BACHELOR THESIS INTERNATIONAL BUSINESS ADMINISTRATION

Preliminary results from new venture creation in an international comparison; the case of the Netherlands versus Malaysia

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Preface

This thesis is the final part of my Bachelor Business Administration at the University of Twente and could not have been carried out without the participation of student entrepreneurs. That's why I would like to thank everybody who participated in my research. Besides, I would like to thank all organizations who gave me the possibility to come in contact with the student entrepreneurs and every student who supported me. Furthermore, my appreciation and thanks go out to my supervisors M.R. Stienstra MSc and PD. Dr. R. Harms, for giving me the opportunity to participate in the EPICC project - Entrepreneurial Processes In a Cultural Context - and their feedback during this study.

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Abstract

The research question in this bachelor thesis is: *To which degree influences national culture the different types of entrepreneurial processes?* First, a theoretical framework was constructed which made it possible to formulate 3 hypotheses. Thereafter, data was collected in order to test the hypotheses. Based on the results of these tests, the hypotheses could be rejected or not. This made it possible to give an answer regarding the research question.

"Culture influences entrepreneurs in their way of operating in practice" (Wennekers & Thurik, 1999, p.52). In this study the emphasis was on the link between national culture and entrepreneurial processes.

The concept of entrepreneurial processes has been operationalized by means of the effectual and causal reasoning (Sarasvathy, 2001). "Effectual reasoning takes a set of means as given and focuses on selecting between possible effects that can be created with that set of mean" (Sarasvathy, 2001, p.245). "Causal reasoning takes a particular effect as given and focuses on selecting between means to create that effect" (Sarasvathy, 2001, p.245). Sarasvathy (2001) introduced 5 effectual principles, whereby she distinguishes between the causal and effectual reasoning.

The concept of national culture has been operationalized using 3 dimensions: Individualism versus collectivism, which describes the relationship between the individual and the community in which someone is living (Hofstede, 2001). Universalism versus particularism, which defines how people judge other people's behavior (Trompenaars & Hampden-Turner, 1998). Individualism versus communitarianism, which covers the way people relate to each other (Trompenaars & Hampden-Turner, 1998). The theories of Hofstede (2001) and Trompenaars & Hampden-Turner (1998) form the basis regarding the operationalization of national culture.

By linking the 2 concepts, 3 hypotheses are formulated:

1. *The higher the degree of individualism in a national culture, the more entrepreneurs will use expected returns (Van den Ham, 2012);*

2. *The higher the degree of particularism in national culture, the more entrepreneurs will embrace contingencies;*
3. *The higher the degree of particularism in a national culture, the more partnerships or alliances entrepreneurs will use.*

Given the difference in degree of individualism between the Netherlands and Malaysia, a comparison is made between the use of effectual and causal principles among Dutch and Malaysian student entrepreneurs. Before the start of the experiment, the subjects were asked to comply with the think-aloud protocol. In the experiment, the data is obtained by means of a business case where ten business problems emerged in the context of setting up, growing and managing a new company. The data from the Netherlands and Malaysia were used to test the hypotheses and were compared to determine whether there are differences in both samples.

Based on the results per hypothesis, a relationship between the dimensions individualism versus collectivism and universalism versus particularism of national culture and the use of different types of entrepreneurial processes is found. It can be concluded the degree of individualism in a national culture has a positive effect on the use expected returns among entrepreneurs and the degree of particularism in national culture has a positive effect on the use of embrace contingencies and no effect on the use of partnerships among entrepreneurs.

Samenvatting

De onderzoeksvraag van deze bachelor thesis is: *In welke mate beïnvloedt nationale cultuur de verschillende type ondernemerschapsprocessen?* Allereest is er een theoretisch kader opgesteld over de concepten ondernemerschapsprocessen en nationale cultuur waardoor het mogelijk was om 3 hypothesen op te stellen. Daarna is er data verzameld om zodoende de hypothesen te kunnen testen. Gebaseerd op de resultaten van deze testen konden de hypothesen wel of niet verworpen worden.

"Cultuur beïnvloedt ondernemers in hun manier van werken in de praktijk" (Wennekers & Thurik, 1999, p.52). In dit onderzoek ligt de nadruk op de link tussen nationale cultuur en ondernemerschapsprocessen.

Het concept ondernemerschapsprocessen is geoperationaliseerd door middel van de effectuele en causale redenering (Sarasvathy, 2001). "De effectuele redenering neemt een set van middelen als gegeven en focust op de mogelijke effecten die gecreëerd kunnen worden met deze set van middelen" (Sarasvathy, 2001, p.245). "De causale redenering neemt een bepaalde doel als gegeven en focust op de selectie van middelen om dit doel te kunnen bereiken" (Sarasvathy, 2001, p.245). Sarasvathy (2001) heeft 5 effectuele principes geïntroduceerd waarbij ze het onderscheid maakt tussen de causale en effectuele redenering.

Het concept van nationale cultuur is geoperationaliseerd door middel van 3 dimensies: Individualisme en collectivisme, deze dimensie beschrijft de relatie tussen het individu en de gemeenschap (Hofstede, 2001). Universalisme versus particularisme, deze dimensie beschrijft hoe mensen elkaars gedrag beoordelen (Trompenaars & Hampden-Turner, 1998). Individualisme versus communitarisme, deze dimensie beschrijft de manier waarop mensen aan elkaar gerelateerd zijn (Trompenaars & Hampden-Turner, 1998). De theorieën van Hofstede (2001) en Trompenaars & Hampden-Turner (1998) vormen de basis voor wat betreft deze operationalisering.

Door het linken van deze 2 concepten zijn 3 hypotheses opgesteld:

1. *Hoe hoger de mate van individualisme in een nationale cultuur, des te meer zullen ondernemers gebruik maken van verwachte rendementen (Van den Ham, 2012);*
2. *Hoe hoger de mate van particularisme in een nationale cultuur, des ter meer zullen ondernemers onvoorziene gebeurtenissen omarmen;*
3. *Hoe hoger de mate van particularisme in een nationale cultuur, des te meer zullen ondernemers gebruik maken van samenwerkingsverbanden.*

Gebaseerd op de verschillen in mate van individualisme is er een vergelijking gemaakt tussen het gebruik effectuele en causale principes onder Nederlandse en Malaise student ondernemers. Voorafgaand aan het experiment werd aan de proefpersonen gevraagd om zich te houden aan het denk-hardop protocol. Tijdens het experiment is de data verzameld door middel van een bedrijfscase waar tien bedrijfsproblemen ontstonden in de context van het opzetten, groeien en managen van een nieuw bedrijf. De data uit Nederland en Maleisië zijn gebruikt om de hypothesen te testen en de data zijn vergelijken om te bepalen of er verschillen in beide samples aanwezig zijn.

Gebaseerd om de resultaten per hypothese is een relatie tussen de dimensies individualisme versus collectivisme en universalisme versus particularisme en het gebruik van verschillende soorten ondernemerschapsprocessen gevonden. Geconcludeerd kan worden dat de mate van individualisme in een nationale cultuur een positief effect heeft op het gebruik van verwachte rendementen onder ondernemers en de mate van particularisme in een nationale cultuur een positief effect heeft op het omarmen van onvoorziene gebeurtenissen en geen effect heeft op het gebruik van samenwerkingsverbanden.

Table of contents

List of figures and tables

Figures

Tables

1 Introduction

Entrepreneurship is relevant. “Entrepreneurship is the process of doing something new and something different for the purpose of creating wealth for the individual and adding value to society” (Kao, 1993, p.69). Individual and corporate entrepreneurship lead to higher productivity, new industries, new niches and improvement of best practices which will lead to economic growth and improvement of the international competitive position of a country (Wennekers & Thurik, 1999). It can be stated that entrepreneurship and so entrepreneurs play an important role in the macroeconomics of a country. “An entrepreneur is someone who perceives an opportunity and creates an organization to pursue it” (Bygrave, 1993, p.257). Also the increasing importance of globalization and ICT cause an increasing need for entrepreneurship, because it provokes a need for change in the structure of organizations, which requires a reallocation of resources (Wennekers & Thurik, 1999).

“Culture influences entrepreneurs in their way of operating in practice” (Wennekers & Thurik, 1999, p.52). Culture is defined as: “The collective programming of the mind which distinguishes the members of one human group from another” (Hofstede, 1980, p.25). It is valuable to explore the relationship between culture and entrepreneurship because this can increase the understanding of how the functioning of entrepreneurs is influenced.

Arguments for a relationship between characteristics of national culture and entrepreneurship have existed for decades. The observations of economists, sociologists and psychologists, who noticed differences in entrepreneurial activities at national level, have contributed to the investigation into the relation between national culture and entrepreneurship. Three wide research streams were found relating the context of national culture and entrepreneurship (Hayton, George, & Zahra, 2002). The first research stream focuses on the influence of national culture on the characteristics of entrepreneurship like national innovative output or the number of newly established companies. The second focuses on the link between national culture and personal characteristics of entrepreneurs. In this stream were values, beliefs, motivations and cognitions of entrepreneurs in different cultures examined. The third focuses on the impact of national culture on corporate entrepreneurship (Hayton et al., 2002).

In previous research, national culture has been related to different fields of entrepreneurship (Hayton et al., 2002). This study, which is part of the EPICC project, explores the influence of national culture on entrepreneurial processes. An entrepreneurial process involves: “All functions, activities and actions associated with perceiving opportunities and the creation of organizations to pursue them” (Bygrave, 1993, p.257). A process orientation is suitable for studying entrepreneurship, because entrepreneurship is an action-based event which includes an interrelated group of creative, strategic and organizing processes (Moroz & Hindle, 2011).

The focus concerning entrepreneurial processes will be on causation and effectuation. The essential difference is that entrepreneurs who use causation are goal-driven, where entrepreneurs who use effectuation use a given set of means (Sarasvathy, 2001). By the introduction of effectuation a new view on entrepreneurship has emerged (Perry, Chandler, & Markova, 2011). It is interesting to discover this new view and therefore the emphasis regarding entrepreneurial processes will be on causation and effectuation.

The purpose of this study is to understand the influence of national culture on entrepreneurial processes and consequently to understand the national differences of entrepreneurial processes at personal level. Therefore, it is necessary to conduct research on national culture and its potential impact on entrepreneurial processes. An international comparison will be made in order to determine to which degree national culture influences different types of entrepreneurial processes. Subsequently, the research question is:

To which degree influences national culture the different types of entrepreneurial processes?

This study is set up in order to get a better understanding how national culture influences the way entrepreneurs operate in practice. Possibly, the way of operating by entrepreneurs has a major influence on for example the growth rate of a national economy, employment rates and technological developments of countries (Wennekers & Thurik, 1999). Also, the introduction of effectuation and further emphasis on effectuation will possibly lead to a change in studies concerning entrepreneurship. Imaginably, awareness of the

entrepreneurial process of effectuation among entrepreneurs can lead to a change in the way entrepreneurs work in practice (Sarasvathy, 2001).

In order to be able to answer the research question a theoretical framework is constructed of the variables national culture and entrepreneurial processes, which can be found in chapter 2. By linking the two variables of the theoretical framework three hypotheses are formulated, which can be found in chapter 3. The methods used in order to obtain the data and ways of analysis can be found in chapter 4. The hypotheses are tested based on the collected data, the results and findings of these tests can be found in Chapter 5. The points of discussion regarding the findings and literature plus the conclusion can be found in chapter 6.

2 Theoretical framework

In this chapter, the concepts of entrepreneurial processes and culture will be described from a broad to narrow perspective.

2.1 Entrepreneurial processes

2.1.1 Perspectives on entrepreneurial processes

Moroz and Hindle (2011) selected 4 out of 32 extant models of entrepreneurial processes which are distinguished from management models on the one hand and are not overly multifactorial on the other hand. This makes these 4 models suitable for the operationalization of the concept of entrepreneurial processes over the other 28.

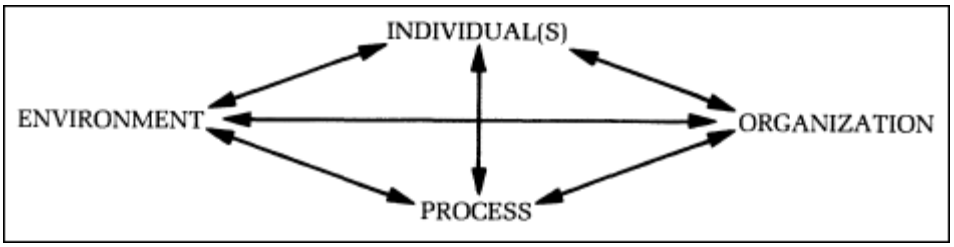

Figure 1: Framework for describing new venture creation (Gartner, 1985, p.698).

The first model, displayed in figure 1, describes the distinction between entrepreneurs and the organizations they create. Four factors influence the creation of new ventures. Environmental factors (for example governmental influences or labor force), organizational factors (for example a new product or differentiation) and individual factors (for example risk taking attitude or educational background) influence the way ventures are created. Though, there can be no creation of new ventures without the process factor, which is the input of entrepreneurial activities. This input contains elements such as the identification of a business opportunity, the accumulation of resources and building of an organization (Gartner, 1985).

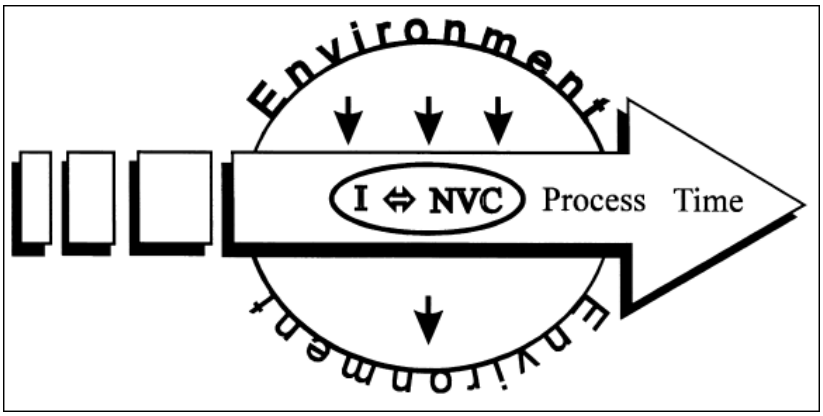

Figure 2: Entrepreneurial process located within its time and environment (Bruyat & Julien, 2001, p.170).

The second model, displayed in figure 2, describes the ongoing process of interaction between the individual (the entrepreneur) and the new value creation, located in an interacting environment. The connection over time between the individual, process and environment demonstrates that the entrepreneur not simply reacts to the environment, but that the entrepreneur is able to create, learn from and affect the environment. The relation between the degree of new value created for the environment and the degree of change for the individual determine the type of entrepreneurial activity (Bruyat & Julien, 2001).

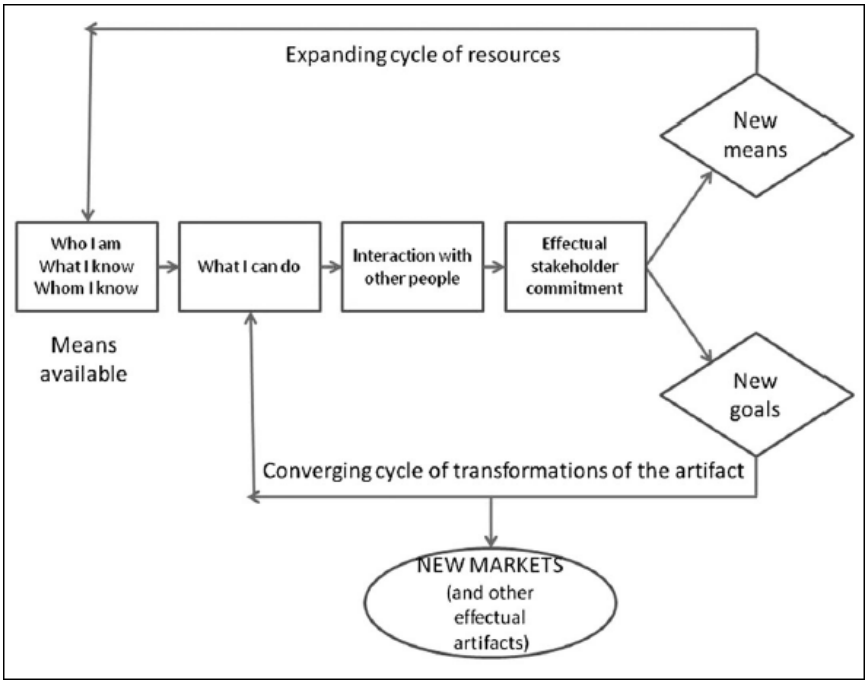

Figure 3: Dynamic model of effectuation (Sarasvathy, 2008, p. 101).

The third model, displayed in figure 3, shows the effectual logic. The effectual logic opposes the causal logic, which makes it possible to differentiate between types of entrepreneurs. Entrepreneurs who use the causal logic are goal-driven and select means to create that goal. In contrast, entrepreneurs who use the effectual logic start with a given set of means and from there new means and goals can emerge. These two process approaches result in the use of causal or effectual principles in the decision-making process of setting up, growing and managing a business (Sarasvathy, 2001).

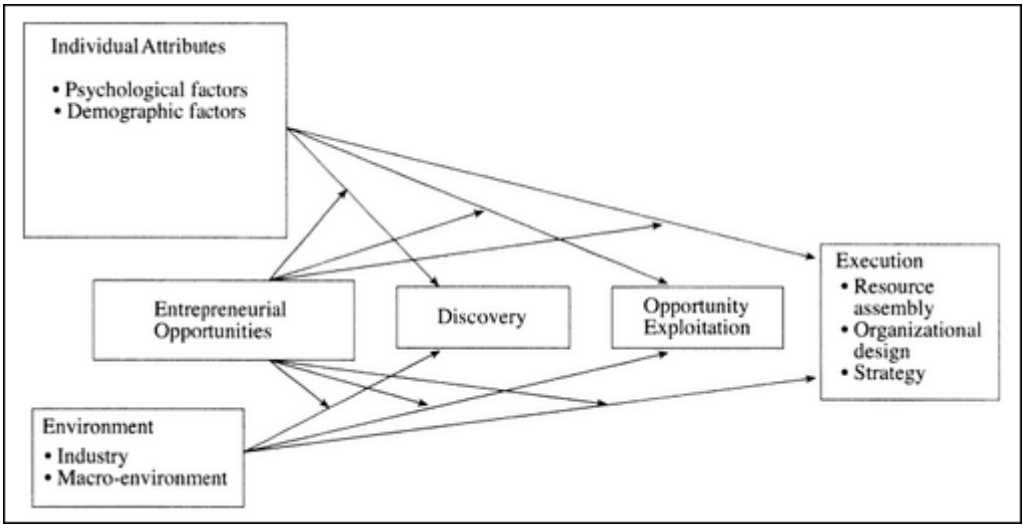

Figure 4: Model of the entrepreneurial process (Shane, 2003, p. 11).

The fourth model, displayed in figure 4, is the opportunity process model and shows the connection between the individual and an entrepreneurial opportunity. In this case, the implementation of strategy, organizational layout and the resource collection are a consequence of the discovery and use of opportunities. The environment and individual attributes act upon this process (Shane, as cited in Moroz & Hindle, 2011).

The theories of Gartner (1985) and Shane's (2003) models are focused on the consequences for profit, the theory of Bruyat and Julien's (2001) model is focused on the consequences for the market and the theory of Sarasvathy's (2001) model is focused on the operations of entrepreneurs (Moroz & Hindle, 2011). The emphasis in this study will be on the third model (Sarasvathy, 2001) because this study aims to determine the influence of national culture on the way of operating by entrepreneurs.

2.1.2 Introduction of effectuation

The primary part of entrepreneurship research is based on rational decision making models created by neoclassical economics (Perry et al., 2011). In this case, the prevailing decision making model in the pursuit of entrepreneurial opportunities is goal-oriented wherby best strategies are used (Perry et al., 2011).

Sarasvathy (2001) introduced the effectual model, as opposed to the neoclassical/causal model. “The effectual process model takes a set of means as given and focuses on selecting between possible effects that can be created with that set of mean” (Sarasvathy, 2001, p.245). “The causal process model takes a particular effect as given and focuses on selecting between means to create that effect” (Sarasvathy, 2001, p.245).

Sarasvathy (2001) shifts the point of view from the venture to the entrepreneur. Present studies of entrepreneurship focus on the performance of the entrepreneurial venture as the primary dependent variable, where the entrepreneur is considered as an instrument in the establishment of companies (Perry et al., 2011). In contrast, Sarasvathy (2001) examines the performance of the entrepreneur and uses an instrumental view of the company. This shift challenges the generally applied causal model of entrepreneurship (Perry et al., 2011), which makes the introduction of effectuation interesting.

2.1.3 Predictability of the future

The quest for the similarities and differences in the decision-making process of expert entrepreneurs who begin with the similar idea for a new venture and meet the similar group of decisions are the motive behind the research of Sarasvathy (2008). Important to notice is that entrepreneurial expertise is not the same as success, although expertise often explains success (Read & Sarasvathy, 2005).

In decision-making processes entrepreneurs have to make decisions about future markets, future goods and future services which includes diverse risks and uncertainties (Sarasvathy, 2008). People differ in their perceptions about the predictability of the future (Sarasvathy, 2001). The way the underlying beliefs about the predictability of the future affect the entrepreneur are examined by means of research instrument including a decision-making

process of setting up, growing and managing a company (Sarasvathy, 2001). This examination by Sarasvathy has resulted in 5 teachable principles (Read & Sarasvathy, 2005).

2.1.4 Problem space

The problem space for effectuation is a situation where an entrepreneur has to deal with the unpredictability of the future. The question is how entrepreneurs can operate rationally in a diverse uncertain environment (Sarasvathy, 2008). The effectual problem space contains three elements which are based on the following three questions.

Effectual problem space	
Underlying questions	**Elements**
"Where can rationality be found when the future is unpredictable" (Knight, 1921)?	Knightian uncertainty: It is impossible to calculate probabilities for future implications.
"Where can rationality be found when the decision maker is uncertain about his own preferences" (March, 1982)?	Goal ambiguity: Preferences are neither given nor well ordered.
"Where can rationality be found when the environment does not independently influence outcomes" (Weick, 1979)?	Isotropy: It is not obvious what factors of the environment to pay attention to and what to disregard.

Table 1: Effectual problem space (Based on Read & Sarasvathy, 2005, p.14; Sarasvathy, 2008, p.70).

Facing these three elements, the entrepreneur can ask himself the following questions: Can I measure the outcomes of my actions (for example measuring future sales at a certain price)? Do I know what I want to achieve (for example choice for a business model)? What information is relevant and what information is not relevant (for example the factors of the environment that play a role in decision-making) (Sarasvathy, 2008)?

The answers to these questions depend on how the entrepreneur approaches the problem space (Sarasvathy, 2008). In the causal approach an entrepreneur treats the environment as uncontrollable and therefore uses ways to predict it and adjust to it. Causation is reactive and adaptive (Read & Sarasvathy, 2005). In the effectual approach an entrepreneur treats

the environment as controllable and therefore tries to manage it by use of contributions by stakeholders. Effectuation is establishing and manageable (Read & Sarasvathy, 2005).

In the causal process the final goal is determined and decisions are made by use of, for example, 'make or buy' criteria, targeting a segment with the highest potential return or lowest risk in funding or hiring the best person for a particular job. The selected resources match with the final goal (Sarasvathy, 2001). In the effectual process available means and tools are given. From there, the entrepreneur seeks feasible effects that can be produced with the given set of means and which are within the range of affordable loss and acceptable risk (Sarasvathy, 2001).

2.1.5 Principles

Based on listed below issues, the criteria for taking action in an effectual manner are collected in principles (Sarasvathy, 2001).The same person may use both the causal and effectual process model, depending on what the circumstances demand. The following table is an overview of the principles of the effectual thought (Read, Song, & Smit, 2009).

Issue	Effectual principle
View of the future	*Creation of the future*. The actions of the entrepreneur cause the outcome of the environment.
Givens	*Means-based* (*What I know - Who I am - Whom I know*) give the basis for decisions and new opportunities.
Predisposition toward risk	*Affordable loss.* Calculate financial downside and risk based on affordable lose.
Attitude towards others	*Use of alliances or partnerships.* Building a market in co-operation with customers, suppliers and potential competitors.
Predisposition toward contingencies	*Embrace contingencies.* Leverage new opportunities out of surprises.

Table 2: Basic principles of effectual thought (Read et al., 2009; Sarasvathy, 2008).

The effectual principles embody an approach to decision making that does not depend on prediction, rather presuming the impact of self-willed individual creation. Effectuation makes it possible to make decisions in the context of setting up, growing and managing a new company in phases of uncertainty (Read et al., 2009).

Although the underlying logic is different, entrepreneurs use both the effectual and causal logic and in a variety of combinations in the entrepreneurial decision making process (Read & Sarasvathy, 2005). The causal approach is based on the logic: "To the extent we can predict the future, we can control it" (Sarasvathy, 2001, p.252). The effectual logic is based on the premise: "To the extent we can control the future, we do not need to predict it" (Sarasvathy, 2001, p.252). However, theoretically, a dichotomous approach of the causal and effectual logic is useful in order to clarify the distinction between the two types of reasoning (Venkatarman & Sarasvathy, 2001).

In the next subchapters, the effectual principles will be explained in detail whereby the contrast is indicated with the causal approach.

2.1.5.1 View of the future: Creation of the future

The use of both the causal and effectual logic implies a search for control over the future. But entrepreneurs using the causal logic focus on the predictable aspects of an uncertain future. In contrast, entrepreneurs using the effectual logic focus on the controllable aspects of an uncertain future (Sarasvathy, 2001). From the controllable aspects, the effectual entrepreneur attempts to create a market, instead of following a market (Sarasvathy, 2001).

The effectual principle creation of the future steers the decision-maker to integrate the consequences of her actions into the outcome of the environment (Read et al., 2009). This principle is in particular suitable in situations where human actions are the main factor in shaping the future (Sarasvathy, 2001).

2.1.5.2 Givens: Means-based

The effectual entrepreneur starts with a set of means and from there focusses on creating new ends. This is in contrast with the causal entrepreneur, who selects means based on the predefined goal (Dew, Read, Sarasvathy, & Wiltbank, 2009). The identity (Who I am), knowledge (What I know) and social network (Whom I know) are the three means which form the basis for decision-making and facing opportunities (Read et al., 2009). Means supply the decision-maker a basis for direction, given that opportunities appear from the resources, knowledge and contacts of the decision-maker (Read et al., 2009).

Identity-based choice liberates the entrepreneur from organizing his preferences for specific outcomes of his decisions and gives the entrepreneur the possibility to make decisions in stages of 'Knightian uncertainty'. Identity is a preference for a way of determining, instead of a preference for a certain outcome (Sarasvathy, 2008).

When outcomes are predictable, it is clear that decisions can be based on preferred outcomes. But if outcomes are unpredictable, or preferences are not clear, a strong identity (who are we instead of what we want) and process (how to make decisions instead of what decisions to make) is useful. The identity depends on and can be converted by knowledge and networks and the other way around. The three means are interdependent and constitute the effectual logic. The means themselves are not important, but what the entrepreneur can achieve with them (Sarasvathy, 2008).

2.1.5.3 Predisposition toward risk: Affordable loss

The causal approach focusses on maximum returns by selecting best strategies. The effectual approach begins with deciding how much the entrepreneur is willing to lose (Sarasvathy, 2001). By estimating the affordable loss, the entrepreneur reduces the dependency on predictions. In order to calculate future returns, he must estimate future revenues and risks. In order to calculate the affordable loss, he only needs to know an estimation of his financial and psychological contribution in a worst-case scenario. This is a non-predictive manner of estimation and also a method to undo the role of uncertainty in financing decisions (Dew et al., 2009). Affordable loss stimulates the entrepreneur to integrate the possible disadvantages in evaluating alternatives so that the possible opportunity of failure will not result in greater venture of personal failure (Read et al., 2009).

When choosing whether to start a company or not the causal entrepreneur uses calculations (for example break-even points) in order to make a choice. Effectual entrepreneurs start with an upper limit of what someone is willing to lose in order to start the company. He uses that what he is willing to pay and may be depending on the input of others at the startup. In the causal decision calculations are decisive. In the effectual approach, the entrepreneur's personal commitment and aspirations, including personal risks and values over which he has control, are decisive (Sarasvathy, 2008).

The use of the affordable loss principle insures that effectual entrepreneurs use creative methods to bring their ideas to the market with the means they can collect. This often leads to a need for external stakeholder involvement (Sarasvathy, 2008).

2.1.5.4 Attitude toward others: Use of alliances or partnerships

The causal approach emphasizes the use of extensive competitive analysis. The effectual approach emphasizes alliances and stakeholder commitments as a way to decrease or rule out uncertainties and to create entry barriers (Sarasvathy, 2001). The effectual entrepreneur lets stakeholders participate who make real commitments in building up the business (Dew et al., 2009).

Effectual entrepreneurs focus on the dynamic interconnection of future stakeholders instead of a creating a vision up front and then try to sell it to stakeholders. The effectual approach starts without a predefined market, therefore effectual entrepreneurs don't underline systematic competitive analysis (Sarasvathy, 2008). By means of new partnerships new opportunities can be created because of the additional means which are attracted (Read et al., 2009). Not being tied to specific markets allows the growing network of stakeholder partnerships to discover new markets, or to determine in which market the company will eventually end (Sarasvathy, 2008).

As well as the affordable-loss principle, the use of alliances or partnerships is a way to bring the idea of the entrepreneur to the market at a low level of financial expenditure. If the amount of resources is low, working together with self-selected stakeholders is useful instead of expanding resources on pursuing stakeholder targets in a predictive way (Sarasvathy, 2008).

2.1.5.5 Predisposition toward contingencies: Embrace contingencies

The causal approach wants to avoid the unexpected and accomplish the predefined goals. The effectual approach wants to make use of unanticipated events. The effectual entrepreneur leverages uncertainty by using unexpected events as an opportunity to exercise control over the emerging situation (Sarasvathy, 2001).

The effectual principle embrace contingencies deals with the relationship between plans, contingencies and uncertainties. Causal entrepreneurs start with a predefined goal, which regulates the acquisition of resources and choices. Effectual entrepreneurs start with a loose understanding of their goals, this offers room for uncertainties and contingencies to influence the process of working towards a goal (Sarasvathy, 2008). Both positive and negative contingencies can serve a source for new opportunities. It is the art to turn unexpected events into valuable and profitable events. How entrepreneurs utilize these contingencies is the core of this effectual logic (Dew et al., 2009). When the future is not clear, the decision-maker must try to use contingencies by finding new possibilities from, even negative, surprises (Read et al., 2009).

2.2 Culture

2.2.1 Perspectives on culture

The word culture is derived from the Latin word 'colere', which can be interpreted as 'to build' or 'to cultivate'. Thus, culture refers to something that is created by the intervention of humans (Dahl, 2004). "Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional ideas and especially their attached values" (Kluckhohn, as cited in Hofstede, 1980, p. 25). Culture can also be defined as: "The collective programming of the mind which distinguishes the members of one human group from another. Culture includes systems of values, and values are among the building blocks of culture" (Hofstede, 1980, p.25). Culture can also be defined as an unaware control mechanism working in our mind, which makes us behave within the boundaries of a society. These boundaries determine what is socially desirable and what is not. Members of a society are expected to live within the boundaries of a culture (Hall, as cited in Dahl, 2004). Several scholars defined culture. Their definitions share aspects of the term culture, but everyone has his own approach. These different approaches provide different ways in how we could interpret culture.

2.2.2 Building blocks of culture

"The essential core of culture consists of traditional ideas and especially their attached values" (Kluckhohn, as cited in Hofstede, 1980, p. 25). A value is defined as "a broad tendency to prefer certain state of affairs over others" (Hofstede, 2001, p 5). Values are programmed early in life and unconscious feelings. In these feelings we consider issues as decent versus indecent, abnormal versus normal and moral and immoral. For example having money could be highly relevant to someone and stated as good, for another person it could be completely irrelevant or stated as bad. Values are invisible until they become visible by behavior (Hofstede, 2001).

Every person has a degree of mental programming that is the same over a period of time, which means that a person exhibits similar behavior in similar situations. The more knowledge available about the mental programming of a person and the particular situation leads to more accurate predictions of behavior (Hofstede, 2001). Mental programming encompasses elements of national culture, which are most expressed in the different values that exist among humans from various countries (Hofstede, 1980).

Three levels are distinguished in the mental programming of a single person (Hofstede, 2001). The most uniform one is the inherited universal level. This is the biological functioning system, which is the same for almost every human-being in the world (Hofstede, 2001). The collective level corresponds with people who belong to the same group, but differs from other groups. The domain of human culture is part of this level. It contains , for example, the language in which we speak, the respect we show to our elders and the way we perceive human activities (Hofstede, 2001). The collective level is learned because of the things and thoughts who are shared among people with different genetic characteristics (Hofstede, 2001). The inherited individual level is the most unique level because no one is equal programmed to each other. That's why different behavior appears in the same collective culture (Hofstede, 2001).

The collective programming of the mind determines the uniqueness of a human group (Hofstede, 2001). Culture is most used for national societies but can also be linked to organizations, regions, professions or families. The extent of uniformity in a national cultural

can vary per society. A society consists of different sub-cultures, but these sub-cultures have characteristics in common which allows outsiders to recognize them as part of one society (Hofstede, 2001).

2.2.3 Operationalization of culture

The absence of a universally applicable framework for ranking cultural characteristics has been targeted by a number researchers. Of these researchers Hofstede (2001) have carried out most influential research (Dahl, 2004). Hofstede set up a framework for the analysis of national culture, this framework is primarily useful because it reduces the complex factors of national culture into 5 simply understood cultural dimensions (Dahl, 2004). Countries, based on their scores on these dimensions, can be divided into cultural areas (Hofstede, 2001).

Hofstede's dimensions	
Power distance	The degree of acceptance of an unequal distribution of power in a society.
Individualism	If a society is based on loose co-operation of individuals or based on the integration of people into cohesive groups.
Masculinity	The degree to which male values (for example earnings and promotion) play a role in a society.
Uncertainty avoidance	The degree to which uncertain and unknown situations are seen as a threat in society.
Long-term orientation	The degree to which values oriented towards the future (for example importance of savings and looking forward) play a role in a society.

Table 3: Hofstede's dimensions (Hofstede, 2001).

In the context of this bachelor assignment, the emphasis will be on the dimension individualism (Hofstede, 2001). The choice for Individualism is made because it reflects a fundamental dimension on which societies differ (Hofstede, 2001).

Trompenaars and Hampden-Turner (1998) classified 7 value dimensions, of which universalism versus particularism and communitarianism versus individualism can be closely linked to Hofstede's individualism dimension (Dahl, 2004). Also these two dimensions will be used, in order to confirm the similarities with Hofstede's work and to elaborate the individualism dimension in a more specific way.

2.2.4 Individualism versus collectivism

This dimension describes the relationship between the individual and the community, because it describes the way people live together. “Individualism stands for a society in which the ties between individuals are loose: Everyone is expected to look after him/herself and his/her immediate family only” (Hofstede, 2001, p. 225). “Collectivism, opposing individualism, stands for a society in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people’s lifetime continue to protect them in exchange for unquestioning loyalty” (Hofstede, 2001, p. 225). In one culture individualism is considered as a blessing and as a form of welfare, but in the other culture as a form of estrangement (Hofstede, 2001).

The relationship between the individual and the collectivity is a fundamental dimension on which societies differ (Hofstede, 2001). The daily behavior is affected by the way in what type of family unit a person lives. A classic example is the difference between living in a clan and living in an urban-industrial society. In a clan children grow up with grandparents, uncles, aunts and cousins and learn to respect the group to where they belong and learn to differentiate between members of the clan and other people. Members of the clan gain protections of the group in exchange for their loyalty to the group. In an urban-industrial society, with grandparents send to homes for the aged and with single relatives who live apart, children learn to think for themselves. Grown-ups are expected to take care of themselves and don’t need protection from a group, which results in lower loyalty to a group. The relationship between the individual and the community is connected with social norms. Hence, it influences the mental programming of an individual and the way organizations and institutions work.

The main factor in our mental programming, within this dimension, is self-concept. The consequence for a collectivistic self-concept is that importance of the community is higher than the importance of the individual. The social and cultural environment give a person a meaningful existence. In contrast, a individualistic self-concept considers the individual more important than the community. The ability to choose a private path is seen as valuable (Hofstede, 2001).

2.2.5 Universalism versus particularism

This dimension defines how people judge other people's behavior. In universalistic groups rules determine which activities can or must be carried out. The compliance with rules means that all people, falling under a rule, should behave the same way. In particularistic groups human with a close and long-lasting relationships defend the interest of each other no matter what the rules say (Trompenaars & Hampden-Turner, 1998). For example, in universalistic groups someone would convict a murderer even if it is a close relative, in particularistic groups someone would protect a close relative even if it is a murderer. Universal values are associated with individualistic countries, particularistic values are associated with collectivistic countries (Hofstede, 2001).

2.2.6 Individualism versus communitarianism

This dimension covers the way people relate to each other. Individualism is defined as "the encouragement of individual freedom and responsibility" (Trompenaars & Hampden-Turner, 1998, p.58). Communitarianism is defined as "the encouragement of individuals to work for consensus in the interests of the group" (Trompenaars & Hampden-Turner, 1998, p.58). This means that in the thinking process of someone in an individualistic group the orientation to the one self has first priority. In contrast, in the thinking process of someone in an communitarian group the orientation to common goals and objectives has first priority (Trompenaars & Hampden-Turner, 1998). Individualistic values, in contrast with communitarian values, are associated with individualistic countries. Communitarian values are associated with collectivistic countries (Hofstede, 2001).

2.2.7 Scores of cultural dimensions

Giving scores to cultural dimensions on a scale level offers room to compare national cultures and based on the scores of cultural dimensions countries can be divided into cultural areas (Hofstede, 2001). The scores of the dimension individualism versus collectivism can be seen in appendix A, page 39.

The scores of cultural dimensions from Hofstede (on a scale from 0 till 100) are based on data from the year 1980. Hofstede assumes that national culture and cultural dimensions

would not change substantially before 2100 (Hofstede, 2001). This assumptions has been criticized for making the scores of cultural dimensions outdated (McSweeny, 2002).

Empirical evidence shows that cultures do change over time. Moreover, it is presumable that the degree of change in national cultures is not the same (Taras, Steel, & Kirkman, 2012). This means that the rankings of countries will change relative from each other.

The scores of cultural dimensions from Taras et al. (2012) are based on longitudinal meta-analytic research and are subject to cultural change (Taras et al., 2012). To cover the criticism on Hofstede and emphasizing the dynamics of cultural change, the scores from Taras et al. will be used in this study.

3 Hypotheses

In this chapter hypotheses are formulated in order to answer the research question, whereby a connection is made between the concepts of national culture and entrepreneurial processes. Based on the score of the individualism dimension, difference in the use of principles of causal and effectual thought can be expected.

3.1 Hypothesis 1

The use of the causal principle expected returns and the use of the effectual principle affordable loss is a consequence of an attitude towards risk (Read et al., 2009). Causal entrepreneurs using expected returns want to reduce risk in financial decisions by making predictions about future outcomes (Dew et al., 2009). In contrast, effectual entrepreneurs using affordable loss accept and challenge a predetermined risk in a non-predictive manner (Sarasvathy, 2001).

Individualism is associated with certainty. In contrast with collectivistic countries, people from high individualistic countries score high on having certainty as a life goal (Hofstede, 2001). In the pursuit of having certainty risks must be avoided.

It is presumable that entrepreneurs from individualistic countries strive more for certainty than entrepreneurs from collectivistic countries. Since the use of the causal principle expected returns is a way of striving for certainty, it can be expected that:

- *The higher the degree of individualism in a national culture, the more entrepreneurs will use expected returns (Van den Ham, 2012).*

3.2 Hypothesis 2

The use of the effectual principle embrace contingencies and the causal principle avoid contingencies is a consequence of a predisposition towards unexpected events (Read et al., 2009). Effectual entrepreneurs make use of unanticipated events as means for their goals. Causal entrepreneurs try to avoid unanticipated events and accomplish predefined goals (Sarasvathy, 2001).

In universalistic countries people work based on predefined agreements and it is expected that people follow the predefined agreements, in order to ensure equity and consistency. In particularistic countries agreements are seen as rough guidelines, flexibility is encouraged so that the agreement can be adjusted to particular situations (Trompenaars & Hampden-Turner, 1998).

It is presumable that entrepreneurs from particularistic countries are more willing to adapt to unexpected situations than entrepreneurs from universalistic countries. Since the effectual principle embrace contingencies makes use of unexpected situations, it can be expected that:

- *The higher the degree of particularism in national culture, the more entrepreneurs will embrace contingencies.*

3.3 Hypothesis 3

The use of the causal principle competitive analysis and the effectual principle partnerships is a consequence of an attitude towards others (Read et al., 2009). Causal entrepreneurs emphasize the use of extensive analysis. Effectual entrepreneurs make use of partnerships and stakeholder commitments as a way to decrease or rule out uncertainties. The effectual principle partnership is a cooperative way of bringing an idea to a market, whereby dynamic networks play an important role (Sarasvathy, 2008).

In universalistic countries the focus is more on rules than relationships. This relationships are predetermined agreements which must be complied. In particularistic countries the focus is more on relationships than on rules. This relationships develop over time and with this networks and private understandings can be created (Trompenaars & Hampden-Turner, 1998). Besides, relationships are a source of satisfaction in particularistic countries (Trompenaars & Hampden-Turner, 1998). Also, in collectivistic countries collectivism exists among employees of other companies (Hofstede, 2001). For an entrepreneur, this increases the chance that collaboration will be successful.

It is presumable that entrepreneurs from particularistic countries are more focused on relationships than entrepreneurs from universalistic countries. Since the effectual principle partnerships makes use of relationships , it can be expected that:

- *The higher the degree of particularism in a national culture, the more partnerships or alliances entrepreneurs will use.*

4 Methodology

In this chapter, the research design will be described. This study is both qualitative and quantitative in nature and its goal is to be able to explain the influences of national culture on the use of entrepreneurial processes. In this study a comparison will be made between two countries based on their different individualism scores. A country is chosen of which the individualism score is considerably lower than the individualism score of the Netherlands and which was available in the database of the EPICC project. The individualism score of Malaysia (-0,93) is considerably lower than the individualism score of the Netherlands (1,07), which makes different use of principles of effectual and causal thought plausible. All the collected data is complementary to the database of the EPICC-project in order to give a complete answer of main research question.

4.1 Sample

The units of analysis are student entrepreneurs, which can be explained as entrepreneurs who are studying or graduated up to 3 years. The sample in this study contains 20 Dutch student entrepreneurs and 22 Malaysian student entrepreneurs. The average age of the Dutch student entrepreneurs is 25,9. The average age of the Malaysian student entrepreneurs is 23,9. The Dutch student entrepreneurs have on average 4,85 years of education and 5,4 years of working experience. The Malaysian student entrepreneurs have on average 3,73 years of education and 3,14 years of working experience. Furthermore, the samples of the Netherlands and Malaysia show inter alia differences in gender, religion, family background and study background, which are displayed in de following tables.

Religion	Netherlands	Malaysia
None	20,0%	0,0%
Christian	15,0%	27,3%
Muslim	0,0%	31,8%
Hindu	0,0%	4,5%
Catholic	5,0%	0,0%
Atheist	55,0%	9,1%
Buddhism	0,0%	22,7%
Other	5,0%	4,5%
Total	100,0%	100,0%

Table 4: Distribution of religion.

Gender	Netherlands	Malaysia
Male	85,0%	81,8%
Female	15,0%	18,2%

Table 5: Distribution of gender.

Family background	Netherlands	Malaysia
Entrepreneur	40,0%	18,2%
Public servant	35,0%	9,1%
Private company	25,0%	72,7%
Total	100,0%	100,0%

Table 6: Distribution of family background.

Study background	Netherlands	Malaysia
Economics, Business, Finance, Entrepreneurship	35,0%	59,1%
Communications, Media, Educational studies, Marketing, Psychology, HR	45,0%	9,1%
Software, Computer science, IT, Mathematics	0,0%	0,0%
Engineering, Mechanics, Chemistry, Construction	20,0%	31,8%
Total	100,0%	100,0%

Table 7: Distribution of study background.

4.2 Recruitment

The student entrepreneurs were approached thanks to organizations of universities who assist students with setting up a business. These organizations provided contact information such as names, email addresses, phone numbers and websites of student entrepreneurs across the Netherlands. The students were informed about the purpose of the research and were asked for their participation. Once agreed with the proposal, an appointment was made to carry out the case.

4.3 Setting

Before starting the experiment, the student entrepreneur was informed about the purpose of the research. Namely, to understand the various ways in which entrepreneurs deal with problems in the context of setting up, growing and managing a business. Also the purpose of the experiment was mentioned, which was the establishment of a new company, a coffee

corner. If the data in the case was not sufficient for the subject, he or she could make assumptions in order to make a decision.

The most important aspect which had to be complied by the subject was the think-aloud protocol. In this study, so-called think-aloud protocols were used in order to research in detail the differences between entrepreneurs in their perceptions and management of a variety of risks. The thoughts of entrepreneurs on issues in a problem-solving and decision-making sphere were discussed with the researcher, while the entrepreneur literally had to think aloud.

Verbal protocols are used to refer to the verbalization of thoughts of someone while he is performing a cognitive task. The protocols can be obtained concurrently with the performance of the task, but also afterwards. They act as a source of data in cognitive research (Ericsson & Simon, 1981). Verbal protocols in the past delivered data of the highest density. It is an indispensable tool in cognitive science (Ericsson & Simon, 1981).

By using this think-aloud protocols, the information someone reports can be discovered. Subsequently, this information is encoded to gain insight into a person's thought process. Instructions to keep thinking aloud disrupt the thought process of a research unit. That’s why the student entrepreneurs are explicitly instructed to keep thinking aloud all the time during the session. If this went wrong anyway, the entrepreneur was corrected.

The logic behind the use of protocol analysis can be explained as follows: Conversations afterwards give subjects the opportunity to make up good stories about how they think they handle problems, stimulus-response methods push the researcher to distract the decision-making process afterwards, concurrent verbalization give the researcher the opportunity to look inside the working of the cognitive process of the subject (Sarasvathy, 2008). Think-aloud protocols give the most reliable information about cognitive processes. The amount of behavior that can be observed is higher when some performs a task in think-aloud conditions compared to performing a task in silent conditions (Ericsson & Simon, 1981).

4.4 Experimental material

In the experiment, the student entrepreneurs were asked to solve ten decision problems in a fictive business case (http://blackboard.utwente.nl/epicc/). The ten business problems emerged in the context of setting up, growing and managing a company. In the fictive business case, the student entrepreneur performed the role of the main entrepreneur who wanted to start his own coffee shop at a university. The student entrepreneurs were examined in the use of effectual and causal principles while solving these ten business problems. The problems were different in nature to enable a complete picture of the various phases and problems of a new venture creation. An example is market identification, where questions were asked about potential customers, competitors, market research and growth opportunities. Another example of a problem is the appointment of professional management. Here, questions were asked about interview techniques that would be used and for which critical issues would be asked.

Once the student entrepreneur completed the case, another four questionnaires were distributed. The first questionnaire served as a reflection on the case, in order to understand the way the subject has experienced the case (http://blackboard.utwente.nl/epicc/). The second questionnaire focused on the biographical characteristics of the student entrepreneur, in order to get a profile of the subject (http://blackboard.utwente.nl/epicc/). The third questionnaire focused on the entrepreneurial characteristics. In order to see if there is deviant behavior by what he does in the coffee corner case, compared to his own company (http://blackboard.utwente.nl/epicc/). And the fourth questionnaire focused on the dimensions of Hofstede (http://blackboard.utwente.nl/epicc/). By which the index scores of the cultural dimensions from Hofstede could be calculated (Appendix B, p. 39).

4.5 Coding

The conversation was recorded with a mobile phone. The sound files were then transcribed into a written protocol. Thereafter the protocol was analyzed by means of a coding scheme. The protocols from Malaysia were obtained and coded by Nicole van der Linde (2012). Statements by the subject were categorized into subcategories of effectuation and causation, which is displayed in table 8. With this an overview can be made of how the subject handled with the problems of the case.

Causal	Effectual
P- Prediction of the future	C- Creation of the future
G- Goal-driven	M- Means-based
R- Expected returns	L- Affordable loss
B- Competitive analysis	A- Use of alliances or partnership
K- Avoid contingencies	E- Embrace contingencies
X- Causal (no subcategory given)	N- Effectual (no subcategory given)

Table 8: Coding scheme (Based on Sarasvathy, 2008, p.55).

Some examples of those statements are: "I would look at the expected sales and profit as a result of the investment. The investment must be profitable." (R- Expected returns) "In your business you just have to suffer a loss sometimes, in order to attain your concept." (L- Affordable loss)

4.6 Analysis

With use of an additional dataset a comparison was made between the two groups of Malaysian and Dutch student entrepreneurs. In order to compare the two unrelated groups, first had to be determined whether there is a normal or no normal distribution in each group. This was executed by means of a Kolmogorov-Smirnov test and a Shapiro-Wilk test. If the p-values of these tests were below the predetermined alpha of 5%, there was no normal distribution. In case of a normal distribution, a parametric test had to be executed. If there was no normal distribution a non-parametric test had to be executed, the Mann-Whitney U test. In the case of one normal distribution and one non-normal distribution among the groups, a Mann-Whitney U test had to be executed because non-parametric tests always can be executed, where parametric tests must have normal distributions (Moore & McCabe, 1994).

The Mann-Whitney U test uses a null hypothesis where both distribution are equal. For example, the use of partnerships among Dutch and Malaysian entrepreneurs is the same. If the p-value of the Mann-Whitney U test was higher the alpha of 5%, the null hypothesis was not rejected. If the p-value of the Mann-Whitney U test was below the alpha of 5%, the null hypothesis had to be rejected. Which means that one group had significantly higher values than the other group. In addition, by use of descriptive statistics a distribution of causation and effectuation per principle was made.

Nominal and ordinal data was obtained about the student entrepreneurs. A comparison was made in order to determine if there were significance difference in the Malaysian and Dutch sample. This was executed by means of a chi-square test. If the p-value of this test was below the predetermined alpha of 5%, there was a significant difference between the Dutch and Malaysian student entrepreneurs regarding a nominal or ordinal variable. This test was used as a detection tool for potential interfering variables regarding the relation between individualism and the use effectual and causal principles. The chi-square was executed on the following variables of the student entrepreneurs: Study direction, study level, years of education, years of work experience, age, sex, religion, having children, marital status, international experience, function international experience, parents income and family background, category of company, founding date of company and number of founders of company.

5 Results

In this chapter, the data of the sample will be analyzed by the use of statistical tests. First, the distribution of causation and effectuation per principle among the Dutch and Malaysian entrepreneurs will be displayed. Thereafter, the hypothesis are tested and the results will be discussed, so that the hypothesis can be rejected or not. In the next chapter, a conclusion can be drawn based on these results.

5.1 Distribution of causation and effectuation

On average, the Dutch entrepreneur expressed 49% effectual statements and 51% causal statements, where the Malaysian entrepreneur expressed 39% effectual statements and 61% causal statements.

The first figure shows the distribution of causation per principle. Here, it becomes clear that Dutch entrepreneurs score higher on the principles goal-driven and expected returns. The Malaysian entrepreneurs score higher on the principles competitive analysis and avoid contingencies. The scores on prediction of the future are almost the same.

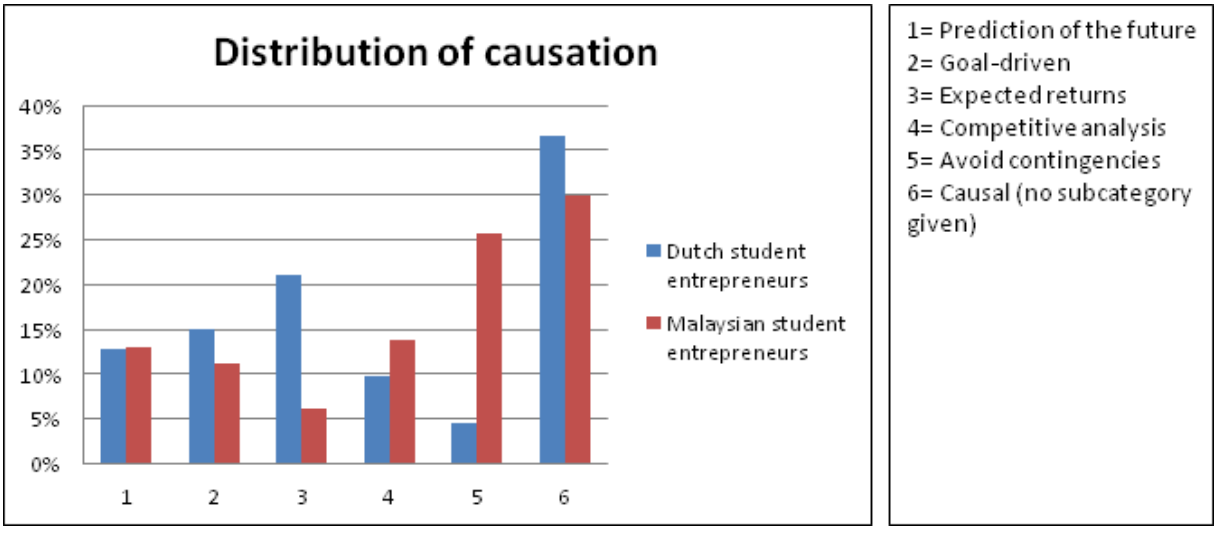

Figure 5: Distribution of causation.

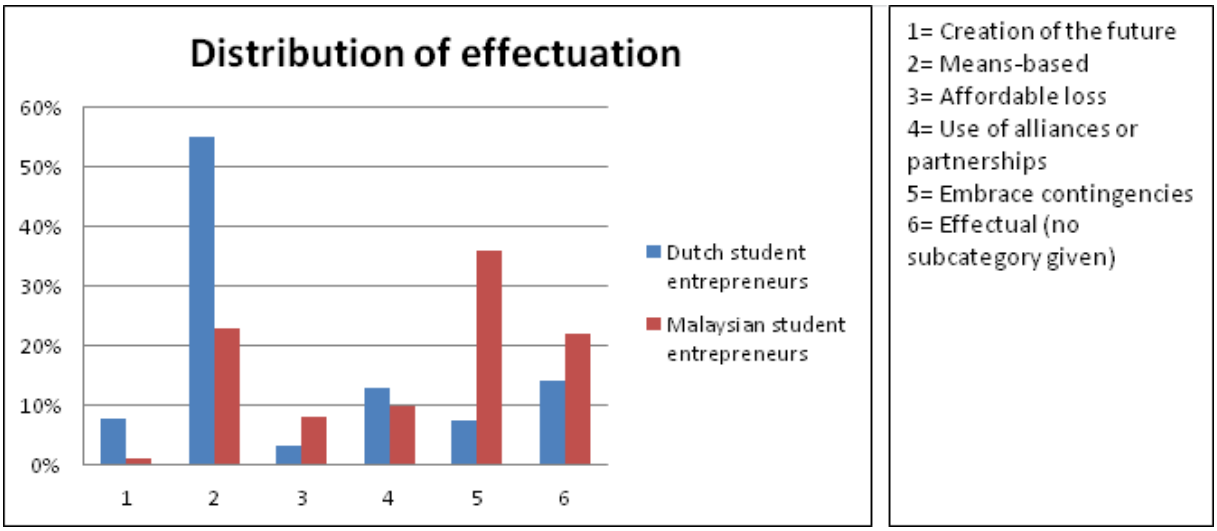

Figure 6: Distribution of effectuation.

The last figure shows the distribution of effectuation per principle. There is a distinct difference in the scores of the principles means-based and embrace contingencies. The Dutch entrepreneurs score higher on means based and lower on embrace contingencies than the Malaysian entrepreneurs. However, based on these data no conclusion can be drawn with regard to the hypothesis.

5.2 Results per hypothesis

In this subchapter, the results of the hypotheses will be addressed in order to reject or not reject the hypothesis.

5.2.1 Hypothesis 1

The higher the degree of individualism in a national culture, the more entrepreneurs will use expected returns (Van den Ham, 2012).

	Nationality Subject	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Expected returns	Dutch	,153	20	,200*	0,940	20	,236
	Malaysian	,242	22	,002	0,864	22	,006

Table 9: Test of normality hypothesis 1.

	Expected returns
Mann-Whitney U	90,000
Wilcoxon W	343,000
Z	-3,325
Asymp. Sig. (2-tailed)	0,001

Table 10: Test statistics hypothesis 1.

In line with the expectations, Dutch entrepreneurs score higher on expected returns than Malaysian entrepreneurs. The values of the Kolmogorov-Smirnov (0,002) and the Shapiro-Wilk (0.006) tests of the Malaysian sample are below the alpha of 5%, which means an absence of a normal distribution. The values of the Kolmogorov-Smirnov (0,200) and the Shapiro-Wilk (0.236) tests of the Malaysian sample are above the alpha of 5%, which means a presence of a normal distribution. Subsequently, a Mann-Whitney U test is executed. The p-value of this test is 0.001, which is lower than the alpha of 5%. Therefore, it can be stated that Dutch entrepreneurs score significantly higher on expected returns than Malaysian entrepreneur. This means that hypothesis 1 can't be rejected.

5.2.2 Hypothesis 2

The higher the degree of particularism in national culture, the more entrepreneurs will embrace contingencies.

	Nationality Subject	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Contingencies	Dutch	,247	20	,002	0,807	20	,001
	Malaysian	,189	22	,040	0,902	22	,032

Table 11: Test of normality hypothesis 2.

	Embrace contingencies
Mann-Whitney U	12,000
Wilcoxon W	222,000
Z	-5,281
Asymp. Sig. (2-tailed)	,000

Table 12: Test statistics hypothesis 2.

In line with the expectations, Malaysian entrepreneurs score higher on embrace contingencies than Dutch entrepreneurs. The values of the Kolmogorov-Smirnov (0,002) and the Shapiro-Wilk (0.001) tests of the Dutch sample are below the alpha of 5%, which means an absence of a normal distribution. The values of the Kolmogorov-Smirnov (0,040) and the Shapiro-Wilk (0.032) tests of the Malaysian sample are below the alpha of 5%, which means an absence of a normal distribution. Subsequently, a Mann-Whitney U test is executed. The p-value of this test is 0.000, which is lower than the alpha of 5%. Therefore, it can be stated that Malaysian entrepreneur score significantly higher on embrace contingencies than Dutch entrepreneurs. This means that hypothesis 2 can't be rejected.

5.2.3 Hypothesis 3

The higher the degree of particularism in a national culture, the more partnerships or alliances entrepreneurs will use.

	Nationality Subject	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Partnerships	Dutch	,300	20	,000	0,830	20	,003
	Malaysian	,189	22	,039	0,887	22	,016

Table 13: Test of normality hypothesis 3.

	Partnerships
Mann-Whitney U	183,500
Wilcoxon W	463,500
Z	-0,961
Asymp. Sig. (2-tailed)	,336

Table 14: Test statistics hypothesis 3.

In contrast with the expectations, Dutch entrepreneurs score a little higher on the use of partnerships than Malaysian entrepreneurs. The values of the Kolmogorov-Smirnov (0,000) and the Shapiro-Wilk (0.003) tests of the Dutch sample are below the alpha of 5%, which means an absence of a normal distribution. The values of the Kolmogorov-Smirnov (0,039) and the Shapiro-Wilk (0.016) tests of the Malaysian sample are below the alpha of 5%, which means an absence of a normal distribution. Subsequently, a Mann-Whitney U test is

executed. The p-value of this test is 0.336, which is higher than the alpha of 5%. This means that the use of partnerships among Malaysian and Dutch entrepreneurs is the same. Therefore, hypothesis 3 can be rejected.

5.3 Results chi-square tests

			Subjects family background			Total
			Entrepreneur	Public servant	Private company	
Nationality subject	Dutch	Count	8	7	5	20
		Expected count	5,7	4,3	10,0	20,0
	Malaysian	Count	4	2	16	22
		Expected count	6,3	4,7	11,0	22,0
Total		Count	12	9	21	42
		Expected count	12,0	9,0	21,0	42,0

Table 15: Crosstab nationality subject and subjects family background.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,800	2	,007
Likelihood Ratio	10,265	2	,006
Lineair-by-Lineair Association	6,686	1	,010
N of Valid Cases	42		

Table 16: Chi-square test nationality subject and subjects family background.

The more the difference between the expected counts and observed counts, the higher the probability that there is a link between the qualifications of row and column. Because the result of the Pearson chi-square test (0,007) is below the predetermined alpha of 5%, it can be stated that there is a relationship between the nationality of the subjects and their family background. It can be concluded that there is a significant difference between the two groups regarding family background.

Besides family background, the results of the chi-square tests have also indicated a significant difference between the two groups regarding study background (0,030), religion (0,001), marital status (0,025) and function in international experience (0,040).

6 Discussion and conclusion

6.1 Points of discussion

A possible threat to the statistical conclusion validity is the low statistical power. The sample of units consists of 20 Dutch student entrepreneurs and 22 Malaysian student entrepreneurs. A relative small sample may cause incorrect conclusion about the relationship between two variables (Shadish, Cook, & Campbell 2002). In order to eliminate this threat, in future research, a larger sample size can be used.

Another possible threat is that events which occurred before the treatment could have caused the observed effect. This can be a possible threat to the internal validity of this study (Shadish et al., 2002). For example, the present financial climate could influence the entrepreneur's mindset about expected returns and affordable loss. Malaysian is in an economic growth, regarding gross domestic product, where the Netherlands are in an economic decline (Trading economics, 2013). The economic growth in a country can influence the banks posture to invest in businesses and this can influence the entrepreneurs possibilities in starting a business. A possibility to eliminate this threat, in future research, is introducing a control group.

A possible threat to the external validity is that a certain effect, found with the used sample, might not hold if another sample had been studied (Shadish et al., 2002). This decreases the generalizability to other countries. This threat is reduced by the execution of the same research in different countries. Another possible threat to the external validity is the generalizability over units. The used sample consists of student entrepreneurs. It is uncertain if the found effects also apply for experienced entrepreneurs. In order to eliminate this threat, in future research, the research must be expanded.

A third variable can lead to an incorrect causal relationship between two other variables (Shadish et al., 2002). Differences in the sample of Dutch and Malaysian student entrepreneurs might have caused the observed relationship. These two groups are compared for significance difference in nominal and ordinal data. Based on chi-square tests, it became clear that the two groups differ significantly from each other in study background,

religion, marital status, function in international experience and family background. These variables could have interfered the observed relationships.

The identification of dimensions in order to demonstrate the distinction of aspects of culture can contribute to cross-cultural research. This way of operationalization has been criticized for its failure to completely represent all important aspects of culture. Nevertheless, the benefits of this approach for cross-cultural research compensate its limitation. Because the recognition of dimensions in which cultures differ contribute to the creation of a framework of culture, which gives a fundament for hypothesis creation (Soares, Farhangmehr, & Shoham, 2007).

In a theoretical perspective, it is interesting to explore all the different cultural dimensions of both Hofstede and Trompenaars & Hampden-Turner and its influence on the use of entrepreneurial processes, in order to give a more complete representation of national culture and its influence on entrepreneurial processes. The members of the EPICC project work hard to explore these dimensions.

Previous participants of the EPICC project also linked the dimension individualism to the use of entrepreneurial processes with use of different samples from different countries. Weynschenk (2012), Krijgsman (2012) and van der Linde (2012) investigated the influence of individualism on the use of partnerships or alliances by entrepreneurs. These three participants hypothesized that the higher the degree of collectivism in a national culture, the more entrepreneurs will make use of partnerships or alliances. Two of the three formed hypotheses were not rejected. The corresponding hypothesis in this study was rejected, which does not match with the majority of previous findings. Van den Ham (2012) investigated the influence of individualism on the use of expected returns by entrepreneurs. He also hypothesized that the higher the degree of individualism in a national culture, the more entrepreneurs will make use of expected returns. This hypothesis was not rejected, which is in line with the findings in this study. In order to determine if the same hypothesis will hold when different samples are used and to strengthen the external validity, it is recommended to further test these hypotheses in samples from different countries.

In a theoretical perspective, it is interesting to distinguish between causal & effectual reasoning and individualism & collectivism. Though, it is important to notice that both causal and effectual reasoning can be found in the same person (Venkatarman & Sarasvathy, 2001). And two extremes of cultural dimensions can always be found in the same person (Trompenaars & Hampden-Turner, 1998).

6.2 Conclusion

The influence of the dimensions individualism versus collectivism and universalism versus particularism of national culture on the use of effectual or causal principles is examined. Hypothesis 1 can't be rejected, which means that a high degree of individualism in a national culture will lead to more use of expected returns among entrepreneurs. Hypothesis 2 can't be rejected, which means that a high degree of particularism in a national culture will lead to more use of embrace contingencies. Hypothesis 3 got rejected and furthermore, no difference of the use of partnerships is observed. From this, it can be concluded that the degree of particularism in national culture has no influence on the use of partnerships.

Based on the results per hypothesis it is feasible to answer the main research question: *"To which degree influences national culture the different types of entrepreneurial processes?"*

Based on these results, it is not possible to determine the influence of the whole concept of national culture on entrepreneurial processes. Nevertheless, a relationship between the dimensions individualism versus collectivism and universalism versus particularism of national culture and the use of different types of entrepreneurial processes is found. From this, it can be concluded the degree of individualism in a national culture has a positive effect on the use expected returns among entrepreneurs and the degree of particularism in national culture has a positive effect on the use of embrace contingencies and no effect on the use of partnerships among entrepreneurs.

References

Bruyat, C., & Julien, P. A. (2001). Defining the field of research in entrepreneurship. *Journal of business venturing*, *16*(2), 165-180.

Bygrave, W. D. (1993). Theory building in the entrepreneurship paradigm. *Journal of Business Venturing*, *8*(3), 255-280.

Dahl, S. (2004). Intercultural research: The current state of knowledge.

Dew, N., Read, S., Sarasvathy, S. D., & Wiltbank, R. (2009). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal of Business Venturing*, *24*(4), 287-309.

Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of management review*, 696-706.

Ericsson, A. K., Simon, H.A. (1981). *Protocol Analysis*. Cambridge: MIT Press.

Ham, R.A. van den. (2012). *The influence of national culture on entrepreneurial processes: a comparison between Vietnam and the Netherlands*. Received on 21-6-2013: http://essay.utwente.nl/61730/

Hayton, J. C., George, G., & Zahra, S. A. (2002). National culture and entrepreneurship: A review of behavioral research. *Entrepreneurship Theory and Practice*, *26*(4), 33-52.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values* (Vol. 5): Sage Publications, Incorporated.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*: Sage Publications, Incorporated.

Kao, R. W. (1993). Defining entrepreneurship: past, present and?. *Creativity and Innovation Management*, *2*(1), 69-70.

Krijgsman, J. (2012) *The influence of national culture on entrepreneurial processes: a comparison between Mexican and Dutch entrepreneurs.* Received on 21-6-2013: http://essay.utwente.nl/61638/

Linde, N. van der. (2012). *The influence of national culture on entrepreneurial processes in Malaysia*. Received on 20-6-2013: http://essay.utwente.nl/61709/

McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: A triumph of faith-a failure of analysis. *Human relations*,*55*(1), 89-118.

Moore, D. S., & McCabe, G. P. (1994). *Statistiek in de praktijk*: Academic Service wetenschap en techniek.

Moroz, P. W., & Hindle, K. (2012). Entrepreneurship as a process: Toward harmonizing multiple perspectives. *Entrepreneurship Theory and Practice*,*36*(4), 781-818.

Perry, J.T. Chandler, G.N. & Markova, G. (2011). Entrepreneurial Effectuation: A Review and Suggestions for Future Research. *Entrepreneurship Theory & Practice, 10*, 1-24.

Read, S., & Sarasvathy, S. D. (2005). Knowing What to Do and Doing What You Know. *The Journal of Private Equity, 9*(1), 45-62.

Read, S., Song, M., & Smit, W. (2009). A meta-analytic review of effectuation and venture performance. *Journal of Business Venturing, 24*(6), 573-587.

Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of management Review*, 243-263.

Sarasvathy, S. D. (2008). *Effectuation: Elements of entrepreneurial expertise*: Edward Elgar Publishing.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). Experimental and quasi-experimental designs for generalized causal inference: Wadsworth Cengage learning.

Soares, A. M., Farhangmehr, M., & Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. *Journal of business research, 60*(3), 277-284.

Taras, V., Steel, P., & Kirkman, B. L. (2012). Improving national cultural indices using a longitudinal meta-analysis of Hofstede's dimensions. *Journal of World Business, 47*(3), 329-341.

Trading economics. (2013). *GDP annual growth rate*. Received on 28-5-2013: http://www.tradingeconomics.com/malaysia/gdp-growth-annual.

Trompenaars, F., & Hampden-Turner, C. (1998). *Riding the waves of culture*: McGraw-Hill New York.

Venkatarman, S., & Sarasvathy, S. (2001). Strategy and entrepreneurship: outlines of an untold story.

Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small business economics, 13*(1), 27-56.

Weynschenk, M. (2012) *Entrepreneurial processes in a Western-Asian context.* Received on 21-6-2013: http://essay.utwente.nl/63060/.

Appendices

Appendix A: Individualism scores

Individualism scores	Hofstede[1]	Taras et al.[2]
The Netherlands	80	1,07
Malaysia	26	-0,93

1. On a scale from 0 till 100

2. On a scale from -2 till 2

Appendix B: Index-scores

Dimensions	Index-scores the Netherlands	Index-scores Malaysia
PDI	48	86
IDV	54	39
MAS	48	66
UAI	43	72

Index-scores based on calculations from own sample.

Dimensions	Index-scores the Netherlands	Index-scores Malaysia
PDI	38	104
IDV	80	26
MAS	14	50
UAI	36	53

Hofstede's Index-scores (Hofstede, 2001).