Culture and the Financial Market:

Identifying Financial Product Preferences

Bachelor thesis

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Abstract

The aim of this bachelor thesis is to investigate how cultural differences of countries can be used to make assumptions on what kind of financial product might be the most efficient one based on the culture of a country. By using research that is trying to explain market performance differences and consumer behavior differences based on culture of a country. This thesis is trying to link those researches in order to create a cultural assessment framework that can be used to make predictions about a country's financial product preferences. In order to create comparability the countries that have been used, have been clustered after similar cultural dimension relationships.

After combining the research and analyzing the clusters it was concluded that collectivist societies tend to favor safer financial products types and individualistic societies a wider range of financial products types.

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List of Abbreviations

PDI   Power Distance Index

IDV   Individualism versus Collectivism

MAS   Masculinity versus Femininity

UAI   Uncertainty Avoidance Index

LTO   Long Term Orientation versus Short Term Normative Orientation

IND   Indulgence versus Restraint

1. Introduction

For the most of the human history people lived, worked and died mostly in the area where they were born. Centuries passed, kingdoms, borders and countries have changed but still most people lived in their small world and had little contact with people outside of their normal circle. The first and second Industrial Revolution changed this fact. Through modern technology suddenly people could travel faster and further as never seen before. New forms of fast, reliable and cheap communicate was used to build and maintain relationships with people across the world and suddenly more and more people were forced to interact with people outside of their normal and familiar society circles resulting in more misunderstandings, conflicts and even war. Even though people around the world are faced with similar and common problems, the way how certain groups are tackling those problems can be very different and can even seem weird for certain non-group members.

"The world is full of confrontations between people, groups and nations who think, feel and act differently." [Hofstede, Minkov, 2010]

Every person is trained since birth to behave and feel in certain cultural patters dominating in the country/region he is living in, resulting in various and different cultures all around the globe.

"Culture is transmitted, through language, material objects, rituals, institutions, and art, from one generation to the next" [Houghton Mifflin Company, 2005]

For example a German business man in China might not understand the concept of building a strong relationship first before making a business deal. One of the reason why a lot of international conflicts in politics, economics and business cannot be solved is that differences in thinking among the various participating partners have been ignored.

"Right and wrong are not what separate us from our enemies it's our different standpoints, our perspectives separate us, and both sides blame one another. There is no good or bad side. Just two sides holding different views" [Kitase, 1999]

These differences in thinking, the sum of attitudes, customs, and beliefs that distinguishes one group of people form another is consider culture. To understand the differences is the first way too adept to those intercultural situations and to make better use of them. This paper seeks to give more insights on the topic of how culture influences financial markets and its possible applications for the financial industry.

2. Culture the Software of the Mind

2.1 Layers of Culture

What makes a human special and can be found in every culture around the world even in most different ones? Human nature, its ability to love, to fear, to feel anger, joy and sadness, the need to belong to a certain group, the ability to observe the environment and talk about it with other human beings. This is the universal level in one mental software which can be found in every human being. This basic operating system of the human mind is inherited within our genes.

"However what one does with these feelings, how one express fear, joy, observations and so one is modified by culture. " [Hofstede, Minkov, 2010]
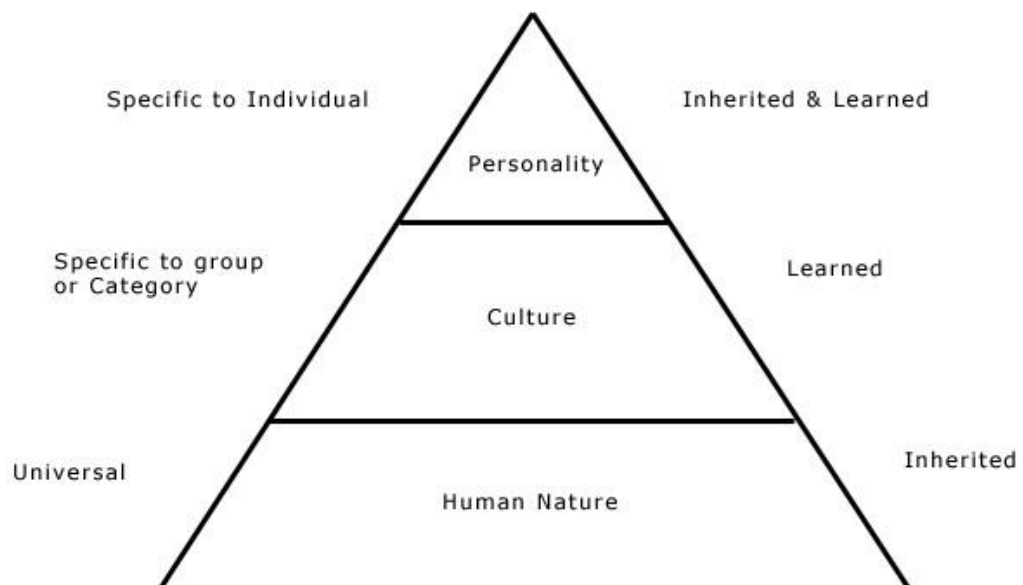

Figure 1 Three Levels of Uniqueness in Mental Programming [Hofstede, Minkov, 2010]

One could argue now that culture has no real significant influence on the behavior of individuals, that every action we take is a result of our own personality. The argumentation of that person would not be entirely true. One's personality is always a combination of traits that are partly inherited within the individuals unique set of genes and partly modified by the influence of a collective programming (culture) as well as by unique personal experiences.

If you randomly ask people on the street what would they consider the right thing and how to behave right, they may say they just know or feel how to do the right thing. Their heart or their conscience tells them. But why cannot we pint point down certain behavioral structures within our self. Mostly because our cultural rules were acquired so early in our lives, that many values and behavior patterns remain a secret to us even though we are influenced by them daily therefore they cannot be discussed, nor can they directly observed by outsiders. People tend to always draw a mental line around those whom they consider part of a certain group: close family, extended family, close friends, work friends, colleagues and strangers. All those people a parts of groups we create within our moral circle. Note that there are strong differences in how we treat people inside and outside of our inner circle, only members within the inner moral circle have full rights and therefore full obligations. [Hofstede, Bond 1988]

Do to others as you would wish them to do to you, for the last 2500 years philosophers in both east and the west had taught this rule and proclaimed it as the basic rule of human interaction between each other. But as we see in our daily life this rule is applied more or less. Especially in religion, people tend to draw their own moral circle around members of their community resulting in different moral rights and duties within the closed community. The Paradigm of religious belief play an important role in creating and outlining moral circles through the human history. Often this caused violence within a Nation, when both Nation and Religion are starting to compete with each other to attempt to outline a society-level moral circle.

These conflicts testify the importance of belonging to a moral circle. Throughout history some societies and religions have shown tendency to expand their moral circle and include all humans as members of one big moral circle. An example of creating one global moral circle is the Universal Declaration of Human Rights ratified by the General Assembly of the United Nations in 1946. [Un.org, 2015] Even animals can be added into moral circles by protecting animal rights. Nevertheless in such far-reaching moral circle, rights and duties of members are automatically weaken resulting in possible hypocrisy and conflicts.

Through our entire life we are members of a various different moral circles, behave and act accordingly in order to fit in. Starting from the earliest moral circle of family, to school, university and work. Every moral circle we are part of has different values that can be identified as a common mental program within the circle. Because of that we are part of various different moral circles we also unavoidably carry several layers of mental programming within ourselves, corresponding to different levels of culture.

Like an onion, culture has several different levels but the way every cultural level is sorted varies depending on each Individual. There are five cultural levels that have to be consider in particular.

1. National level
2. Regional and or ethnic/religious, or linguistic affiliation level
3. Gender level
4. Generation level
5. Social Class level

Following the assumptions that humans act differently according to their mental programs we can also safely assume that those mental programs do not necessarily run in harmony with each other. In modern societies which are changing fast they are often in conflict to each other, for example religious values may conflict national values etc.. [Hofstede, Minkov, 2010]

Those mental programs which are in conflict with each other make it quite difficult to anticipate human behavior patterns. The world around us is constantly changing and new innovative technologies appear almost daily, the World Wide Web has made our world appear smaller. Business companies operate not local anymore but on a global scale. Mergers and stock market volatility of countries shake the global business landscape. [Alloway, 2015] It seems like that every action taken on the world has suddenly a huge global impact so that notion of global village seems appropriate. These changes seem so powerful that we like to assume that national culture suddenly has less influence on the global level.

But how deep are these changes? Has the globalization suddenly made humans act accordingly to a new global mental program which is constantly changing depending on which region or trend we are focusing at the moment? Or are human societies much slower in change then we think they are? So that basically none of those changes seem to have an influence on our mental programs. If we think again about cultural change, the first point where change would happen would be in the outer layers of culture which are practices. Practices are the only visible part of culture that can even be observed by outsiders. New practices can and will be learned throughout one's lifetime if they offer an advantage. For example seniors happily using Skype and other new ways of communication to stay in touch with their children and grandchildren. Culture change in form of basic value change though is much harder to achieve since basic values are the core principals of a moral programming.

As already argued, those values were taught to us when we were still children, we received them from our parents who acquired them when they were children from their parents and so on. This leads to very stable basic values of a society overtime, since basic value change can only happen within new generations. These shifts in basic values primarily affect only certain levels of cultural levels like the gender and the national level. Hofstede and Minkov [2010] argued that cultural core values can only change over a very long time period therefore national value systems should be considered given facts, as hard as a country´s geographical position or its weather. Therefore politicians, religious leaders, or business chiefs who claim that they will and can reform national core values should be ignored.

Outer Layers of culture acquired later in life like organizational cultures tend to be more changeable and there is no doubt that new technologies has an effect on all the members of a society as well. [Bunkowske, 2002] However for what people are using those new technologies remains mostly the same: to make money, to impress other people, to make life easier, to intimidate others or to seduce potential partners for example. All those activities are part of the social game that our parents and grandparents also played.

We have a very fine antenna that tells us what choices we have to make in order to belong to a particular social circle. From changing cloths, jokes, diets and music taste, everything can be changed in order to fit in and we need to fit in and behave in ways that are acceptable within ones preferred society. The unwritten rules for success and failure are linked to which degree oneself can integrate to a certain group. Most changes concerns the toys we use while playing the social game but not how we play it. [Hofstede, Minkov, 2010]

2.2 National Culture Differences

The nation system that divides the world and to which every human being is supposed to belong is a recent phenomenon in human history and it was introduced worldwide only in the mid-twentieth century. Most of the countries and their borders which exist nowadays, especially in Africa, are a legacy of the colonial era were the technologically advanced countries of Western Europe literally divide the world among themselves. [Heath, 2015] National borders were drawn after the will of the colonial power rather than to the cultural dividing lines of the local populations. Therefore when we speak about Nations we should always have in mind that a Nation is not automatically a society. Societies developed organically from social organizations in consequence have a common culture. In research on cultural differences nationality should therefore always be used carefully due to possible diversity of groups within a country that could make general and stereotypical predictions difficult but on the other hand it is often the only feasible criterion for classification. The advantages of using nations rather than societies is that nations tend to supply all kinds of statistics about their populations which is a good reason to collect data on a national level in order to create comparability across borders.

When it comes down to compare a country´s structures and functioning of its institutions it is very important to consider a country´s values since they are strongly related to how people in a country think, feel, act, and organize themselves. After the communist economic system failed in the former Soviet Union and other parts of Eastern European some economist thought that all the former communist countries needed was a capitalist institutions and this will automatically result into economic growth. This Shock therapy did not work out that well. Each country had to struggle through its own type of reforms and adapted the institutions to the software of its people's minds. [Marvin, 2010] The Globalization trend of to introduce multinational corporations and supranational institutions such as the World Bank to a country without adapting them to the local cultural system meets fierce local resistance because economic systems are not culture free. [Provost, 2014] Economic arguments are often directly influenced of cultural values therefore simply importing foreign institutions and to hope that they will work in another country is quite optimistic. The science of economics is strongly influenced by strong individualistic nations such as Great Britain and the United States therefore a lot economic theories were created under their individualistic assumptions on economic processes, therefore those cultural affected economic theories are unlikely to fully apply in societies in which group interest prevail. [Hofstede, Minkov, 2010]

2.3 The impact of Culture on the Financial Market

Like with traditional economic theories traditional financial theories like the Efficient Market Hypothesis assume that financial markets act rationally. So therefore that the development of equity prices can be predicted and that they always reflect and incorporate all relevant market information. The conclusion drawn from rational-acting market participants is that markets are efficient. [Busic, 2008] Therefore any human interaction with the market can be predicted. But the reality shows us a different picture not every market movement can solely be explained by the Efficient Market Hypothesis. For that reason we have to look at behavioral finance in order to explain market anomalies such as bubbles in order to find explanations in different behavior of the market participants.

Behavioral finance is a relative new research that tries to describes that not only rational arguments such as asset pricing but also individualistic preferences affect an investors investment decisions and consequently not appear rational to every participant of the market. The perception of what is a rational decision though differs from country to country why else do investors from different countries tend to demand different types of risk adjusted returns? [Arosa, 2010] For example Asian cultures tend to be much more risk averse then western cultures which is consistent with their high degree of Uncertainty Avoidance. [Fan, Xiao 2006] Resulting into higher risk adjusted returns in order cope with the risks of financial markets. This different perception of rationality brings us back to national cultural differences and their impact on a countries institutions. Financial systems vary across countries and to explain those different configurations we traditionally used two different approaches the legal and the political approach. While the legal approach tries to show how the protection of shareholders, through regulatory provisions and the quality of their enforcement affects the configuration of national financial markets. [La Porta, 1998]

The political approach tries to show the power of political forces in financial developments and therefore that political systems and national institutions can directly affect financial markets. [Rajan, Zingales, 2003] For example if a political system favors the formation of party coalitions, entrepreneurs and workers will be willing to trade low shareholder protection for high job security.[Pagano, Volpin, 2005]

Both approaches make sense but they might be also a projection of a nation's perception of risks and those nations' methods in trying to counter those uncertainties. The studies of Kwok [2006] and Weber [1998] are sharing this argumentation and are introducing a third approach to explain cross country differences in financial systems. They propose that the configuration differs due to a different perception of risk and by there for they follow the same argumentation of Hofstede that the individual perception of risks and uncertainty is affected by national culture. Cultural values seem not only to have an effect on the configuration of financial markets they also seem to effect the behavior of market participants.

The research of Chui, Titman & Wei [2008] for example have found by using stock market return data from 41 countries and the individualism index of Hofstede that countries with a high degree of individualism tend to have higher trading volumes and that momentum and long term reversals tend to be stronger. The work of Beugelsdijk and Frijns [2010] shows the same relationship between culture and amount of how much is traded in a national stock market. While the work of Grinblatt and Keloharju [2001] shows that national culture may also have an influence one how investors choose their equities. That investors are more likely to hold and trade stocks that have chief executives of the same cultural background.

So it seems to appear that culture can be quite helpful to explain differences of cross national market differences, especially when traditional explanations fail. [Chui, Titman, and Wei, 2008] In recent years global stock markets tend to display an increased degree of volatility, some countries financial markets tough seem to be more volatile than others. Chukwuogor [2007] shows that especially emerging markets tend to be much more volatile than other markets and therefore also challenging the appropriateness of the Efficient Market Hypotheses since emotion plays an important role in making economic and financial decisions. Basic emotions are universal across all societies and different cultures may encourage some emotions but suppress others. [Aaker, Williams, 1998]

"If culture has an effect on the configuration of financial system and on the behavior of market participants, it would be fair to assume that not only the volatility of stock markets could vary across nations, but also performance of the national market as a whole due to cultural differences." [Arosa, 2010]

The study of Arosa "The *Impact of Culture on Volatility and performance of Global Equity Indices*" which builds on and support the research of Pirouz [2004] found a statistically significant relationship between the cultural dimensions of Hofstede and global stock market volatility in terms of standard deviation and volatility range. Her findings imply that countries with a high level power distance tend to have an overall lower volatility. She also found a statistically significant relationship between three dimensions of Hofstede's model and market performance measured by the Sharpe ratio. Her findings suggest that when a nation has

a high degree of uncertainty avoidance it feels more uncomfortable under ambiguity and uncertainty therefore investors will demand higher risk adjusted premiums in order to cope with risk of participating in the stock market.

3.   Research Question and Hypotheses

All the previously shown research so far indicates that culture might be usable as significant variable to determinate what investors from different cultures might demand, do and feel when they participate in financial markets. Especially the work of Chui, Titman & Wei, [2008], Pirouz [2004], Arosa [2010] and Beugelsdijk, Frijns [2010] and their research through the use of stock market data and the cultural dimensions of Hofstede in empirical analysis laid a foundation for investor behavior predictions based on the culture of a country. Nevertheless the authors encourage a deeper investigation on the topic since their research still let a lot of questions unanswered. The main question I had was on how to use their findings in a practical way for the financial industry.

As a result of the relative new research I could not find any directly research related literature that is trying to answer this question. This reason is one of the key motivations of this bachelor thesis, to find possible applications that could benefit financial institutions and supporting their business.

In order to create possible applications that are using the current research I had to look into other business related research that are trying to use Professor Hofstede's work to explain differences in behavior of market participants. The work of Marieke de Mooij on Hofstede's model and its applications to global branding and advertising strategy to increase efficiency in global marketing is one of those researches. She has done extensive research on consumer behavior across cultures and created various theories to integrate culture into the field of marketing which might be adaptable for consumer behavior predictions for financial products when combined with the research of Chui, Titman & Wei, [2008], Pirouz [2004], Arosa [2010] and Beugelsdijk, Frijns [2010].

Leading ultimately to my main research question: "How can cross country cultural differences be used to identify financial product preferences?"

Due to the importance of volatility and stock market performance in financial risk assessments Arosa and Pirouz findings are the most promising in order to find possible methods for cross cultural preferences assessments for financial products.

Since the work of Arosa shows that financial markets perform differently due to different cultural biases, my first assumption was that there should be countries with similar cultural dimensions and that those countries can be clustered. Resulting into my first Hypothesis: Clustering Cultural Similarities

3.1 Hypothesis: Clustering Cultural Similarities

Countries with similar cultural dimensions can be clustered.

Following the assumption of possible similarities we can also assume that those clusters can be used to make predictions about a nation's perception of risk and its impact on investment behavior. Resulting into my second Hypothesis: Cross Culture Clusters as preference assessment tool for financial products

3.2 Hypothesis: Cultural Clusters as preference assessment tool for financial products

Cultural Clusters can be used to make assumptions about a nation's perception of risk and its impact on investment behavior

In order to find the financial product preferences of a country based on the culture of a country we first have to review Hofstede Cultural Dimensions and make use of those dimension in different interdisciplinary researches in order to create a framework that allows basic assumptions for financial product preferences across countries.

4. Literature Review

4.1 The evolution of the Cultural Dimensions Model

The original Cultural Dimension Model of Hofstede was produced in the early 1970s, the originally data set was gathered in a research project within the large multinational corporation IBM in order to answer the question: *How values in the workplace are influenced by culture.* With more than 116.000 questionnaires that have been translated into 20 different languages and were answered in 71 countries, Geert Hofstede created one of the first models for culture measurements. [Hofstede, 2001] His first model could be statistically categorized into four groups which became the original dimensions of national culture: Power Distance (PDI), Individualism versus Collectivism (IDV), Masculinity versus Femininity (MAS), and Uncertainty Avoidance (UAI).

In 1991 based on research by Michael Harris Bond the fifth dimension of Long-Term Orientation (LTO) which is based on Confucian thinking was added and was applied to 23 countries. Throughout the years Hofstede's study was many times replicated on the bases of various smaller data sets and validate Hofstede's results. In the year 2001 Geert Hofstede published his book Culture´s Consequences in which he describes over 200 external comparative studies and replications that supported his model and showed that his results are quite stable over time.

Nevertheless there are some critiques of Hofstede's model according to Kirkman, Lowe & Gibson [2006] Hofstede's model fails to capture the adaptable nature of humans and the fact that societies within countries are not homogenous. They also highlight the fact that the original cultural dimensions are only based on the data gathered within IBM and not within the general population of the countries itself. Despite some critiques many researchers across interdisciplinary research favor his Cultural Dimension Model for its simplicity and its fairly easy application to real world problems.

In 2010 Michael Minkov fully replicated the Cultural Dimension Model using recent World Values Survey data from representative samples of national populations, creating the first replication of the Cultural Dimension Model with a similar sized data set. In his research he not only validates Hofstede's model but also presented one new dimension labeled as Indulgence versus Restraint (IND) and extended the scores for the Long term orientation dimension to 93 countries by pretty much replicating the method used by Bond resulting in a model that correlates strongly but yet is not fully identical with the research done by Bond in 1991.

The Hofstede Cultural Dimension distinguishes cultures nowadays according to six dimension: Power distance, Individualism, Masculinity, Uncertainty Avoidance, Long term orientation and Indulgence. [Hofstede, 2001], [Hofstede, Minkov 2010] The cultural dimensions scores of a country are consider relative therefore the cultural dimensions can only be used meaningfully when used in comparison. The model provides scales from 0 to 100 with 50 as a midlevel for each cultural dimension. Basically if a score is under 50 the culture scores relatively low on that scale and above 50 high. Individualism is special case though under 50 the culture is considered collectivist and above 50 considered individualist. How collectivist/individualist a culture is depends on the shaping and relation to other cultures for example a country with a score of 43 would be collectivist but less collectivist than a country with 28 on the same scale.
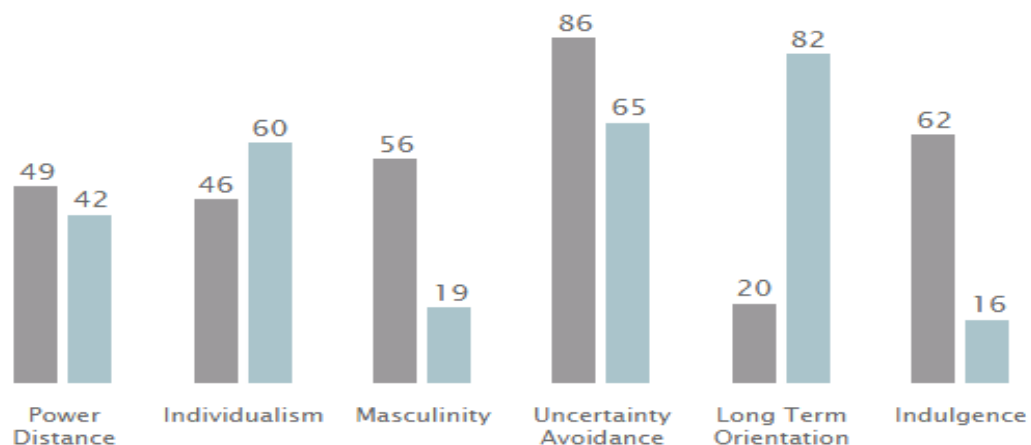

Figure 2 Dimensions of national culture [Geert-hofstede.com, 2015]

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4.2   The Cultural Dimensions

Although the original cultural dimension scores were produced in the early 1970s these relative scores have been proven to be quite stable over time. There are nevertheless forces that causes cultures to change but these forces tend to be global or continent-wide. In other words this means that the relative positions of countries remain the same, since these forces affect many countries at once so by therefore they shift together. There is but one exception to this rule: states that suffer from war and other disasters or rapid growth of wealth and education level can change a country positions without affecting other countries but in such cases the relative positions will also only change very slowly therefore national value systems should be considered given facts, as hard as a country´s geographical position or its weather. [Geerthofstede.nl, 2015]

Power Distance Index (PDI)

The power distance dimension is defined as to which degree the less powerful members of a society accept and expect that power is distributed unequally. Cultures with a high degree of power distance tend to believe that everyone within that society has its rightful place in hierarchy, ones social status must be clear so that others can show proper respect. Lower power distance societies on the other hand though favor equalization in distribution of power and demand justification for inequalities of power.

Individualism versus Collectivism (IDV)

A high degree of individualism can be defined as people looking after themselves and their immediate family only, while with a low degree people are trying to belong to groups that look after them in exchange for loyalty those groups extent the boundaries of family. In Individualistic cultures people are I-conscious and self-fulfillment is important but therefore tend to universalistic and assuming their values are valid for the whole word. [Hofstede, Minkov, 2010]

Masculinity/Femininity (MAS)

The dominant values in a masculine society are achievement and success while in in feminine society the values of caring for others and quality of life is more dominant than pure success.

Uncertainty Avoidance Index (UAI)

The Uncertainty Avoidance dimension is defined as to which degree the members of a society feel uncomfortable with uncertainty and ambiguity. In cultures of strong uncertainty avoidance, there is a need for rules and formality to structure life in order to counter uncertainties and are less open to unorthodox ideas and innovations. Societies with low Uncertainty Avoidance on the other hand maintain a more relaxed attitude towards uncertainty and new unfamiliar situations, practices are highly valued and weight more than principles.

Indulgence versus Restraint (IND)

This dimension is trying to explain the extent to which degree people try to control their desires and impulses. A low degree in this dimension stands for a society that suppresses impulsive behavior and regulates it by means of strict social norms.

Long Term Orientation versus Short Term Normative Orientation (LTO)

Every society has to maintain some links with its own past while dealing with the challenges of the present and the future. Societies who score high on this dimension prefer a pragmatic future-orientated perspective rather than a short-term point of view. Highly valued values in long term orientated societies are perseverance, thriftiness and investments in the future while the values of short term orientated societies include personal steadiness, stability and respect for traditions. [Geert-hofstede.com, 2015]

4.3 Consumer Behavior and Culture

Like already mentioned the Hofstede cultural dimension model tries to show the relationship of cultures to each other, therefore the model itself does not directly predict any phenomena or dynamics. When applying the cultural dimensions on the real world one has always to consider other factors like for example national wealth, history, personalities, and education level. The model itself is not a magical tool that let one understand a countries social structure within a short amount of time. Nevertheless the model and its dimensions allow us to predict certain preferences and trends within a society and they can be predicted fairly well. For instance Power Distances correlates with income inequality and Individualism with national wealth. The model itself has been applied to many different researches. From optimizing international customer services, outsourcing strategies and recruitment in international organizations in order to cope with complex international environments. Or to identifying management techniques and leadership styles that may not work in a certain cultures. [Hofstede, 2001]

One of the biggest business related research that makes use of Hofstede's dimensions is the field of International Marketing since all aspects of consumer behavior are cultural related. For example in a commercial cross cultural brand value study done by Crocus in 2004, found out that brands that focus to appear prestigious are more likely to be successful in countries with a high degree uncertainty avoidance and a high power distance. On the other hand prestigious brands are considered less innovative in countries with low power distance and low uncertainty avoidance therefore they are less successful. Consumers tend to project their own personality preferences on to global brands.

Especially the work of Marieke de Mooij in the field of marketing and culture is helping to identify and understand culture and its impact on global marketing. Her research is based on cross cultural psychology and meta-analysis of consumer behavior data that can be found in her book *Consumer Behavior and Culture: Consequences for Global Marketing* which was published in 2004. She argues that a lot of concepts in branding strategies are very much influenced by individualistic worldviews, since they were created in countries with a high degree of Individualism. A major construct that traditional branding strategies do not consider is the concept of social pressure. [Lee, Green, 1991]

Social pressure has quite a weak influence on buying decisions for societies that are individualistic. But in collectivist cultures this on the other hand is quite different. Here one has to live up to the standards of ones position in order to save face. The concept of saving face is a huge motivator in collectivist societies therefore a key factor in buying decisions. Since if one act contrary to expectations of one's social position it may result in loss of moral integrity. [Malhotra, McCort, 2001]

One key point in consumer behavior is to identify how people are acquiring information about a product. People in collectivist and or/high power distance cultures are more likely to acquire information via direct communications within their expanded social circle. Based on those acquired information they make their buying decisions, therefore are strongly influenced by social standards and opinions. Whereas in individualistic cultures with a low power distance, people are more likely to acquire information via the media and from close friends in order to make buying decision. [De Mooij, 2010]

But not only the way information is acquired is a vital point in consumer behavior but also on how products are advertised, while in China and Korea product advertising focus on harmony and family are more effective. In individualistic cultures like the United States advertising individual benefits, personal success and independence are much more effective due to their high degree of Individualism [Han, Shavitt, 1994]

De Mooij argues that the three cultural dimensions of power distance, individualism/collectivism and uncertainty avoidance are responsible for the variance of communications styles across countries. She also argues that in advertising the product category defines the most relevant cultural dimension in order to identifying certain trends and preferences. [De Mooij, 2003, 2004, 2010]

At this point we can try to draw a connection between the researches done in the field of marketing and the research that is using culture as variable to describe financial market differences. To determinate what kind of financial products investors from different cultures might demand in order to participate in the financial markets.

5. Product preference assessment

5.1 Clustering process

Following the assumption made in the first Hypothesis Clustering Cultural Similarities that: *Countries with similar cultural dimensions can be clustered.* The first problem that appears when trying to sort countries after their cultural dimensions is the problem which countries and cultural dimensions should be focused and considered for the clustering process.

Arosa only included a limited amount of countries in her study out of two reasons, to create comparability in the regression analysis due to the lack of enough data for all the available countries and the second reason that the updated new data set of Hofstede and Minkov was only shortly introduced after she published her work resulting into that she only covered and had access to the original four culture dimensions. The shown relevant relationship between market performance and the dimensions of Power Distance, Uncertainty Avoidance and Individualism are nevertheless still quite useful to explain cross national market performance differences and will be used in this research. To make assumptions about the possible investment preferences of possible investors though I now would like also to include the dimension of Long term orientation since planning ahead is a vital characteristic for investment decisions.

The dimension of Indulgence might be also quite significant to explain volatility within a market since this dimension is trying to explain the extent to which degree people try to control their desires and impulses. But due to the ambiguities of focusing on happiness research by Michael Minkov and happiness might be viewed, represented and discussed quite differently across countries.

"This might call in to doubt the validity of using data originating from questions asking respondents to describe how happy they are."[MacLachlan, 2013]

Therefore we will not use the newly introduce sixth dimension by Minkov, resulting into a total amount of 83 countries that we can try to cluster after cultural similarities .The next problem we are faced with is after what kind similarities we want to cluster the countries. There are various types of different similarities that countries can be clustered after for example regional clusters, economic development, similar characteristic of the culture dimensions etc...

In order to create a preference assessment tool for basic assumptions what of kind financial products a certain cluster might demand. I clustered the countries after similar relationships of the culture dimensions to each other, due to the fact that if countries are sorted not after similar relationships there is a possible higher chance for cultural paradoxes within a cluster resulting into a less robust and more complicated model. The 83 countries have been clustered in Microsoft Excel after the following algorithm with the result possibilities of true and false:

- *Power Distance < Individualism*

- *Individualism > Uncertainty Avoidance*

- *Individualism < Long term orientation*

- *Uncertainty Avoidance > Long term orientation*

- *Power Distance < Long term orientation*

Country	Power Distance	Individualism	Uncertainty Avoidance	Long-term Orientation	Clusters	PDI<IDV	IDV>UAI	IDV<LTO	UAI>LTO	PDI<LTO
China	80	20	30	87	7	False	False	True	False	True
South Korea	60	18	85	100	7	False	False	True	False	True
Taiwan	58	17	69	93	7	False	False	True	False	True
United States	40	91	46	26	8	True	True	False	True	False
Australia	36	90	51	21	8	True	True	False	True	False
Canada	39	80	48	36	8	True	True	False	True	False
Ireland	28	70	35	24	8	True	True	False	True	False

Figure 3 Combination Example

After the if-algorithm 15 different false/true combinations were created and were manually sorted in order to cluster them. But due to the fact that two possible clusters (Germany, Switzerland) and (Estonia, Lithuania) showed very similar characteristic of their cultural dimensions but a different relationship in the *Individualism > Uncertainty Avoidance* function I decided to combine those two clusters into one; resulting into a total amount of 14 different clusters.[1]

Country	Power Distance	Individualism	Uncertainty Avoidance	Long-term Orientation	Clusters	PDI<IDV	IDV>UAI	IDV<LTO	UAI>LTO	PDI<LTO
Switzerland	34	68	58	74	14	True	True	True	False	True
Germany	35	67	65	83	14	True	True	True	False	True
Estonia	40	60	60	82	14	True	False	True	False	True
Lithuania	42	60	65	82	14	True	False	True	False	True

Figure 4 Different relationship same dimension characteristics

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[1] The data sheet for the 83 countries can be found in the appendix on the page VI

Since the created clusters were just randomly sorted to each other's same false/true combination the next logically step was to ensure that the combination clusters are sorted after a specific pattern to put the clusters in a relationship to each other. By using the sorting function in Excel the data set has been sorted after (*Power Distance < Individualism= false).*

Now I could separate the clusters into two main groups: collectivist societies (Clusters 1-7) and individualistic societies (Clusters 8-14). Note that there is one country (Poland, IDV=60) which is in the collectivist societies clusters (Cluster 2) even though Poland is considered a individualistic society since it scores above 50 mark in the Individualism Dimension. Therefore it should be considered as an outliner.

With the now unsorted clusters within the two main groups I applied another sorting function. Resulting into that clusters within the collectivist group and the individualistic group were now sorted after an increasing average of the cultural dimension Long-term orientation of each cluster. The findings of the applied clustering algorithms can be observed in the Figure 5 Country Clusters.[2]
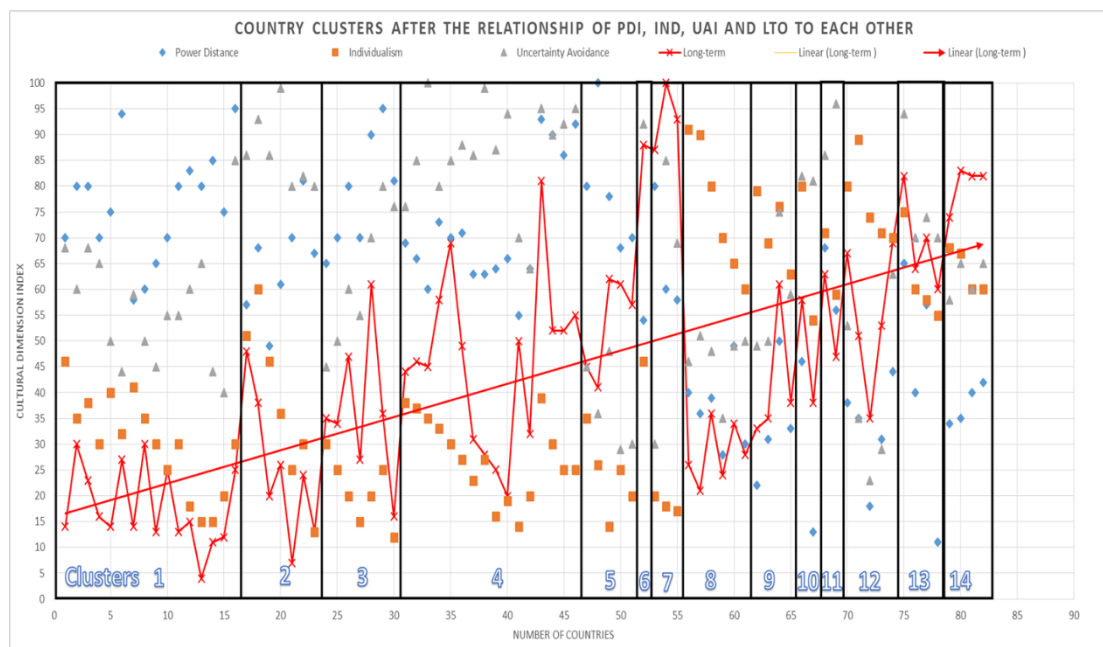

Figure 5 Country Clusters

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[2] A bigger version of Figure 5 can be found in the appendix on page VII

5.2 Culture Assessment Framework

The next main step after the creation of the cultural dimension clusters would be to use previously show researches and putting them together into a framework that can be used to make assumptions about the risk preferences within a cultural cluster. After that we have to look at the different basic configuration types of financial products in order to integrate those product types into the created framework. Since the shown research indicates that Individualism, Uncertainty Avoidance, Power Distance and maybe Long term orientation might be the most relevant cultural dimensions to define risk perception of an investor and therefore his possible financial product preferences. And as we already looked at the basic definitions of the cultural dimension we now have to take a closer look again by trying to implement the findings of the researches into those definitions.

Individualism

A high degree of Individualism can be defined as people looking after themselves and their immediate family only. People in strong individualistic cultures are buying more life insurance policies ("safe investments") in order to counter the fact that one cannot necessarily count on the support of their family. [Chui, Kwok, 2008] Together with a low power distance people are more likely to acquire information via the media and from close friends in order to make buying decision. In individualistic cultures people are I-conscious and self-fulfillment is important but therefore tend to be universalistic, overconfident and assuming their values are valid for the whole word. Also countries with a high degree of Individualism tend to have higher trading volumes [Chui, Titman & Wei, 2010].

With a low degree in Individualism people are trying to belong to groups that look after them in exchange for loyalty those groups extent the boundaries of family. Investors will demand high risk adjusted returns not only just to cope with investment risks but also in order to prevent losing face. Because if one act contrary to expectations of one´s social position it may result in loss of moral integrity for that person, questioning the position of a person in the whole society. [Malhotra & McCort 2001] [Hofstede, Minkov, 2010] [Arosa, 2010]

Uncertainty Avoidance

The Uncertainty Avoidance dimension is defined as to which degree the members of a society feel uncomfortable with uncertainty and ambiguity. In cultures of strong uncertainty avoidance, there is a need for rules and formality to structure life in order to counter uncertainties and are less open to unorthodox ideas and innovations. The more uncomfortable a nation feels under ambiguity and uncertainty the higher risk adjusted return will it demand in order to cope with the risk of participating in the market. Countries with a high degree in this dimensions are considers highly risk averse therefore security is an important element in their decision making process and motivation. [Fan, Xiao, 2006]

Societies with low Uncertainty Avoidance on the other hand maintain a more relaxed attitude towards uncertainty and new unfamiliar situations resulting into that those countries experience higher market volatility. Practices are highly valued and weight more than principles. People favor no more rules than necessary. [Hofstede, Minkov, 2010] Since people maintain a more relaxed attitude towards unfamiliar situations smaller risk adjusted returns are needed to persuade people to invest. [Arosa, 2010]

Power Distance

The power distance dimension is defined as to which degree the less powerful members of a society accept and expect that power is distributed unequally. Cultures with a high degree of power distance tend to believe that everyone within that society has its rightful place in hierarchy, ones social status must be clear so that others can show proper respect therefore investors will demand high returns as status symbol. People in collectivist and or/high power distance cultures are more likely to acquire information via direct communications within their expanded social circle which they consider as an authority. Based on those acquired information they make their buying decisions, therefore are strongly influenced by social standards and opinions. [De Mooij, 2010] Countries with a high degree in Power Distance also tend to experiences overall lower market volatility [Arosa, 2010]

Lower Power Distance societies on the other hand though favor equalization in distribution of power and demand justification for inequalities of power. Power is decentralized and people count on experience rather than authority. Information is shared frequently and gathered from various sources in order to make decisions. They have the bias to believe that inequalities are unacceptable and changeable. [Hofstede, McCrea, 2004]

Long Term orientation

Every society has to maintain some links with its own past while dealing with the challenges of the present and the future. Societies who scores low in this dimension prefer a short term orientated perspective which is characterized by personal steadiness, stability, respect for traditions and a relatively small propensity to save for the future. People tend to focus on achieving quick results and have a strong concern to establish an absolute truth therefore are less likely to adept to a new situation.

Societies who score high on this dimension prefer a pragmatic future-orientated perspective therefore there is an acceptance that there are many truths and often depends on the viewer. Highly valued values in long term orientated societies are perseverance in achieving results, thriftiness resulting into a higher own capital rates and investments in the future. They have a bias for constantly high rate of investments in R&D even in economically difficult times, the priority lies in steady growth of market shares rather than on quarterly profits. [Hofstede, Minkov, 2010]

After that we now have created a cultural assessment framework that can help us define possible risk preferences and demands of possible investors. The next logically step would be to identify basic financial product types in order to use them together with the framework and the created cluster to make predictions about financial product preferences within the cultural clusters.

5.3 Basic financial product types

What are the basic different types of financial products? The first thing to do would be to think of the one thing that all financial products share but distinguish them from one other, the degree of risk associated with the products and services. All financial products contain a certain degree of risk and even '"safe" investment strategies may contain an element of uncertainty. Though the relevant risk depends on a variety of factors from the way financial products were issued or structured to all kinds of external risks types. From interest rate risk, liquidity risk, volatility risk to political or legal risk. The amount of different risk factors on the financial markets can be enormous, like the amount of diversity in financial services provided in those markets. Nevertheless by just assuming that a given investment strategy is either "safe" or "risky" would be quite simple, financial products available today cannot be classified in such way. Generally speaking the level of risk is most of the time and hopefully directly corresponded with its potential rewards. With this in mind, the spectrum of risk adjusted returns can be broken down into the following seven risk/return combinations.

Safe/Low Risk and Return: treasury securities, savings bonds, life insurance;

Very Low Risk and Return: fixed and indexed annuities, insured municipal bonds;

Low Risk and Return: investment-grade corporate bonds, uninsured municipal bonds;

Moderate Risk and Return: preferred stocks, fixed income funds;

Medium Risk and Return: Equity mutual funds, blue-chip stocks, real estate;

Figure 6 Financial products basic types

High Risk and Return: Small/mid-cap stocks, small cap funds, mutual funds;

Speculative Risk and Return: Oil and gas investments, limited partnerships, financial derivatives, penny stocks, commodities; [Crédit Agricole, n.d] [BNP Paribas Fortis, 2009]

5.4   Cluster analyses

Now that we have the basic financial product configurations with its different risk and return types, the only thing that is left to do. Is to describe the different cultural clusters with the help of the culture assessment framework and assess which clusters has which preferences for which financial product. The figures that shows the Clustering and the Data Set of the countries can be found in the appendix. So therefore let us now look at Cluster number one.
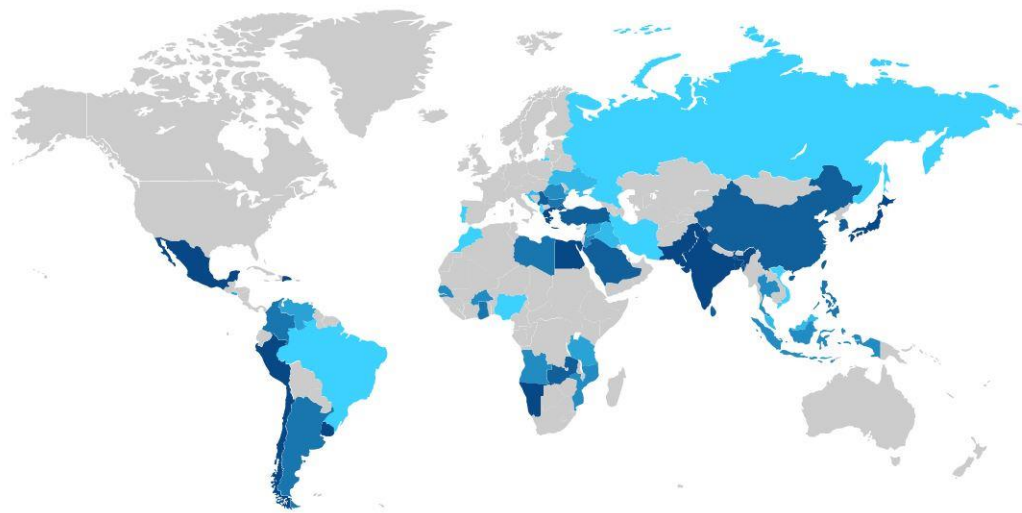
Figure 7 Collectivistic Societies used

Cluster 1 consists of 16 different countries and shows a high level of Power Distance, a low degree of Individualism identifying the countries as collectivist societies, a medium level of Uncertainty Avoidance and a very low score on Long Term Orientation. People strongly believe that everyone has its rightful place in the social hierarchy and that inequalities are acceptable and not changeable. People are belonging to various groups that look after them therefore will only act accordingly to their social position. Investors are naturally more risk averse and will demand high risk adjusted returns in order to prevent losing face and to not lose ones social position. Nevertheless there is still a demand for high returns as status symbol in higher hierarchy levels in order to distinguish oneself from another one.

Focus lies on short term returns and achieving fast results therefore people have a very low bias for long term investments and thriftiness.

Product Preferences: Low Risk/Return, Moderate Risk/Return and Medium Risk/Return, Speculative Risk and Return

Countries: Morocco, Syria, Libya, Jordan, Philippines, Zambia, Dominican Republic, Senegal , Nigeria, Angola, Ghana, Mozambique, Cape Verde, Iraq

Cluster 2 consists of 7 different countries and shows a medium/high level of Power Distance, a low degree of Individualism identifying the countries as collectivist societies with one outliner (Poland) and one with no clear preferences (Spain) ,a very high level of Uncertainty Avoidance and a very low score on Long Term Orientation. People accept that everyone has its place in the social hierarchy and that inequalities are acceptable and not fully changeable. People are belonging to various groups that look after them therefor will only act accordingly to their social position. People need structure in life through rules and formalities and feel threatened by ambiguous situations. Investors are highly risk averse and will demand very high risk adjusted returns in order to cope with investment risk and to prevent losing face. Nevertheless there might be a demand for high returns as status symbol in higher hierarchy levels in order to distinguish oneself from another one. Focus lies on short term returns and achieving fast results therefore people have a very low bias for long term investments and thriftiness.

Product Preferences: Low Risk/Return, Moderate Risk/Return and Medium Risk/Return

Countries: Poland, Spain, Argentina, Uruguay, Egypt, Mexico, Colombia

Cluster 3 consists of 7 different countries and shows a high level of Power Distance, a very low degree of Individualism identifying the countries as collectivist societies, a medium level of Uncertainty Avoidance and a low/moderate score on Long Term Orientation. People strongly believe that everyone has its rightful place in the social hierarchy and that inequalities are acceptable and not changeable. People are belonging to various groups that look after them therefor will only act accordingly to their social position. Investors are naturally risk averse

and will demand high risk adjusted returns in order to prevent losing face and to not lose ones social position. Nevertheless there is demand for high returns as status symbol in higher hierarchy levels in order to distinguish oneself from another one. Focus lies on short term returns and achieving quick results therefore people have a low bias for long term investments.

Product Preferences: Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return and Speculative Risk and Return

Countries: Namibia, Tanzania, Bangladesh, Burkina Faso, Albania, Saudi Arabia, Venezuela,

Cluster 4 consists of 16 different countries and shows a medium/high level of Power Distance, a very low/low degree of Individualism identifying the countries as collectivist societies, a very high level of Uncertainty Avoidance and moderate score on Long Term Orientation with two outliners that score even higher (Russia and Bulgaria). People accept and belief that everyone has its place in the social hierarchy and that inequalities are acceptable and not fully changeable. People are belonging to various groups that look after them therefor will only act accordingly to their social position. People having a big need for structure in life through rules and formalities and feel threatened by ambiguous situations. Investors are highly risk averse and will demand very high risk adjusted returns in order to cope with investment risk and to prevent losing face. Nevertheless there might be demand for high returns as status symbol in higher hierarchy levels in order to distinguish oneself from another one. Planning and investment time bias depends on the situation and viewer there is no clear preference in this dimension.

Product Preferences: Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return, and High Risk and Return

Countries: Brazil, Turkey, Greece, Croatia, Bulgaria, Slovenia, Chile, Peru, El Salvador, Pakistan, Thailand, Russia, Romania, Serbia, Ukraine

Cluster 5 consists of 5 different countries and shows a high level of Power Distance, a low degree of Individualism identifying the countries as collectivist societies, low/moderate level of Uncertainty Avoidance and a medium score on Long Term Orientation. People strongly believe that everyone has its rightful place in the social hierarchy and that inequalities are acceptable and not changeable. People are belonging to various groups that look after them therefore will only act accordingly to their social position. Investors are quite risk averse and will demand high risk adjusted returns in order to prevent losing face and to not lose ones social position. Nevertheless there is still a demand for high returns as status symbol in higher hierarchy levels in order to distinguish oneself from another one. Planning and investment time bias depends on the situation and viewer therefore act more pragmatic.

Product Preferences: Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return and Medium Risk/Return, and High Risk/Return

Countries: Sir Lanka, Malaysia, Indonesia, Hong Kong, Vietnam

Cluster 6 is Japan and it shows a medium level of Power Distance, a medium degree of Individualism identifying the country as collectivist society with a very high level of Uncertainty Avoidance and a very high score on Long Term Orientation. People accept that everyone has a place in the social hierarchy and that inequalities are acceptable and but changeable through hard work. People are belonging to various groups but tend to focus more on inner groups nevertheless they will act accordingly to their social position. People need structure in life through rules and formalities and feel threatened by ambiguous situations therefore prepare themselves for any uncertain situation. Investors are highly risk averse and will demand very high risk adjusted returns in order to cope with investment risk and to prevent losing face. Focus lies on a long scale future orientated planning with a perseverance in achieving results and investments in the future. Priority lies in steady growth of market shares rather than on quarterly profits.

Product Preferences: Safe/Low Risk and Return. Very Low Risk/Return Low, Risk/Return, Moderate Risk/Return and Medium Risk/Return

Cluster 7 consists of 3 (China, Taiwan, South Korea) different countries and shows a medium/high level of Power Distance, a very low degree of Individualism identifying the countries as collectivist societies, a high level of Uncertainty Avoidance with China as outliners and a very high score on Long Term Orientation. People accept that everyone has a place in the social hierarchy and that inequalities are acceptable and but changeable through hard work. People are belonging to various groups and they will act accordingly to their social position. People need structure in life through rules and formalities and feel threatened by ambiguous situations. Investors are highly risk averse and will demand very high risk adjusted returns in order to cope with investment risk and to prevent losing face. Nevertheless there is still a demand for high returns as status symbol in higher hierarchy levels in order to distinguish oneself from another one. Focus lies on a long scale future orientated planning with a perseverance in achieving results and investments in the future. Priority lies in steady growth of market shares rather than on quarterly profits.

Product Preferences: Safe/Low Risk and Return, Very Low Risk/Return Low, Risk/Return, Moderate Risk/Return, Medium Risk/Return and High Risk/Return

Figure 8 Individualistic Countries used

Cluster 8 consists of 6 different countries and shows a low level of Power Distance, a high degree of Individualism identifying the countries as individualistic societies, a moderate/medium level of Uncertainty Avoidance and a low score on Long Term Orientation. People believe that inequalities are unacceptable and changeable therefor favor equalization in distribution of power and demand justification for inequalities. People looking for themselves and their immediate

family only but cannot necessarily count on the support of their family therefore searching for methods to protect themselves. I-consciousness and self-fulfillment is important resulting into a need to invest in order to fulfil ones desire. Investors are aware of risks and will demand risk adjusted returns in order to cope with investment risk, though people tend to be overconfident and assuming their values are valid for the whole world therefore underestimating possible risks. Focus lies on short term returns and achieving fast results therefore people have a low bias for long term investments and thriftiness.

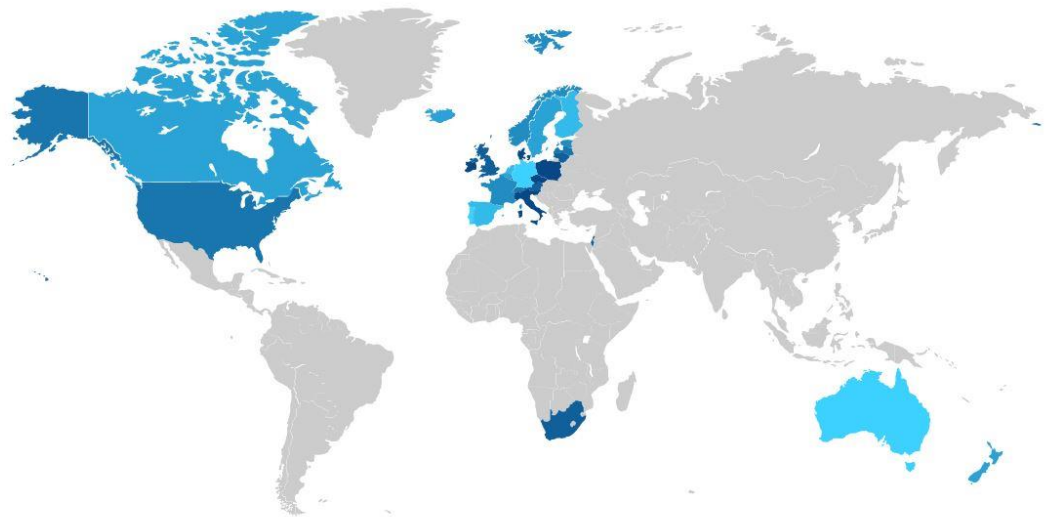*Product Preferences*: Safe/Low Risk and Return, Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return, High Risk/Return, and Speculative Risk and Return.

Countries: United States, Australia, Canada, Ireland, South Africa, Iceland

Cluster 9 consists of 4 different countries and shows a low level of Power Distance, a medium/high degree of Individualism identifying the countries as individualistic societies, a medium level of Uncertainty Avoidance and a low/moderate score on Long Term Orientation with Italy as outliner in this dimension. People believe that inequalities are unacceptable and changeable therefore favor equalization in distribution of power and demand justification for inequalities. People are looking for themselves and their immediate family only but cannot necessarily count on the support of their family therefore searching for methods to protect themselves. I-consciousness and self-fulfillment is important resulting into a need to invest in order to fulfil ones desire. Investors are aware of risks and will demand risk adjusted returns in order to cope with investment risk, though people are having the preference to be overconfident and assuming their values are valid for the whole world therefore underestimating possible risks. Focus lies on short/medium term returns and achieving fast results therefore people have a low bias for long term investments and thriftiness.

Product Preferences: Safe/Low Risk and Return, Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return, High Risk/Return, and Speculative Risk and Return.

Countries: New Zealand, Norway, Finland, Italy,

Cluster 10 consists of 2 countries (Hungary, Israel) and shows a moderate level of Power Distance, a medium/high degree of Individualism identifying the countries as individualistic societies, a very high level of Uncertainty Avoidance and a moderate score on Long Term Orientation. People believe that inequalities are unacceptable and changeable but nevertheless there is need for structure in life through rules and formalities. Investors are highly risk averse and will demand high risk adjusted returns in order to cope with investment risk though people can be overconfident therefore underestimating possible risks. People tend look after tem themselves and their immediate family only but since they fell threated with ambiguous situations are trying to protect themselves. Focus lies on short/medium term returns and achieving fast results therefore people have a low bias for long term investments and thriftiness.

Product Preferences: Safe/Low Risk and Return, Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return

Cluster 11 consists of 2 countries (France, Malta) and shows a medium/high level of Power Distance, a medium/high degree of Individualism identifying the count-tries as individualistic societies, a very high level of Uncertainty Avoidance and a medium score on Long Term Orientation.

People have a tendency to accept that everyone has its place in the social hierarchy and that inequalities are acceptable and but changeable. There is big need for structure in life through rules and formalities and people feel threatened by ambiguous situations. Investors are highly risk averse and will demand very high risk adjusted returns in order to cope with investment risk though people tend to be overconfident and assuming their values are valid for the whole world therefore underestimating possible risks. People tend look after themselves and their immediate family only but since they fell threated with ambiguous situations are trying to protect themselves. They belong also to various groups but tend to focus more on inner groups nevertheless they will act accordingly to their social position. Nevertheless there might be a demand for high returns as status symbol in higher hierarchy levels in order to distinguish oneself from another one.

Planning and investment time bias depends on the situation and viewer therefore people act more pragmatic but there is tendency to thriftiness due to risk aversion.

Product Preferences: Safe/Low Risk and Return, Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return, High Return/Risk

Cluster 12 consists of 5 different countries and shows a low level of Power Distance, a high degree of Individualism identifying the countries as individualistic societies, a low/moderate level of Uncertainty Avoidance and a medium score on Long Term Orientation.

People believe that inequalities are unacceptable and changeable therefor favor equalization in distribution of power and demand justification for inequalities. People looking for themselves and their immediate family but cannot necessarily count on the support of their family therefore searching for methods to protect themselves. I-consciousness and self-fulfillment is very important resulting into a need to invest in order to fulfil ones desire. Investors are aware of risks though people tend to be quite overconfident and assuming their values are valid for the whole world therefore underestimating possible risks. Planning and investment time bias depends on the situation and viewer therefore people act more pragmatic.

Product Preferences: Safe/Low Risk and Return, Safe Risk/Return, Moderate Risk/Return, Medium Risk/Return, High Return/Risk, Speculative Risk and Return.

Countries: Netherlands, United Kingdom, Denmark, Sweden, Latvia

Cluster 13 consists of 4 different countries and shows a moderate/medium level of Power Distance with Austria as runaway, a medium/high degree of Individualism identifying the countries as individualistic societies, a high level of Uncertainty Avoidance and a medium/high score on Long Term Orientation. There is need for structure in life through rules and formalities. Investors are quite risk averse and will demand high risk adjusted returns in order to cope with investment risk though people tend to be overconfident and assuming their values are valid for the whole world therefore underestimating possible risks. People are

looking for themselves and their immediate family only but cannot necessarily count on the support of their family therefore searching for methods to protect themselves. Focus lies on a medium/long term orientated planning with a perseverance in achieving results and investments in the future.

Product Preferences: Safe/Low Risk and Return, Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return, High Re-turn/Risk

Countries: Belgium, Luxembourg, Czech Republic, Austria

Cluster 14 consists of 4 different countries and shows a moderate level of Power Distance, a medium/high degree of Individualism identifying the countries as in-dividualistic societies, a medium level of Uncertainty Avoidance and a high score on Long Term Orientation. People believe that inequalities are unacceptable and changeable therefore favor equalization in distribution of power and demand jus-tification for inequalities. People tend to look for themselves and their immediate family only but cannot necessarily count on the support of their family therefore searching for methods to protect themselves. I-consciousness and self-fulfillment is important resulting into a need to invest and thrift in order to fulfil ones desire. Investors are aware of risks and will demand risk adjusted returns in order to cope with investment risk, though people tend to be overconfident and assuming their values are valid for the whole world therefore underestimating possible risks. Focus lies on a long scale future orientated planning with a perseverance in achieving results and investments in the future. Priority lies in steady growth of market shares rather than on quarterly profits.

Product Preferences: Safe/Low Risk and Return, Very Low Risk/Return, Low Risk/Return, Moderate Risk/Return, Medium Risk/Return

Countries: Switzerland, Germany, Estonia, Lithuania,

5.5 Model Robustness

There are two main problems when using a model of cultural values. The first problem is that the dimensions of Hofstede´s model itself do not exist in a tangible sense they are mere constructs. Constructs are methods that are trying to help explain the different components of theories, as well as trying to measure and observe their impact. [Dissertation.laerd.com, 2015] Culture itself is a construct as well, so are all the values associated with culture that are describing and predicting certain behavior. They do not exist in a tangible sense, they rather are a matter of definition, and practical significance should be the criterion.

So therefore Hofstede's dimensions does not directly predict any phenomena or dynamics. Cultures can be a deceptive concept, and can be misleading if used to plan business activities. Like with any other rational and logically decision assessment one has always to consider various factors like national wealth, history or personalities and many other factors, to make a plausible decision. But nevertheless Hofstede's model, if well understood, can helps us to understand what might happen. Not for specific cases but for trends, averages, and expectations.

The second problems of using a model of cultural values is that different cultural measurement models, such as the GLOBE study, will likely lead to different results when using them to make predictions. [House, 2004] [Shi, Wang, 2010] *"In particular the differences resulting from asking for the desired or the desirable influence research result."* [De Mooij, 2010]. It has to be highlighted that none of the cultural models were developed to analyze consumer behavior so therefore to make predictions about consumer behavior one has to select and interpret the dimensions that are the most likely relevant to a certain product or consumer group. At this point I would like to encourage a further research on how different cultural models might lead to different motivations to invest, and how those differences might lead to different financial product preferences.

6. Conclusion

Culture has an impact on our decision making and how we react to different situations. The various research in different research fields have shown that it is possible to make consumer behavior assumptions based on the culture of a society. The financial product preferences predictions made in this bachelors thesis can be used for a first assessment to identify a possible demand of a market cluster. The main conclusions drawn from the cluster analyses are that collectivistic societies tend to demand a safer investment product type, to safe ones position in society but also might demand an investment product with a very high return as possible status symbol to raise ones position in society. And individualistic societies tend to demand a wider range of investment product types due to fact that individualism tend to create a loser social framework therefore encourage safer investments to protect oneself from unidentified threats. But due to the need for self-fulfillment also tend to demand high returns in order to fulfil ones desire

It seems like after analyzing the collectivistic societies on its own and individualistic societies on its own. That even though societies have different cultural biases within those two mains clusters, they have similar product preferences. Maybe this can be explained due to a fact mentioned in the very beginning of thesis. That people around the world are faced with similar and common problems but the way how certain groups are tackling those problems can be very different. Nevertheless even though they are tackling those problems in a different way and have different motivations to solve a problem the end result might be the still the same. Resulting into different financial product preferences of collectivist societies and individualistic societies, but within those society clusters quite similar product preferences. I have to mention at this point that the created financial product preferences within this bachelor thesis are just basic assumptions. Note that the cultural financial product preferences of every country can be different than its clusters preferences due to the used clustering process. A further and deeper investigation is needed for every specific country. In order create a more detailed and specific assessment tool to identify financial product preference after the cultural bias of each country.

Appendix

Country	Power Distance	Individualism	Uncertainty Avoidance	Long-term Orientation	Clusters	PDI<IDV	IDV>UAI	IDV<LTO	UAI>LTO	PDI<LTO
Morocco	70	46	68	14	1	False	False	False	True	False
Syria	80	35	60	30	1	False	False	False	True	False
Libya	80	38	68	23	1	False	False	False	True	False
Jordan	70	30	65	16	1	False	False	False	True	False
Lebanon	75	40	50	14	1	False	False	False	True	False
Philippines	94	32	44	27	1	False	False	False	True	False
Iran	58	41	59	14	1	False	False	False	True	False
Zambia	60	35	50	30	1	False	False	False	True	False
Dominican Republic	65	30	45	13	1	False	False	False	True	False
Senegal	70	25	55	25	1	False	False	False	True	False
Nigeria	80	30	55	13	1	False	False	False	True	False
Angola	83	18	60	15	1	False	False	False	True	False
Ghana	80	15	65	4	1	False	False	False	True	False
Mozambique	85	15	44	11	1	False	False	False	True	False
Cape Verde	75	20	40	12	1	False	False	False	True	False
Iraq	95	30	85	25	1	False	False	False	True	False
Spain	57	51	86	48	2	False	False	False	True	False
Poland	68	60	93	38	2	False	False	False	True	False
Argentina	49	46	86	20	2	False	False	False	True	False
Uruguay	61	36	99	26	2	False	False	False	True	False
Egypt	70	25	80	7	2	False	False	False	True	False
Mexico	81	30	82	24	2	False	False	False	True	False
Colombia	67	13	80	13	2	False	False	False	True	False
Namibia	65	30	45	35	3	False	False	True	True	False
Tanzania	70	25	50	34	3	False	False	True	True	False
Bangladesh	80	20	60	47	3	False	False	True	True	False
Burkina Faso	70	15	55	27	3	False	False	True	True	False
Albania	90	20	70	61	3	False	False	True	True	False
Saudi Arabia	95	25	80	36	3	False	False	True	True	False
Venezuela	81	12	76	16	3	False	False	True	True	False
Brazil	69	38	76	44	4	False	False	True	True	False
Turkey	66	37	85	46	4	False	False	True	True	False
Greece	60	35	100	45	4	False	False	True	True	False
Croatia	73	33	80	58	4	False	False	True	True	False
Bulgaria	70	30	85	69	4	False	False	True	True	False
Slovenia	71	27	88	49	4	False	False	True	True	False
Chile	63	23	86	31	4	False	False	True	True	False
Portugal	63	27	99	28	4	False	False	True	True	False
Peru	64	16	87	25	4	False	False	True	True	False
El Salvador	66	19	94	20	4	False	False	True	True	False
Pakistan	55	14	70	50	4	False	False	True	True	False
Thailand	64	20	64	32	4	False	False	True	True	False
Russia	93	39	95	81	4	False	False	True	True	False
Romania	90	30	90	52	4	False	False	True	True	False
Serbia	86	25	92	52	4	False	False	True	True	False
Ukraine	92	25	95	55	4	False	False	True	True	False
Sri Lanka	80	35	45	45	5	False	False	True	False	False
Malaysia	100	26	36	41	5	False	False	True	False	False
Indonesia	78	14	48	62	5	False	False	True	False	False
Hong Kong	68	25	29	61	5	False	False	True	False	False
Vietnam	70	20	30	57	5	False	False	True	False	False
Japan	54	46	92	88	6	False	False	True	True	True
China	80	20	30	87	7	False	False	True	False	True
South Korea	60	18	85	100	7	False	False	True	False	True
Taiwan	58	17	69	93	7	False	False	True	False	True
United States	40	91	46	26	8	True	True	False	True	False
Australia	36	90	51	21	8	True	True	False	True	False
Canada	39	80	48	36	8	True	True	False	True	False
Ireland	28	70	35	24	8	True	True	False	True	False
South Africa	49	65	49	34	8	True	True	False	True	False
Iceland	30	60	50	28	8	True	True	False	True	False
New Zealand	22	79	49	33	9	True	True	False	True	True
Norway	31	69	50	35	9	True	True	False	True	True
Italy	50	76	75	61	9	True	True	False	True	True
Finland	33	63	59	38	9	True	True	False	True	True
Hungary	46	80	82	58	10	True	False	False	True	True
Isreal	13	54	81	38	10	True	False	False	True	True
France	68	71	86	63	11	True	False	False	True	False
Malta	56	59	96	47	11	True	False	False	True	False
Netherlands	38	80	53	67	12	True	True	False	False	True
United Kingdom	35	89	35	51	12	True	True	False	False	True
Denmark	18	74	23	35	12	True	True	False	False	True
Sweden	31	71	29	53	12	True	True	False	False	True
Latvia	44	70	63	69	12	True	True	False	False	True
Belgium	65	75	94	82	13	True	False	True	True	True
Luxembourg	40	60	70	64	13	True	False	True	True	True
Czech Republic	57	58	74	70	13	True	False	True	True	True
Austria	11	55	70	60	13	True	False	True	True	True
Switzerland	34	68	58	74	14	True	True	True	False	True
Germany	35	67	65	83	14	True	True	True	False	True
Estonia	40	60	60	82	14	True	False	True	False	True
Lithuania	42	60	65	82	14	True	False	True	False	True

COUNTRY CLUSTERS AFTER THE RELATIONSHIP OF PDI, IND, UAI AND LTO TO EACH OTHER
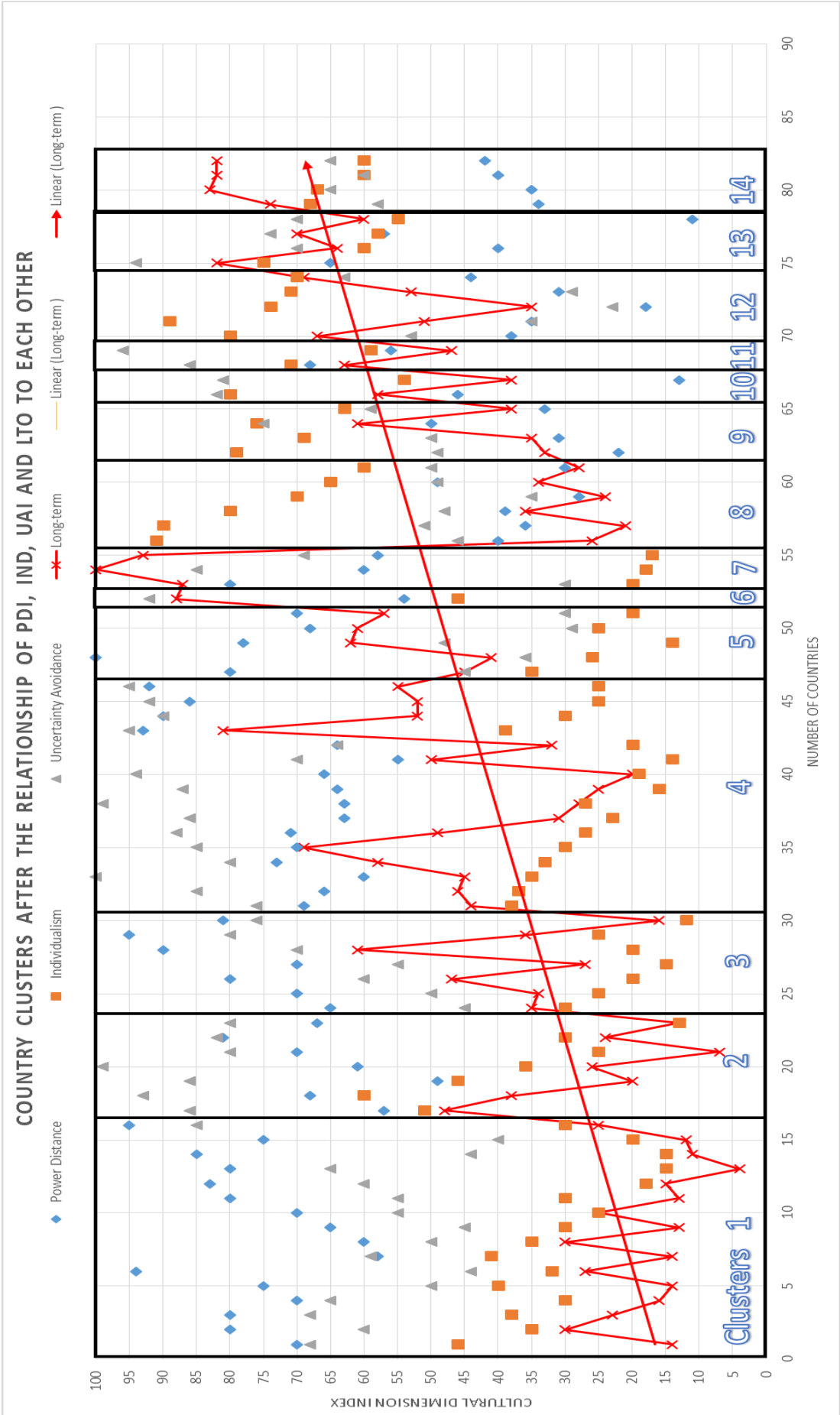
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Statutory Declaration

I declare that I have authored this thesis independently, that I have not used other than the declared sources / resources, and that I have explicitly marked all material which has been quoted either literally or by content from the used sources.

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          Date   Alexander Bock