Expansion Strategies for International Trade and Investment

National Culture and Foreign Market Entry
A theory testing Approach

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Executive Summary

This thesis is about market entry strategies for international trade and investment and to what extent the choices for certain strategies are influenced by national culture. The significance of this topic has led to numerous studies in the field of international business. Nevertheless, this does not mean that empirical studies have retrieved homogeneous outcomes. Rather, the results do not present consensus, even after decades of research. Although most of the research papers use the same measurement, Kogut and Singh's aggregate measure of cultural distance, the studies reveal different results. The measure which is a simple formula calculated on the basis of Hofstede's (1980) five cultural dimensions does not provide for equivalent results. Furthermore, most of the papers do not provide an *a posteriori* analysis of their quantitative results. This means that quantitative results are often not falsified in, for example, case studies with business organizations in order to see how individual actors conceive the relationship between culture and entry modes.

In this thesis, it was tested quantitatively if there is a significant relationship between the five cultural dimensions developed by Hofstede and the choice between equity and non-equity market entry modes. The relationship between these variables was clarified by placing them in the context of transaction cost economics. The aggregate measurement of Kogut and Singh was disaggregated in the five original dimensions. Data from forty-eight worldwide operating companies on their cultural dimension scores and the number of equity and non-equity modes per company were tested with the help of inferential statistics. Afterwards, the quantitative results were reflected with the help of a case study. Two countries were selected from the sample of the quantitative analysis, the Netherlands and Canada. Actors from the shale gas industry were chosen as sample for the interviews, because foreign market potential in this industry is seen for Dutch and Canadian companies. However, the interviews were not used to test the theory again. Rather, the case study was used to clarify the relationship between cultural dimensions and foreign market strategies. It is an illustration of the falsification of Hofstede's theory and a reflection on the quantitative results.

More than 20 years have passed since the first publication of Hofstede's *Culture's Consequences* and many research papers have yielded an impressive amount of research in the area of cultural dimensions and foreign investment strategies; however questions about the real influences of cultural dimensions on foreign market entry strategies remain. Even moving beyond the disaggregate measurement by studying the five variables separately does not seem to add to the fragmented research findings. The results of the quantitative analysis and the case study are in alignment with what was known beforehand; Hofstede's dimensions do not seem to show a significant influence on the choice between equity and non-equity market entry modes. The quantitative results show only one significant relationship between the variables. The dimension of uncertainty avoidance was found to have a significant correlation with market entry strategies. It was found that companies from countries that score low on uncertainty avoidance are more likely to enter foreign markets by equity modes. All interview partners seemed to agree with this finding. Nevertheless, the case study showed that there is more to entry decision making than just rational choice models, such as transaction cost economics. From this insight, the question remains if transaction cost economics alone is enough to explain why business organizations with different cultural backgrounds choose for certain entry modes.

In order to be able to overcome the fragmented results in the research field of culture and international investment strategies, the following is recommended:

- *Move Beyond Hofstede – Shift in paradigms on culture and investment strategies*
  A new paradigm should be developed to study the influence of cultural backgrounds on the international investment strategies. This does not mean that cultural dimensions should be neglected all together, it is the question if these dimensions can be added by individual attributes of managers (years of experience for example) in order to make them more suitable for business organization research. It is suggested that the fragmented research findings can be overcome by *improving* Hofstede's framework with additional variables that are relevant in making strategic decisions.
- *International Investment as Multilevel Phenomenon- Develop an overall theoretical market entry model*
  It is suggested that an overall framework or model should be developed which presents variables to managers they can choose from and that are retrieved from different theoretical backgrounds. One could think about including network theories and corporate culture theories.
- *Deepening of TCE theory - Including Strategic Decision Making*
  This research, as well as previous studies, have relied mostly on rational choice models such as transaction cost economics. Yet although entry mode choice is a strategic decision, many papers have seemed to ignore research on strategic decision making (SDM) in their theoretical reviews. It is suggested to include how a managers knowledge and attitudes influence entry decisions because previously made experiences can have an impact on the experiences that are made abroad. Neither Hofstede nor TCE consider manager's experiences in the past and their influence on entry mode choice.

All in all, the results show that the choice for certain international investment strategies should be rooted in a multiple theoretical framework. The complex decision making mechanisms behind entry mode choices can neither be explained by Hofstede's dimensions nor by transaction cost economics alone. The previously made postulation that many business studies are tremendously based on the assumptions of the five dimensions and transaction costs is verified in this study to be a constraining factor in successfully explain the relationships between these variables. It is time to consider alternative theoretical explanations and move beyond Hofstede because it is obvious that cultural differences have little direct effect on entry mode choices.

Table of contents

1 Introduction **1**

1.1 Research Background 1

1.2. Research Objectives 4

1.3. Research Questions 5

1.4. Research Strategy 6

2 Theoretical Background **7**

2.1. Hofstede's Culture Dimensions 7

2.2. Foreign Market Entry Modes 13

2.3. Transaction Cost Economics (TCE) 21

3 Conceptual Discussion and Hypotheses Development **26**

4 Methodology **32**

4.1. General Methods 32

4.2. Sample and Data Collection 34

4.3. Data Analysis 36

5 Results **38**

5.1. Analysis of Data Quality 38

5.2. Quantitative Analysis Results 39

5.3. Concluding Remarks on the Quantitative Analysis Results 44

5.4. Case Study Results 45

5.5. Concluding Remarks on the Case Study Results 52

6 Conclusions **53**

7 Discussion **57**

7.1. Recommendations 57

7.2. Limitations & Suggestions for further research 59

List of References **60**

Annex A - Hofstede's Survey **64**

Annex B - Country Scores on Hofstede's Dimensions **68**

Annex C - Database for Quantitative Analysis **70**

Annex D - Organizing the Data – Statistical Analysis of Data Quality **71**

Annex E - Interview Questions **77**

Annex F - Case Study on the North American and Dutch shale gas industry **78**

Abbreviations

Anova	Analysis of Variance
FMEM	Foreign Market Entry Mode
GLOBE	Global Leadership and Organizational Behaviour Effectiveness Project
IND	Individualism
JV	Joint Venture
LTO	Long-term orientation
MAS	Masculinity
NOGEPA	Nederlandse Olie en Gas Exploratie en Productie Associatie
NTO	Netherlands Trade Office Edmonton
NWP	Netherlands Water Partnership
PDI	Power Distance
PTAC	Petroleum Technology Alliance Canada
R&D	Research & Development
SDM	Strategic Decision Making
Sig. Level	Significance level
SME's	Small and medium-sized enterprises
TCE	Transaction Cost Economics
UAI	Uncertainty Avoidance
WOS	Wholly owned subsidiary

List of Figures

Figure 1	Theory-testing research approach	6
Figure 2	Hofstede's Dimensions – World Average	9
Figure 3	Classification of domestic and international expansion alternatives	14
Figure 4	Dimensions of International Activity	16
Figure 5	Classification of Foreign Market Entry Modes	17
Figure 6	General Model of the Research Process	32

List of Tables

Table 1	Hofstede's Five Dimensions & Definitions	10
Table 2	Motivations underlying foreign market entry	15
Table 3	Overview of interviewees	35
Table 4	Descriptive Statistics for the independent t-test on the difference of mean scores between cultural dimensions and entry modes	40

1 Introduction

"ConocoPhillips Looking to Enter Shale Gas in China"
- The Wall Street Journal, September 11 2012

"BA poised to take stake in American super airline"
- The Sunday Times, September 02 2011

"Scotiabank to buy ING's Canadian arm"
- Financial Times, August 29 2012

This thesis is about international market entry strategies and to what extent the choices for certain strategies are influenced by national culture. International market entry strategies refer to the methods of business organizations to enter foreign markets and rank from low involvement such as export to high involvement as in the case of joint ventures. The national culture of a country has values that distinguish the countries from each other. These values, or also called dimensions, influence the behavior of societies and organizations. The function of this chapter is to serve as idea generating and problem-definition phase of the research. The topic of interest will be identified and the general ideas are refined into precise questions to be studied. The research questions will control the way in which the research process is carried out. However, the most important rationale behind this chapter is to work towards making empirical observations by providing the research background on which this paper is based.

1.1 Research Background

Research in the area of international business studies reveals a great amount of scientific publications on the topic of cultural dimensions and the choice between different foreign market entry modes. It can be seen as a crucial topic because the choice of entry modes indicates the level of control a company can execute, whether it is full control over a foreign unit, whether control must be shared with foreign partners or whether control is given up to foreign agents (Erramilli, 1995; Contractor and Kundu, 1998; Meyer et al., 2008) . Moreover, the market entry rapidity, proximity to the market and the investment risks play an important role as well (Barkema and Vermeulen, 1997). The choice for a certain market entry mode can be seen on a continuum, starting with low investments from direct export to contractual agreements which make them non-equity modes of entry (Fladmoe-Lindquist, and Jaque, 1995).

Non-equity modes are characterized by low owner involvement. On the contrary, equity modes such as joint ventures or wholly owned subsidiaries (WOS) require greater proximities of owner involvement (Asmussen et al., 2009). The research on foreign market entries often proposes an influential approach, transaction cost economics (TCE). TCE offers a decision making framework when it comes to the choice of how to enter a foreign market. Companies are expected to choose the entry mode that minimizes the costs of a certain transaction. When the TCE framework is applied, it deals with comparing different institutional arrangement for carrying out economic activity (Williamson, 1985). The choice between direct export and joint venture is at the same time a choice between an internal arrangement and an arrangement involving a third party (Burgel & Murray, 2000). Then, the tools of the transaction cost economics framework become relevant to model these kind of decisions.

As previously mentioned, many papers in business research have made the link between cultural dimensions that are supposed to have an influence on the choice between equity and non-equity market entry modes. The most prominent theory that is used throughout business research is the theory of the five cultural dimensions developed by Hofstede (1991). The dimensions suggested by Hofstede reduce the complexities that are associated with the definition of culture into five dimensions (Brouthers and Brouthers, 2001). These are individualism-collectivism, uncertainty avoidance, power distance, masculinity-femininity and long term orientation vs. short-term orientation. The obtained scores per country specify the central values of a society and can be translated to national culture as well as to the business world. For this research it means that business organizations can be compared based on the country scores. Businesses can be selected according to the five dimensions based on Hofstede's scores and be compared on the frequency of the chosen entry modes. Comparison is what makes the scores valid, otherwise the scores would just be relative.

Research Problem

The significance of this topic has led to numerous studies in the field of international business. Nevertheless, this does not mean that empirical studies have retrieved homogeneous outcomes. Rather, the results do not present consensus, even after decades of research (Harzing, 2004; Sanchez-Peinado & Menguzzato-Boulard, 2008; Alvarez&Marin, 2010). Although most of the research papers use the same measurement, Kogut and Singh's (1988) aggregate measure of cultural distance, the papers reveal different results. The measure which is a simple formula calculated on the basis of Hofstede's (1980) five cultural dimensions does not provide for equivalent results, even if same variables or relationships have been tested. Shenkar (2001) points out that it is a standardized measure of cultural difference which can be easily

incorporated in statistical models. However, because it sums up the five dimensions in one formula, it might bypass the complexity of the cultural dimension concept. Besides, the summative formula led many researchers to believe in this one specific measurement without proposing reliable alternative measurements or look at the cultural dimensions separately and their impact on the choices for market entry modes. Furthermore, most of the papers do not provide an *a posteriori* analysis of their quantitative results. This means, that quantitative results are often not falsified in, for example, interviews with business organizations in order to see how individual actors conceive the relationship between culture and entry modes. Whereas quantitative data can make certain results available, business is often determined by factors such as market dynamics, legal environments, experiences abroad, competitive situations and many more. One could question if the inconsistent results stem from an overestimation of Hofstede's cultural distance concept. Going even further, one could ask in how far the dimensions legitimate the choices for certain market entry modes. Other concepts such as the corporate culture of a company could also play an important or even more important role for companies in deciding which foreign market entry mode to choose. However, until now these concepts have been neglected in the use and application of Hofstede's cultural distance theory because they are treated as separate concepts and are not embedded in the cultural dimension theory. It is claimed that most of the research papers do not go beyond the five concepts suggested by Hofstede to include more recent phenomena. Moreover, it is claimed that most papers rely too much on the simple formula of cultural distance developed by Kogut and Singh (1988) and do not verify their statistically obtained results in an *a posteriori* business analysis, for example as can be done with a case study.

Research Context

The starting point of the thesis is the cultural dimension theory by Hofstede which was tested in many research papers but showed not a clear relationship when it comes to the extent to which cultural dimensions explain the choice for international business strategies. Transaction cost economics is used to outline the relationship between the variables of cultural dimensions and foreign market entries and to substantiate the reflection of the quantitative results later on. It will be tested quantitatively if there is a significant relationship between the five cultural dimensions developed by Hofstede (1991) and the choice between equity and non-equity market entry modes. The aggregate measurement of Kogut and Singh (1988) which summarizes Hofstede's dimensions in one formula will be disaggregated in the five original dimensions and the relationship will be examined in terms of the five dimensions individually, instead of using a summative measurement. The disaggregation of the summative measurement is done for the reason that it is expected that each individual cultural dimension has an influence on the choice

between equity and non-equity market entry modes. It makes sense to disaggregate the measurement because culture is a complex phenomenon and the aggregate formula by Kogut and Singh is standardizing this complex phenomenon in one simple formula. Data from forty-eight worldwide operating companies on their cultural dimension scores and the number of equity and non-equity modes per company will be tested with the help of inferential statistics. Afterwards, this study is using an *a posteriori* analysis of the results in terms of a case study. Two countries are going to be selected from the sample of the quantitative analysis, the Netherlands and Canada. Actors from the shale gas industry are chosen as sample for the interviews, because foreign market potential in this industry is seen for Dutch and Canadian companies. The interviews have been conducted with business and government actors from the Dutch and Canadian shale gas sector. The interviews are not used to test the theory again. Rather, the case study is used to clarify the relation between cultural dimensions and foreign market strategies. It is an illustration of the falsification of Hofstede's theory and a reflection on the quantitative results. The semi-structured interviews in the case study are used to add to the priory obtained statistical results. To sum up, the goal of this mixed-method research approach is to develop a theory testing research in which it is aimed to find out to what extent culture explains international trade and investment strategies.

1.2. Research Objectives

From the previous made introduction to the research topic it seems that there are inconsistent results in the research area of cultural dimensions and foreign market entry modes. Although it is a research area that is already studied for many years with a lot of publications, there seems to be no clear consensus on the impact of Hofstede's cultural dimensions among the researchers. Therefore, business actors are provided with ambiguous results that probably do not offer added value for the choices in internationalization strategies when considering the various different managerial implications in the research papers.

The main objective of this research thesis is to add to empirical knowledge by developing a theory-testing research approach which examines the relationship between Hofstede's cultural dimension theory and its explanation for the choice between equity and non-equity modes. Theories on entry mode choices and transaction costs will be culturally embedded. In addition, the quantitative results will be clarified in a case study, moving this research from a deductive approach to an inductive approach. Besides, the secondary objective of this research is to provide recommendations not only on the theoretical use and application of Hofstede's cultural dimension theory but also to provide managerial implications.

1.3. Research Questions

The above mentioned introduction has revealed some important concepts that will be studied quantitatively and qualitatively throughout the paper. These main concepts are: five cultural dimensions, foreign market entry strategies and transaction cost economics. Based on all the above mentioned, the following research questions can be formulated:

Main research question:

To what extent does culture explain international investment strategies?

Sub-questions

- How can culture be described and what are the characteristics of the cultural dimensions?

- What are foreign market entry strategies and how can we understand the relation to cultural dimensions?

- To what extent is there a significant relationship between cultural dimensions and the choice for equity or non-equity market entry strategies?

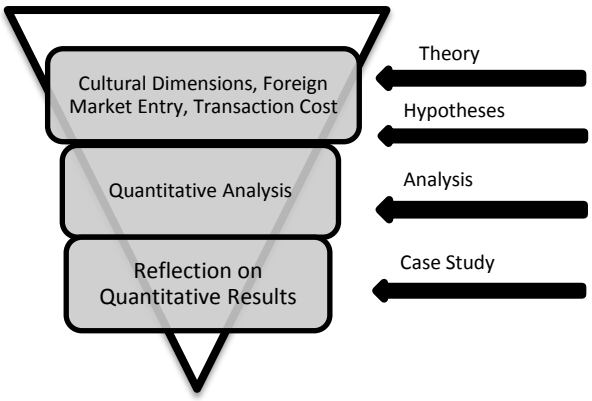
- How are the cultural dimensions perceived by actors from the Netherlands and Canada and which strategies do they consider when entering a foreign market?

1.4. Research Strategy

Below, a graphical representation of the main steps in the theory-testing research approach is illustrated.

Figure 1 Theory – testing research approach

Theory-testing research approach



Falsification Hofstede's theory

Since this thesis is using a theory-testing approach it is necessary to define first the theory on Hofstede's cultural dimension, foreign market entry modes and transaction cost economics. **In chapter two (Theoretical Framework)**, the formalized set of concepts that summarizes and organizes observations on theories will be outlined. The hypotheses will be outlined in **chapter three (Operationalization)**. To be scientific, a theory must be testable, that is, must make specific predictions that can be tested empirically, and the predictions have to be such that they can be contradicted by empirical evidence. Before the theories will be tested, the methods of doing so will be described in **chapter four (Data Collection & Method)**. The theories must then be tested for conformation or falsification in **chapter five (Data Analysis & Results)**. The actual analysis can be found in the annex whereas the results are presented in chapter five. The results of of the case study will be described in the same chapter. The thesis will be concluded with **chapter six** which summaries the main insights on the theoretical background, the analyses and results. Furthermore, this chapter will answer the main research question. Finally, chapter **seven** will provide recommendations on the use and application of Hofstede's cultural dimension theory. Limitations and suggestions for further research will round up the research. This research approach and strategies will be outlined in more detail in chapter four about the methodology of this research. In the following chapter, theoretical backgrounds on cultural dimensions, foreign market entry modes and transaction cost economics will be reviewed.

2 Theoretical Background

The function of this chapter is to explain the theoretical concepts behind cultural dimensions , the choice between different foreign market entry modes (FMEM) and transaction cost economics (TCE). The explanation of the theoretical backgrounds will play a critical role in being able to develop research hypotheses in the following chapter, because explicit theories guide decisions about the subsequent parts of the thesis. The arguments used to legitimate Hofstede's culture theory on the choice between different FMEM's will be embedded in the TCE theory. The chapter begins with an outline of Hofstede's cultural dimension theory.

2.1. Hofstede's Culture Dimensions

Objective of this review & definition of culture

The objective of the theoretical review of Hofstede's cultural dimensions is to get the reader acquainted with the dimensions and to make it possible to link them to the choice between different market entry modes in the internationalization process. Before cultural dimensions can be reviewed, it is important to get a clear picture on how the concept 'culture' can be defined. In different research areas, it has been a challenging task to provide an adequate definition of culture. Hofstede (1991, p.4) claims that "every person carriers within him or herself patterns of thinking, feeling, and potential acting which were learned throughout their lifetime" (…) such patterns of thinking, feeling and acting can be called *mental programs* (Hofstede, 1991, p.4). "Mental programs vary as much as the social environments in which they were acquired. A customary term for such a mental software is *culture."* (Hofstede, 1991, p.5). Hofstede is basing his definition on insights originated from social anthropology, where culture means 'civilization' or 'refinement of the mind'. In the years following 1991, Hofstede published more books on national culture. However, the publication from 1991 describes the underlying ideas behind the five cultural dimensions and is therefore chosen intentionally as driving publication for outlining the cultural dimension theory.

Rationale behind choosing Hofstede's theory

Next to Hofstede, many other famous scientists have focused on the study of culture and developed insights that can be useful for this study as well. Hofstede proposed five layers of culture (power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity and long-term orientation vs. short-term orientation). These dimensions result in an

'onion' model, of which Hofstede wrote that culture is like an onion that can be peeled layer by layer to expose the content. Like Hofstede, two other scientists, Trompenaars and Hampden-Turner (1997) implement an onion-like model of culture as well. However, they apply more dimensions to culture (universalism vs. particularism, individualism vs. communitarianism, neutral vs. emotional, specific vs. diffuse, achievement vs. ascription, attitude to time, internal vs. external orientation). Their assumption is based on value and behavior patterns, whereas Hofstede identified the dimensions to distinguish between country cultures. Furthermore, the *Global Leadership and Organizational Behavior Effectiveness Project (GLOBE)* can be noted as well, because the group of international scientists in this project works together to study cross-cultural leadership. They identified nine dimensions, most of them being based on the insights of Hofstede's research (performance orientation, human orientation, uncertainty avoidance, in-group collectivism, power distance, gender egalitarianism, future orientation, assertiveness and institutional collectivism (Dorfman, 2012). Finally, Schwartz (2006) wrote in *Value orientations: measurement, antecedents and consequences across nations,* about value orientations that are reflected as questions or problems in human activity. In order to plan solutions to these problems, individuals first need to differentiate between those. It is the way humans cope with these problems that serve as identification of dimensions that distinguish one culture by another. In Schwartz's theory three bipolar dimensions are specified which explain solutions to the problems that humans come across: autonomy vs. conservatism, hierarchy vs. egalitarism and mastery vs. harmony.

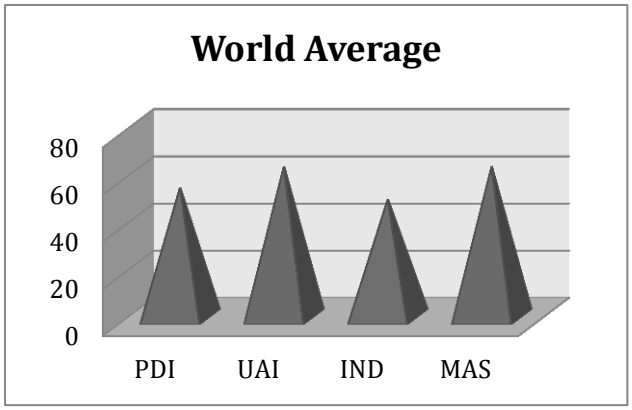
From the above mentioned, Hofstede's theory will be chosen for this research for several reasons. First, one can say that Hofstede provided the basis for cross-cultural research; other scientists like Trompenaars and Hampden Turners or the GLOBE project have relied on the Hofstede's results. Second, his insights do not only apply to research on societal norms in general, but provide the backbone for research on families, education systems and more importantly for this thesis, on the relevance of work. Finally, the dimensions are useful to explain organizational cultures. As Hofstede states (2001, p.408): *"The performance of an organization should be measured against its objectives, and top management's role is to translate objectives into strategy. Strategies are carried out via the existing structure and control systems, and their outcome is modified by the organization's culture.* Especially the issue of **control and involvement** play an important role in deciding for the use of Hofstede's theory. Later in this chapter, TCE theory will be reviewed which is an important element in understanding why companies choose between different foreign market entry modes. The TCE theory uses the concept of **control and involvement** to a large extent as well, also in developing the hypotheses and link the three overarching concepts of this thesis: cultural dimensions, foreign market entry

modes and transaction cost economics. To sum up, TCE can be understood as the linking between the other two variables.

Hofstede's Cultural Dimension Theory

In the first half of the twentieth century, social anthropology scientists developed the view that all traditional and modern societies experience the same elementary problems. The only thing that distinguished them was the answers developed. Hofstede's theory shows that cultural differences are particularly found on the deepest levels, such as the values of a society. Although different nations are confronted with same questions such as how to behave towards authoritarian decision-making, the cultural values distinguish their answers (attitudes) toward these questions. On the business level, cultural differences are particularly found on the level of practices. In the 1970s, Geert Hofstede was given the opportunity to investigate a large amount of survey data considering the values of people in more than 50 countries around the world. This survey can be found in Annex A. The people surveyed all worked for the same company – IBM. In the time between 1967 – 1973, Hofstede analysed work-related values from more than 117,000 IBM employees. In addition to statistical analyses across individuals, an analysis of variance was performed using country, occupation, gender, and age as criteria, but most crucial was correlation and factor analyses based on matched employee samples across countries. The initial analysis was limited to 40 countries with more than 50 respondents each. Only those questions were retained for which the country ranking remained stable over time. In a later stage, data from 10 more countries and three multi-country regions were added. The country culture dimension of power distance and uncertainty avoidance were found through an eclectic analysis of the data, based on theoretical reasoning and correlation analysis. The dimensions of individualism and masculinity were derived from a country-level factor analysis of scores on work goal importance. A country-level factor analysis of all data combined integrates the picture of the four dimensions. These dimensions have been presented in vector graphs per country. See below for such a vector graph for the world average on these dimensions.

Figure 2 Hofstede's Dimensions – World Average



Source: (Hofstede, 1991)

In the 1980s a new cross-national study, Bond's Chinese Value Survey, led to the addition of a fifth dimension: long-term versus shot-term orientation. After obtaining the data and the statistical analysis Hofstede found four common problems, but with solutions that differed from country to country, (Hofstede, 1991, p.13):

1. Social inequality, including the relationship with authority
2. The relationship between the individual and the group
3. Concepts of masculinity and femininity: the social implications of having been born as a boy or as a girl
4. Ways of dealing with uncertainty, relating to the control of aggression and the expression of emotions (p.13)

According to Hofstede (1991) the four problems represent dimensions of cultures. "A dimension is an aspect of a culture that can be measured relative to other cultures" (Hofstede, 1991, p.14). The problems correspond to dimensions, which are statistically independent and which explain inter-country variation. Hofstede labelled them: *power distance* (from small to large), *collectivism* versus *individualism, femininity* versus *masculinity*, and *uncertainty avoidance* (from weak to strong). Hofstede explains further that each of these dimensions is not new to the social sciences; they already existed in some form. He assigned each country in his sample a score on the dimensions that varied between 0 and 100, see Annex B. In 2010, a sixth dimension was added to the research on national culture, called *Indulgence vs Restraint.* However, this dimension is not relevant for this research because of the availability of data which seem to be more consistent for the other five dimensions explained previously. Each dimension is explained below.

Table 1 Hofstede's Five Dimensions & Definitions

Dimension	Definition
Power Distance: degree of tolerance for hierarchical or unequal relationships	*High* – Large degree of tolerance for unequal relationships *Low* – Small degree of tolerance for unequal relationships
Uncertainty Avoidance: Degree of acceptance for uncertainty or willingness to take risk	*Strong* – Little acceptance for uncertainty or risk *Weak* – Generally accepting for uncertainty and risk
Individualism: Degree of emphasis placed on individual accomplishment	*Individualism* – Large degree of emphasis on individual accomplishment *Collectivism* – Large degree of emphasis on group accomplishment

Masculinity: Degree of stress placed on materialism	*Masculanity* – Large degree of stress on materialism and wealth *Feminity* – Large degree of stress on harmony and relationships
Long-term Orientation: Degree of stress placed on virtous living in this world	*Long-term* – Associated with thrift and perseverance *Short-term* – Associated with respect for tradition, fulfilling social obligations, and protecting one's 'face'

Source: (Hofstede 1991)

Power distance

The scores on power distance tell us about the *dependence* relationship in countries. In countries with a small level of power distance, one can recognize that there is limited dependence of subordinates on their bosses. One can say that the emotional distance between subordinates and their bosses is relatively small, meaning that subordinates are willing and open in approaching their bosses. On the other hand, in large power distance countries subordinates depend considerably on their bosses, and this relationship is preferred. In these countries, it is not likely that subordinates will approach their bosses. The definition Hofstede is providing is the following, (Hofstede, 1991, p. 27-28):

Power distance can therefore be defined as the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. Power distance is thus explained from the value systems of the less powerful members.

Individualism

According to Hofstede, the majority of the people in our world live in societies where group interests prevail over the interests of the individual person. These societies can be called *collectivist* societies. On the contrary, there are also countries in which the interest of the individual prevails over the interests of the group, which can be called an *individualist society.* The definition Hofstede is providing is the following (Hofstede, 1991, p.51):

Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies 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.

Masculinity vs. Femininity

The behavioral patterns that are attributed to either males or females do not only differ among traditional societies but also among the modern societies as well. Most obviously, this can be seen in the distribution of men and women over certain professions (Hofstede, 1991, p.80). The distribution of these gender roles can be seen as a trend among most societies. "Men in short, are supposed to be assertive, competitive, and tough. Women are supposed to be more concerned with taking care of the home, the children and of people in general" (Hofstede, 1991, p.81). The definition Hofstede is providing is the following:

Masculinity pertains to societies in which social gender roles are clearly distinct (i.e. men are supposed to be assertive, tough and focused on material success whereas women are supposed to be more modest, tender, and concerned with the quality of life); femininity pertains to societies in which social gender roles overlap i.e. both men and women are supposed to be modest, tender and concerned with the quality of life.

Uncertainty avoidance

The extent to which members of a society can experience uncertainty is not only personal, but can also be shared partly with other members of the society. As the values above, uncertainty is acquired and learned as well, thereby being a likely reaction of people in a society with a common mental programming. The pattern of reacting to unknown and unstructured situations is a collective one; however these patterns might seem incomprehensible to member of other societies. The definition Hofstede is providing is the following, (Hofstede, 1991, p.113):

Uncertainty avoidance can therefore be defined as the extent to which the members of a culture feel threatened by uncertain or unknown situations. This feeling is, among other things, expressed through nervous stress and in a need for predictability: a need for written and unwritten rules.

Long-term vs. short-term orientation

This dimension was added later to Hofstede research. It was found in the answers of student samples from 23 countries around 1985 to the Chinese Value Survey (CVS), an instrument developed by M.H. Bond. The fact that this dimension was not found in the IBM survey data can be attributed to the Western minds of the designers of the IBM questionnaire (Hofstede, 2001, p.351). The definition Hofstede is providing is the following, (Hofstede, 1991, 359):

Long term orientation stands for the fostering of virtues oriented towards future rewards, in particular, perseverance and thrift. Its opposite pole, short term orientation, stands for the fostering of virtues related to the past and present, in particular, respect for tradition, preservation of 'face' and fulfilling social obligations.

This section of the chapter attempted to give the reader an insight into the cultural dimension theory developed by Hofstede. They are part of the culture concept and present value characteristics of nations and business organizations which make it possible to study the data in comparison to other countries in order to understand certain practices and strategies that nations or businesses employ. Subsequently, the next important variable of this thesis will be explained: foreign market entry modes.

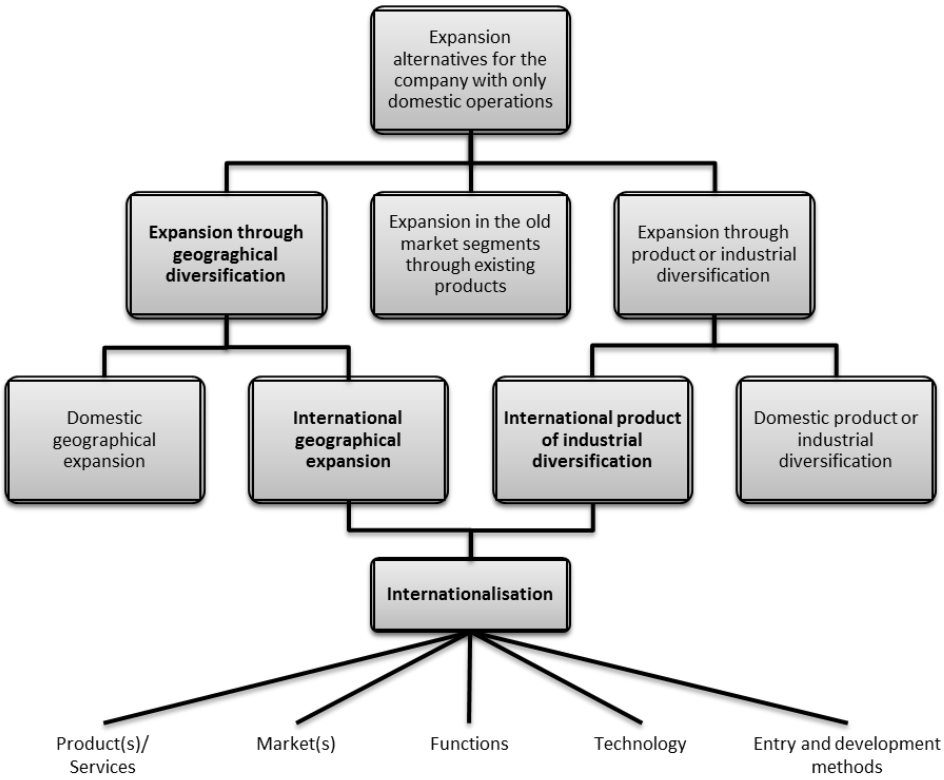
2.2. Foreign Market Entry Modes

The objective of this review is to get the reader acquainted with the concept of foreign market entry modes (FMEM), their definition and classification. Before a company decides on the entry mode, the preparation of the internationalization process needs to be considered. The elements belonging to this process and leading to the choice of an entry mode will be described as well. This part also refers to the issue of **control and involvement**, which are seen as important guiding concept in the theoretical part of the thesis because it runs as a red line through Hofstede's theory, the choice for foreign market entry modes and are underpinned by TCE.

Internationalization process

In their book *International Market Entry and Development,* Young et al. (1989) describe that the choice for a certain FMEM is representing one of a series of decisions to be made by a company within its overall business operation framework. Typically, one can assume that the internationalization process starts with an analysis of the internal and external environments, the determination of objectives which then lead to an analysis and selection of strategies. Afterwards the entry mode is implemented, evaluated and controlled. Some of the options that are open to a company seeking international expansion are illustrated below. This thesis will focus on foreign market entry strategies only, because they are seen as 'frontier issue' in international business development (Jones et al, 1989). Even though other decision areas are important as well, the method of *how* to supply the overseas market with new services or products will have a crucial effect on the success of the company.

Figure 3 Classification of domestic and international expansion alternatives



Source: Young et al (1989)

Definition of Foreign Market Entry Modes

According to Jones et al. (2009), "foreign market entry modes refer to the methods of business organizations employed by companies to enter international markets for the purpose of undertaking value-creating activities. They represent the formal mechanisms and relationships employed in cross-border activities". Morschett et al. (2010) describe foreign market entry modes as a structural agreement "that allows a firm to implement its product market strategy in a host country either by carrying out only the marketing operation (for example via export), or both production and marketing operations by itself or in partnership with others (joint ventures, wholly owned operations).

After having decided upon the direction which it is going to take, the company must then select the entry mode of achieving its strategies. Mostly, these decisions are characterized by trade-offs between costs, speed, control and risks associated with the several entry modes (Shane, 1992; Shane 1994). The starting point in deciding upon the entry mode is determined by a clear statement of objectives to be achieved in the foreign markets, which are presented in Table 2 below.

Table 2 Motivations underlying foreign market entry

Profit-oriented	
ROI	To achieve predetermined level of return on investment
Early cash recovery	In order to improve liquidity; will require immediate increase in sales
Cost reduction	Through access to lower material and factor costs; transport and communication costs; possible economies of scale through larger volume
Market-oriented	
Market stabilisation	Market entry or development within minimum disruption to avoid retaliation
Market skimming	Aimed at low sales volume in target markets, associated with market spreding
Market penetration	A more agressive approach aimed at achieving a large market share
Competitive-oriented	
Build permanent market position	Market entry or expansion to defend or improve market share
Meet or follow competition	Market entry or expansion in response to competitor actions
Exchange of threat	A response to import competition in the domestic market
Prevent new competition	Market entry or expansion aimed at establishing entry barriers
Follow customers	Market entry or expansion in response to customers' internationalization
Shaping competition	Market entry or expansion aimed at influencing industry structure
Strategic-oriented	
Technology (and other know-how) transfer	Market entry or expansion to gain access to know-how
Geographical diversification	Reduce dependency on certain country markets
Product diversification	Market entry or expansion to gain access/dvelop new product lines
Leverage	To achieve additional leverage for key resources and investments (e.g. R&D)
Control	To achieve market entry while maintaining close control over proprietary know-how etc

Source: Young et al. (1989), Burgel & Murray (2000), Datta et al. (2009)

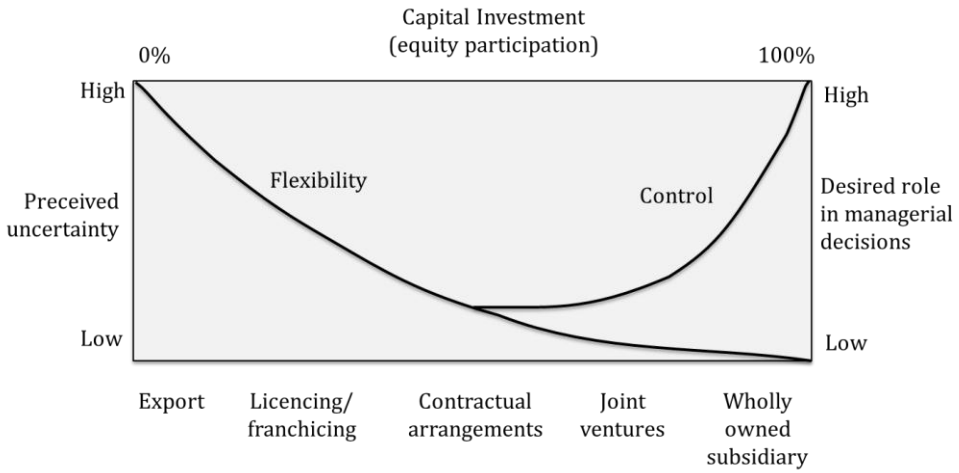
From the table above, it becomes obvious that certain factors need to be considered, such as financial costs or risks. However, all the above mentioned motivations have two important issues in common which are not immediately visible: the level of **involvement** in the foreign entity and the level of **control** the company can execute. These two issues play a crucial role for this thesis. Not only because involvement and control can become sensitive issues when entering a foreign market which is characterized by another "mental mapping" (see Hofstede).

They are also important in classifying FMEM's into two sub-groups, equity entry modes and non-equity entry modes. Before starting to classify FMEM's, the preeminent role of control and involvement will be explained first.

Control and Involvement

There is no doubt that control has a significant influence on the success of a company in a foreign market. Once a company has control, it is allowed to "implement and revise its strategies, coordinate actions and resolve disputes" (Anderson & Gatignon, 1986) that inevitably may arise once partners from different nations and cultures are collaborating. In order to take control, the company entering the foreign market takes responsibility for decision-making. However, having control over a foreign entity also increases costs and risks, for example it encompasses the commitment of resources (Davidson and McFetridge, 1985). Therefore, control and involvement are the focus of the entry mode literature because *"they are the single most important determinant of both risk and return… Firms trade various levels of control for reduction of resource commitment in the hope of reducing some forms of risk while increasing their returns"* (Anderson & Gatignon, 1989). The figure below illustrates the tradeoffs between control/cost/flexibility issues that are of great importance in deciding how to enter foreign markets. This figure is included to apply more dimensions to the taking the decisions. A simple spectrum which runs from export to take-over modes fails to take into account the complexities behind a foreign market entry.

Figure 4 Dimensions of international activity



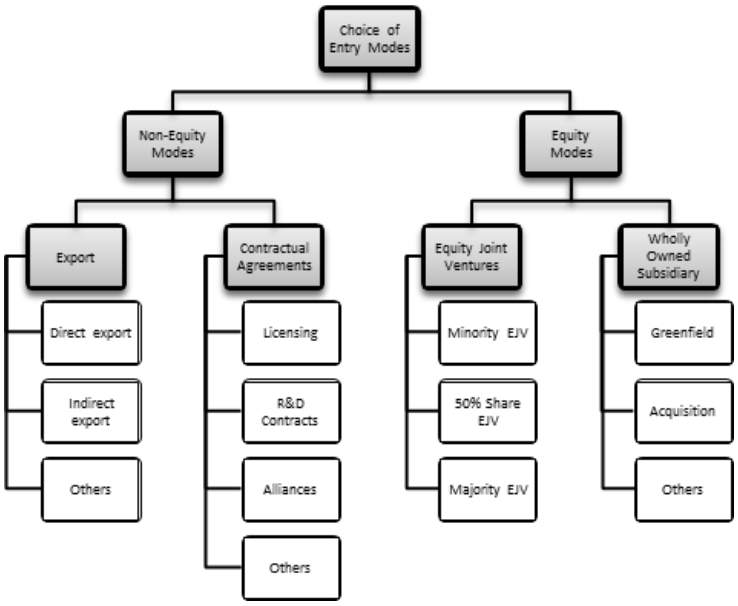
Source: Young et al. (1989)

Classifying Modes of Entry

The ideas of control and involvement fit perfectly well to the classification of foreign market entry modes. Of course, there is a wide variety of methods of classifying these modes, however, this paper considers the distinction between *non-equity* and *equity modes* of foreign market entry (Pan & Tse, 2000). Non equity modes keep owner involvement at a minimum level (such

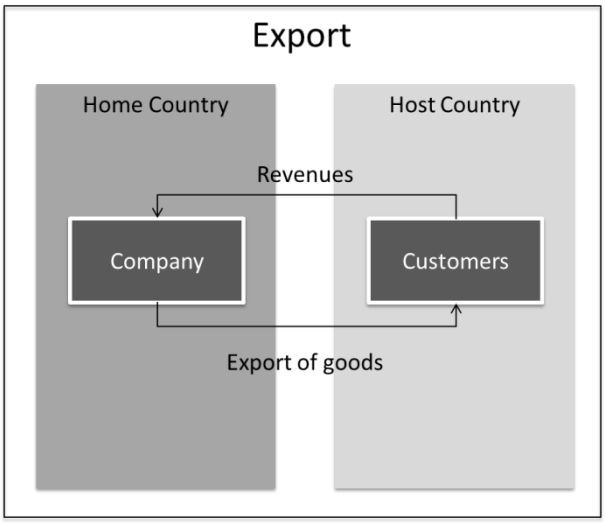
as licensing or exporting). Because they do not require direct involvement, relationships can be specified and fixed in a contract. Equity modes require owner involvement partly or to a whole extent (such as joint ventures or greenfield acquisitions). They require resource commitment in the overseas market (Anderson & Gatignon, 1989) and an ongoing direct management of the entity in a constant interaction with local parties, which also means more control. Pan and Tse (2000) present a hierarchical model for structuring non-equity and equit modes. Arguing in line with Young (1989, see above), managers structure their objectives and motivations in accordance with a defined set of evaluation criteria for each level. After deciding whether equity or non-equity modes to use, managers then decide on the specific modes *within*. Consequently, entry modes can be seen as major categories of non-equity modes (contractual agreement and export) or equity modes (wholly owned operations and joint ventures). The hierarchical representation of the modes is supported by Pan and Tse (2000) with the argument that managers convert a complex decision into a hierarchical process in order to be able to examine critical variables at each level. Furthermore, because the circumstances vary for each entry mode dramatically (control and involvement issues), it would be too difficult to compare them at the same (horizontal) level.

Figure 5 Classification of Foreign Market Entry Modes



Source: Pan & Tse (2000)

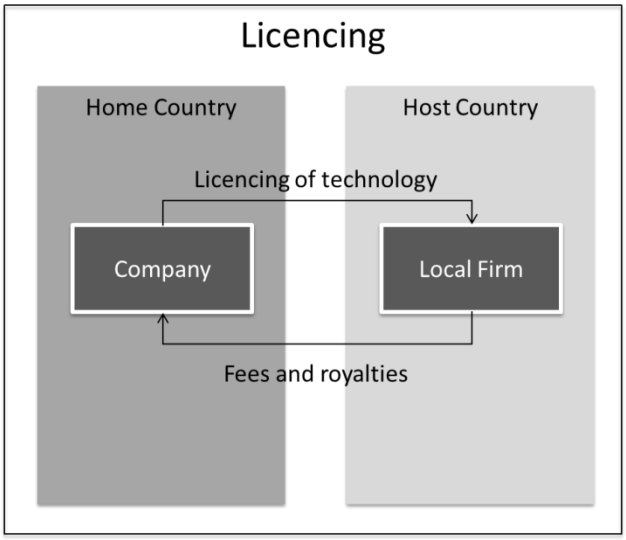
Export



In general, export is seen as the least-risk method in the internationalization process. A company can be called an *indirect exporter* "when its products are sold in foreign markets without any special activity for this purpose being undertaken within the company" (Young et al., 1989). This means that all operations associated with exporting (such as documentation, the movement of goods and distribution channels for sale) are carried out by others without the knowledge of the company itself. Exporting in an indirect way can take place through an export house, which buys directly from the company on behalf of a foreign principal. A second form of indirect export is the use of a trading company. A third form of indirect exporting is called 'piggybacking', in which the company sells its products or services through the overseas distribution facilities of another producer. The most indirect form of exporting involves foreign buyers (for example from foreign retail organization) that approach a firm to buy a product because they see the product or service suitable for their home market (Tihanyi et al., 2005).

In the form of *direct exporting*, the level of control and involvement is increased. The company carries out the export tasks itself. This requires the establishment of contacts, a prior conducted market research and the processing of documentation, transportation, storing etc. The products or services are then sold by agents or distributors. The distributor takes title to the goods and represents the company. In contrast to indirect exporting, this way facilitates a route which allows for greater control/involvement and information feedback from the foreign market (Young et al., 1989).

Licensing



Licensing refers to a contract which enables "a foreign licensor to provide a local licensee with access to one or a set of technologies or know-how in exchange for financial compensation" (Young et, 1989). The local licensee is provided with the exclusive rights to produce and market a product. This contractual agreement is specified for a certain period of time.

A license agreement may relate to the following, (Young et al., 1989):

- Patents, where a patentor may license others to use his invention, until the period of expiration of the licensed patents.
- Copyright, which protects expression as in book publishing, films and television, and computer programs
- Trade marks, being words or symbols used to distinguish particular goods and services and to indicate the origin. As with patents, duration is likely to vary between countries, although it is fairly easy to renew a trademark registration once it has expired
- Trade secrets and know-how, which are information not generally available and which may be disclosed either by itself or as part of a patent or trade mark license. This may include product and process specifications, quality-control procedures, factory layout drawings, instruction manuals and the like. Know-how is different from patents and trademarks in the sense that the latter enjoy a measure of additional legal protection.

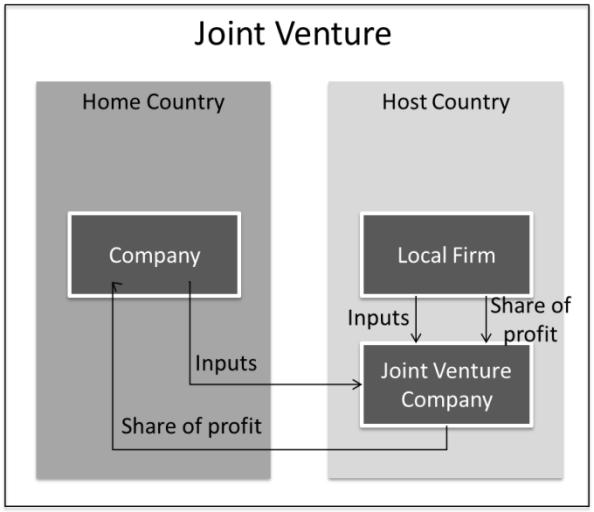
Alliances

Alliances are particularly important to small and medium-sized enterprises (SME's) which are not dominant on the market. They make it possible to build up a competitive advantage against multinational enterprises. This does not mean that the latter ones do not engage in alliances as well. Often, large and small enterprises cooperate in order to share the risks associated with innovation or in developing jointly new business opportunities (Sengupta and Perry, 1997). Moreover, alliances enable partners to link complementary skills and resources. The goal of forming alliances is to generate quick and effective objectives of the parties involved (Aroroa and Fosfuri, 2000; Pangarkar and Klein, 2001).

R&D contracts

"R&D contracts refer to outsourcing agreements in R&D between firms (that is, firm A agrees to perform certain R&D work for firm B)" (Young et al., 1989). R&D contracts make it possible to get access to innovative research or locations at a relatively low cost level. Nevertheless, three problems may occur. First, because R&D contracts are mostly multidimensional (including more than one partner, consist out of several research phases, etc.) the contracts are not easy to negotiate and to implement. First, given the uncertain and multidimensional nature of R&D, these contracts are often difficult to negotiate and enforce. Second, R&D contracts can encourage competitors. Third, companies that depend on outsiders to execute a lot of R&D run the risk of losing some of their essential R&D capabilities in the long run.

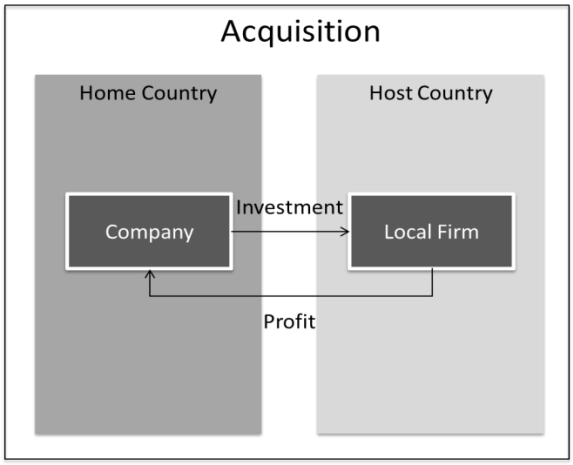
Joint ventures

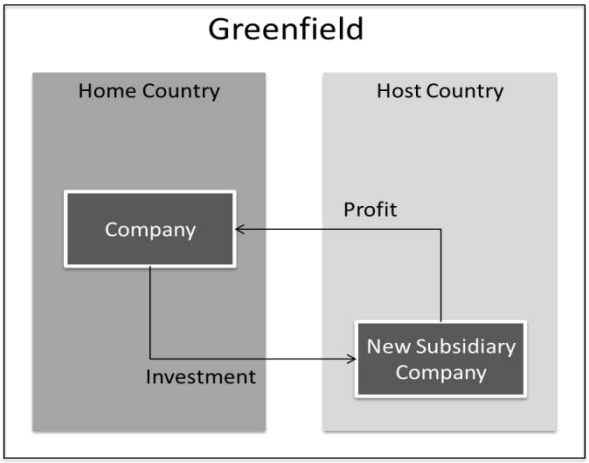


According to the Young (1989), "an equity joint venture implies the sharing of risks and profits, and participation in the ownership (i.e. equity) of a particular enterprise or investment project

by more than one firm or economic group". Usually, the relative equity shareholding is 50/50 per cent, or 51/49 per cent. However, any distribution is possible, distinguishing joint ventures into minority – or majority owned joint ventures (Agarwal, 1994). The question of how ownership and respectively control is distributed in the joint ventures is commonly based on the contributions that are made by the parties (technology, management, access to the world market, etc.)

Wholly owned subsidiaries (WOS)





WOS can be characterized by either greenfield investments or acquisitions. In greenfield investments, a company is internationalizing by starting a subsidiary from scratch in a foreign country. This step requires the company to buy local property and to hire local partners. On the contrary, a company using acquisition as an entry mode is taking over another firm that already exists in the foreign market (Kim & Hwang, 1992). The acquisition involves the takeover of the assets of a company, thereby being able to confer control to the new acquisition. However, level of control is higher in greenfield investments, because the entrant company can decide itself on the location, expected costs,

2.3. Transaction Cost Economics (TCE)

The objective of this part is to include the TCE theory that will serve as linking point between Hofstede's cultural dimension theory and the choice between different foreign market entry modes. First, an outline is given on the reasons why the TCE theory is chosen, followed by a review of the theory itself. Chapter two ends with a conclusion on the contents of the different parts, how they are linked together and how they can help with hypotheses building in chapter three.

Rationale behind choosing Transaction Cost Economics Theory

Numerous theoretical perspectives have been used when investigating the relationship between cultural dimensions and foreign market entry modes. The *resource-based view*, for example is underlining the issue of experience. A rather inexperienced company, that is new to the foreign market and which is unfamiliar with the national culture, will use entry modes with a low level of involvement and control. Once the level of experience is increased, companies enter foreign markets by more complex modes such as JV's or WOS (Meyer et al., 2009). The *institutional theory* argues that a strong or weak level of the institutional environment creates the range of acceptable entry modes, meaning that it stipulates for example the level of ownership that is allowed (Brouthers and Hennart, 2007). *Dunning's eclectic framework* adds to the insights of transaction cost economics by including three factors such as ownership advantage, location advantage and internationalization advantage that all determine whether or not a company decides to enter a foreign market (Agarwal and Ramaswami, 1992). However, when studying papers on FMEM's, it appears that one theory is prevailing over the others and is used in most of the research papers on entry modes and cultural differences; transaction cost economics (TCE). The TCE theory is chosen for this research paper because it provides a powerful lens to look at the topic of why companies prefer a certain FMEM over the other. TCE has emerged as a major paradigm for understanding how companies can derive competitive advantage from governing their transactions. TCE combines elements of industrial organization, organization theory and contract law to weigh the tradeoffs to be made in international investments. TCE has been influential because it provides a decision rule with regard to individual entry decisions. It maintains that the cost of finding, negotiating and monitoring the actions of potential partners influence entry mode choice. In its application, it is concerned with comparing different institutional arrangement for carrying out economic activity (Williamson, 1985). The tools of the theory are applicable because they provide the basis on which companies decide between equity and non-equity modes.

Definition

The concept of transaction cost economics was introduced by Ronald Coase in his publication *The Nature of the Firm* (1937) in which he stated "(…) the costs of organizing within the firm will be equal either to the costs of organizing in another firm or to the costs involved in leaving the transaction to be "organized" by price mechanism". Furthermore he claims that " (…) it is clear that the dynamic factors are also of considerable importance, and an investigation of the effect changes have on the cost of organizing within the firm and on marketing costs generally will enable one to explain why firms get larger and smaller". Oliver Williamson extended this theory by including dimensions to the transaction cost theory. Moreover, he added a few

assumptions on human nature in his theory, which are certainly of importance when one considers the link with Hofstede's *mental programming.* (Williamson, 1985).

In a broad sense, transaction costs include the finding of an appropriate partner (s), negotiating with the partner(s) and the costs of monitoring the performance of the partner firm(s). The basic idea behind TCE is that companies will always choose entry modes (also called governance strutures by Williamson, 1985) that minimize the sum of transaction costs associated with entering into the agreement, running the partnership and monitoring the arrangement (Palenzuela and Bobillo, 1999). Consequently, when one considers the entry mode context, TCE is dealing with the costs of integrating an operation *within* a firm, compared with the costs that are associated with using an *external* party to act for the company abroad (Williamson, 1985). It is also suggested that companies implement certain organization structures while expanding, phrasing them non-equity modes and equity modes (Taylor et al., 1998). Again, this distinction is influenced by the choice which structure is more cost efficient than the other. In the development of the theory, Williamson (1985) proposes that *asset specificity, internal uncertainties and external uncertainties* create two main costs: *market transaction costs and control costs.*

Asset specificity

Asset specificity refers to the physical and human resources that are involved in a transaction. To some extent, transaction costs can be created by the asset specificity of the investment that is involved when a company is entering a new market. Transferring these assets (physical or human) creates the danger that they lose their value (Klein et al., 1990; Williamson, 1985; Williamson & Ouchi, 1981). A company with unique or extraordinary resources (technologies, know-how etc) needs to take additional measures to protect these assets, which requires additional costs. Besides, a company that uses a foreign agent in the new market may face switching costs once it becomes obvious that he is not performing well or decides to leave the arrangement (Erramilli & Rao, 1993, Klein, 1990). TCE suggests that in case of low asset specificity, companies will deal with only a few costs in the protection of their resources (Hennart, 1989). This statement can be linked to the control issue mentioned previously. According to Anderson and Gatignon (1986): "because the requisite knowledge is well codified and widely available for hire, the entrant does not need to supplement the control offered by the market mechanism." When asset-specific investments are low, firms face consequently lower control-related transaction costs. Next to asset specificity, TCE advocates two types of uncertainty that companies face: *internal uncertainty*, also called behanioral uncertainty and *external uncertainty*, also called environmental uncertainty.

Internal Uncertainty

Internal uncertainty can be defined as a situation that occurs when a company is not capable of predicting the behaviour of individuals in the country it enters. Therefore, internal uncertainty as mentioned in the TCE theory can be linked to the claim of Hofstede that national cultures are different and that the culture of a society is a *mental programming,* which sometimes can be hardly understood by outsiders. Opportunistic behaviour arises from internal uncertainty because it can contain the avoidance of responsibility and other forms of dishonest behaviour (Williamson, 1985). As with asset specificity, internal uncertainty involves some type of control in order to be able to minimize opportunistic behaviour. One of the mechanisms to do so is internal control. Internal control is realized through entering the market via ownership modes (equity modes), whereby a certain extent of hierarchy is established and involvement raised. This gives a company the legal right to control the actions of the foreign actors (Williamson, 1985). However, whereas control gives a company the *right,* it does not mean necessarily that a company also has the *means* to achieve the control. Entering and controlling an unknown territory often requires special skills that are developed over time in order to be able to enter the *mental mindsets* of the foreign actors. A second type of control which is suggested in literature is experience (Johanson & Vahlne, 1990). Experience is seen as an important factor in foreign market entry because it allows for a learning period in which a company can gradually acquire knowledge about the behavioural patterns of foreign actors. Through this learning process, a company obtains knowledge in managing foreign entries. This process can be applied to either rather simple modes such as licensing or to more complex ones such as WOS (Brouthers and Brouthers, 2003).

External Uncertainty

Another type of uncertainty is called *external uncertainty.* The volatility of a foreign market means unpredictability for a company. The uncertainties refer to the risks that are associated with the foreign market and are commonly labelled as political instability, economic instability or fluctuations in currency. By the time a strict administrative and regulatory environment of the host market is allowing a new technology on the market, it can be already outdated (Williamson, 1985). Again, as with the other two dimensions, a company can apply control measures against these forms of uncertainty. In the case of increased control, a company is required to commit additional resources, like certain contracts or human capacity. However, given the uncertainties in some external markets, companies are better off by avoiding ownership because full ownership of a foreign company prevents to be flexible when it comes to external shifts (Lopez-Duarte and Vidal-Suarez, 2010). Risks should rather be allocated to

outside actors. If this is not the case and the company is locked in a specific arrangement, regular shifts in the external environment mean regular negations of new arrangements. Thus, companies operating in countries with high environmental uncertainties can rather admit to low-control entry modes, because it gives the entrants the possibility to act flexible and does not require committing resources (Williamson, 1985). Established contracts can be renegotiated at a lower cost and change of partnering firms is made easier if the company decided to apply less control and be more flexible instead (Lopez-Duarte and Vidal-Suarez, 2010).

Concluding Remarks

The function of this chapter is to provide a theoretical background on the concepts of cultural dimensions, foreign market entry and transaction cost economics. The chapter started with a definition of culture, followed by arguments why Hofstede's theory was chosen and an explanation of the five cultural dimensions: power distance, uncertainty avoidance, individualism, masculinity and long-term orientation. The next subchapter reviewed foreign market entry modes by explaining the internationalization process of a company first, providing a definition of foreign market entry modes afterwards and placing them in a hierarchical model in order to define the difference between non-equity and equity modes. The last subchapter reviewed the theory of transaction cost economics by explaining reasons why the theory was chosen and by providing a review of the theory itself.

Inducement to the next chapter

The arguments used to explain cultural dimensions and foreign market entry modes were underpinned with the TCE theory, because it encompasses some very important aspects that are recurring in all three theories: level of control, level of involvement and extent of uncertainty. Countries that are culturally distant from each other cause uncertainties for companies involved in foreign market operations. The level of uncertainty directly affects the choice between entry modes that include a high level of control and involvement or a low level of both. Unfamiliar markets cause different organizational practices abroad. By including the TCE theory in this study, this chapter attempts to show the cultural embedeness of this theory. Since the underlying assumption is that international operations can be highly uncertain, it will be more difficult to verify claims by culturally distant agents, since the claims are rooted in an unfamiliar environment, in a different *mental programming.* In the following chapter, hypotheses are developed on the concepts that have been reviewed in chapter two in order to test the theory afterwards.

3 Conceptual Discussion and Hypotheses Development

A crucial part of a theory-testing research approach is developing and testing *research hypotheses.* Developing good hypotheses involves several steps. After converting an initial idea into a problem statement, the research draws insights on previous made observations and phenomena. The theoretical background makes it possible to convert the concepts of the problem statement into specific procedures for measurement. The underlying variables of the theoretical review in the previous chapter will now be converted into hypotheses. "The research hypothesis is a specific prediction about the effects of the specific, operationally defined independent variable on the specific, operationally defined dependent variable" (Graziano & Raulin, 2004).

Conceptual Discussion

TCE theory is frequently used in entry mode research. The theory claims that companies will base their choice of entry mode associated with the costs of each entry mode. In the internationalization process companies start by outweighing different possibilities for entering the market, thereby respecting the uncertainties of the foreign market. Dealing with these uncertainties by considering the level of involvement (ownership) and control, the company then decides for the entry mode with the lowest transaction costs in order to minimize costs. The viewpoint which is taken in this study is that FMEM's are most useful when they are adopted under circumstances of uncertainty and risks and when they are used as a tradeoff between control and resource commitment. Besides, being flexible is another important issue for companies to consider. Flexibility allows for the fast change of entry modes at a low cost once necessary. The hypotheses will be developed by looking first at the insights of transaction cost analysis and how they influence the choice between equity and non-equity foreign market entry modes. Afterwards, the link is made between these assumptions and cultural dimensions in order to state what their influence is on the choice between equity and non-equity modes. The TCE theory will therefore be culturally embedded in the development of the hypotheses. Obviously, the stated hypotheses below are developed on the basis of own argumentation. As outlined in the limitation section of this thesis, the relationship of Hofstede's cultural dimensions and their influence on the choice between equity and non-equity market entry

modes can also be hypothesized from a reversed angle, meaning that the definition of the cultural dimensions leaves room for alternative interpretations.

To recall, asset specificity refers to the physical and human resources that are involved in a transaction. If a company is dealing with high asset specific investments it will be concerned with protecting these investments (know-how, specific technology etc.) in the foreign market. Entering a foreign market through equity modes makes it easier to internalize foreign operations in order to increase greater control over the use of the high asset specific investments. Non-equity modes will not be preferred because a company can't execute control once a foreign partners leaves the agreement and takes the acquired knowledge to a competitor or to form an own set up.

When the internal uncertainty of a foreign entity is high, meaning that behaviours are not easy to foresee, control is required of the entrant company. This assumes that the management level knows exactly how people behave; however this is often unlikely in unknown international markets. Only by gaining experience over the years, management will be able to form this level of experience. Once this level of experience is achieved, the company is more likely to enter through equity modes because it has developed insights into internal control mechanisms and can foresee the steps that are taken by the foreign partner. A company that is unable or unwilling to take the risks, will shift the responsibility of taking control to a locally based agent or company, hence they reduce control-related problems by entering through non-equity modes.

The amount of risks associated with a foreign market refers to the level of environmental uncertainty in this market. A company that is entering a country which is characterized by high environmental uncertainties such as political instability or economic fluctuations is more likely to enter the market through non-equity modes. This gives the company a greater field of manoeuvre once it needs to change partners or renegotiate contracts. The company preserves greater flexibility and is not committing too many resources.

Hypotheses Development

PowerDistance

Power Distance refers to the degree to which people are willing to accept the unequal allocation of power inside an organization. In a country with high power distance, a high degree of interpersonal inequality exists and this inequality is accepted. Employees accept that their supervisors are right and they do not engage in initiatives that include non-routine decision making. The people are more obedient and easier to control. In a country with low power distance, employees and managers from different levels see themselves as relatively equal; the management style is rather participative (Hofstede, 1991). The high degree in interpersonal inequality in high power distant countries aligns with a hierarchical structure of the company. This can facilitate collective activities because roles are clearly defined and people are aware to play their individual roles.

Entering a foreign market means a close and frequent contact with local companies, which is unavoidable. These contacts are hardly to write down in a contract because they occur outside of all contractual arrangements. If problems arise, firms have to be willing to work together with the local parties; a sense of hierarchy can be useful. When the level of involvement is high (equity mode) and every participant in the transaction knows about the individuals tasks, uncertainty can be reduced, and control over the several players increased. These formal power structures can't be achieved by non-equity modes because control over assets is given up to a great extent to foreign parties. Therefore:

1a: Companies from countries that are more power distant are more likely to enter foreign markets by equity modes

1b: Companies from countries that are less power distant are more likely to enter foreign markets by non-equity modes

Uncertainty Avoidance

Uncertainty avoidance refers to the tolerance of a country towards uncertain and unknown situations. In countries with high levels of uncertainty avoidance, companies are uncomfortable with uncertainty and ambiguity. In contrast, companies from countries with a low level of uncertainty avoidance are more open and flexible to act upon ambiguous, unfamiliar and challenging situations (Hofstede, 1991).In countries with high uncertainty avoidance, people tend to stay with their organization for a long time (loyalty) and organizational change is likely

to receive strong resistance. This means that people will not be flexible once environmental uncertainty arises. Entering a foreign market means to implement changes, but change is difficult for people to accept. Non-equity modes present the least changes because they can specify their activities in forms of contracts outline clear rules of behavior and create structured situations which are easier to foresee. Work procedures need to be designed clearly and controllable in order to decrease the sense of uncertainty. This means a low level of involvement (non-equity modes), to keep it simple and easy to assess. In countries with low uncertainty avoidance, structures and rules are often unclear and are not written down. The risk orientation is usually higher and in order to raise the controllability, companies want to become highly involved and show no reluctance to adopt new strategies. Therefore:

2a: Companies from countries with higher uncertainty avoidance are more likely to enter foreign markets by non-equity modes

2b: Companies from countries with lower uncertainty avoidance are more likely to enter foreign markets by equity modes

Individualism vs. Collectivism

This dimension focuses on the relationships between individuals of a society. Individualism refers to loose social framework wherein members are concerned primarily with themselves. In individualistic societies, people are more concerned with the pursuit of their personal goals and accept responsibility for their own work and are evaluated on basis of their own achievements. Entering foreign markets means to give up a certain degree of control and responsibility to other, unknown individuals. In collectivist societies, people tend to have more tight social frameworks with loyal relationships. Entering foreign markets by equity modes means a close contact with local actors and a higher physical proximity. Being more involved and sharing risks is closely linked to societies that are more collectivist oriented. Also, the communication plays an important role as well. Individualistic actors are loosely tied to each and communication is not as rich as with individualist actors because they also put emphasis on nonverbal signals and rather prefer face-to-face contact which means high involvement with foreign parties. Therefore:

3a: Companies from countries that are more individualistic are more likely to enter foreign markets by non-equity modes

3b: Companies from countries that are less individualistic are more likely to enter foreign markets by equity modes

Masculinity vs. Femininity

The *masculinity- femininity* dimension is the degree to which the dominant values in a society emphasize assertiveness, acquisition of money and status, and achievement of visible and symbolic organizational rewards (masculinity) compared to the degree to which they emphasize relationships, concern for others, and the overall quality of life (femininity). In masculine societies people value challenges and recognition, people strive for advancement and earnings. In order to achieve this, there is frequent encounters and constant interaction between the different actors. People spend longer times to keep up relationships and ensure satisfaction; moreover the actors show competitive behavior. Actors prefer entry modes in which organization performance is more directly attributable to individual actors, which costs them a high degree of involvement in terms of time, assets, risks and control to achieve their goals (equity modes). People from feminine societies rather prefer harmony above competition, cooperate at work and share or even give up trust to others and commitment to resources. People tend to be more flexible in order to suit the demand of others which means to give up certain degrees of involvement and control. Therefore:

4a: Companies from countries that are more masculine are more likely to enter foreign markets by equity modes

4b: Companies from countries that are less masculine are more likely to enter foreign markets by non-equity modes

Long term orientation vs. short term orientation

This dimension refers to the extent to which a culture programs its members to accept delayed gratification of their material, social and emotional needs; it describes a culture's orientation towards the future. In a long-term oriented society, values like persistence and perseverance

towards slow results and personal adaptability are valued. In short-term oriented societies people are more oriented towards the past and the present (Hofstede, 1991).

In long-term oriented societies, companies are more comfortable with preserving their past financial performances and do not want to take risks and high risk projects. They rather want to keep their high assets and employ greater caution and conservative decision making in order to reduce risks and uncertainty by being less involved in projects. In contrats, companies from countries that are short-term oriented want to ensure that the host partner is performing well by being direlty involved and execute control. Therefore:

5a: Companies from countries that are more long-term oriented are more likely to enter foreign markets by non-equity modes

5b: Companies from countries that are more short-term oriented are more likley to enter foreign markets by equity modes

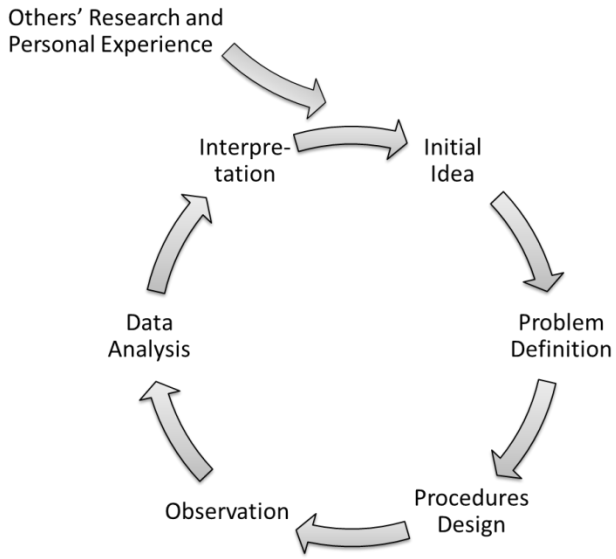
In this chapter the aforementioned theoretical insights have been translated into hypotheses. The methodology will be outlined in the next chapter. Furthermore, the formulated hypotheses will be tested subsequently.

4 Methodology

4.1. General Methods

The purpose of outlining a model of the general research process is to organize the activities of this research and to help the reader understand why the particular research activities have been chosen in this way. First a general model of a research process is presented. The several research activities in this study will be outlined afterwards in order to align them to the general research process.

Figure 6 General Model of the Research Process



This theory-testing research follows the general model of a research process, see above. Starting with the **idea generating phase**, this research is shaped by research results that have been obtained earlier on the topics of cultural dimensions and foreign market entry modes. Having established the ideas, the research then moves to the **problem-definition phase.** The examination of previous research and theory and one's own ideas are helping to place the problem in a wider research context and to define and to phrase the research questions. The research questions largely control the way the rest of the research process is carried out. The process of developing the problem into a context and research questions is used to prepare for the next phase, in which the procedures for making the observations are designed (Graziano & Raulin, 2004). In the **procedures-design phase** the researcher must determine which

observations to make and under which conditions, how to record the observations and what statistical methods to use to analyze the data (Graziano & Raulin, 2004). This phase of the research process is then followed by the **observation phase,** in which the data will be obtained. This is the empirical phase in which the research carries out the procedures that were designed in the previous phase. In the **data-analysis phase**, the researcher processes and makes sense out of the data. Statistical procedures are used to describe and evaluate numerical data and to help to determine the significance of the observations. Next to this, the obtained data can also be of non-numerical nature, such as interview responses which can be coded afterwards in order to analyze them. Having analyzed the data quantitatively, qualitatively or even both, the research starts with the **interpretation phase.** It will be determined how the data can help answer the research questions and how the answers contribute to the knowledge in the field. This stage represents the flip side of the problem-definition phase. When defining a research problem, theories were used as guiding ideas. Here, the answers that were generated by the theories determine how accurately the theories predict the observations.

General research activities of this study

This research will use a mixed method approach, both quantitative analysis and a case study. The theory-testing research starts with a theoretical review on Hofstede's cultural dimensions theory, a review on foreign market entry modes and a review on the theory of transaction cost economics. Because most of the studies in this field used Kogut and Singh's aggregate measure of cultural dimension and study results vary greatly, this paper attempts to look at the cultural dimensions separately and investigate the relationship between them and different kinds of market entry modes (*equity and non-equity modes*). The TCE theory is included to show that it proposes variables that can be used in developing the hypotheses and link cultural dimensions and foreign market entry modes, such as control, involvement, risk and uncertainty. Furthermore, by including TCE it is shown that this theory can be culturally embedded. After having reviewed the theory and developed the hypotheses, the relationships will be analyzed using quantitative data analysis. An independent sample t-test is used to compare the mean differences between countries that score either high or low on the five dimensions of Hofstede. Once the results of the quantitative analysis are obtained and analyzed, a case study will be conducted. Throughout the research for this thesis, several interviews have been conducted with business and government actors from the Dutch and Canadian shale gas sector. The interviews are not used to test the theory again. Rather, the case study is used to clarify the relation between cultural dimensions and foreign market strategies. It is an illustration of the falsification of Hofstede's theory and a reflection on the quantitative results.

4.2. Sample and Data Collection

This part of the chapter will describe the sample for the theory-testing research for the quantitative part as well as for the case study. Furthermore, it will be elaborated upon the data collection techniques for both research activities.

Quantitative Analysis

The sample for the statistical analyses includes n=48 companies from 12 countries (Canada, China, Denmark, France, Germany, Great Britain, Japan, The Netherlands, South Korea, Sweden, Switzerland and U.S.A). These countries were chosen on the basis of representing western countries. In addition, Hofstede's scores are reliable for these countries. Looking at Africa and South America, Hofstede was not able to collect data for all countries on these continents. The third reason is that the above mentioned countries all were recurrent in all five dimensions of Hofstede, either scoring on average higher or on average lower. The scores for each country are obtained from Hofstede's database, see Annex B. The database is publicly accesible to all people wanting to get an insight into Hofstede's data or in order to use them for research. The 48 companies from these countries were chosen on the basis of purposive sampling of typical instances (Shadish, Cook and Campbell, 2002). According to Shadish, Cook and Campbell (2002), *"defining typical instances … is easiest when the target of generalization is a clearly delineated single instance or set of instances … that available data describe on various characteristics".* All the companies that were chosen for the analysis are publicly traded on the national stock exchanges of the 12 countries. Publicly traded companies publish annual reports on the developments of their company, inside the own country but also in foreign markets. The annual reports provide information on the foreign market activities; the number of foreign entries and the nature of the entries(equity or non-equity). Data will be gathered on the largest firms since they are similar in terms of range of activities, international experience, scope and size. The data contain information on all foreign market entry strategies reported in the annual reports between 2009 and 2011. This time frame was chosen because foreign market activities of these firms can be assumed to increase after the financial crisis in 2008 when a possible downturn is assumed (Wall Street Journal, 2012). The host markets of these countries are distributed all over the world. Below it is explained step by step how the data have been collected.

1. Starting with the independent variable, Hofstede's five dimensions were split up in categories in order to be able to group the countries in categories from low to high. From Hofstede's dataset it becomes clear that only in some minor cases the score of 100 is excessed. The countries will be grouped from a ranking low (score 0-51) to high (52 and higher).

2. From this categorization, countries were chosen that are recurrent in all five dimensions in order to keep the sample the same. Countries were also chosen on the basis of the existence of an own national stock exchange.

3. From the 12 countries that were chosen, 4 companies per country have been chosen purposively from different industries to avoid an analysis for one sector/industry only. All these companies are publicly traded on the national stock exchanges.

4. The information on the foreign market entry modes is retrieved through a scan of the annual reports and press releases and counted in terms of non-equity/equity foreign market entry mode.

5. The time frame of the data retrieved is January 2009 – December 2011

6. A dataset is created which displays the amount of non-equity/equity foreign market entry modes per country, the sector of the company and the cultural dimension score for each of Hofstede's five dimensions (the database can be found in Annex C).

Case Study

The sample of the qualitative case study includes actors from companies, governments and institutes (n=12). Below a table provides information on the amount of interviews conducted and the position of the interview partners. The set of questions have been discussed with twelve interviewees. More contacts with other organizations also provided insights, however the set of questions have not been discussed with them.

Table 3 Overview of interviewees

Time Frame	**October 2011 – July 2012**
Canada	**Netherlands**
Provincial Ministry of Environment and Water Albert – Groundwater Policy Specialist	Government Institution NTO – Trade Commissioner
Provincial Ministry of Environment and Water Alberta – Groundwater Policy Specialist	Business organization – Director Business Development
Network Platform PTAC – Director Oil and Oil Sands	Government Institution Ministry of Economic Affairs – Coordinator Innovation Program
Environmental Consulting – Principal	Network Organization NWP – Project Office
Engineering and Procurement Management	Network Organization NWP – Director Innovation

Services – Regional Director	Program Water Technology
	Government Institution Ministry of Economic Affairs – Advisor Centre of Expertise International Research and Innovation
	Association NOGEPA – Management
	Knowledge institute – Consultant Researcher Business Unit Innovation & Environment
	Investment and Development Company – Manager
	Institute Deltares – Cluster Manager Canada

The sample was chosen purposively because only 'typical instances' are able to answer questions that are related to the case study. A randomly selected sample would be unable to have the appropriate knowledge to answer the questions during the semi-structures interviews. This technique was chosen because it allows for open-ended questions without having a limited set of questions for the interview. An open method of interviewing is encouraged, where answers of the interviewee can be discussed back and forth. Whereas some questions will be designed beforehand, others will come up during the interview. An overview of a loose set of questions can be found in Annex D.

4.3. Data Analysis

Inferential statistics are used most frequently to evaluate mean differences between groups. Such statistical techniques are valuable because research hypotheses can often be specified in terms of mean differences. There are several tests for evaluating mean differences between groups, like the t-test for independent groups, the correlated t-test and the analysis of variance (ANOVA). This research will use the independent t-test because the data are on a ratio scale (parametric data) and the correct analysis for this data type includes the computation of the mean and variance. Furthermore, the independent t-test is used because the dependent variable is of dichotomous nature. The independent t-test is a *parametric test* based on the normal distribution. Therefore, it can be assumed that:

- Data are from normally distributed populations
- Variances in these populations are roughly equal (*homogeneity of variance)*
- Scores are independent (because they come from different people)
- Data are measures at least at the interval level

These assumptions will be checked using the computer program SPSS. Afterwards the independent t-test will be analyzed with SPSS and an output containing the test statistics will be

provided. The test results will be reported in chapter seven. The acceptance or rejection of the hypotheses and the statistical significance is calculated based on a standard that no more than 5% (.05 level) of the variance is due to chance or sampling error and that the same variance would occur 95% of the time should the test be repeated.

The semi-structured interviews will be analyzed following an open coding method. With this approach, one is able to analyze data by selecting them into categories and name these. Because the data are collected using a semi-structured approach, important variables and concepts involved in the answers will be identified and subsequently categorized in order to be able to establish relationships between them. To do this, it is necessary to make sure in what kind of "range" the variables fall. Conceptualizing and operationalizing these variables is of importance in order to locate them to certain values (Babbie, 2006).

5 Results

This chapter describes the results of the quantitative analyses of data on foreign market entry modes and cultural dimensions from twelve countries. It is attempted to find out to what extent culture explains the choice for foreign investment strategies. The analysis of the data quality is briefly intrdocued, Annex D provides an overall description of the analysis. Additionally, Table 4 summarizes all quantitative results. The results for each hypothesis are described systematically below. After presenting some concluding remarks on the quantitative results, the chapter continuous with the interviews that have been conducted for the case study. The interview questions and a introduction thourough description on the case study can be found in Annex E and F. The purpose of the case study is an illustration of the falsification of Hofstede's theory. With the help of the case study it will be clarified how cultural dimensions are perceived and which role and impact Hofstede's dimensions play in foreign business activities. The interviews are a reflection on the quantitative results.

5.1. Analysis of Data Quality

Annex D shows the presentation of the data and the analysis of the data quality. Since the independent t-test is a parametric test, a normal distribution can be assumed. Performing a z-score test to see the skeweness of the data, it can be said at first glance that the data are skewed and not normally distributed (equity modes z-score = 4.834, non-equity modes z-score = 4.802). Nevertheless, a Q-Q plot chart is outlined which shows that most of the data are in line with a normal distribution; the assumption is therefore tenable. In addition, the assumption of interval data is tenable as well because the data for the two dependent variables equity and non-equity modes are of a high measurement level, they are ratio-scale variables. After performing a Brown-Forsythe test to check for the assumption of homogeneity, the test indicated that the variances are not significantly different, the assumption is tenable. Finally, the assumption of independence is also fulfilled because the companies are not influenced by each other on the choice between different foreign market entry modes. Since the assumptions have been checked and are all tenable, the independent t-test can be performed.

5.2. Quantitative Analysis Results

The analysis of the data is presented in a systematic manner. All descriptive statistics will be presented in an overall table. Afterwards, the five sub-paragraphs go into detail of each of the five relationships tested. The outputs from the five independent t-tests contain two tables. The first table provides a summary statistics for the two experimental conditions. The second output table contains the main test statistics.

The data in Table 4 are summarized into an overall table in order to give an overview of all significance levels found while testing the hypotheses. The cultural dimensions have been disaggregated and have been tested separately from each other instead of using an aggregate formula for all five dimensions. By testing the dimensions separately, only one significant relationship was found. Four out of the five hypotheses are rejected. Below, the descriptive results of the analysis for each of the five hypotheses are described in more detail.

Table 4 Descriptive Statistics for Independent t-test on the difference between mean scores of cultural dimensions and entry modes

		Levene's Test for Equality of Variance		t-test for Equality of Means				
		F	Sig.	t	df	Sig.*(2-tailed)	Mean Difference	Std. Error Difference
pdi_di	equity	1.164	.286	.897	46	.375	.813	.906
				1.033	42.822	.308	.813	.787
	non_equity	4.262	.045	1.172	46	.247	1.000	.853
				1.399	45.176	.169	1.000	.715
uai_di	equity	.145	.705	-2.297	46	.026	-1.875	.816
				-2.297	45.226	.026	-1.875	.816
	non_equity	5.369	.025	.000	46	1.000	.000	.816
				.000	34.859	1.000	.000	.816
idv_di	equity	1.076	.305	-1.278	46	.208	-1.250	.978
				-1.625	31.822	.114	-1.250	.769
	non_equity	2.279	.138	-.892	46	.377	-.833	.935
				-1.118	30.689	.272	-.833	.746
mas_di	equity	.013	.909	.782	46	.439	.679	.868
				.755	35.709	.455	.679	.898
	non_equity	2.895	.096	-.086	46	.932	-.071	.828
				-.092	45.753	.927	-.071	.774
lto_di	equity	.350	.557	-1.654	46	.105	-1.469	.888
				-1.697	32.232	.099	-1.469	.866
	non_equity	4.379	.042	.470	46	.640	.406	.864
				.396	20.138	.697	.406	1.027

N(48); *Sig.<.05;
a Independent Variable: Cultural Dimensions; b Dependent Variable: foreign market entry modes

Power Distance and the choice between equity and non-equity market entry

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
equity	Equal variances assumed	1.164	.286	.897	46	.375	.813	.906	-1.012	2.637
	Equal variances not assumed			1.033	42.822	.308	.813	.787	-.775	2.400
non_equity	Equal variances assumed	4.262	.045	1.172	46	.247	1.000	.853	-.718	2.718
	Equal variances not assumed			1.399	45.176	.169	1.000	.715	-.440	2.440

The first thing to notice is that there are two rows containing values for the test statistics: one row is labeled *Equal variances assumed*, while the other is labeled *Equal variances not assumed.* Looking first at the Levene's test, we can see for the first group that the *Sig.* level is .286 which means that we can assume equal variances. For the non-equity group, *the Sig.* level is at .045; therefore we cannot assume equal variance. To conclude, for the equity group we have to look at the t value of .897, with a degrees of freedom of 46. We can see that the significance level is at .375, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in equity modes between companies from high power distant countries and low power distant countries is not statistically significant.**

For the non-equity group we have to look at the t value of 1.399 because equal variance is not assumed. The degrees of freedom is 45.17. We can see that the significance level is at .169, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in non-equity modes between companies from high power distant countries and low power distant countries is not statistically significant.**

Uncertainty Avoidance and the choice between equity and non-equity market entry

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
equity	Equal variances assumed	.145	.705	-2.297	46	.026	-1.875	.816	-3.518	-.232
	Equal variances not assumed			-2.297	45.226	.026	-1.875	.816	-3.519	-.231
non_equity	Equal variances assumed	5.369	.025	.000	46	1.000	.000	.816	-1.643	1.643
	Equal variances not assumed			.000	34.859	1.000	.000	.816	-1.658	1.658

Looking first at the Levene's test, we can see for the first group that the *Sig.* level is .705 which means that we can assume equal variances. For the non-equity group, *the Sig.* level is at .025; therefore we cannot assume equal variance.

Concluding, for the equity group we have to look at the t value of -2.297, with a degrees of freedom of 46. We can see that the significance level is at .026, because this level is less than .05 we would reject the null hypothesis of no difference between the means. **The difference in equity modes between companies from high uncertainty avoidance countries and low uncertainty avoidance countries is statistically significant.**

There was a significant difference in the scores for low uncertainty avoidance (M=2.92, SD= 2.64) and high uncertainty avoidance (M= 4.79, SD= 3.01) dimensions; t(46)=-2.297, p= 0,026. These results suggest that low uncertainty avoidance does have an effect on the choice for equity modes.

For the non-equity group we have to look at the t value of .000 because equal variance is not assumed. The degrees of freedom is 34.86. We can see that the significance level is at 1.0, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in non-equity modes between companies from high uncertainty avoidance countries and low uncertainty avoidance countries is not statistically significant.**

Individualism and the choice between equity and non-equity market entry

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
equity	Equal variances assumed	1.076	.305	-1.278	46	.208	-1.250	.978	-3.218	.718
	Equal variances not assumed			-1.625	31.822	.114	-1.250	.769	-2.817	.317
non_equity	Equal variances assumed	2.279	.138	-.892	46	.377	-.833	.935	-2.715	1.048
	Equal variances not assumed			-1.118	30.689	.272	-.833	.746	-2.355	.688

Looking first at the Levene's test, we can see for both groups the *Sig.* level is more than .05 (.305 and .138) so we can assume equal variance for both means. Concluding, for the equity group we have to look at the t value of -1.278, with a degrees of freedom of 46. We can see that the significance level is at .208, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in equity modes between**

companies from more individualist countries and less individualist countries is not statistically different.

For the non-equity group we have to look at the t value of -.892 with a degrees of freedom of 46. We can see that the significance level is at .377, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in non-equity modes between companies from more individualistic countries and less individualist countries is not statistically significant.**

Masculinity and the choice between equity and non-equity market entry

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
equity	Equal variances assumed	.013	.909	.782	46	.439	.679	.868	-1.069	2.426
	Equal variances not assumed			.755	35.709	.455	.679	.898	-1.144	2.501
non_equity	Equal variances assumed	2.895	.096	-.086	46	.932	-.071	.828	-1.738	1.595
	Equal variances not assumed			-.092	45.753	.927	-.071	.774	-1.629	1.486

Looking first at the Levene's test, we can see for the first group that the *Sig.* level is .909 which means that we can assume equal variance. For the non-equity group, the *Sig.* level is at .096 which is more than .05 so here we can assume equal variance as well.

Concluding, for the equity group we have to look at the t value of .782 with a degrees of freedom of 46. We can see that the significance level is at .439, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in equity modes between companies from more masculine countries and less masculine countries is not statistically significant.**

For the non-equity group we have to look at the t value of -.086, with a degrees of freedom of 46. We can see that the significance level is at .932, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in non-equity modes between companies from more masculine countries and less masculine countries is not statistically significant.**

Long term orientation and the choice between equity and non-equity market entry

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
equity	Equal variances assumed	.350	.557	-1.654	46	.105	-1.469	.888	-3.256	.319
	Equal variances not assumed			-1.697	32.232	.099	-1.469	.866	-3.232	.294
non_equity	Equal variances assumed	4.379	.042	.470	46	.640	.406	.864	-1.333	2.145
	Equal variances not assumed			.396	20.138	.697	.406	1.027	-1.735	2.547

Looking first at the Levene's test, we can see for the first group that the *Sig.* level is .557 which means that we can assume equal variances. For the non-equity group, *the Sig.* level is at .042; therefore we cannot assume equal variance.

Concluding, for the equity group we have to look at the t value of -1.654, with a degrees of freedom of 46. We can see that the significance level is at .105, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in equity modes between companies from high long term oriented countries and short term oriented countries is not statistically significant.**

For the non-equity group we have to look at the t value of .396 because equal variance is not assumed. The degrees of freedom is 20.138. We can see that the significance level is at .697, because this level is more than .05 we cannot reject the null hypothesis of no difference between the means. **The difference in non-equity modes between companies from high long term oriented countries and short term oriented countries is not statistically significant.**

5.3. Concluding Remarks on the Quantitative Analysis Results

In the first subchapter a quantitative analysis of data was performed to test the relationship between Hofstede's five dimensions and the choice between equity and non-equity market entry modes. The analysis started with a test of the four assumptions that have to be checked before starting to perform a t-test for independent groups (normally distributed data, homogeneity of variance, interval data and independence). The analysis of the data quality can be found in Annex D. The assumption of normally distributed data was slightly violated when analyzing the skewness of the data. However, once a Q-Q plot was employed the assumption was accepted. Analyzing the homogeneity of variance with the Levene's test first showed that

one group presented equal variance, whereas another group showed unequal variance. SPSS provides another test for correcting these slight differences and in order to able to be able to accept the assumption. Applying the Brown-Forsythe test, indicates that both groups can be accepted to have equal variance. After the assumptions have been checked, the t-tests for every five hypotheses were conducted. The data have been presented in a systematic manner. First of all, an overall table was included to present a summary of the significance levels found for all relationships under investigation. Afterwards, the cultural dimensions have been tested in a disaggregated way rather than use a summative formula for the dimensions. As is explained in the sub-paragraphs, the individual testing leads to the conclusion that four out of the five hypotheses can be rejected. Only one relationship was found to be significant, namely the influence of uncertainty avoidance on the choice between equity and non-equity market entry modes.

5.4. Case Study Results

The rationale behind the quantitative analysis is to provide an alternative approach in studying the relationship between cultural dimension and the choice between equity and non-equity foreign market entry modes. As explained in the first chapter, most papers concentrate on the aggregate measurement of Kogut and Singh (1988) without having a look at the five dimensions separately. In addition, the results of previous research differ tremendously, there seems to be no consensus in how far the cultural dimensions influence the choice for equity or non-equity market entry modes. Finally, most papers do not add to their quantitive results by including field research such as case studies. Throughout the research for this thesis, several interviews have been conducted with business and government actors from the Dutch and Canadian shale gas sector. The interviews are not used to test the theory again. Rather, the case study is used to clarify the relationship between cultural dimensions and foreign market entry strategies. It is an illustration of the falsification of Hofstede's theory and a reflection on the quantitative results.

This thesis attempts to contribute to the inconsistencies described above. The relationships between Hofstede's five dimensions and foreign market entry modes have been hypothesized for each dimension separately in order to avoid the aggregate measurement of Kogut and Singh (1998). A parametric test was applied to investigate the relationship between the dimensions and the choice between equity and non-equity market entry modes. However, the quantitative results are in alignment with what was known beforehand; Hofstede's dimensions do not seem to show a significant influence on the choice between equity and non-equity market entry modes. Only one test revealed a positive significant relationship between the variables. It

appears that research which is inspired by Hofstede is redundant and has led to a lack of synergy, even if the aggregate forumula of cultural dimension is disaggregated.

The SPSS outputs in this chapter present the significance levels of the variables under investigation. Hypothesis 1 focused on the independent variable of power distance and the choice between equity and non-equity foreign market entry modes. It was hypothesized that companies from countries that are more power distant are more likely to enter foreign markets by equity modes and that companies from countries that are less power distant are more likely to enter foreign markets by equity modes. *However, the statistical analysis shows that there is no significant relationship between low or high power distance and the choice between equity and non-equity modes.* Asking the interview partners about their experiences and viewpoints with regards to these variables all of them indicated that hierarchical structures, whether low or high, do not play a role in deciding whether to enter a market through an equity or non-equity mode. Canada and the Netherlands both score almost equally on the dimension of power distance (Canada = 39; Netherlands 38). Interview partners from both countries showed indeed a rather participative sense in deciding collectively on actions to take. Although one can see the direct physical hierarchy in Canada more than in the Netherlands (the way in which the offices were allocated for example) parties from both countries mentioned that characteristics of their participative management style do not have a direct effect on the choice between equity or non-equity market entry modes. Dutch parties mentioned:

"The most important aspects to consider in transferring our technology abroad is to protect our knowledge but also to be able to reach the customers abroad and supply them with our technologies. For this, it is necessary to find the right balance between protecting our assets and open them to a new public abroad. I'm sure that hierarchical structures won't help, it is rather the way and experiences made in one's own business that determine which kind of entry will be chosen".

"We do not only sell our products, we also want to sell our vision. This makes it more important to look at once own business culture than the hierarchical structures within. A whole business culture cannot be adjusted so fast as a hierarchical structure, that's more important to consider".

"Being led by hierarchical structures of who is going to do exactly what can lead to a complete failure in the foreign market and to an ignorance of market conditions. For us it is important to engage with parties abroad in order to show what we can but also to learn more about their markets. I believe that is only achievable by being present abroad. Especially in the shale gas market it is important to establish a reputation."

One Canadian party stated:

"Collaborating with a foreign party is always associated with differences, from cultural ones to organizational ones. In the end every company or organization is pursuing its own organizational goals. We can help facilitate to overcome barriers that prevent companies from both sides of the ocean to share risks and commitment. A company coming to Canada first needs to prove its technology before it will be accepted here. Hierarchies do not play a role so much; it's more about the vision behind a product that is sold."

It seems that the answers related to organizational structures/hierarchies and the statistical results have certain insights in common. Power distance, whether low or high is both quantitatively and qualitatively not proved as having an impact on whether to choose equity or non-equity modes.The structure within a company (its business culture) was said to have an influence on how decisions are made. However, deciding to go abroad involves more than just the structure within a company. In order to survive in a foreign market, companies the commitment of resources is required. With this is mind, it is essential to look at corporate visions and how to sell these together with the products abroad. Controlling the own assets abroad seems to be a very important aspect indicated during the interviews. It seems that strong organizational cultures provide companies rather with the right tools to enter foreign market than the orientation on hierarchical structures. The latter ones are indicated as having no influence on the ability to protect and control assets abroad. From the interviews there seems to be a strong will to high a high involvement (equity modes) in the Canadian shale gas market. The reason behind this is that a certain degree of presence/involvement makes it possible to better prove the technologies on the market.

Hypothesis 2 focused on the independent variable of uncertainty avoidance and the choice between equity and non-equity market entry modes. It was hypothesized that companies from countries with higher uncertainty avoidance are more likely to enter foreign markets by non-equity modes and companies from countries with lower uncertainty avoidance are more likely to enter foreign markets by equity modes. *The statistical results suggested indeed a positive and significant relation between the variables equity mode of market entry and lower uncertainty avoidance*. It is the only hypothesis that was confirmed by the statistical analysis. Both Canada and the Netherlands have almost exact scores on uncertainty avoidance with the Netherlands scoring a bit higher (53), Canada (48). Uncertainty can be said to be the most important concepts for the interview partners. However, they associated uncertainty rather with the business environment abroad than with cultural aspects such as loyalty to the organization etc. For the theory, this implies that the statements are more in line with the insights of TCE than Hofstede's cultural dimension premises. When unpredictability plays a major role when asset

specificity is high (as in the case of shale gas technologies), there is a stronger need for control that these specificieties create.

"In the current competitive environments, going abroad means survival of the fittest. A company that is driven to sell its innovative products abroad needs to take risks, share resources and be flexibility once it experiences unknown situations."

"One can only prevent uncertainty by being present in the market. However, Canadian parties are only willing to buy foreign products if they have established a good reputation. This reputation can only be achieved after years of experience."

"Trade missions are supported because parties from both countries can get to know each other, learn about the markets and the associated risks and learn how to deal with uncertain situations."

The arguments made during the interviews show a strong correlation with the results of the quantitative analysis. It seems that in order to avoid uncertainty for the company that is going abroad it is essential to be present in the foreign market, establish contact there and get to know the market. Especially interesting is the fact that Canada as a host country for Dutch companies is suggesting itself that only "proven technologies" will become a success. To achieve this, it is very important to be actively involved in foreign transaction and show years of experiences. Interesting to mention is also the information a Dutch company representative provided on the question of how to enter the Canadian shale gas market. He mentioned:

"In order for the Canadians to be convinced about a technology from the Netherlands, it would be necessary for Dutch parties to establish a demonstration project here in the Netherlands. Once we can show to them how the technology works and how it can contribute to their business challenges they will be convinced to adapt it in their home market."

It seems that the dimension of uncertainty avoidance is a very important one to all stakeholders. Uncertainty is associated with control, flexibility and experience. Being highly involved in a foreign market is seen as essential to be able to sell innovative technologies. This suggests that Dutch parties rather prefer equity modes over non-equity modes when entering the Canadian shale gas market.

Hypothesis 3 focused on the independent variable of individualism. It was hypothesized that companies from countries that are more individualistic are more likely to enter foreign markets by non-equity modes and companies from countries that are less individualistic are more likely to enter foreign markets by equity modes. *However, the statistical analysis shows that there is no significant relationship between low or high individualistic scores and the choice between equity and non-equity modes.* The same attitudes are also provided during the interviews. Although the

Netherlands and Canada both score extremely high on the dimension of individualism (NL= 80, CA= 80), it seems that there is no tendency to say that individualistic societies rather prefer non-equity modes. One governmental representative stated:

"The achievement of success abroad is a group accomplishment. We are working together with partners from the public sector, private companies and research institutes together to achieve common results.

Another actor said that *"In today's fast changing society it is important to constantly interact with your business partners, even if this means to go abroad in order to attend a network event or trade show. In the shale gas industry which requires a lot of communication to the public environment, it does not help if there is only infrequent contact with other stakeholders."*

"A lesson learned from years of experiences with shale gas production is to raise the public awareness. Companies that act in the pursuit of their own goals are not contributing to awareness rising and will not be successful at the Canadian shale gas market."

From the interviews it appears that one can see the third hypothesis in a rather reversed sense. Although the Netherlands and Canada are both scoring high on individualism, the interview partners rather prefer market modes with which they can have a frequent encounter with the host partners. This would mean the use of more equity modes than non-equity modes. Although it was indicated that the first motivation behind going abroad is making profits instead of individualistic or collectivist motivations, it was also stressed that the latter ones play a role in approaching foreign markets. Being individualistic is rooted in the behavioral patterns of all stakeholders and in the phases before an entry mode is chosen, these patterns certainly play a role. Mostly, this is the case when it comes to internal arrangements. It was indicated by a Dutch company representative that *"in the end everybody is striving for his or her own goals within a company (in terms of upgrading into another position or increase of salary). When a company decides to go abroad and employees see chances for the development of their career then they will go for it. However, when it comes to decisions that are exclusively interesting for collective matters, people will give up on their individualist behavior".* An interesting point in this statement is that by sending own company representatives abroad a company is trying to position itself abroad and represent its own interests there via own channels. Next to control and resource commitment that are transferred abroad, the company also extends its networks via own channels and via channels of local parties. Therefore, no significant relationship was found. Also the interviews were not able to add to the insignificant results. Although Canada and the Netherlands both score high on individualism, success in the shale gas market is seen to be achievable only by collective mechanisms. As with the previous hypothesis, it was indicated that presence in the market is essential, particularly when it comes to the communication of the work to the public.

Hypothesis 4 focused on the independent variable of masculinity vs. femininity. It was hypothesized that companies from countries that are more masculine are more likely to enter foreign markets by equity modes and companies from countries that are less masculine are more likely to enter foreign markets by non-equity modes. *However, the statistical analysis shows that there is no significant relationship between low or high levels of masculinity and the choice between equity and non-equity modes.* During the interviews (which were conducted only with male representatives), Hofstede's definition of masculine societies became confirmed. Actors from both countries supported the view that acquisition of money and rewards are of importance in making business. All interviewees agreed with the hypothesis that by entering through equity modes into a foreign market, one needs to have close interaction with parties from the host country. One Canadian representative mentioned that *"if a Canadian supplier of technologies for shale gas is looking for a business partner, he will first look in his own network. It doesn't matter if there is a Dutch company with a solution that is more innovative, cheaper or easier to bring to the market. John will do rather do business with his friend Jim whom he knows since high school, even if Jim provides a solution which is less profitable."*

Specifically for the dimension of masculinity it seems from the interviews that taking risks and being able to execute control and ownership are closely linked to masculine values and are underpinned by what some actors called the "old boys network". Even if the Netherlands scores low on masculinity (14) and Canada scores higher (52) both countries seem to realize that entering the Canadian shale gas business is associated with establishing close relationships. This can be achieved by entering through equity modes. Having entered the network once it becomes easier to prove technologies. In line with the dimension of individualism, it was also indicated that placing company representatives abroad is another way to be able to execute control. This level of involvement can be achieved through equity modes. However, a Dutch actor mentioned the following: *"It is of course of great importance to extend the network in Canada. It increases your opportunities abroad and one gets access to relations that can prove to be valuable for the development of the technologies. It's good to be involved in the business locally. Nevertheless, we have learned from other experiences abroad that a close contact with the network can also diminish you decision capacities. After a while you start thinking in the same ways and directions and are not able to find alternative routes to the answers you are seeking."*

The statistical results showed no significant relationship. However, it became clear during the interviews that equity modes provide one with the ability of executing control and power, two variables that are indicated to be important in approaching the Canadian shale gas market.

Hypothesis 5 focused on the independent variable of long-term orientation versus short-term orientation. It was hypothesized that companies from countries that are more long term

oriented are more likely to enter foreign markets by non-equity modes and companies from countries that are more short-term oriented are more likely to enter foreign markets by equity modes. *However, the statistical analysis shows that there is no significant relationship between low or high levels of masculinity and the choice between equity and non-equity modes.* From the interviews and the internship in Canada it became clear that Canadian parties apply greater caution in deciding upon projects than Dutch companies. Canada scores 36 and is rather short term oriented. This in itself contradicts with Hofstede's score assigned to Canada. The issue of being so caution can best be illustrated with a quote from a government representative in Canada: *"The Dutch are offering concepts that are wonderful in providing solutions to the problems associated with shale gas production here in Canada. Still, before we can sign the agreement for an alliance, we would like to get to know the technologies better because we are taking risks by entering into an agreement with foreign parties instead of our own solution providers".* The Netherlands scores 67 and is rather long term oriented. However, from the interviews it does not seem that the actors are thrifty, they rather want to commit their resources and investments in order to explore business opportunities in the shale gas industry abroad. One interviewee mentioned: *"Of course it is important to be aware of your assets in a foreign market entry. They can determine the costs of the transaction. Having control over these assets is the best way to keep the overview, this means to be actively involved in the foreign market. From a long term perspective, I would approach the Canadian shale gas market with a high ownership level. However, entering a foreign market is not only determined by being able to execute control and preserve ownership, it is also about the way that leads to the choice for the market entry mode. In the end, we will choose the entry mode which gives us the most profitability and most utility. However, from a short-term or long-term perspective I could not say how to define this utility".*

It seems from the interviews that the actors do not fully represent the characteristics of Hofstede's dimension. Whereas Canada is supposed to be short term oriented, it clearly shows values of a long term oriented society. Especially the issue of caution towards everything that is new is an important point. The same is true for the Netherlands, where the actors do not identify with long term oriented values. The statistical test did not find any significant relationship. However, it can clearly be stated that Canadian companies are more cautious when it comes to unfamiliar technologies or business practices. They are not immediately open and rather keep a distance whereas Dutch parties are willing to take risks and become actively involved in the market. Nevertheless, the dimension of long term or short term orientation could not provide Dutch parties with information on which steps to take when entering the market and achieving the highest utility.

5.5. Concluding Remarks on the Case Study Results

More than 20 years have passed since the first publication of Hofstede's *Culture's Consequences* and many research papers have yielded an impressive amount on research in the area of cultural dimensions and foreign investment strategies. Most of the findings are comprehensive and impactful, however questions about the real influences of cultural dimensions on foreign market entry strategies remain. Even moving beyond the disaggregate measurement by studying the five variables separately does not seem to add to the fragmented research findings. As with many other studies, this thesis also focused on the TCE framework to clarify the relation between cultural dimensions and foreign entry strategies. Yet, the interviews show that there is more to entry decision making that just rational choice models. From this insight, the question remains if TCE alone is enough to explain why business organizations with different cultural backgrounds choose for certain entry modes. Past entry mode research, as well as this research, focused solely on rational choice models with attributes that are measurable during the transactions. The variables of cultural dimensions, foreign market entry strategies and the clarification of these with the help of TCE does not seem to provide an all-inlcusive answer to the question in how far culture explains the choice between different foreign investment strategies.

6 Conclusions

The purpose of this research was to investigate to what extent culture explains international investment strategies. The inconsistency and fragmentation in research on these topics is attempted to be overcome by analyzing cultural dimension separately and move away from the common use of Kogut ansd Singh's aggregate measurement. Furthermore, a case study was used in order to reflect on the quantitative findings. The objective of reviewing the theoretical backgrounds on Hofstede's dimensions, foreign market entry modes and transaction cost economics was to elaborate on the cohesion of these three concepts. Instead of seeing the concepts apart from each other, it was suggested to look at them as linked topics. They are hold together by variables that are constantly recurring in all three concepts: uncertainty, control, level of involvement (ownership), experience, risk, resource commitment and flexibility. It was shown that these variables run as a red line through the three theories. The review of the theoretical background also showed that transaction cost economics is the most prominent theory in studying the choices between equity and non-equity modes. With the help of a quantitative analysis and a case study, the following main research question was answered:

To what extent does culture explain international investment strategies?

Cultural Dimensions and FMEM

Concluding, culture as in the sense of the five cultural dimensions does not provide an all-inlcusive answer to this questions. The empirical results do not show a significant influence of Hofstede's dimensions on the choice between equity or non-equity market entry modes. Only one of the five hypotheses was confirmed. The dimension of uncertainty avoidance was found to have a significant correlation with market entry modes. It was found that companies from countries that score low on uncertainty avoidance are more likely to enter foreign markets by equity modes. All interview partners agreed with the importance of uncertainty avoidance and the amount of risks and control associated with this dimensions.

For the dimension of power distance the interviews showed that parties in the shale gas industry do not evaluate power distance as having an influence on the choice between equity and non-equity entry modes. Representatives from both countries indicate that success can only be achieved by collective actions, rather than hierarchical structures. Business or corporate culture was indicated to have a greater impact on how a company behaves than the internal

hierarchical structure. It is more about selling the own vision and align the own vision to the foreign market than hierarchical structures. However, Hofstede's theory is not considering the influence of business culture.

For the dimension of individualism, no significant relationships have been found either through the quantitative analysis. Although the Netherlands and Canada both score high on individualism it was emphasized that equity modes are a preferred way of entering the shale gas marketing and doing business abroad. This contradicts hypothesis 3a. However, it was also recognized that individualistic behaviors play a role when it comes to internal decisions in a company or in other organization. Nevertheless, the development of a solid network which serves to have access to resources abroad can only be achieved by being actively involved in the foreign markets.

Closely linked to the dimension of individualism is also the dimension of masculinity. Although the quantitative analysis found no significant relationship, the interview partners agreed with the fact that entering foreign markets through ownership modes requires certain levels of competitive behavior, assertiveness and the strive for advancements. Some actors mentioned the old-boys network. Once this close network is established, it is easier to build up a reputation and prove one's own technologies. Hofstede's dimensions of individualism and masculinity do not consider network relations.

For the last dimension (long term orientation) no statistically significant results were found. The interviews showed that Canadian parties are more cautious than the Dutch parties. However this is not in accordance with how Hofstede operationalized both countries. In terms of the choice for equity or non-equity modes, no clear preference was indicated. Nevertheless, one issue was mentioned that is of importance. Long or short term orientations were indicated as having something to do with decision processes. Companies ask themselves which steps to take in a certain amount of time to achieve the highest utility. However, Hofstede's dimension of long/short term orientation does not consider the importance of strategic decision making choices.

Looking at Hofstede's dimensions in a disaggretated manner provided some valuable insights as well. Although the five dimensions themselves are not having strong effects on the choice between equity and non-equity modes (except uncertainty avoidance) other matters were mentioned that are aligned to the dimensions but not discussed by Hofstede: business/corporate culture, network relations and the process of decision making to achieve the highest utility from the foreign market. Organizational cultures may affect entry decisions because they present the set of beliefs and values shared within an organization. Organizational

culture can certainly not be seen apart from Hofstede's dimensions since the latter ones are also work related. However, one could ask how organizational beliefs influence the entry choice and if differences in organizational cultures make it easier or difficult to enter via certain entry modes. The same is true for decision making theory and rational choice models. Making decisions for certain entry choices is certainly influenced by attitudes and beliefs that align with Hofstede's dimensions. However, Hofstede is ignoring the steps in taking these decisions. Concluding, Hofstede's theory is also ignoring the fact that companies are entities that are embedded in a web of relationships and that market entries are always subject of a broad array of interpersonal and inter-organizational relationships that have to be fostered in order to prove technologies abroad and become successful.

Yet, the interviews suggest viewpoints to be considered next to the cultural dimensions. First, it was mentioned that there is no doubt that culture plays a role in conducting international business. But culture is only important in the beginning phases of the internationalization process, when the first meetings abroad are made and companies have to get to know each other. The choice for equity or non-equity mode is rather oriented on the issue of profitability, risks involved, maturity of the technology, acceptance of the technology and control over the foreign units. These are all concepts related to the transaction cost economics theory.

TCE and FMEM

To sum up, it can be stated that Hofstede's cultural dimensions only explain to a small amount the choice between equity or non-equity entries. The quantitative results provided fragmented insights which are in line with previous research. Compared to the quantitative analyses, the interviews also showed no clear consistency when to choose with entry mode, although there is a tendency towards equity modes which require presence in a foreign market. A possible explanation for the tendency towards the choice for equity modes can be the nature of the industry itself. Technologies to produce shale gas are characterized by high asset specificit because individuals have knowledge about a certain technology that are not easily transferrable to a foreign market (human asset specificity) or because the technology can be located close to other assets (site asset specificity). As in line with previous research (Anderson and Gatignon, 1988; Erramilli & Rao, 1993; Brouthers and Brouthers, 2003) this study has found support for the transaction cost hypothesis that high asset specificity is related to the use of high control market entry modes (equity modes). However, other research findings have found opposite effects or no effects of high asset specificity on entry mode choice (Hennart & Larimo, 1998; Palenzuela & Bobillo, 1999;) which makes the TCE framework ambiguous in predicting the choice for international investment strategies. A possible explanation for the ambiguous results

could be the different operationalizations of asset specificity in the previous studies, where some measure it as a firm's R&D intensity, others as asset-specific investement such as human asset specifity or technology specificity (Brouthers & Hennart, 2007).

Concerns about the ambiguous nature of the second TCE variable may also arise, external uncertainty. The quantitative results as well as the interviews suggest that countries with a lower uncertainty avoidance scores are more likely to enter foreign markets by equity modes. This is because risk orientation is higher and in order to increase controllability over uncertain situations, companies want to become highly involved. However, one could also argue that uncertainty encourages companies to maintain flexibility and shift the risk to outsiders which can be done with non-equity modes. Moreover, insights on internal uncertainty are vague as well. Williamson (1985) stated that uncertainty internal to the firm makes more control desirable regardless of the level of asset specificity involved. Entry modes whereby companies can execute control to monitor inputs are therefore necessary. In a domestic environment, it can be assumed that managers know how people behave in terms of the five cultural dimensions. But is that also easy to anticipate in an unknown international environment? This research does not find clear answers to this question. However, and even more importantly, it seems that TCE is lacking additional insights on internal uncertainty which were brought forward during the interviews such as the development of a foreign network to get to know the markets and conditions. Following from this, it appears that much more thought needs to be contributed to how the different variables of TCE explain entry mode choices.

All in all, the results show that the choice for certain international investment strategies should be rooted in a multiple theoretical framework. The complex decision making mechanisms behind entry mode choices can neiether be explained by Hofstede's dimensions bor by TCE theory alone. The previously made postulation that many business studies are tremendously based on the assumptions of the five dimensions and transaction costs is verified in this study to be a constraining factor in successfully explain the relationships between these variables. It is time to consider alternative theoretical explanations and move beyond Hofstede and TCE because it is obvious that cultural differences have little direct effect on strategic entry mode choices. Concluding, cultural dimensions and transaction cost economics alone are not sufficient to explain the multi-faceted issue of foreign market entry modes. The fact that entry mode research is a multi-faceted phenomenon also implies that it is difficult to study entry modes. This would also explain the inconsistency in empirical results . However, other concepts such as business culture, network relations and decision making theory are ignored and are suggested to be included in an alternative theoretical model to cover the complexities that are associated with the costs, risks and controls of foreign market entities.

7 Discussion

7.1. Recommendations

Move Beyond Hofstede – Shift in paradigms on culture and investment strategies

Since the cultural dimensions developed by Hofstede don't seem to offer an all-inclusive answer in how far to explain international investment strategies, it is recommended that future studies should move beyond Hofstede's insights and not to produce again studies wit the same variables already well investigated. Rather, a new paradigm should be developed to study the influence of cultural backgrounds on the international investment strategies. This does not mean that cultural dimensions should be neglected all together, it is the question if these dimensions can be added by individual attributes of managers (years of experience for example) in order to make them more suitable for business organization research. It is suggested that the fragmented research findings can be overcome by *improving* Hofstede's framework with additional variables that are relevant in making strategic decisions. At the managerical level it is recommended that when foreign practices are applied, managers should treat the ambiguous results with great caution, because the vague results seem to be not an exception but the rule.

International Investment as Multilevel Phenomenon- Develop an overall theoretical market entry model

The ambiguous and fragmented results of the influence of cultural dimensions should make clear that entering a foreign market can only be described as a multilevel phenomenon. Because a company needs to deal with integrating new business practices (such as increase in size and manpower, transfer of IPR's, degree of competition, future excess capacity etc), researchers and managers should understand that foreign market entry is a multifaceted aspect that can not be explained solely by individual theories and models. It is suggested that an overall framework or model should be developed which presents variables to managers they can choose from and that are retrieved from different theoretical backgrounds. This allows for understanding the process by which firms enter a foreign market and which would explain the multi-level approach of interaction between structures and actions which link different actors together. Here, one can think about including insights from network theory. The interviews indicated that companies see themselves as units which act in a web of relationships and networks. Especially

in high asset specific industries it seems even more important to link resource interdependent entities because network building allows for the development of trust in foreign partners/technologies and whereby knowledge can only be accessed through involvement in a network. The same is true for aspects of corporate culture. The compatibility of companies forming a successful alliance can not only be explained by different cultural backgrounds. It is not enough to compare different scores on power distance etc. In addition, it would be more appropriate to include scores of corporate cultures in the overall model such as: process-oriented vs. result-oriented culture, adhocracy-oriented (dynamic and entrepreneurial, values innovation and entrepreneurship) vs. hierarchically oriented (favors structure and control, coordination and efficiency, stability is important)

Deepening of TCE theory - Including Strategic Decision Making

This research, as well as previous studies, have relied mostly on rational choice models such as transaction cost economics. Yet although entry mode choice is a strategic decision, many papers have seemed to ignore research on strategic decision making (SDM) in their theoretical reviews. It is important to include how a managers knowledge and attitudes influence entry decisions because previously made experiences can have an impact on the experiences that are made abroad. Neither Hofstede nor TCE consider manager's experiences in the past and their influence on entry mode choice. This is probably the case because attributes of SDM are difficult to measure. It is obvious from the interviews that variables such as acceptance of foreign business practices, trust and risk play an important role. Although some studies have made the attempt to look at risk propensities through the cultural dimensions lense, it is the single manager who takes the decision in the end and not the whole firm-level itself. SDM theories would contribute to Hofstede's framework and TCE by focusing on the single decision maker and his/her experiences. Finally, TCE assumes a profit maximization approach. But including individual SDM frameworks can help adding dimensions next to profit maximization which explain choices for investment strategies. By looking at the individual decision maker and the stakeholders surrounding him, managers might also respond with foreign market entries due to urgency considerations (competition) or because of power plays. Here, the influence of stakeholders such as governments, interest groups etc. plays an important rule as well and it should be asked if they have an influence on entry mode choice as well. Adding these perspectives to the TCE framework makes it possible to bring more "realism" to the understanding of international investment strategies.

7.2. Limitations & Suggestions for further research

This research is not without limitations. They will be discussed in combination with suggested possible future research. The findings of this study have important implications with regards to how the relationships between Hofstede's dimensions, FMEM's and TCE have been hypothesized previous to the quantitative analyses. It should be noted that cultural dimensions and the insights on TCE are ambiguous. Whereas one group of researchers might hypothesize the relationship in one direction, others might see opposite relationships. The cultural dimensions and TCE leave room for interpretation and researchers should be cautious with the exact nuances of both variables. Furthermore, the quantitative analysis of this research included five independent variables on cultural dimensions and two dependent variables on foreign market entry. Aspects that are important in studying TCE such as country risk factors or firm size and R&D propensity have not been included as control variables. They have been discussed during the interviews, but it would also be preferable to include them in quantitative analysis.

Moreover, one could argue that the small sample size of 48 companies does not represent generalizable results. Moreover, the data that have been collected are of cross-sectional nature, meaning that they are collected at one point in time. This provides little understanding of how learning and knowledge accumulation influence future mode choices. It is suggested that researchers pursue longitudinal studies of entry mode choices. This would make it possible to understand the learning and experience curve of managers (see recommendation for including strategic decision making theory) and would make it possible to develop a multifaceted framework for international investment strategies with more insights into network relations and corporate cultures. It is also suggested that in order to improve the replication of findings, researchers should include more clearly data that are necessary for secondary research. The results of this research have important implications for future studies. Most importantly, researchers need to develop a multilevel theoretical framework for understanding the choice in international investment strategies. Culture can not be the solely influencing factor but should be extended to other theoretical insights. Key to developing this framework is a longitudinal approach, moving away from studying cross-sectional data only. Long time oriented studies have the potential to extend the model beyond Hofstede and TCE in order to include individual strategic decisions and involvement with foreign networks, corporate cultures and experiences with previously made entry decisions.

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ANNEX

Annex A Hofstede's Survey

V S M 9 4

VALUES SURVEY MODULE 1994

QUESTIONNAIRE

English version

hofstede@bart.nl

INTERNATIONAL QUESTIONNAIRE (VSM 94)

Please think of an ideal job, disregarding your present job, if you have one. In choosing an ideal job, how important would it be to you to ... (please circle one answer in each line across):

1 = of utmost importance
2 = very important
3 = of moderate importance
4 = of little importance
5 = of very little or no importance

1.	have sufficient time for your personal or family life	1	2	3	4	5
2.	have good physical working conditions (good ventilation and lighting, adequate work space, etc.)	1	2	3	4	5
3.	have a good working relationship with your direct superior	1	2	3	4	5
4.	have security of employment	1	2	3	4	5
5.	work with people who cooperate well with one another	1	2	3	4	5
6.	be consulted by your direct superior in his/her decisions	1	2	3	4	5
7.	have an opportunity for advancement to higher level jobs	1	2	3	4	5
8.	have an element of variety and adventure in the job	1	2	3	4	5

In your private life, how important is each of the following to you? (please circle one answer in each line across):

9.	Personal steadiness and stability	1	2	3	4	5
10.	Thrift	1	2	3	4	5
11.	Persistence (perseverance)	1	2	3	4	5
12.	Respect for tradition	1	2	3	4	5

INTERNATIONAL QUESTIONNAIRE (VSM 94)

13. How often do you feel nervous or tense at work?
    1. never
    2. seldom
    3. sometimes
    4. usually
    5. always

14. How frequently, in your experience, are subordinates afraid to express disagreement with their superiors?
    1. very seldom
    2. seldom
    3. sometimes
    4. frequently
    5. very frequently

To what extent do you agree or disagree with each of the following statements? (please circle one answer in each line across):

1 = strongly agree
2 = agree
3 = undecided
4 = disagree
5 = strongly disagree

15. Most people can be trusted	1	2	3	4	5
16. One can be a good manager without having precise answers to most questions that subordinates may raise about their work	1	2	3	4	5
17. An organization structure in which certain subordinates have two bosses should be avoided at all costs	1	2	3	4	5
18. Competition between employees usually does more harm than good	1	2	3	4	5
19. A company's or organization's rules should not be broken - not even when the employee thinks it is in the company's best interest	1	2	3	4	5
20. When people have failed in life it is often their own fault	1	2	3	4	5

INTERNATIONAL QUESTIONNAIRE (VSM 94)

Some information about yourself (for statistical purposes):

21. Are you:
    1. male
    2. female

22. How old are you?
    1. Under 20
    2. 20-24
    3. 25-29
    4. 30-34
    5. 35-39
    6. 40-49
    7. 50-59
    8. 60 or over

23. How many years of formal school education (or their equivalent) did you complete (starting with primary school)?
    1. 10 years or less
    2. 11 years
    3. 12 years
    4. 13 years
    5. 14 years
    6. 15 years
    7. 16 years
    8. 17 years
    9. 18 years or over

24. If you have or have had a paid job, what kind of job is it / was it?
    1. No paid job (includes full-time students)
    2. Unskilled or semi-skilled manual worker
    3. Generally trained office worker or secretary
    4. Vocationally trained craftsperson, technician, informatician, nurse, artist or equivalent
    5. Academically trained professional or equivalent (but not a manager of people)
    6. Manager of one or more subordinates (non-managers)
    7. Manager of one or more managers

25. What is your nationality?

26. What was your nationality at birth (if different)?

Annex B Country Scores on Hofstede's Dimensions

ctr	country	pdi	idv	mas	uai	ltowvs	ivr
AFE	Africa East	64	27	41	52	32	40
AFW	Africa West	77	20	46	54	9	78
ALB	Albania	#NULL!	#NULL!	#NULL!	#NULL!	61	15
ALG	Algeria	#NULL!	#NULL!	#NULL!	#NULL!	26	32
AND	Andorra	#NULL!	#NULL!	#NULL!	#NULL!	#NULL!	65
ARA	Arab countries	80	38	53	68	23	34
ARG	Argentina	49	46	56	86	20	62
ARM	Armenia	#NULL!	#NULL!	#NULL!	#NULL!	61	#NULL!
AUL	Australia	36	90	61	51	21	71
AUT	Austria	11	55	79	70	60	63
AZE	Azerbaijan	#NULL!	#NULL!	#NULL!	#NULL!	61	22
BAN	Bangladesh	80	20	55	60	47	20
BLR	Belarus	#NULL!	#NULL!	#NULL!	#NULL!	81	15
BEL	Belgium	65	75	54	94	82	57
BEF	Belgium French	67	72	60	93	#NULL!	#NULL!
BEN	Belgium Netherl	61	78	43	97	#NULL!	#NULL!
BOS	Bosnia	#NULL!	#NULL!	#NULL!	#NULL!	70	44
BRA	Brazil	69	38	49	76	44	59
BUL	Bulgaria	70	30	40	85	69	16
BUF	Burkina Faso	#NULL!	#NULL!	#NULL!	#NULL!	27	18
CAN	Canada	39	80	52	48	36	68
CAF	Canada French	54	73	45	60	#NULL!	#NULL!
CHL	Chile	63	23	28	86	31	68
CHI	China	80	20	66	30	87	24
COL	Colombia	67	13	64	80	13	83
COS	Costa Rica	35	15	21	86	#NULL!	#NULL!
CRO	Croatia	73	33	40	80	58	33
CYP	Cyprus	#NULL!	#NULL!	#NULL!	#NULL!	#NULL!	70
CZE	Czech Rep	57	58	57	74	70	29
DEN	Denmark	18	74	16	23	35	70
DOM	Dominican Rep	#NULL!	#NULL!	#NULL!	#NULL!	13	54
ECA	Ecuador	78	8	63	67	#NULL!	#NULL!
EGY	Egypt	#NULL!	#NULL!	#NULL!	#NULL!	7	4
SAL	El Salvador	66	19	40	94	20	89
EST	Estonia	40	60	30	60	82	16
FIN	Finland	33	63	26	59	38	57
FRA	France	68	71	43	86	63	48
GEO	Georgia	#NULL!	#NULL!	#NULL!	#NULL!	38	32
GER	Germany	35	67	66	65	83	40
GEE	Germany East	#NULL!	#NULL!	#NULL!	#NULL!	78	34
GHA	Ghana	#NULL!	#NULL!	#NULL!	#NULL!	4	72
GBR	Great Britain	35	89	66	35	51	69
GRE	Greece	60	35	57	112	45	50
GUA	Guatemala	95	6	37	101	#NULL!	#NULL!
HOK	Hong Kong	68	25	57	29	61	17
HUN	Hungary	46	80	88	82	58	31
ICE	Iceland	#NULL!	#NULL!	#NULL!	#NULL!	28	67
IND	India	77	48	56	40	51	26
IDO	Indonesia	78	14	46	48	62	38
IRA	Iran	58	41	43	59	14	40
IRQ	Iraq	#NULL!	#NULL!	#NULL!	#NULL!	25	17
IRE	Ireland	28	70	68	35	24	65
ISR	Israel	13	54	47	81	38	#NULL!
ITA	Italy	50	76	70	75	61	30
JAM	Jamaica	45	39	68	13	#NULL!	#NULL!

JPN	Japan	54	46	95	92	88	42
JOR	Jordan	#NULL!	#NULL!	#NULL!	#NULL!	16	43
KOR	Korea South	60	18	39	85	100	29
KYR	Kyrgyz Rep	#NULL!	#NULL!	#NULL!	#NULL!	66	39
LAT	Latvia	44	70	9	63	69	13
LIT	Lithuania	42	60	19	65	82	16
LUX	Luxembourg	40	60	50	70	64	56
MAC	Macedonia Rep	#NULL!	#NULL!	#NULL!	#NULL!	62	35
MAL	Malaysia	104	26	50	36	41	57
MLI	Mali	#NULL!	#NULL!	#NULL!	#NULL!	20	43
MLT	Malta	56	59	47	96	47	66
MEX	Mexico	81	30	69	82	24	97
MOL	Moldova	#NULL!	#NULL!	#NULL!	#NULL!	71	19
MNG	Montenegro	#NULL!	#NULL!	#NULL!	#NULL!	75	20
MOR	Morocco	70	46	53	68	14	25
NET	Netherlands	38	80	14	53	67	68
NZL	New Zealand	22	79	58	49	33	75
NIG	Nigeria	#NULL!	#NULL!	#NULL!	#NULL!	13	84
NOR	Norway	31	69	8	50	35	55
PAK	Pakistan	55	14	50	70	50	0
PAN	Panama	95	11	44	86	#NULL!	#NULL!
PER	Peru	64	16	42	87	25	46
PHI	Philippines	94	32	64	44	27	42
POL	Poland	68	60	64	93	38	29
POR	Portugal	63	27	31	104	28	33
PUE	Puerto Rico	#NULL!	#NULL!	#NULL!	#NULL!	0	90
ROM	Romania	90	30	42	90	52	20
RUS	Russia	93	39	36	95	81	20
RWA	Rwanda	#NULL!	#NULL!	#NULL!	#NULL!	18	37
SAU	Saudi Arabia	#NULL!	#NULL!	#NULL!	#NULL!	36	52
SER	Serbia	86	25	43	92	52	28
SIN	Singapore	74	20	48	8	72	46
SLK	Slovak Rep	104	52	110	51	77	28
SLV	Slovenia	71	27	19	88	49	48
SAF	South Africa	#NULL!	#NULL!	#NULL!	#NULL!	34	63
SAW	South Africa white	49	65	83	49	#NULL!	#NULL!
SPA	Spain	57	51	42	86	48	44
SUR	Suriname	85	47	37	92	#NULL!	#NULL!
SWE	Sweden	31	71	5	29	53	78
SWI	Switzerland	34	68	70	58	74	66
SWF	Switzerland French	70	64	58	70	#NULL!	#NULL!
SWG	Switzerland German	26	69	72	56	#NULL!	#NULL!
TAI	Taiwan	58	17	45	69	93	49
TAN	Tanzania	#NULL!	#NULL!	#NULL!	#NULL!	34	38
THA	Thailand	64	20	34	64	32	45
TRI	Trinidad and Tobago	47	16	58	55	13	80
TUR	Turkey	66	37	45	85	46	49
USA	U.S.A.	40	91	62	46	26	68
UGA	Uganda	#NULL!	#NULL!	#NULL!	#NULL!	24	52
UKR	Ukraine	#NULL!	#NULL!	#NULL!	#NULL!	86	14
URU	Uruguay	61	36	38	100	26	53
VEN	Venezuela	81	12	73	76	16	100
VIE	Vietnam	70	20	40	30	57	35
ZAM	Zambia	#NULL!	#NULL!	#NULL!	#NULL!	30	42
ZIM	Zimbabwe	#NULL!	#NULL!	#NULL!	#NULL!	15	28

Annex C Database for Quantitative Analysis

Year 2009-2011								
Country	**Sector**	**Cutural dimension score**					**Foreign Market Entry Mode**	
		pdi	**idv**	**mas**	**uai**	**ltowvs**	**Equity**	**Non-Equity**
Canada	Oil and gas	39	80	52	48	36	0	1
Canada	Oil and gas	39	80	52	48	36	1	1
Canada	Oil and gas	39	80	52	48	36	2	0
Canada	Financial services	39	80	52	48	36	2	0
China	Oil and gas	80	20	66	30	87	2	3
China	Oil and gas	80	20	66	30	87	4	0
China	Financial services	80	20	66	30	87	1	1
China	Metals and mining	80	20	66	30	87	1	0
Denmark	Energy and Logistics	18	74	16	23	35	1	3
Denmark	Beverage	18	74	16	23	35	2	2
Denmark	Transport	18	74	16	23	35	4	2
Denmark	Pharmaceutical	18	74	16	23	35	2	6
France	Automotive	68	71	43	86	63	2	4
France	Environmental services	68	71	43	86	63	4	2
France	Financial services	68	71	43	86	63	4	2
France	Financial services	68	71	43	86	63	8	0
Germany	Chemicals	35	67	66	65	83	6	4
Germany	Automotive	35	67	66	65	83	2	6
Germany	Pharmaceutical	35	67	66	65	83	2	4
Germany	Pharmaceutical and chemicals	35	67	66	65	83	5	6
Great Britain	Oil and gas	35	89	66	35	51	4	5
Great Britain	Telecommunications	35	89	66	35	51	3	10
Great Britain	Metals and mining	35	89	66	35	51	5	0
Great Britain	Oil and gas	35	89	66	35	51	3	4
Japan	Electronics	54	46	95	92	88	1	1
Japan	Electronics	54	46	95	92	88	5	2
Japan	Information/telecommunication systems	54	46	95	92	88	7	3
Japan	Automotive/robotics	54	46	95	92	88	3	7
Netherlands	Construction	38	80	14	53	67	5	5
Netherlands	Chemicals	38	80	14	53	67	6	2
Netherlands	Beverages	38	80	14	53	67	5	1
Netherlands	Chemicals	38	80	14	53	67	15	3
South Korea	Electronics/Telecommunication	60	18	39	85	100	4	3
South Korea	Electronics/Telecommunication	60	18	39	85	100	2	3
South Korea	Automotive	60	18	39	85	100	1	1
South Korea	Automotive	60	18	39	85	100	4	2
Sweden	Polymer technology	31	71	5	29	53	8	0
Sweden	Food packaging	31	71	5	29	53	4	1
Sweden	Operation systems	31	71	5	29	53	0	9
Sweden	Dairy	31	71	5	29	53	4	4
Switzerland	Food processing	34	68	70	58	74	6	0
Switzerland	Food processing	34	68	70	58	74	9	3
Switzerland	Pharmaceutical	34	68	70	58	74	5	1
Switzerland	Pharmaceutical	34	68	70	58	74	4	2
U.S.A.	Online retailing	40	91	62	46	26	2	0
U.S.A.	Computing	40	91	62	46	26	2	13
U.S.A.	Food and bevarage	40	91	62	46	26	12	1
U.S.A.	Software	40	91	62	46	26	1	1

Annex D Organizing the Data – Statistical Analysis of Data Quality

Assumptions & Graphical Representation

The independent t-test is a parametric test based on the normal distribution. Therefore, it assumes:

- Data are from normally distributed populations
- Data are measured at least at the interval level
- Variances in these populations are roughly equal (homogeneity of variance)
- Scores are independent (because they come from different people)

Normally distributed data

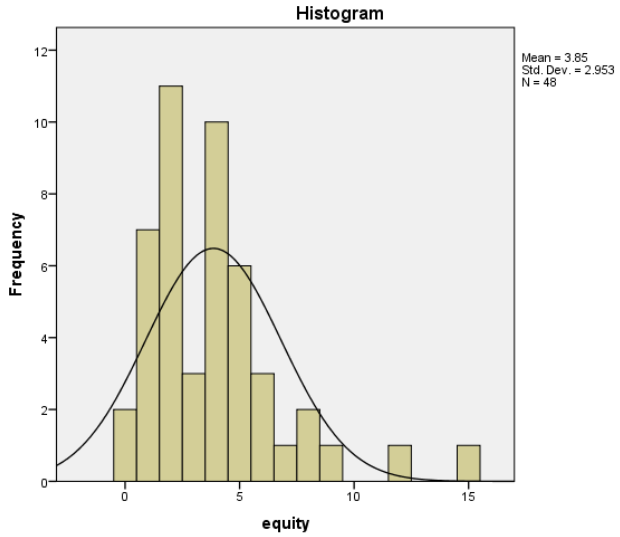
For the equity score, SPSS gives out a basic table with the valid observations 48 and skewness was estimated at 1.658. The standard error associated with this skewness level is .343. For the non-equity score, SPSS gives out a basic table with the valid observation of 48 and skewness was estimated at 1.647. The standard error associated with this skewness level is .343

SPSS Output on the Skewness of the Distribution

Statistics

equity

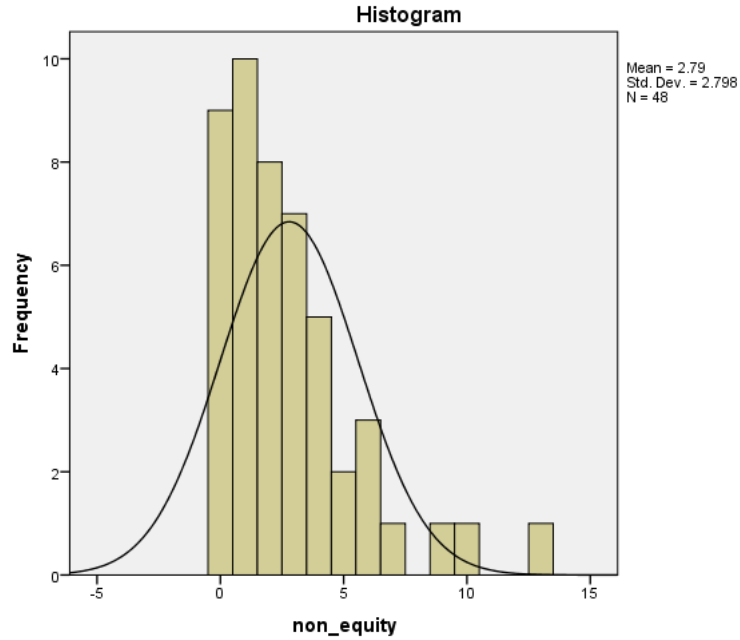
N	Valid	48
	Missing	0
Skewness		1.658
Std. Error of Skewness		.343



Statistics

non_equity

N	Valid	48
	Missing	0
Skewness		1.647
Std. Error of Skewness		.343



The values of skewness should be zero in a normal distribution. Positive values of skewness indicate a pile-up of scores on the left of the distribution, whereas negative values indicate a pile-up on the right. However, the actual values of skewness are not in themselves informative.

Instead, we need to take the value and convert it to a z-score. A *z*-score is simply a score from a distribution that has a mean of 0 and a standard deviation of 1. The reason for converting scores to a *z*-score is because it is a way of standardizing them and determines the statistical significance of the skewness. To transform the score to a z-score one can simply subtract the mean of the distribution and then divide by the standard deviation of the distribution (Field, 2005).

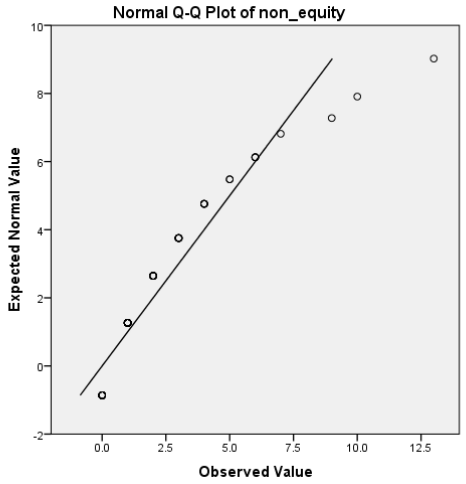
$$Z_{skewness} = \frac{S - 0}{\text{SEskewness}}$$

The *z*-scores can be compared against values that one would expect to get by chance alone. An absolute value greater than 1.96 is significant at $p < .05$, above 2.58 is significant at $p < .01$ and absolute values above about 3.29 are significant at $p < .001$.

For the equity score, the *z*-score of skewness is 1.658/.343=4.834. Because 4.834 is larger than 1.96 we can reject the null hypothesis of no skew and the skewness is statistically significant. For the non-equity score, the *z*-score of skewness is 1.647/.343=4.802. Because4.802 is larger than 1.96 we can reject the null hypothesis of no skew and the skewness is statistically significant.

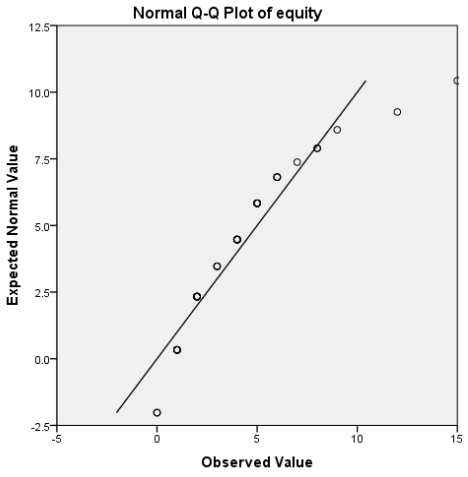
At first glance, it can be said that the data are skewed and not normally distributed which would violate the conditions to perform a parametric test. However, another test is applied to check for normality, the Q-Q plot. The normal Q-Q chart plots the values you would expect to get if the distribution were normal (expected values) against the values actually seen in the data set (observed values). The expected values are a straight diagonal line, whereas the observed values are plotted as individual points. If the data are normally distributed, then the observed values (the dots on the chart) should fall exactly along the straight line (meaning that the observed values are the same as you would expect to get from a normally distributed data set.) Any deviation of the dots from the line represents a deviation from normality.

SPSS OUT on the Q-Q plot for the assumption of distribution



In both of the dependent variables (equity and non-equity modes) the data are not completely normally distributed (see *z*-score and Q-Q plot). The plots confirm the observation because the dots deviate from the line. Although some outliers are visible for both variables, one can also see that most of the dots are in close range to the diagonal. The skewness is therefore not as strong as to reject this assumption completely.

- ✓ This assumption is tenable
- ✓ **Interval data**



The data for the two dependent variables **equity and non-equity modes** are of a high measurement level. They are ratio-scale variables.

- ✓ This assumption is tenable

Homogeneity of variance

This assumption means that if one goes through the level of one variable, the variance of the other should not change. To test the homogeneity of variance we can use a test called *Levene's test.* It tests the hypothesis that the variances in the groups are equal (i.e. the difference between the variance is zero). Therefore, if Levene's test is significant at $p < .05$ then we can conclude that the null hypothesis is incorrect and that the variances are significantly different – therefore, the assumption of homogeneity of variances has been violated. If, however, Levene's test is non-sgnificant (i.e. $p > .05$) then we must accept the null hypothesis that the difference between the variances is zero – the variances are roughly equal and the assumption is tenable (Field, 2005).

SPSS Output on the Levene's test

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
equity	Based on Mean	2.023	11	36	.055
	Based on Median	.417	11	36	.939
	Based on Median and with adjusted df	.417	11	10.308	.917
	Based on trimmed mean	1.677	11	36	.119
non_equity	Based on Mean	2.534	11	36	.017
	Based on Median	.742	11	36	.692
	Based on Median and with adjusted df	.742	11	7.513	.684
	Based on trimmed mean	2.206	11	36	.037

The SPSS output shows the Levene's test for untransformed data. One should read the test statistics in terms of the means. For the untransformed data it appears that Levene's test is non-significant for the equity score (values in the column labeled *Sig.* are more than .05) indicating that the variances are not significantly different (i.e. they are similar and the assumption is tenable). However, for the non-equity scores, the Levene's test is significant (values in the column labeled *Sig.* are less than .05) indicating that the variances assumption has been violated.

If the homogeneity of variance assumption is broken, then SPSS offers an alternative version, being the *Brown-Forsythe* test. This test will be employed to check for the assumption of homogeneity because there is an unequal *n* in the two groups and the distribution is not quite normally.

SPSS Output on the Brown-Forsyth test

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
equity	Brown-Forsythe	1.656	11	16.126	.174
non_equity	Brown-Forsythe	1.005	11	12.567	.492

a. Asymptotically F distributed.

The output of the Brown-Forsythe test shows us that the test is non-significant for both equity and non-equity scores (values in the column labeled *Sig.* are more than .05) indicating that the variances are not significantly different.

- ✓ This assumption is tenable

Independence

This assumption is that data from different participants are independent, which means that the behavior of one participant does not influence the behavior of another. The data that have been collected for all 48 companies can be said to be independent from each other. The companies are not influenced by each other on the choice between different foreign market entry modes.

- ✓ This assumption is tenable

Annex E Interview Questions

- Which factors play an important role for your organization when expanding abroad?
- How are the networks established in your country? Are the companies supported in entering foreign markets? What role do the networks play?
- What is the future of shale gas in the Netherlands and what role can the Dutch companies claim considering their knowledge and level of expertise?
- How are cultural differences perceived?
- What role does experience play in foreign market entry modes?
- What role does control play?
- How risk taking are you when it comes to entering a foreign market or accept foreign technologies?
- How are hierarchical relationships in your company affecting the choices for market entry modes?
- How does the decision making process looks like for a foreign market entrance? (hierarchical, collective, ect)?
- What are your strategies to eliminate uncertainties and unknown situations in foreign markets?
- How competitive is the shale gas industry and what role do competitiveness and assertiveness play in approaching foreign markets? Are they linked to control mechanisms?
- Do you consider your market entry decision from a long term perspective or from a short term perspective?
- What is the best way of entering the Canadian shale gas industry? Together with local players, or 'going it alone'? What kind of thoughts/strategies are considered with these steps?
- Etc.

Annex F Case Study on the North American and Dutch shale gas industry

The case study is used to add to the quantitative analysis in order to see if Hofstede's culture dimensions legitimate the choice between equity and non-equity foreign market entry modes. The case study is an illustration of the falsification of Hofstede's theory. Moreover, the interviews are a reflection on the quantitative results. By including the interviews, it can be possible to develop further insights on why so many quantitative analyses on Hofstede's dimensions and foreign market entry modes reveal inconsistent results and if there is more to entering a foreign market. The interview partners might come up with suggestions on what causes these inconsistencies.

Introduction to the Case Study

Rationale for choosing this case study

The rationale behind choosing the North American and Dutch shale gas industry as a case study is in alignment with the ideas of different cultural background and the choice of how to enter a foreign market. The production of shale gas is most commonly associated with North America where the production process is in place for many years already. It requires special techniques to produce shale gas which makes it a highly specific asset. Especially the use of water in terms of amount and groundwater contamination is crucial, the production of shale therefore requires specialized techniques. Dutch companies have developed these techniques in order to make the production of shale gas safer and more sustainable. However, they are not allowed to apply these techniques and technologies in the home market, because shale gas production is not allowed in the Netherlands yet (Rijksoverheid, 2012). There are certainly opportunities for Dutch companies abroad, especially in Canada where a lot of environmental concerns arise and the most innovative and sustainable techniques are required. Entering the Canadian or even North American shale gas market is associated with different cultural backgrounds, unknown situations and resource commitments. For Dutch companies it then becomes inevitable to know *how* to enter the market, if cultural differences play a role at all, what level of involvement to choose depending on the these cultural differences and if there are perhaps other factors that even have a greater impact on the market entry decision. The rationale of choosing the case study is to find out if cultural differences play a role in deciding between equity and non-equity modes and if these answers are in line with the statistical results.

Background of Interviewees

The interview partners are actors from public and private organizations and institutes (n=12) and the interviews have been conducted starting on October 2011 to July 2012. During an internship at the Dutch Consulate General in Edmonton in Canada and the provincial Ministry of Environment and Water it was possible to interview experts on foreign trade helping with trade missions from the Netherlands to Canada in order to learn more about the business opportunities and to get to know each other. Members of the policy development section at the Ministry had political and technological backgrounds and were able to provide information about the developments of shale gas in Canada and business development in this industry. They have a background in hydrogeology and policy analysis and are in close contact not only with government representatives but also with private companies and research institutes. One interview was conducted in Calgary with *Petroleum Technology Alliance Canada (PTAC)* which is an institute focused on supporting collaborative partnerships with domestic partners but also with foreign partners on petroleum related technologies. Furthermore, PTAC organizes network events for interested parties that want to collaborate in a project. A Dutch-Canadian workshop on groundwater management was hold in Edmonton in October 2011 which made it possible to get to know several parties from the Netherlands and Canada and to be able to get their insights on business development and elaborate on these insights during the time in Canada. The Dutch parties are: Province of Groningen, Deltares, TNO, University of Utrecht and Consulate General Edmonton and Vancouver. The Canadian parties are: Alberta Ministry of Environment and Water, Alberta Geological Survey and two consultancy companies, Aquality and Worley Parsons. Actors interviewed in the Netherlands include Norit/Pentair which is a leading company in membrane filtration, especially important in cleaning contaminated groundwater from shale gas. Furthermore, actors from the Netherlands Water Partnership have been interviewed. The network organization has experiences with organizing ingoing and outgoing trade missions to North America and knows actors from both sides. Two actors from the Ministries of Economic Affairs (EL&I, Agentschap NL) and Infrastructure and Environment have been interviewed, especially on the topics of supporting Dutch companies in expanding abroad. NOGEPA was another party to provide valuable insights on business development because it represents the interest of oil and gas exploring companies. Finally, the established contacts with TNO were used as well as conversations with several companies during a trade show in Munich, the IFAT trade show for water, waste treatment and raw materials management. One of these companies was NOM, which is specialized in foreign direct investment support and bilateral relations.

Shale Gas and the production process

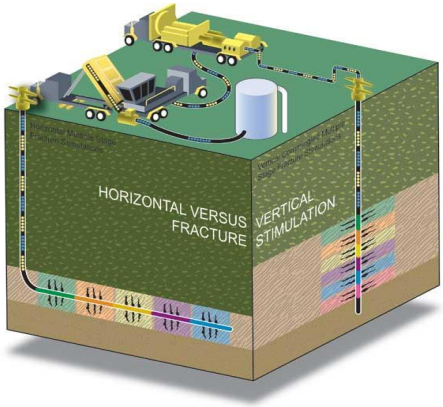
Shale gas can be found in sedimentary rocks all over the world and is primarily composed of clay, fragments and other minerals. “Shale formations normally have low permeability (limited

ability for gas or fluids to flow easily through the shale formation) and normally require stimulation techniques to economically produce shale gas (Energy Resource Conservation Board, 2008).

Horizontal and vertical drilling

A Primer on Understanding Shale Gas: As mentioned before, shale gas will notg flow to any vertical well drilled because of the low permeabilities of shales. In this scenario, one can drill a horizontal well, "whereby the drillbit is steered from its downward trajectory to follow a horizontal trajectory for two kilometers, thereby exposing the wellbore to as much reservoir as possible" (National Energy Board, 2009). The advantage of drilling horizontally is that a greater number of fractures in the reservoir can be intersected. Nonetheless, some shale formations can only be drilled with the help of vertical wells because boreholes might collapse (National Energy Board, 2009).

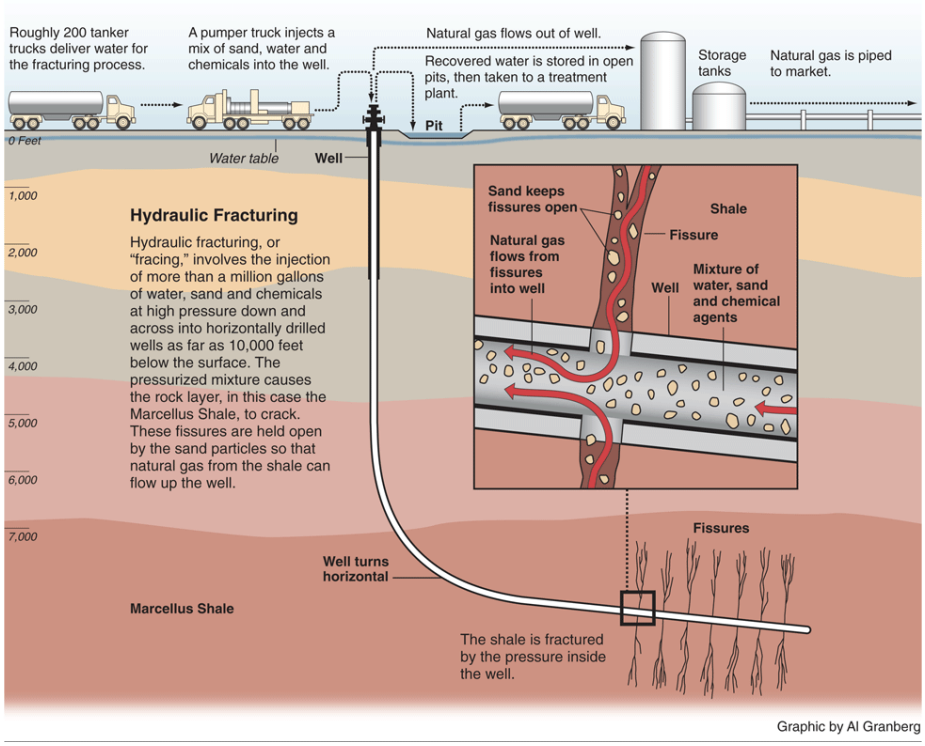
The process of vertical and horizontal drilling



Hydraulic fracturing

The process of hydraulic fracturing can also be called "fracking". This technique is widely used nowadays in the oil and gas industry in order to overcome the low permeability of shale formations. By pumping fluid (water mixed with chemicals) down the drillbit, one is putting pressure into the rock formations causing the fractures to open. Critiques arise about the process, claiming that contaminated groundwater might be left behind which is supplied to households containing numerous chemicals (National Energy Board, 2009).

The process of hydraulic fracturing



http://stateimpact.npr.org/texas/tag/fracking/

Advantages and Disadvantages of Shale Gas Production

The overview below presents argument in favour and against the production of shale gas in the Netherlands. It is adapted from a study conducted by TNO and other parties. The overview is based on a literature review and two 'think sessions' with TNO and other parties (TNO, 2011).

Energy	
Advantage	Disadvantage
Shale gas can help compensating the dclining gas stock and gas production in the Netherlands	The financing of shale gas production is repressing financing of renewable energies
Shale gas can supply the necessary energy in the transition phase to renewable energies	The production of shale gas is declining the need to switch to renewable energies
Shale gas can provide energy if the demand in renewable resources is shortened	Shale gas production is increasing the dependency on it and amplifies the lobby activities of the gas industry
The production of shale gas and the necessary processes create knlowledge that can be used for other types of energy such as geothermal energy	

Environment	
Advantages	Disadvantages
Combustion of shale gas is producing less greenhouse gas per unit than the combustion of oil or coal	Shale gas production can cause groundwater contamination and can reduce the quality of drinking water
The development of knowledge in shale gas production can be used for sustainable production	Production of shale gas requires great amount of water which can lead to decreasing groundwater

in the shale gas industry abroad	levels
	The production of shale gas requires transportation of materials and water which can harm the environment
	Drilling wells which are left behind (brownfields) can increase the potential of leakages and therefore can harm the groundwater

Security	
Advantages	Disadvantages
The production of shale gas is making use of proven technologies which is reducing risks	The production of shale gas can increase the risks of small earthquakes and subsidence
The production of shale gas can cause extra investments into the maintenance of the gas infrastrcuture	Harmful substances can reach the surface and increase risks for health
	There is little knowledge about the effects of shale gas production and effective measures in case of accicents

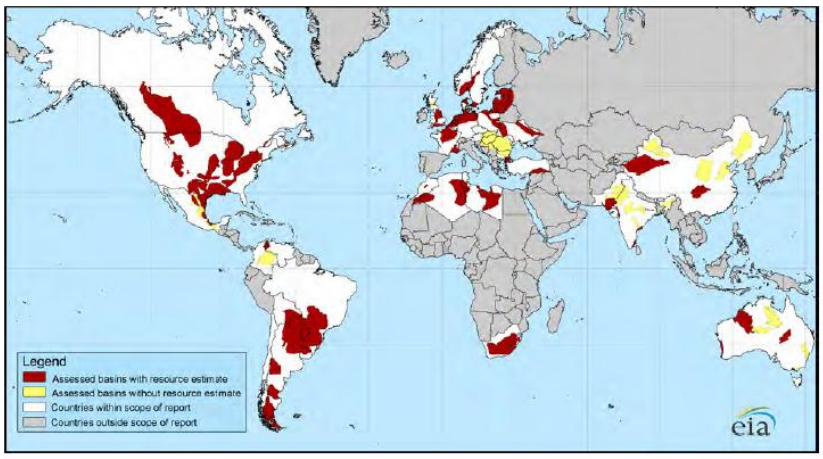
Economy	
Advantages	Disadvantages
The government is earning money as stakeholder in the sale of shale gas	Testing drill wells will cost the taxpayer because the government is investing
Producers of shale gas are paying taxes to the government for produced gas	The contaminated groundwater can only be cleaned with costly technologies and processes
The Dutch gas transport network is used for longer periods; investments are used efficiently	The complexity of the Dutch ground/soil requires a lof of drilling which costs money
The Netherlands can export their knowledge and experiences for the processes in the production of shale gas	It is not fully clear how much profitable shale gas there is in the Netherlands
Shale gas increases the possibilities to trade with gas in the Netherlands (storage, buy-sell)	
Shale gas is increasing possibilities for local and SME's companies	
Employment in the region is supported	

Politics	
Advantages	Disadvantages
Shale gas is reducing the political dependence of the NL on other international energy suppliers	The legal supervision on the production of shale gas is not fully developed
Shale gas is reduccing the chances that the Netherlands is affected by international conflicts concerning gas	The production of shale gas is increasing public concerns
Shale gas is reducing the need to build new nuclear reactors	The public fears that house prizes will fall in the surrounding environment of drilling sites
	The provision of information about processes and production of shale gas is provided from different sources which is not a transparent process

Shale Gas Worldwide

A report by the EIA (U.S. Energy Information Administration) assessed 48 shale gas basins in 32 countries, containing almost 70 shale gas formations. The assessment includes prospective resources of shale gas basins and geological data that contain sufficient information (EIA, 2010).

Shale gas basins worldwide



• Red colored areas represent the location of assessed shale gas basins for which estimates of the
'risked' gas-in-place and technically recoverable resources were provided

• Yellow colored area represents the location of shale gas basins that were reviewed, but for which
estimates were not provided, mainly due to the lack of data necessary to conduct the assessment

• White colored countries are those for which at least one shale gas basin was considered for this
report

• Gray colored countries are those for which no shale gas basins were considered for this report

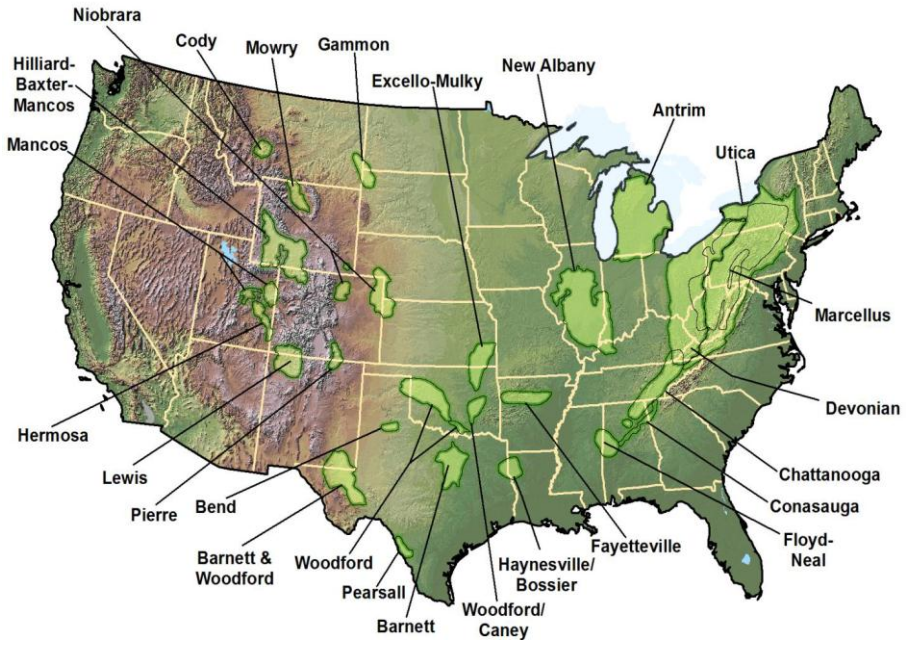
Although one can assume that the shale gas resources analyzed will change over time, it is obvious that the worldwide shale gas resources are enormous. The report is estimating that technically recoverable shale gas in the 32 countries can be estimated up to 5,760 trillion cubic feet (EIA, 2010).

Shale Gas in North America

United States

In the figure below, one can find the current locations of producing gas shales and the location of prospective shales. Currently, the most active shales are the Barnett Shale, the Haynesville/Bossier Shale, the Antrium Shale, the Fayetteville Shale, the Marcellus Shale and the New Albany Shale. Because each of these shale basins is different, the development and production requires different techniques and is associated with unique opportunities and challenges (U.S. Department of Energy, 2009).

United States Shale Basins



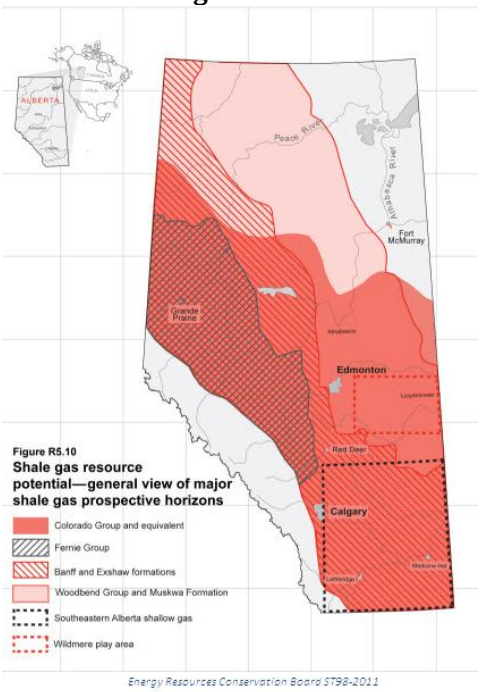
The production of shale gas in the United States is regulated by different governmental levels, from federal to local laws which are addressing almost every aspect of its exploration. The laws that apply to conventional oil and gas also apply to shale gas production. The U.S. Environmental

Protection Agency runs the federal laws, although development on federally-owned land is administered primarily by the Bureau of Land Management (part of the Department of the Interior) and the U.S. Forest Service (part of the Department of Agriculture) (U.S. Department of Energy, 2009). In addition, each state in which oil and gas is produced has one or more regulatory agencies that permit wells, including their design, location, spacing, operation, and abandonment, as well as environmental activities and discharges, including water management and disposal, waste management and disposal, air emissions, underground injection, wildlife impacts, surface disturbance, and worker health and safety (U.S. Department of Energy, 2009)

Canada

The past decade has seen an explosion of unconventional gas exploration across Canada. Canadian production of conventional natural gas is declining and is expected to continue declining over the next few years. In response, industry has been shifting its exploration focus towards unconventional natural gas (i.e. natural gas that can be produced from non-traditional, low permeability reservoirs such as shales or coals). The main Canadian shale gas plays are the Horn River Basin and Montney shales in northeast British Columbia, the Colorado Group of Alberta and Saskatchewan, the Utica Shale of Quebec, and the Horton Bluff Shale in New Brunswick and Nova Scotia (National Energy Board, 2009). The Gas Technology Institute estimates that the province of Alberta has approximately 850 trillion cubic feet (Tcf) of shale gas in place. However, shale gas development in Alberta is still in its early stages. The number of connections producing shale gas in Alberta (each well bore can have more than one connection) has only increased from 5 connections in 2000 to 142 connections in 2010. Alberta has extensive experience in the development of energy resources and has a strong regulatory framework already in place. Shale gas is currently regulated under the same legislation, rules and policies as conventional natural gas. Although shale gas development in Alberta has not been using horizontal multi-stage fracturing, Alberta does have extensive experience with hydraulic fracturing. Approximately 171,000 wells have been hydraulically fractured in Alberta since the technology was introduced more than 50 years ago (National Energy Board, 2009). The figure below shows the potentials of shale gas resources in the province of Alberta

Potential shale gas resources in Alberta



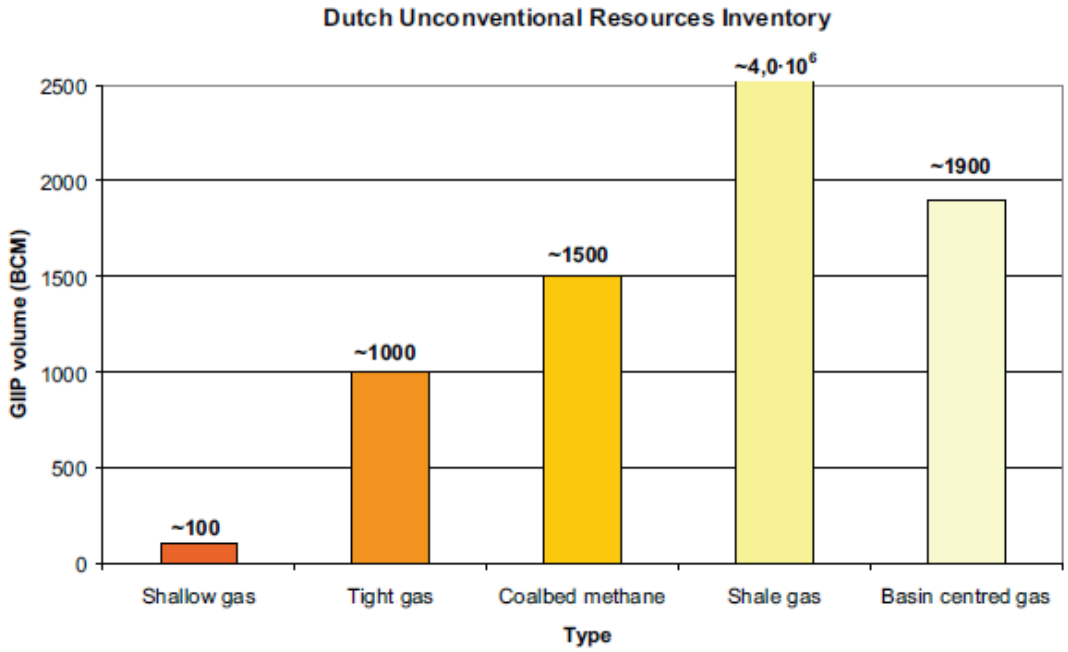
http://www.energy.alberta.ca/NaturalGas/944.asp

Most aspects of the oil and gas industry are regulated in Alberta by the Energy Resources Conservation Board. The ERCB sets requirements for drilling and production operations. The ERCB protects our fresh water aquifers (groundwater) with strict regulations that are designed to ensure that gas cannot migrate up a well bore to contaminate groundwater sources. Well bores are required to have cemented casings in place that meet stringent requirements and which are also set to depths far below any fresh water aquifers. This ensures there is an impenetrable barrier between the shale gas formation and the well bore so that gas and fluids are unable to use the well bore as a pathway to contaminate groundwater (National Energy Board, 2009). Alberta has strict requirements in place to manage the safe disposal of produced fluids (fluids that return to the well head as part of the hydraulic fracturing process) and does not allow produced fluids to be sent to municipal waste water treatment systems. Fluids that cannot be treated and recycled must be disposed of in approved disposal wells where the fluids are injected deep underground for permanent disposal (National Energy Board, 2009).

Shale Gas in the Netherlands

Since many years the Netherlands is playing an important role in the international gas scene. "In 2008 Dutch gas production was about 80 billion cubic meters (BCM), of which almost 40 BCM, 90% of Dutch gas consumption, came from small fields" (EBN, 2009). EBN started a research on quantifying the unconventional gas potentials in the Netherlands. The underlying numbers are a first-pass inventory of estimated quantities of coalbed methane, gas in tight reservoirs, shale gas, shale low gas and basin centred gas (EBN, 2009).

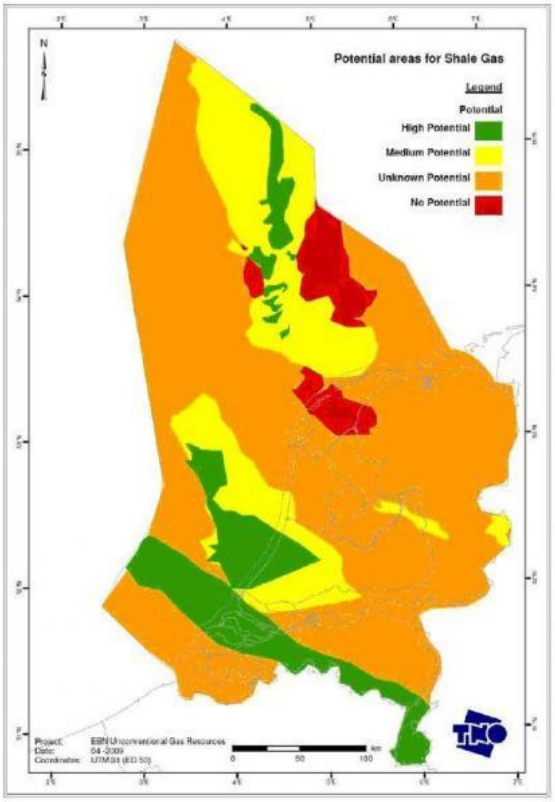
Dutch Unconventional Resources Inventory



http://www.europeanenergyreview.eu/data/docs/Viewpoints/ebn2306.pdf

Currently, it is not possible to produce shale gas in the Netherlands. It is expected that it will take between five and ten years until the full development of shale gas. The technical solutions to produce shale gas are still in place, however regulatory and public barriers make shale gas development impossible. Although shale gas development is not possible at this moment, the Ministry of Economic Affairs (EL&I) four licences have been distributed to discover shale gas basins and their potentials. For this one needs to drill wells in order to assess the potentials. The licences have been given to Quadrilla (in the provinces of Noord-Brabant, Flevoland, Overijssel and Friesland), and to Queensland Gas (in the provinces of Noord-Brabant, Gelderland and Overijssel) (Rijksoverheid, 2012). Below one can find a map with potential shale gas basins in the Netherlands.

Potential areas for Shale Gas in the Netherlands



http://www.rijksoverheid.nl/onderwerpen/gas/gasexploratie-en-productie/onconventioneel-gas