Mann Whitney U test, a p-value of 0,045 is derived. Because  $p < 0,05$ , there is a significant difference between the two means.

### 4.1.4 Hypothesis 4

*The more individual a culture is, the more focused on exploration of contingencies the entrepreneur will be.*

Considering table 4 Dutch novice entrepreneurs are more focused on 'existing market knowledge' compared to Vietnamese novice entrepreneurs. On the 'existing market knowledge vs. exploration of contingencies' element the Dutch score respectively 61% and 39%. Their Vietnamese counterparts score respectively 46% and 54%. This is not in line with the hypothesis. Due to these figures hypothesis 4 is rejected. The Mann Whitney U test, which is conducted to check whether there is a significant difference for the 'exploration of contingencies' element has a p-value of 0.143. With a  $p > 0,05$ , there is no significant difference between the two means.

#### 4.1.5 Hypothesis 5

*The more individual a culture is, the more (marketing) research will be distrusted by the entrepreneur.*

With a score of 4% on the element 'distrusting research', the Vietnamese novice entrepreneurs score lower than the Dutch novice entrepreneurs who score 25% on this element. This is in line with the hypothesis, since the Netherlands is an individualistic culture. The Mann Whitney U test, which is conducted to check whether there is a significant difference for the 'distrusting research' element, has a p-value of 0,06. With  $p > 0.05$ , there is no significant difference between the two means. Therefore hypothesis 5 can be rejected.

#### 4.1.6 Hypothesis 6

*The more individual a culture is, the more focused on non-predictive control the entrepreneur will be.*

Dutch novice entrepreneurs score 35% on 'non-predictive control', within the element 'predictions of the future vs. non-predictive control'. This is higher than their Vietnamese counterparts, who score 6% on 'non-predictive control'. This makes Dutch novice entrepreneurs focus more on the effectual element, which is in line with the hypothesis, since the Netherlands is a more individualistic country opposed to Vietnam and is using more frequently effectual logic within this element. The Mann Whitney U test, which is conducted to check whether there is a significant difference for the 'non-predictive control' element, has a p-value of 0,000. With  $p < 0.05$ , there is a significant difference between the two means. Therefore hypothesis 6 can be accepted.

## 4.2 Questionnaire results and case results compared

Besides of checking a possible influence of language, the results of the case were compared with the outcome of the questionnaire. This questionnaire gives an idea about the frequency of causal and effectual logic used in setting up their company. It was expected to see similarities in the dominance of causal logic, or effectual logic over the other between the outcome of the questionnaire and the results of the case. In table 6 the results are shown. In the results of both the questionnaire and the case, nine out of ten Vietnamese entrepreneurs used causal logic more than 50% of the time in both the questionnaire and the case. Therefore I expect that the case gives a good representation of the use of causal and effectual logic by a novice entrepreneur conducting the case.

	V1	V3	V4	V7	V10	V12	V13	V15	V16	V17
Question 1	1	0	0	1	1	0	0	2	0	1
Question 2	0	0	2	2	2	-1	2	1	1	2
Question 3	2	0	2	2	2	-1	1	0	-1	0
Question 4	2	1	2	-1	2	-1	-1	1	-2	1
Question 5	0	0	0	-2	2	-1	0	1	-2	1
Question 6	1	1	1	1	2	1	2	0	2	1
Question 7	2	1	0	-1	2	1	2	1	2	2
Question 8	1	1	1	2	1	-2	1	0	1	-1
Question 9	2	0	-1	2	2	-1	2	1	2	0
Average	1,22	0,44	0,78	0,67	1,78	-0,56	1,00	0,78	0,33	0,78
Question 10	1	1	1	2	0	2	0	1	2	0
Question 11	1	1	-1	0	2	1	-2	1	1	1
Question 12	0	0	0	-1	-2	1	-2	0	1	-1
Question 13	1	0	-1	1	-2	1	-1	-1	-2	-1
Question 14	1	0	-1	0	0	1	-2	-1	-2	-2
Question 15	0	0	-1	-1	-2	1	-2	-1	-2	-1
Question 16	1	0	-1	2	-2	0	0	-2	0	1
Question 17	0	1	0	-2	-2	1	-2	0	1	2
Average	0,63	0,38	-0,50	0,13	-1,00	1,00	-1,38	-0,38	-0,13	-0,13
SUM	1,85	0,82	0,28	0,79	0,78	0,44	-0,38	0,40	0,21	0,65
% causal*	74%	64%	70%	59%	74%	78%	63%	78%	73%	59%
% effectual*	26%	36%	30%	41%	26%	22%	37%	22%	27%	41%

\* 'Derived from case results'

Table 6: Questionnaire and case results compared

When the number in the row 'SUM' is between 0 and 2, the entrepreneurs tend to use more causal logic according to the questionnaire, whereas a score between 0 and -2 confirms a more effectual approach. Only for Vietnamese entrepreneur thirteen (V13) the outcome of the questionnaire does not correspond to the outcome of the case, since -0,38 suggests a

more effectual approach while in the case entrepreneur 13 used effectual logic 37% of the time. Appendix 3 further explains how the questionnaire score is calculated.

### 4.3 Other independent factors

National culture is the 'central theme' in this study, as we are interested if national culture has a significant influence on entrepreneurial processes. Next to national culture it is possible that other independent factors like gender, age and educational background influence the use of causal and effectual reasoning. To test to what extent these factors are influencing the use of causal and effectual reasoning, this is analyzed for the Vietnamese sample. The Dutch sample is not taken into account due to missing data.

	Causational	Effectual
Male	65%	35%
Female	71%	29%
0 - 24 years	67%	33%
25 - 30 years	71%	29%
Economical background	69%	31%
IT background	68%	32%

Table 7: Use of causal and effectual reasoning of Vietnamese for the independent factors gender, age, and educational background

As can be seen in table 7 the differences in causal and effectual reasoning on the independent factors gender, age, and educational background are small. To check whether these differences are significant, the same statistical analysis is used as we used for the independent factor 'national culture'. First, the normal distribution is analyzed (appendix 4) by the Shapiro-Wilk test elements with significant p-values will be analyzed with the Mann Whitney U test, and elements with no significant p-values with the independent samples t-test.

The elements which will be analyzed with the t-test are: Goal-based, competitive analysis, use of alliances, existing knowledge, exploration of contingency. The elements analyzed with

the Mann Whitney U test are: Means-based, expected returns, affordable loss, predicting the future, non-predictive control, emphasis on data, distrusting research. The results of both of these test are shown below.

#### 4.3.1 Gender

Test Statistics<sup>b</sup>

	Means_ based	expected_ returns	affordable_ loss	predicting_ future	non_ predictive_ control	emphasis_ on data	distrusting_ research
Mann-Whitney U	30,500	34,000	34,500	34,500	22,500	35,500	26,500
Wilcoxon W	75,500	79,000	79,500	79,500	67,500	71,500	71,500
Z	-,797	-,217	-,153	-,148	-1,956	-,049	-1,242
Asymp. Sig. (2-tailed)	,426	,828	,879	,883	,050	,961	,214
Exact Sig. [2*(1-tailed Sig.)]	,606 <sup>a</sup>	,888 <sup>a</sup>	,888 <sup>a</sup>	,888 <sup>a</sup>	,200 <sup>a</sup>	,963 <sup>a</sup>	,370 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: Gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Goal_based	Equal variances assumed	2,364	,145	-,164	15	,872	-,153	,934	-2,144	1,838
	Equal variances not assumed			-,168	13,500	,869	-,153	,908	-2,108	1,802
competitive_analysis	Equal variances assumed	,000	,992	-,243	15	,812	-,250	1,031	-2,447	1,947
	Equal variances not assumed			-,241	14,164	,813	-,250	1,038	-2,475	1,975
use_of_alliances	Equal variances assumed	1,668	,216	-,143	15	,889	-,125	,877	-1,995	1,745
	Equal variances not assumed			-,139	11,821	,892	-,125	,900	-2,088	1,838
existing_knowledge	Equal variances assumed	,007	,937	-1,398	15	,183	-1,625	1,163	-4,103	,853
	Equal variances not assumed			-1,411	14,993	,179	-1,625	1,152	-4,081	,831
exploration_of_contingency	Equal variances assumed	1,914	,187	,648	15	,527	,569	,879	-1,304	2,443
	Equal variances not assumed			,669	12,944	,515	,569	,852	-1,271	2,410

Table 8: results independent sample t-test and Mann Whitney U for the factor 'gender'

When analyzing the results of the Mann Whitney U test and the independent samples t-test, only the element of non-predictive control shows a significant difference between the mean score of male and female Vietnamese novice entrepreneurs. Table 7 shows that Vietnamese male entrepreneurs are using causal reasoning 65% of the time against 35% effectual reasoning. For the Vietnamese female entrepreneurs this is 71% causal reasoning, against 29% effectual reasoning. However, the statistical results show that this small difference is not significant.

### 4.3.2 Age

Test Statistics<sup>b</sup>

	Means_ based	expected_ returns	affordable_ loss	predicting_ future	non_ predictive_ control	emphasis_ on data	distrusting_ research
Mann-Whitney U	22,500	17,500	16,500	27,000	22,500	23,500	23,000
Wilcoxon W	37,500	95,500	31,500	42,000	37,500	101,500	101,000
Z	-1,190	-1,487	-1,506	-,323	-1,190	-,705	-1,003
Asymp. Sig. (2-tailed)	,234	,137	,132	,746	,234	,481	,316
Exact Sig. [2*(1-tailed Sig.)]	,442 <sup>a</sup>	,195 <sup>a</sup>	,160 <sup>a</sup>	,799 <sup>a</sup>	,442 <sup>a</sup>	,506 <sup>a</sup>	,506 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: Age

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Goal_based	Equal variances assumed	,027	,872	,426	15	,676	,433	1,018	-1,737	2,603
	Equal variances not assumed			,439	8,070	,672	,433	,988	-1,841	2,708
competitive_analysis	Equal variances assumed	,480	,499	,876	15	,395	,967	1,103	-1,385	3,319
	Equal variances not assumed			,779	6,045	,465	,967	1,241	-2,065	3,998
use_of_alliances	Equal variances assumed	,571	,462	-,087	15	,932	-,083	,961	-2,132	1,966
	Equal variances not assumed			-,073	5,551	,944	-,083	1,142	-2,933	2,766
existing_knowledge	Equal variances assumed	,201	,660	,897	15	,384	1,183	1,319	-1,628	3,995
	Equal variances not assumed			,990	9,515	,346	1,183	1,195	-1,497	3,864
exploration_of_contingency	Equal variances assumed	2,623	,126	,930	15	,367	,883	,949	-1,140	2,907
	Equal variances not assumed			1,175	13,302	,261	,883	,752	-,737	2,504

Table 9: results independent sample t-test and Mann Whitney U for the factor 'age'

When analyzing the results of the Mann Whitney U test and the independent samples t-test, none of the causal and effectual elements show a significant difference between the mean score of Vietnamese novice entrepreneurs in the '0 – 24 years' group and the '25 – 30 years' group. Table 7 shows that the '0 – 24 years' group of Vietnamese entrepreneurs are using causal reasoning 67% of the time against 33% effectual reasoning. For the '25 – 30 years' group of Vietnamese entrepreneurs this is 71% causal reasoning, against 29% effectual reasoning. However, the statistical results show that this small difference is not significant.

### 4.3.3 Educational background

Test Statistics<sup>b</sup>

	Means_ based	expected_ returns	affordable_ loss	predicting_ future	non_ predictive_ control	emphasis_ on data	distrusting_ research
Mann-Whitney U	22,500	25,500	15,000	17,500	29,500	22,500	23,000
Wilcoxon W	37,500	103,500	30,000	32,500	107,500	100,500	101,000
Z	-1,190	-,535	-1,673	-1,348	-,079	-,813	-1,003
Asymp. Sig. (2-tailed)	,234	,593	,094	,178	,937	,416	,316
Exact Sig. [2*(1-tailed Sig.)]	,442 <sup>a</sup>	,646 <sup>a</sup>	,130 <sup>a</sup>	,195 <sup>a</sup>	,959 <sup>a</sup>	,442 <sup>a</sup>	,506 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: Educational\_background

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Goal_based	Equal variances assumed	2,654	,124	-,694	15	,498	-,700	1,008	-2,849	1,449
	Equal variances not assumed			-,895	13,874	,386	-,700	,782	-2,378	,978
competitive_analysis	Equal variances assumed	,975	,339	,611	15	,550	,683	1,118	-1,699	3,065
	Equal variances not assumed			,724	11,378	,484	,683	,944	-1,386	2,753
use_of_alliances	Equal variances assumed	,820	,379	-,687	15	,503	-,650	,947	-2,668	1,368
	Equal variances not assumed			-,579	5,570	,585	-,650	1,122	-3,448	2,148
existing_knowledge	Equal variances assumed	2,276	,152	3,926	15	,001	3,733	,951	1,707	5,760
	Equal variances not assumed			5,288	14,777	,000	3,733	,706	2,227	5,240
exploration_of_contingency	Equal variances assumed	,826	,378	,325	15	,749	,317	,973	-1,757	2,390
	Equal variances not assumed			,383	11,174	,709	,317	,828	-1,502	2,135

Table 10: results independent sample t-test and Mann Whitney U for the factor 'educational background'

When analyzing the results of the Mann Whitney U test and the independent samples t-test, only the elements of affordable loss, and existing knowledge show a significant difference between the mean score of Vietnamese novice entrepreneurs in the 'economical background' group and the 'IT background' group. Table 7 shows that the 'economical background' group of Vietnamese entrepreneurs are using causal reasoning 69% of the time against 31% effectual reasoning. For the 'IT background' group of Vietnamese entrepreneurs this is 68% causal reasoning, against 32% effectual reasoning. The statistical results show that this small difference is not significant.



#### 4.4 Results Value Survey Module 1994

With Hofstede's VSM formulas (see appendix 2) it is possible to get an answer below 0 or above 100. At the end of each formula a number is added or subtracted. This is a constant and can be changed to shift the scores to values between 0 and 100. It is important to use the same constant at the same formula, for the countries to be compared. The constant can be a positive as well as a negative number. Next to making it possible to shift the value between 0 and 100, it does not affect the comparison between the countries.

Vietnamese respondents				
Formula	Score	Constant	Score	Hofstede's score
$PDI=(-35 \times 2,2)+(35 \times 2,55)+(25 \times 3,13)-(20 \times 2,95)$	32	54	86	70
$IDV=(-50 \times 2,48)+(30 \times 2,54)+(20 \times 2,69)-(25 \times 2,28)$	- 51	104	53	20
$MAS=(60 \times 2,33)-(20 \times 2,28)+(20 \times 2,98)-(70 \times 2,39)$	- 14	53	39	40
$UAI=(25 \times 2,92)+(20 \times 3,25)-(50 \times 3,30)-(15 \times 3,02)$	-72	159	87	30
$LTO=(-20 \times 2,79)+(20 \times 3,03)$	5	39	44	80

Table 11: Results Vietnamese participants

Dutch respondents			
Formula	Score	Constant	Score
$PDI=(-35 \times 2,27)+(35 \times 1,94)+(25 \times 2,47)-(20 \times 3,31)$	-16	54	38
$IDV=(-50 \times 2,08)+(30 \times 2,25)+(20 \times 2,76)-(25 \times 1,71)$	-24	104	80
$MAS=(60 \times 2,31)-(20 \times 1,78)+(20 \times 2,51)-(70 \times 2,75)$	-39	53	14
$UAI=(25 \times 2,29)+(20 \times 2,27)-(50 \times 3,25)-(15 \times 3,18)$	-108	159	51
$LTO=(-20 \times 2,80)+(20 \times 3,04)$	5	39	44

Table 12: Results Dutch participants

In table 11 and table 12 the results of the VSM model are presented. The scores of the Dutch respondents are leveled with Hofstede's scores by adding a constant per individual dimension. This constant per dimension is also added to the Vietnamese scores. As a result the score of the VSM model can be compared to the scores Hofstede (2001) provided of Vietnam. As can be seen in table 10 the VSM scores of the Vietnamese respondents do not

match with Hofstede's scores on every dimension. Only the PDI and MAS scores are relatively the same, but for the IDV, UAI, and LTO dimensions larger differences can be noticed.

However, also after comparing the VSM scores of Vietnam and the Netherlands it is clear that the Netherlands score high on the IDV dimension, while Vietnam scores moderate on the IDV dimension. Therefore I continue my comparison of Vietnamese and Dutch entrepreneurs, using the IDV dimension score of Hofstede as a tool to explain possible differences within the case results.

## CHAPTER 5: DISCUSSION, CONCLUSION, LIMITATIONS AND FURTHER RESEARCH

### 5.1 Discussion

This thesis examined the possible influence of national culture on entrepreneurial processes, and the use of causal and effectual reasoning in specific. Based on the results of the analysis the main pattern which can be identified is that, in general, Dutch novice entrepreneurs use more effectual reasoning opposed to Vietnamese novice entrepreneurs. In this thesis, however, I formulated more specific hypotheses which are focused on the elements of causation and effectuation. After analyzing these results this study showed that Dutch novice entrepreneurs were more focused on the following effectual elements than the Vietnamese: 'means-based', 'alliances and partnerships', 'non-predictive control', and 'distrusting research'. The Vietnamese counterparts were more focused than the Dutch on: 'affordable loss', and 'exploration of contingencies'. I explained these differences between Dutch and Vietnamese novice entrepreneurs by using the IDV dimension of Hofstede, since this showed the largest cultural difference between the Dutch (being part of an individualistic culture), and Vietnamese (being part of a collectivistic culture) national culture, and Confucianism. Therefore I expected that the IDV dimension was best suitable to explain differences between the use of causal and effectual logic. Hofstede (1980) is often criticized for containing old data. Hence, I used the VSM94 model to calculate new scores for both Vietnam and the Netherlands. The results showed a shift in the Vietnamese scores, e.g. the difference in IDV decreased from 60 to 27. This could be explained by several causes. Firstly, the sample of Vietnamese novice entrepreneurs consists of students who have been studying, or are still studying, at a university. Youth studying at a university in Vietnam comes from middle- or upper class families. This is supported by the biographic information which the entrepreneurs had to fill in. Secondly, most of our sample has been grown up in the 'Doi Moi' era in which Vietnam is making a shift from a planned economy to a market economy. Lastly, Vietnam is still influenced by China which is economically ahead of Vietnam and therefore shifting more to individualism (Ralston, Van Thang, et al., 1999). Based on the results in chapter 4, I will discuss the outcomes on the six hypotheses.

The first hypothesis was: *The more individualistic a culture is, the more means-based the entrepreneur will be.* It was expected that the Dutch novice entrepreneurs would score a higher percentage on the 'means-based' element as the Vietnamese. The results show that this is indeed the case, and that the difference is significant with  $p < 0.05$ . Furthermore this is in line with the theory, in which it can be found that the Netherlands is a being-oriented culture in which people may resist goal-oriented behavior (Kirkman & Shapiro, 1997). Next to that, Hofstede (2001) implies that people in collectivistic cultures learn how to do, whereas people in individualistic cultures learn how to learn. In my view this can be linked to planning behavior, where people from collectivistic cultures like Vietnam learn how to do and thus more specifically learn what path to follow to accomplish a certain goal. To achieve this goal it is most likely that they will make a plan to reach their goal, whereas people who learn how to learn are more flexible and create multiple goals while learning new things.

The second hypothesis was: *The more individualistic a culture is, the more focused on expected returns the entrepreneur will be.* The results which are presented in chapter 4 are in line with the hypothesis. Dutch novice entrepreneurs are more focused on expected returns as Vietnamese novice entrepreneurs, and with  $p < 0.05$  this difference is significant. An explanation can be found in theory, which is supporting this outcome. Confucianism still plays an important role in Vietnamese culture, where not spending more than necessary is a way of life (Vuong & Tran, 2009). Participant 1 (NVH), like many other Vietnamese participants said during the case: "...at the first years I will not spend a lot of money for some luxury commercials on local TV." This sentence shows the Confucian influence in Vietnamese society. What I experienced during my stay in Vietnam, and what might also influences the focus of Vietnamese novice entrepreneurs on the affordable-loss element, is the difference in wealth between Vietnam and the Netherlands. Vietnamese novice entrepreneurs therefore might not spend more than necessary, as it is harder for them to attain financial resources.

The third hypothesis was: *The more individualistic a culture is, the more focused on competitive analysis the entrepreneur will be.* According to the results of the case, this is not supported. The Vietnamese participants were more focused on competitive analysis as their Dutch counterparts. Theory did not support this outcome, since individualistic cultures emphasize differentiation, competition, and making comparisons. However, since the

introduction of the 'Doi Moi' the Vietnamese economy has been growing in the shadow of its Chinese brother and the Vietnamese all want to gain more wealth. This is backed up by the quote of the Hanoi manager in Ralston et al. (1999, p. 667): "Sometimes we seem like crabs, crawling all over each other for personal gain." This prospect of greater wealth might cause the outcome of the results. Statistics show that the difference is significant.

The fourth hypothesis was: *The more individualistic a culture is, the more focused on exploration of contingencies the entrepreneurs will be.* When analyzing Hofstede (2001) people from individualistic cultures tend to be more focused on exploring contingencies as for them it is undesirable to stay with a company where people from collectivistic cultures stick to the familiar. However, the results did not support this view. The Vietnamese participants focused more on the effectual element of exploration of contingencies as the Dutch participants. This might also be caused by what I described under the third hypothesis. Since the 'Doi Moi', the Vietnamese have been experiencing a bit more freedom, and focus more on personal gain. Statistics show that the difference is not significant with  $p > 0.05$ .

The fifth hypothesis was: *The more individualistic a culture is, the more (marketing) research will be distrusted.* The results support the last hypothesis, however the  $p > 0.05$  indicates that the difference between Vietnamese and Dutch novice entrepreneurs is not significant. This element is in line with the element of the next hypothesis, which shows that people from collectivistic cultures tend to plan and predict more than people from individualistic cultures. Therefore these results are in line with theory, since emphasis on data can be helpful in the planning process. However, it is questionable if this result will be the same in further research since statistics did not provide a significant difference.

The sixth hypothesis was: *The more individualistic a culture is, the more focused on non-predictive control the entrepreneur will be.* This hypothesis is supported by the results which show that Vietnamese participants are less focused on the element non-predictive control as the Dutch. Since  $p < 0.05$  the difference on this element between Vietnamese and Dutch novice entrepreneurs is significant. For this hypothesis the purpose of education is important again. By 'learning how to do' in collectivistic cultures, it is expected that Vietnamese are more focused on planning and predictions. This is backed up by the results.

Next to the impact of national culture on entrepreneurial processes, the factors gender, age and educational background were analyzed. Within the Vietnamese sample the results show that differences on scores of causal and effectual reasoning between Vietnamese males and females, between different age groups, and between Vietnamese with an economical or IT background are between 1% and 6%. The difference between Vietnamese and Dutch novice entrepreneurs on scores of causal and effectual reasoning caused by national culture is 11%. Next to this, only one out of twelve elements showed a significant difference caused by gender and by age, while two out of twelve elements showed a significant difference caused by educational background. This is lower than the six out of twelve elements that show a significant difference caused by national culture. Hence, national culture seems to have a higher influence on entrepreneurial processes than factors like gender, age, and educational background.

### ***Significance for theory***

The significance of these results for theory is, that it supports extant statements that national culture has a significant influence on entrepreneurial processes (Kreiser et al., 2010). However, these previous studies and reviews did not contain empirical evidence of a possible influence of national culture on entrepreneurial processes. With this study, as part of the EPIC-C project, a new road is created which still need to be more fully explored. This study opened this road on which future research can continue to explore. Next to this, the outcome of the VSM survey showed the importance of collecting primary data even if country scores are already available. This is in line with Smith (2006), who indicated that a modest number of conceptually based measures is a prerequisite. Our findings disagree with the statement of Minkov and Hofstede (2011) that cultures do evolve but tend to move more or less in one and the same cultural direction. Our findings show that on dimensions like IDV and UAI there have been major shifts in difference between Vietnam and the Netherlands on their dimension scores. Possible causes like the transition of the Vietnamese economy (Vuong & Tran, 2009) and the influence of China (Ralston et al., 1999) have already been discussed.

***significance for practice***

Besides a significance for theory, the outcome of this study is also significant for practice. The background of this thesis pointed out that Western theories might not be applicable to Eastern cultures. However, there is a trend of importing educational programs and institutions from in particular Western countries by developing countries in Asia (Futao Huang, 2007). This is also experienced by me, when I participated in some classes at the Foreign Trade university in Hanoi where an American teacher, using western educational programs, was teaching the Vietnamese university students. However, this incorporation of Western education and institutions does not mean that cultural differences will blur over time (Vuong & Tran, 2009), and nuances in teaching still can be useful. I believe education on the topic of effectuation will make entrepreneurs in both individualistic and collectivistic cultures more aware of making valuable decisions about their venture in uncertain and certain environments. When a causal decision making style is rooted in the national culture of an entrepreneur, awareness of this can help the entrepreneur to use an effectual approach in situations where this will be more fruitful.

Furthermore, Dutch investors seeking partners in Vietnam have to keep in mind that potential Vietnamese partners are not as focused as they are on effectual reasoning, to avoid obstructions in working together.

**5.2 Conclusion**

Considering the results in chapter 4, I am able to give an answer to the main research question:

*To what extent do novice entrepreneurs in Vietnam and the Netherlands differ on the use of effectual and causational logic, and to what extent is national culture influencing the entrepreneurial process?*

Although the scope of this research is limited, the answer to the main question in this study is that to a large extent national culture has an influence on entrepreneurial processes. In general Dutch novice entrepreneurs are using effectual logic 43% of the time, while Vietnamese novice entrepreneurs used effectual logic 32% of the time. Four out of six

hypotheses are in line with the results, and for three of these four hypotheses, with a  $p < 0.05$ , it is proven that the differences between Vietnamese and Dutch novice entrepreneurs are significant. This difference caused by national culture is in line with extant literature on the influence of national culture on entrepreneurial processes (Kreiser et al., 2010). Next to this, this study implies that national culture 'overrules' other independent variables like gender, age, and educational background. Therefore, in future research, scholars should take this cultural contextual dimension in account. For practice the importance lies in what is 'programmed in the mind' of novice entrepreneurs in a certain culture. Making people in a collectivistic culture aware of their predominant focus on causation can help them making them understand that in uncertain situations it is more effective to adapt to a more flexible approach.

### 5.3 Limitations and future research

As with all studies, due to design choices and circumstances this study has limitations. First of all, culture may not be the only influence on entrepreneurial behavior. As mentioned in the background of this thesis, other factors like politics and institutions also influence entrepreneurial processes. Therefore we cannot be sure that the measured effects can be contributed to cultural factors. Additionally, as shown in the results of the VSM model, it seems that Vietnam's scores on Hofstede's cultural dimensions are shifting. Using the Hofstede framework for testing our hypotheses might represent a limitation of this study due to critiques (McSweeney, 2002). However, Hofstede has countered these critiques and therefore I consider the Hofstede framework appropriate for the purpose of this thesis. Considering the results of the VSM model, I suggest future research to focus on longitudinal studies in which both countries are compared more frequently at certain points in time. This can give further insights if, for example, economical and institutional changes are overruled by cultural factors. Next to this, more data should be collected with the VSM model. The data collected in this research came from Hanoi, but future research should collect data from the whole country. This will give better insight on what dimensions Vietnam and the Netherlands differ, and can point to other cultural dimensions which are better able to explain differences in causal and effectual reasoning.



Secondly, the sample size of 17 Vietnamese and 17 Dutch participants imposes limits on the statistical validity of this study. For using the think aloud method this sample size is decent in my opinion, however, it still remains possible that effects are overestimated. Furthermore with regard to the sample, the participants were all selected in one city. In the case of Vietnam, all participants are from the city of Hanoi. Next to this, they were all university students or graduates. Therefore the findings are only generalizable to these groups, and may not hold for other, e.g. Vietnamese novice entrepreneurs in Saigon.

The small sample size also has implications for the statistical tests which were used in this thesis. We used bivariate tests, due to the small sample size of 17 Vietnamese participants. In future research multivariate tests should be used, after having collected more data. Multivariate test will be able to more precisely determine effects of independent variables.

Thirdly, further elaborating on the generalizability of this study, only novice entrepreneurs are used as participants. Future research could focus on expert entrepreneurs and compare the outcome of differences between Vietnamese and Dutch expert entrepreneurs with the outcome of this study on Vietnamese and Dutch novice entrepreneurs. Next to this, further research should replicate this study to validate the findings. Furthermore, future research should change the origins of subjects to see whether similar differences can be noticed between other individualistic and collectivistic cultures.

Fourthly, a gap between theory and practice can occur when participants answers in the case do not correspond to how they would behave in reality when facing such a decision. The case was set up in an evolving way, where a start-up company (the coffee corner) grew to a multi-million company. All the subjects in this study have not been through all the phases which were presented in the case. While the purpose of the case is to find out which entrepreneurial processes are used during different phases of running a company, one can imagine that the subjects do not have an idea about issues in a later stage of this evolving process. Vietnamese entrepreneur 8-BTH is answering to the question about hiring a professional management: “..this is a very difficult question. The answer will not be very realistic, because if you...in the real situation you might decide different than in this case.” Vietnamese entrepreneur 6-NTT answers to this case-problem: “Well I never hired such a person in this..such a high position.” Considering these answers of entrepreneur 8-BTH and 6-NTT, it is questionable if they really answered what they ‘want’ to answer, or just gave an

answer because an answer was expected. Therefore it is questionable if the provided answer is an answer based on their, by national culture influenced, cognitive thinking. If further research will focus on expert entrepreneurs, those results can be compared to the results of the novice entrepreneurs to see whether differences in both studies are in line.

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## Appendix 1: Contrasting effectual against causal reasoning

### Contrasting effectual against causal reasoning

Issue	Causal position	Effectual position
View of the future	<i>Prediction.</i> The future is a continuation of the past; can be acceptably predicted	<i>Design.</i> The future is contingent on actions by willful agents
<i>Constructs pertaining to individual decisions</i>		
Givens	<i>Goals</i> are given	<i>Means</i> (Who I am, what I know, and whom I know) are given
Decision agenda	<i>Resources.</i> What resources ought I to accumulate to achieve these goals?	<i>Effects.</i> What effects can I create with the means I have?
Basis for taking action	<i>Desired worlds.</i> Vision of a desired world determines goals; goals determine sub-goals, commitments, and actions	<i>Possible worlds.</i> Means and stakeholder commitments determine possible sub-goals—goals emerge through aggregation of sub-goals
Basis for commitment	<i>Should.</i> Do what you ought to do—based on analysis and maximization	<i>Can.</i> Do what you are able to do—based on imagination and satisficing
Stakeholder acquisition	<i>Instrumental view of stakeholders.</i> Project objectives determine who comes on board	<i>Instrumental view of objectives.</i> Who comes on board determines project objectives
<i>Constructs in terms of responses to the environment</i>		
Predisposition toward risk	<i>Expected return.</i> Calculate upside potential and pursue (risk adjusted) best opportunity	<i>Affordable loss.</i> Calculate downside potential and risk no more than you can afford to lose
Predisposition toward contingencies	<i>Avoid.</i> Surprises may be unpleasant. So invest in techniques to avoid or neutralize them.	<i>Leverage.</i> Surprises can be positive. So invest in techniques that are open to them and leverage them into new opportunities.
Attitude toward success/failure	<i>Outcomes.</i> Success and failure are discrete outcomes to be sought after or avoided, respectively	<i>Process.</i> Successes and failures are inputs into a process that needs to be managed such that failures are outlived and successes are accumulated
Attitude toward probability estimates	<i>Update beliefs.</i> Estimates are used in a Bayesian fashion—to update ones beliefs about the future.	<i>Manipulate conditionals.</i> Estimates signal which conditionals may be reified or falsified so the future can be skewed through action.
Attitude toward others	<i>Competition.</i> Constrain task relationships with customers and suppliers to what is necessary	<i>Partnership.</i> Build YOUR market together with customers, suppliers and even prospective competitors
Underlying logic	To the extent we can predict the future, we can control it	To the extent we can control the future, we do not need to predict it

Contrasting effectual against causal reasoning. (Source: Sarasvathy & Dew, 2005, p. 390)

## Appendix 2: VSM94 and Formula's

### Dutch VSM94

#### INTERNATIONALE VRAGENLIJST (VSM 94) – blz. 1 van 3

Stel je een ideale baan voor – los van je huidige bezigheden. Bij de keuze van een ideale baan, hoe belangrijk is ..... (één antwoord per regel omcirkelen)

1 = van het allergrootste belang

2 = zeer belangrijk

3 = tamelijk belangrijk

4 = van weinig belang

5 = van heel weinig of geen belang

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Voldoende tijd over te houden voor je privé- en/of gezinsleven                | 1 | 2 | 3 | 4 | 5 |
| 2. Goede werkomstandigheden te hebben (voldoende ruimte, licht, ventilatie enz.) | 1 | 2 | 3 | 4 | 5 |
| 3. Een goede relatie met je baas   | 1 | 2 | 3 | 4 | 5 |
| 4. Zekerheid (een vaste baan)  | 1 | 2 | 3 | 4 | 5 |
| 5. Met mensen te werken die goed met   |   |   |   |   |   |

elkaar overweg kunnen	1	2	3	4	5
6. Door je baas betrokken te worden bij beslissingen die je werk raken	1	2	3	4	5
7. De mogelijkheid om promotie te maken	1	2	3	4	5
8. Afwisseling en avontuur in het werk	1	2	3	4	5

Hoe belangrijk zijn de volgende dingen voor jou persoonlijk?

9. Evenwichtigheid (stabiel zijn)	1	2	3	4	5
10. Spaarzaamheid	1	2	3	4	5
11. Volharding, doorzettingsvermogen	1	2	3	4	5
12. Respect voor traditie	1	2	3	4	5

13. Hoe vaak voel je je nerveus of gespannen op het werk?

1 = nooit

2 = zelden

3 = soms

4 = vaak

5 = altijd

14. Hoe vaak komt het in jouw omgeving voor dat ondergeschikten bang zijn om het hun chefs te vertellen als zij het met hen oneens zijn?

1 = heel zelden

2 = zelden

3 = soms

4 = vaak

5 = heel vaak

In hoeverre ben je het eens of oneens met de volgende uitspraken? (één antwoord per regel omcirkelen):

1 = volkomen mee eens

2 = mee eens

3 = weet niet

4 = niet mee eens

5 = volstrekt niet mee eens

15. De meeste mensen zijn te vertrouwen                      1            2            3            4            5

16. Je kunt een goede chef zijn zonder  
op elke vraag van een medewerker  
over zijn of haar werk een precies

antwoord te hebben	1	2	3	4	5
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17. Een organisatiestructuur waarin sommige mensen aan twee bazen

tegelijk rapporteren moet tot elke

prijs vermeden worden	1	2	3	4	5
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18. Wedijver tussen medewerkers doet meestal meer kwaad dan goed

1	2	3	4	5
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19. Bedrijfsregels moeten niet overtreden worden, zelfs niet als de medewerker

denkt dat dit beter voor de zaak is	1	2	3	4	5
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20. Als mensen falen in hun leven is het meestal hun eigen schuld

1	2	3	4	5
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Graag een paar persoonlijke gegevens (voor statistische doelen):

21. Ben je:

1 = Man

2 = Vrouw

22. Hoe oud ben je?

1 = Onder de 20

2 = 20-24

3 = 25-29

4 = 30-34

5 = 35-39

6 = 40-49

7 = 50-59

8 = 60 of ouder

23. Hoe veel jaren schoolopleiding heb je voltooid? (beginnend met de lagere school of groep 3)?

1 = 10 jaar of minder

2 = 11 jaar

3 = 12 jaar

4 = 13 jaar

5 = 14 jaar

6 = 15 jaar

7 = 16 jaar

8 = 17 jaar

9 = 18 jaar of meer

24. Als je een betaalde baan hebt of had, wat voor type baan was dat?

- a. Geen betaalde baan (inclusief full-time studie)
- b. Ongeschoold of geoefend handwerker
- c. Administratief of secretariaal medewerker of -ster
- d. Geschoold vakman of -vrouw, technicus, informaticus, verpleegkundige, kunstenaar of gelijkwaardig
- e. Academisch geschoold niet-leidinggevend medewerker
- f. Manager van één of meer medewerkers (niet-managers)
- g. Manager van één of meer managers

25. Wat is je nationaliteit?

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26. En wat was je nationaliteit bij je geboorte (indien anders)?

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**Hartelijk dank voor je medewerking!**

### Calculating dimensional scores

The VSM94 module is used both in Vietnam and the Netherlands. The 20 questions make it possible to calculate index scores for the first five dimensions of Hofstede: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, and Long-term orientation. Respondents have to answer the content questions by scoring on a five-point scale (1-2-3-4-5). Index scores are derived by using the mean scores on the question in the formulas set up by Hofstede. The formulas are:

$$\text{PDI} = -35m(03) + 35m(06) + 25m(14) - 20m(17) + C(pd)$$

In which m(03) is the mean score for question 3, etc. A low score stands for a low Power Distance, whereas a high score stands for a large Power Distance.

$$\text{IDV} = -50m(01) + 30m(02) + 20m(04) - 25m(8) + C(ic)$$

A low score stands for Collectivism, whereas a high score stands for Individualism

$$\text{MAS} = +60m(05) - 20m(07) + 20m(15) - 70m(20) + C(mf)$$

A low score stands for a more Feminine society, whereas a high score stands for a more Masculine society.

$$\text{UAI} = +25m(13) + 20m(16) - 50m(18) - 15m(19) + C(ua)$$

A low score stands for low Uncertainty Avoidance, whereas a high score stands for high Uncertainty Avoidance

$$\text{LTO} = -20m(10) + 20m(12) + C(ls)$$



A low score stands for a more Short-term view, whereas a high score stands for a more Long-term view. This formula was revised in 1999, after experience has shown that only questions 10 and 12 produced country scores correlated with other LTO measures.<sup>3</sup> Therefore questions 9 and 11 have been replaced in the VSM08 module.

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<sup>3</sup> VSM94 manual (source: <http://www.geerthofstede.com/research--vsm/vsm-94.aspx>)

### Appendix 3: Effect of language

Frequency of elements used: Languages compared				
entrepreneur	3e	3v	10e	10v
G	2	2	3	3
R	0	1	2	2
B	5	5	1	3
K	4	4	5	3
P	6	5	3	5
Z	4	4	10	2
X	11	5	2	4
Sub Total	32	26	26	22
M	0	1	0	0
L	5	4	3	3
A	4	3	3	3
E	8	4	2	2
C	0	0	0	0
D	1	0	0	0
N	0	1	1	0
Sub Total	18	13	9	8
<b>Total</b>	<b>50</b>	<b>39</b>	<b>35</b>	<b>30</b>
	3e	3v	10e	10v
Causal	64%	67%	74%	73%
Effectual	36%	33%	26%	27%
Total	100%	100%	100%	100%

In the first table it is shown that Vietnamese entrepreneurs 3 and 10 conducted the case both in English (3e and 10e) and Vietnamese (3v and 10v). Subject 3 first performed the case in English and approximately 3 weeks later in Vietnamese. For entrepreneur 10 this was the other way around, first in Vietnamese and later in English. The Vietnamese protocols were transcribed by Vietnamese who are proficient in English. The original English transcript and the translated transcript were both coded and the results are shown in the upper table. The lower table shows in percentages the use of causal and effectual logic in both situations.

## Appendix 4: Normality distributions

*Tests of Normality for the combined Vietnamese and Dutch sample*

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Goal_based	,182	34	,006	,892	34	,003
Means_based	,239	34	,000	,736	34	,000
expected_returns	,214	34	,000	,777	34	,000
affordable_loss	,186	34	,004	,943	34	,077
competitive_analysis	,198	34	,002	,920	34	,016
use_of_alliances	,161	34	,025	,957	34	,198
existing_knowledge	,190	34	,003	,900	34	,005
exploration_of_contingency	,234	34	,000	,871	34	,001
predicting_future	,189	34	,003	,886	34	,002
non_predictive_control	,297	34	,000	,560	34	,000
emphasis_on_data	,153	34	,042	,938	34	,053
distrusting_research	,370	34	,000	,585	34	,000

a. Lilliefors Significance Correction

*Test of normality for the Vietnamese sample*

**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Goal_based	,202	17	,064	,920	17	,145
Means_based	,486	17	,000	,490	17	,000
expected_returns	,354	17	,000	,743	17	,000
affordable_loss	,287	17	,001	,884	17	,037
competitive_analysis	,170	17	,200 <sup>*</sup>	,941	17	,332
use_of_alliances	,160	17	,200 <sup>*</sup>	,945	17	,382
existing_knowledge	,126	17	,200 <sup>*</sup>	,945	17	,382
exploration_of_contingency	,208	17	,049	,930	17	,222
predicting_future	,175	17	,178	,885	17	,038
non_predictive_control	,486	17	,000	,490	17	,000
emphasis_on_data	,237	17	,012	,847	17	,010
distrusting_research	,469	17	,000	,533	17	,000

a. Lilliefors Significance Correction

\*. This is a lower bound of the true significance.

## Appendix 5: Questionnaire and Case compared

### Questionnaire

Interviewer Name: Ronald van den Ham

Interviewee Name: \_\_\_\_\_

Code number interview: \_\_\_\_\_ (same as for the biographical info, **filled in by Interviewer**)

Email interviewee: \_\_\_\_\_

Name / website of student company;: \_\_\_\_\_ -

Short description of (student company) (what business are you in):

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Founding date: \_\_\_\_\_

Founding place: \_\_\_\_\_

Number of founders (including entrepreneur): \_\_\_\_\_

Current number of employees (including all founders, in full time equivalents): \_\_\_\_\_

Annual turnover in country currency: \_\_\_\_\_ (amount) \_\_\_\_\_ currency

To what degree did you start your enterprise because you had no other option for work?

Not at all	A little	Somewhat	To a large extent	absolutely
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To what degree did you start your enterprise because you wanted to become independent or increase your income

Not at all	A little	Somewhat	To a large extent	absolutely

(Measures for necessity vs. opportunity taken from GEM).

Please answer this questionnaire on the basis of reflecting on your own company.

Please have a look at the following statements. Now, circle/mark 1 answer out of 5, in which you indicate the degree to which you do not agree or agree to the statement.

	Do not agree	Agree little	Agree somewhat	Mostly agree	Fully agree
We analyzed long run opportunities and selected what we thought would provide the best returns					
We developed a strategy to best take advantage of resources and capabilities					
We researched and selected target markets and did meaningful competitive analysis					
We designed and planned business strategies					
We organized and implemented control processes to make sure we met objectives					
We had a clear and consistent vision					

for what we wanted to do					
We designed and planned production and marketing efforts					
The ultimate product/service that I used to launch this business was quite similar to my original conception					
Our decision making has been largely driven by expected returns					
The ultimate product/service that I used to launch this business was quite different from my original conception					
It was impossible to see from the beginning where we wanted to end					
We have allowed the business to evolve as opportunities have emerged					
We evaluated the set of resources and means we had at our disposal and thought about different options					
We experimented with different products and/or business models					
We started out very flexibly and tried to take advantage of unexpected opportunities as they arose					
We used a substantial number of agreements with customers, suppliers and other organizations and people to reduce the amount of uncertainty					
Our decision making has been largely driven by how much we could afford to lose					

Note 1: Scales from Chandler et al. (2011): Causation and effectuation processes: a validation study. JBV, 26(3), 375-390

### **Comparison case and questionnaire**

	V1	V3	V4	V7	V10	V12	V13	V15	V16	V17
Question 1	1	0	0	1	1	0	0	2	0	1
Question 2	0	0	2	2	2	-1	2	1	1	2
Question 3	2	0	2	2	2	-1	1	0	-1	0
Question 4	2	1	2	-1	2	-1	-1	1	-2	1
Question 5	0	0	0	-2	2	-1	0	1	-2	1
Question 6	1	1	1	1	2	1	2	0	2	1
Question 7	2	1	0	-1	2	1	2	1	2	2
Question 8	1	1	1	2	1	-2	1	0	1	-1
Question 9	2	0	-1	2	2	-1	2	1	2	0
<b>Average</b>	<b>1,22</b>	<b>0,44</b>	<b>0,78</b>	<b>0,67</b>	<b>1,78</b>	<b>-0,56</b>	<b>1,00</b>	<b>0,78</b>	<b>0,33</b>	<b>0,78</b>
Question 10	1	1	1	2	0	2	0	1	2	0
Question 11	1	1	-1	0	2	1	-2	1	1	1
Question 12	0	0	0	-1	-2	1	-2	0	1	-1
Question 13	1	0	-1	1	-2	1	-1	-1	-2	-1
Question 14	1	0	-1	0	0	1	-2	-1	-2	-2
Question 15	0	0	-1	-1	-2	1	-2	-1	-2	-1
Question 16	1	0	-1	2	-2	0	0	-2	0	1
Question 17	0	1	0	-2	-2	1	-2	0	1	2
<b>Average</b>	<b>0,63</b>	<b>0,38</b>	<b>-0,50</b>	<b>0,13</b>	<b>-1,00</b>	<b>1,00</b>	<b>-1,38</b>	<b>-0,38</b>	<b>-0,13</b>	<b>-0,13</b>
<b>SUM</b>	<b>1,85</b>	<b>0,82</b>	<b>0,28</b>	<b>0,79</b>	<b>0,78</b>	<b>0,44</b>	<b>-0,38</b>	<b>0,40</b>	<b>0,21</b>	<b>0,65</b>
% causal*	74%	64%	70%	59%	74%	78%	63%	78%	73%	59%
% effectual*	26%	36%	30%	41%	26%	22%	37%	22%	27%	41%

\* 'Derived from case results

In case the SUM is a positive number (max. = +2), the entrepreneur tend to be more causal. In case the SUM is a negative number (max. = -2), the entrepreneur tend to be more effectual.

	Do not agree	Agree little	Agree somewhat	Mostly agree	Fully agree
Question 1 to 9:	-2	-1	0	1	2
Question 10 to 17:	2	1	0	-1	-2

The questionnaire consists of 17 different questions. The first 9 questions are set up in a way that the more a respondent disagrees with the statement, the more effectual reasoning he is using. The more the entrepreneur agrees with the statement, the more causal reasoning is used. For questions 10 to 17 this is exactly the other way around. Therefore, question 10 to 17 are scored opposite to the first 9 questions. In this way we can calculate a SUM, which is done in the main table. When the SUM of the scores is between 0 and 2 the entrepreneur is using more causal logic. If the SUM is between 0

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and -2, the entrepreneur tend to favor more effectual logic. In the lower two rows of the main table we can see the percentages of causal and effectual reasoning which are derived from the case results. All entrepreneurs, except for entrepreneur 13 (V13), tended to use more causal logic in the case which corresponded with the SUM score of the questionnaire.