



# **Uncertainty Avoidance and Job Performance: A study between Portugal and Germany**

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## **Biographic Note**

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## **Dedication**

This thesis is dedicated to my grandmother, Adelina, who cared and loved me since I was born and moved to Heaven during this project.

## **Abstract**

Nowadays we are crossing borders to get a better life, a better job and better conditions. We leave our region or country, but we go with a culture that it is difficult or impossible to leave behind. This culture was associated to behaviours that differentiate the native from the ones with other roots, at work and on the society life in general (Lewis, 2006).

The companies are now allowed to easily get this people from different cultures to work with them. It can be profitable to the company to integrate them as this integration could lead to an increasing of performance on the company. In order to understand which culture can fit better a company and a position, studies as Hofstede (1980) and GLOBE (House et al., 2004) compared cultures worldwide and decomposed culture into dimensions to better be analysed.

The present thesis aims to analyse one dimension of culture, uncertainty avoidance which was more associated to management and performance, and link it with two different measures of job performance, effort and quality, which will also help us to understand that job performance cannot only depend on one measure.

We conducted a questionnaire on the citizens of two different countries, Portugal and Germany, as one is in the tail and the other in the head of Europe in the terms of development and growth (European Commission, 2015a; 2015b). We used scales validated by other studies (Hofstede, 1980; House et al., 2004; Dysvik and Kuvaas, 2011). We obtained a sample of 164 respondents, 57 German and 107 Portuguese. It was analysed the results based on correlations between national culture and job performance using Spearman's rho correlation test, by the comparison between the results of Portugal and Germany using the Mann-Whitney U test and by the comparison with previous results.

We verified the existence of significant correlations between GLOBE and job performance and the existence of different scores between the two countries. The significant findings allow us to tell that Portugal has better work effort and lower uncertainty avoidance as was expected by GLOBE previous studies.

**Keywords:** Uncertainty Avoidance; Job Performance; Germany; Portugal

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# **1 Introduction**

We are in the Globalization Era (European Commission, 2010), where the world is trading everything between everyone. The international trades of goods and services are already recognised as very important in these days. However, this is not only the trade of goods and services, not anymore. With the facilities of nowadays and the easiness to travel and move to other countries, we are observing trades of labour between nations.

According to OECD (2015), the countries have a tendency in the last years to increase the foreign population. This shows that the same way people can acquire products from other countries, companies can hire labour from countries abroad. However, companies understand that the implementation of a new product in a new country is not a straight forward process. It has to be adapted and studied in order to better predict if it will fit or not in the new culture and if it will be successfully sold. More importantly they also understand that normally it is even more difficult to integrate a person to a completely different culture and norms, shared not only by a company and its employees but also by the whole society. The management have to adapt the structure of the firms if it wants to be able to fully use the skills brought by new labour. It is important that the management knows how to work with this people that have completely different work-related cultures, behaviours and approaches.

However, this approach is much more complex than the trade of goods and services. Companies have their own organizational culture, which could be hard for someone with an entirely different background to assimilate and adapt to it. Therefore, it is a process that requires time. The situation is more frequent with people from other cultures, because organizational culture is based on the national country, even when considering the huge difference of business styles (Lewis, 2006; House et al., 2004).

Likewise, the individuals also have their own national culture associations and sometimes regional culture (House et al., 2004). Even within the national culture of regions or countries there are some people that have for the same dimensions different traits. Therefore, companies have to be careful when handling different national and regional cultures. Attention to details is imperative in order to reach their goals of attaining greater job performance from their employees. It is very important for a

company to have its employees working efficiently, accurately and effectively from the beginning, right after recruitment and selection process.

Moreover, some studies established a relationship between national culture and performance (Trompenaars, 1993; Hofstede, 2001; Kessapidou and Varsakelis, 2002; House et al., 2004). It is our aim to replicate and test if national culture has impact on job performance.

A lot of studies have already been done in the area of national culture, mainly to conceptualize and give meaning to this subject but also to prove it. Hofstede (1980) and GLOBE (House et al., 2004) deeply studied the conceptualization of national culture and its dimensions. For the purpose of this research only uncertainty avoidance will be considered. According to the studies of both Hofstede (2001) and GLOBE (House et al., 2004), this dimension presents the biggest gap between Portugal and Germany (West and East in case of GLOBE). These two countries were chosen because it is not unusual to hear that Portugal, unlike Germany, has low productivity. Moreover, it is also known that their national cultures are different. They are often in different cultural clusters (Kale, 1994; Hofstede, 2001; House et al., 2004). Hence came the curiosity to investigate whether cultural differences and more specifically uncertainty avoidance is related to productivity or job performance.

Furthermore, job performance is not also a new on the research area and a lot of studies had been made to develop the best way of analysing and preview the job performance (Hunter and Hunter, 1984; Barrick and Mount, 1991; Judge and Bono, 2001; Dysvik and Kuvaas, 2011)

The thesis will start by analysing if differences in uncertainty avoidance between people working in Germany and Portugal really exist without focusing on leaders, GLOBE (House et al., 2004), or only in one firm, Hofstede (1980). Moreover, this thesis will study the relation between uncertainty avoidance and job performance, work quality and work effort. Until which degree will uncertainty avoidance change the values of job performance? Until which degree can societies with high levels of uncertainty avoidance be better or worse in job performance than low uncertainty avoidance societies? Does it depend on how job performance is measured?

The thesis will conduct a questionnaire and randomly cover different jobs in different organizations. This questionnaire will include social-demographics items,

questions based on the uncertainty avoidance, index of GLOBE project (House et al., 2004) and 1980 Hofstede's index survey, and questions regarding job performance, work effort and work quality, designed by Dysvik and Kuvaas (2011). It will be used both indexes from GLOBE and Hofstede as they have different results in their rankings, so it is possible that they measure different characteristics (Smith, 2006; Shi and Wang, 2011).

This report is divided in three main parts: literature review, methodology, results and conclusions.

The literature review, as the name indicates, will include a review of several studies of national cultural dimensions. Uncertainty avoidance will be exposed here, with the main focus being placed on Hofstede (1980) and GLOBE Project (House et al., 2004). After this some studies, namely by Disvyk and Kuvaas (2011), will be presented about job performance which will then be split in two areas: task and contextual performance.

The methodology will present how the study was developed, including the individual steps given to achieve it and the scales used to measure culture dimensions and job performance.

Finally, the conclusion will state the results, their discussion and guide lines for future research.

## 2 Literature Review

This chapter presents several studies about national culture and job performance in order to understand the pertinence and the main concepts of the thesis.

### 2.1 Culture and National Culture

Culture was first examined by anthropology and it was used to characterise small civilizations. However, the concept of national culture is recent. In the last years the studies about national culture have grown, mainly after the huge study of Hofstede (1980). He analysed cultural differences between countries inside of the IBM Company (Hofstede, 2001). After other studies appeared namely GLOBE project in 2004. It is a worldwide project analysing the cultural dimensions in several countries with the aim to link national culture with types of leadership (House et al., 2004). These two studies are considered the most important studies about national culture.

Nevertheless, the study of national culture started under the term “*national character*” even before these two main studies. This term was created by Wilhelm Wundt in the beginning of the 20th century. He is considered the father of cross-cultural psychology (Hofstede, 2001). Wundt wrote a 10 volumes book regarding findings about cross-cultural psychology. In his books he does a comparative study across countries regarding cultural factors such as language, rituals, myths, art, religion, among others (Hofstede, 2001). According to Hofstede (2001), this concept was only popular research between 1930's and 1950's. However, with the findings of Hofstede's study, the national culture subject increased again its popularity among social researchers.

The concept of national culture is not a straight concept accepted by everyone, as it is a complex item in discussion nowadays. It has in its basis the concept of culture that it is very complex and still not well defined. Part of the problem is that social scientists are part of the cultural system, with no chance to put away their own subjectivity and the impossibility of reaching all the complexity of culture (Hofstede, 2001). Hofstede argued that a lot of perspectives are needed to reach a “*draw*” of culture:

*"Social scientists approach the social reality as the blind men from the Indian fable approached the elephant; the one who gets hold of a leg thinks it is a tree, the one who gets the tail thinks it is a rope, but none of them understands what the whole animal is like. We will never be more than blind men in front of social elephant, but by joining forces with other blind men in front of a social elephant; but by joining forces with other blind men and women and approaching the animal from as many angles as possible, we may find out more about it than we could ever do alone."* (Singh, 2012, p.52)

With this statement, Hofstede asks for more cooperation in the area in order to achieve results nearer the reality, which can be observed in the critics done by Hofstede and GLOBE regarding the previous studies that are only based in west countries with special emphasis in US.

Both studies argued that mainly for cross-culture's studies it is needed not only one perspective of culture, but many. However, that is very complex to do. Hofstede did not base his study in different perspectives. He tried instead to validate, in the end, his findings in Asiatic countries with the comparative study as with Bond (Hofstede and Bond, 1984).

In a different approach, GLOBE project invited social scientists of other cultures in order to understand better these cultures that do not have previous literature or studies and tried to reach a balance in his research which integrates the culture's concepts of these societies. Even though the GLOBE project attached higher importance to European and North American cultures, the cultures of other countries were also considered. The study was designed with the help of social scientists from other countries which allowed a more equilibrated cultural approach.

Both studies, Hofstede and GLOBE, have a clear understanding of culture and national culture. Even if the definitions appear to be different from each other, the bases are very similar. Hofstede sees culture as a "*Mental Program*" that each person has in mind (Hofstede, 2001). He uses the definition of the anthropologist Kluckhohn:

*"Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists*

*of traditional (i.e. historically derived and selected) ideas and especially their attached values*" (Kluckhohn, 1951, p.86).

Hofstede defines national culture as the characteristics of individually "Mental Program" common to all or to the majority of the society, which could be country or regional depending on the society (Hofstede, 2001).

Following the anthropologist Redfield (1948), who sees culture as "*shared understandings made manifest in act and artifact*" (House et al., 2004, p.xv), GLOBE presents its definition as "*shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives that are transmitted across generations.*" (House et al., 2004, 15) In this case "collectives" are nations or in some cases regions. For instance in Germany, it is possible to identify west and east due to the gap created with the Berlin wall. In the case of South Africa, society can be divided into white and black due to racial historic divisions (House et al., 2004).

These definitions of culture are intangible and due to that it is not easy to measure. In order to measure culture the studies do not observe directly the culture, but research the consequences of culture as described by Hofstede in his book: "*All we can observe is behaviour: words and deeds.*" (Hofstede, 2001, p.2)

Through these definitions of culture and national culture these two worldwide studies had the objective of measuring differences between cultures in different regions of the world as Wundt did before. However, the knowledge about culture and also the knowledge about the cultures worldwide had a huge improvement since Wundt's research study. The facilities around the world had a big improvement. The conditions for worldwide researches had favour enrichment of knowledge and development of study methods.

Hofstede carried out his study in IBM, between the years of 1966 and 1978, at a worldwide company with the workforce spread by more than fifty modern countries even on that date. The data collected by Hofstede about IBM's employees in several countries were so important that IBM supported him to continue his study and go further in its development until 1978. The database collected and the results were in fact so interesting that Hofstede had the need of go further in his knowledge about subjects such as psychology, sociology, political science and anthropology.

Hofstede identified five dimensions of national culture, power distance, uncertainty avoidance, individualism, masculinity and long-term orientation, where the first four had already been identified by Inkeles and Levinson (1954). The last one, long-term orientation, was later identified during a partnership between Hofstede and Bond (1988) from the Chinese university of Hong Kong. Initially a study lead by Bond (1988) headed to this new dimension firstly named as "*Confucian work dynamism*". In sum, all the five dimensions had already been tested and validated by those authors (Soares et al., 2007).

Hofstede characterised those five dimensions and defined them as follows (Hofstede, 2001, p. 29):

- "Power Distance, which is related to the different solutions to the basic problem of human inequality"
- "Uncertainty Avoidance, which is related to the level of stress in a society in the face of unknown future"
- "Individualism versus collectivism, which is related to the integration of individuals into primary groups"
- "Masculinity versus femininity, which is related to the division of emotional roles between men and women"
- "Long-term Orientation versus short-term orientation, which is related to the choice of focus for people's efforts: the future or the present"

Nowadays, Hofstede is still researching those dimensions, even though it is his understanding that culture cannot be measured by only a few dimensions (Hofstede, 2014). Hofstede also sustains that it is important to achieve a close and clearer view of culture producing other studies with different views that can complement the work already done.

Following this line of thinking, GLOBE study started in 1991 by Robert House. He based his study on some literature as Hofstede had done before him. He reviewed Hofstede's work and a few other ones such as Schwartz (1992) and Inglehart (1997). Combined with his own knowledge of social science, he started to design his own research. Consequently, GLOBE was primarily started from previous knowledge of culture and national culture from Hofstede's study, its achievements, its mistakes and its difficulties (House et al., 2004).



GLOBE was begun by House, but was after carried on by one hundred and seventy social scientists from all around the world. Sixty two different societies interacted and worked together to build this big project. It was named GLOBE project, Global Leadership and Organizational Behaviour Effectiveness research program. The social researchers on the project met sometimes to discuss the matters in study and the concepts used, which will be seen in detail further ahead.

They defined nine cultural dimensions: performance orientation, assertiveness, future orientation, humane orientation, institutional collectivism, in-group collectivism, gender egalitarianism, power distance and uncertainty avoidance.

GLOBE project also considered power distance as Hofstede had done. It measured the degree until which the society expects and accepts the distance between the poorer and richer and also the concentration of power in the upper levels of both organization and society. They also changed Hofstede's definition and gave it a societal level what was not his research level, previous concentration on the organizational context.

In-group and institutional collectivism also came from Hofstede's individualism versus collectivism dimensions. At the GLOBE project it was found useful to split it into two different dimensions: In-group and institutional collectivism. Hofstede's dimension is more similar in nature with in-group collectivism. The use of this dimension in GLOBE project is mainly based on the study done by Triandis (1995). It was intended to measure the degree of each individual "*[expressing] pride, loyalty, and cohesiveness in their organizations or families*" (House et al., 2004, p.12). Institutional collectivism was a newly added concept in this field, and it checked "*the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action*" (House et al., 2004, p.12).

The GLOBE dimensions of assertiveness and gender egalitarianism were both originated from Hofstede's masculinity. GLOBE project studied the masculinity index. Even though they understood that this dimension of Hofstede was important, they also judged that Hofstede's index had a lot of irrelevant items, which lead them to create these two new dimensions with different items. With this sight GLOBE project also created the dimension of assertiveness. It measured the level of aggression, confrontation and assertiveness of one society or organization. Gender egalitarianism by

its turn measured the level of society's promotion of gender equality by reducing differences in gender roles.

Uncertainty avoidance was conceptualized last in Hofstede's study and used under the same name by GLOBE project. However, the two dimensions are not correlated even though they assume the same name. GLOBE project conceptualized this dimension from 1963 Cyert and March study and validate it with 1992 Schwartz study. These studies will be discussed in more detail in the next chapters. GLOBE project defined uncertainty avoidance as "*the extent to which members of an organization or society strive to avoid uncertainty by relying on established social norms, rituals, and bureaucratic practices.*" (House et al., 2004, p.11) GLOBE also adds that high uncertainty avoidance societies decrease the probability of unpredictable events that try to plan and predict better the solutions for adverse events that could happen in the future. In sum, high uncertainty avoidance cultures should have a higher probability to succeed in a planning, because they are more detail orientated.

In another direction GLOBE projected other dimensions that were outside Hofstede's scope. Designed by other social researchers GLOBE project provided three additional dimensions: future orientation, humane orientation and performance orientation.

Future orientation derived from the previous studies of Kluckhohn and Strodtbeck (1961). It was defined as the degree by which individuals focus on future. In other words it measures the degree until which individuals and organizations focus on future plans, future behaviours and future investments (House et al., 2004). Hofstede in his joint studies with Bond (1984) added this dimension of long-term orientation.

Moreover, without any connection with Hofstede's previous studies, the humane orientation is constructed to measure the degree of encouragement that each society gives for their citizens to be good. Being fair, altruistic, friendly, generous, caring and kind are measures for this dimension (House et al., 2004). It is also based on dimension of Kluckhohn and Strodtbeck's (1961). It was named Human Nature as Good versus Human Nature as Bad and studied after also, for instance, by McClelland (1985) and Putnam (1993).

Finally, the last dimension is rooted in McClelland's work (1961) and it was called performance orientation. Whereas McClelland (1961) used projective tests,

GLOBE project opted to use a completely different method and constructed a closed-end questionnaire. This dimension was designed to find the degree of the society's encouragement of high performance, excellence and perfection.

The results of those dimensions across countries were published in the book "*Culture, Leadership, and Organizations - The GLOBE study of 62 Societies*". In this book all sixty two societies were ranked in two different categories, "As it is" and "As it should be" (House et al., 2004). The GLOBE project found important not only to know how these societies are, practices, ("as it is") but also how the society think that it should be, values, ("as it should be") (House et al., 2004).

However, GLOBE project did not only intended to know more about different societies and its characteristics, but also to find associations between these cultural traits and types of leadership. They intend to develop a better understanding of the relationships between each type of leadership in each society and how to increase the easiness of adaptation of a leader to one society, mainly if this leader came from another society.

These relationships are well explained in the GLOBE project book. They associated the societies' traits with economic, financial and other variables as well as types of leaderships that could be a better fit in different societies. However, the most important knowledge regarding the relationship between leadership and culture societies will be presented in the next phase (House et al., 2004).

In order to understand all the relationships between leaders and societies GLOBE project undergone a third phase. This phase was designed to measure the impact and effectiveness of a given type of leader and his/her deeds on the behaviour and performance of his/her subordinates.

Even without this third phase, GLOBE project had already found out interesting results within the first two phases that brought very useful knowledge both to scientists and ordinary people. The third phase would give the extra layer of achievement that this project collectively wanted.

### 2.1.1 Uncertainty Avoidance

The concept of uncertainty avoidance was first published by Cyert and March (1963), but it only gained worldwide importance with the studies of Hofstede and GLOBE project. From these two important studies, this thesis will focus on the comparison between Germany and Portugal. Germany is split in East and West in GLOBE study, so it will be presented always the both values from each side.

The dimension of uncertainty avoidance was selected, due to the discrepancy in values obtained by the three main scales of both studies:

- Hofstede: Germany 65 and Portugal 104
- GLOBE (practices): Germany (East) 5.16 and (West) 5.22 and Portugal 3.91
- GLOBE (values): Germany (East) 3.94 and (West) 3.32 and Portugal 4.43

Moreover, this dimension differs in these studies also in the items that are on the base of its measure. However, uncertainty avoidance has always been correlated with performance and considered very important for management (Hofstede, 2001; House et al., 2004). Due to that this dimension will be in the centre of this thesis.

In order to better understand these indexes present on both studies we have to go further down its roots, how its process was and what were the results of each study.

In the first worldwide study from Hofstede, uncertainty avoidance was a concept borrowed from Cyert and March study about behaviours of firms from 1963. In Cyert and March's study uncertainty avoidance was first named as such and defined as *"rather than looking for ways of dealing with uncertainty through certainty equivalents, the firm looks for procedures that minimize the need for predicting uncertain future events. One method uses short-run feedback as a trigger to action, another accepts (and enforces) standardized decision rules."* (Cyert and March, 1963, p. 121) However, Hofstede besides borrowing the concept, he also argued that uncertainty avoidance were deeply present in our cultures for which he made an analogy with society. He stated that during the existence of the human being we have tried to cope with uncertainty avoidance mainly in three different ways, which we can even observe nowadays: religion, law and technology. In his book, *"Culture's Consequences"*, he demonstrated

that these three ways cope with different aspects of uncertainty in our human life. Technology copes with uncertainty in human performance. It makes everything faster and more predictable. Law copes with human behaviours and relationships between people by making them more predictable. And finally, religion copes with uncertainty of all the rest, everything that is unknown and out of people's control.

Furthermore, Hofstede with this perspective recognized that this dimension could be measured by the level of individual's stress from one country. He reasoned that stress is mainly provoked when people need to reduce the ambiguity in their daily lives, in other words, with the daily uncertainty that is not coped with by any of the three items described previously. He also recognized that peoples who feel the need to avoid uncertainty will give preference to stability without unpredictable events in their personal life. In order to get data, Hofstede split uncertainty avoidance into three different areas: employment stability, rule orientation and stress (Hofstede, 2001).

Hofstede selected these three subjects in accordance with the needs in creating uncertainty avoidance's index and with the prospects that he found at IBM's database. For the three different areas he extrapolated three different questions only from IBM's available data. He analysed only what he already had at his disposal to draft his own conclusions firstly because the database already had a lot of data to work with and secondly because creating a new database as IBM's would mean devoting a lot of time and effort. The three selected questions were (Hofstede, 2001, p. 150):

1. Rule Orientation:

- *"Company rules should not be broken - even when the employee thinks it is in the company's best interest"* measured the level of agreement from 1 (Strongly agree) to 5 (Strongly disagree).

2. Stress:

- *"How often do you feel nervous or tense at work?"* measured from a scale of 1 (never) to 5 (always) the stress and anxiety levels at work.

3. Employment stability:

- *"How long do you think you will continue working for this company?"* measured in a 4 scale, 1 (two years at most), 2 (from two to five years), 3 (more than five years but before retire), and 4 (until I retire) the expectation level of employers to stay with their company.

These three questions were written accordingly to Hofstede's beliefs, even if he did not deny that the existence of other questions could provide a better understanding of uncertainty avoidance. With them he tried to measure the observed consequences of ambiguity through the levels of stress and the need for stability.

They were selected from the universe of questions that IBM's surveys contained in order to calculate the uncertainty avoidance index. However, each question had completely different measures hence he had to implement a common system from which he could craft the data. Thus, Hofstede developed his own formula to build this index constructing the following expression (Hofstede, 2001; Rapp, Bernardi and Bosco, 2011):

$$UAI = 300 - 30 (\text{Rule Orientation mean score}) - (\text{Percentage that score 1 or 2 in Employment Stability}) - 40 (\text{Stress mean score})$$

With this formula the Uncertainty Avoidance Index (UAI) oscillates between:

- Minimum of -150, a common belief that the rules can be broken is shared, no one intends to stay more than five years and nobody feels nervous
- Maximum of 230, rules cannot be broken even when is in the best interest of the company, everyone wants to stay in the company more than five years and everyone is always feeling nervous.

This interval between -150 and 230 was constructed in order to filter the results in a way that no country ranked would have a negative UAI score, in other words the formula was developed until the lowest country, Singapore, reached a positive number (8).

In the list of fifty three countries the ranking is led by Greece with 112 points and Singapore came last with eight points. It is important to enhance that Portugal is second in this ranking with 104 points and Germany in the twenty ninth with 65 points, the mean score on the list.

Furthermore, Hofstede's study intended not only to create a list, but also to find relations between uncertainty avoidance and other cultural, demographic and social

variables. In other words, in order to understand how uncertainty avoidance changed each person's life, what characteristics and behaviours would a traditional high uncertainty avoidance society adopt compared with the ones of a low uncertainty avoidance society.

Hofstede tried to uncover a correlation between occupations across countries and this dimension but he failed. There did not seem to be a direct correlation between occupations and the UAI, which indicated that the occupations would not change uncertainty avoidance.

Hofstede validated the anxiety and stress levels in the UAI construction mainly through the comparison with Lynn's (1971; 1973) studies in which anxiety, neuroticism and uncertainty were replicated by many variables as among others chronic psychosis, suicide, caffeine consumption and alcoholism.

Another important study was Inkeles (1993). Inkeles studied the evolution in the population's perception of improvement through the modernization and industrialization. On the one hand some perceived the improvement of their personal well-being with the modernization. On the other hand, some people did not perceive these improvements. Interestingly enough, the confrontation between UAI and Inkele's study uncovered that countries with higher UAI showed in fact lower subjective well-being.

Hofstede then compared his own work with these ones and reached some statements that characterized both types of societies. The result came as a list of values and psychological characteristics related with uncertainty avoidance. Hofstede split in four different categories:

1. Stress, anxiety and expression of emotions (see table 1):

<b>Low uncertainty avoidance societies</b>	<b>High uncertainty avoidance societies</b>
Lower work stress	Higher work stress
Lower anxiety level	Higher anxiety level
Control of emotions	Relief of emotions
Claiming for no expression of emotions and less readable by others	Claiming for embarrassment, anger and guilt

**Table 1 - Characteristics from Hofstede's UA - Stress, anxiety and expression of emotions**

2. Subjective well-being or happiness (see table 2):

<b>Low uncertainty avoidance societies</b>	<b>High uncertainty avoidance societies</b>
More subjective well-being	Less subjective well-being
Feelings of happiness shared	Feelings of happiness widely dispersed

**Table 2 - Characteristics from Hofstede's UA - Subjective well-being or happiness**

3. Employment stability, seniority, generation gap (see table 3):

<b>Low uncertainty avoidance societies</b>	<b>High uncertainty avoidance societies</b>
Less hesitation to change employer	Tendency to stay with the same employer
Lower average seniority in jobs	Higher average seniority in jobs
Company loyalty is not a virtue per se	Company loyalty is a virtue
Managers should not be selected on seniority basis	Managers should be selected on seniority basis
Preference for smaller Organizations	Preference for larger Organizations
Less pessimism about employer's motives	Pessimism about employer's motives
More admittance of dissatisfaction with employer	Less admittance of dissatisfaction with employer
Bigger ambition for advancement	Lower ambition for advancement
Preference for generalists	Preference for specialists
Ideology tend more to authoritative management	Ideology tend more to group decisions and consultative management
More agreement with competition between employers	Less agreement with employers competition
Less critical toward attitude and behaviours of younger people	More critical toward attitude and behaviours of younger people
Smaller generation gap	Larger generation gap

**Table 3 - Characteristics from Hofstede's UA - Employment stability, seniority, generation gap**



4. Trust and openness to new experiences and information (see table 4):

<b>Low uncertainty avoidance societies</b>	<b>High uncertainty avoidance societies</b>
Agree on breaking rules at any circumstance	Disagree on breaking rules at any circumstance
Less resistance to changes	Resistance to changes
More trustful	Less trustful
More acceptance of foreign managers	Less acceptance of foreign managers
Less appealing for the harmony with nature	Higher appealing for the harmony with nature

**Table 4 - Characteristics from Hofstede's UA - Openness to new experience, information and trust**

However, this summary of connotations regarding uncertainty avoidance should be interpreted as an extreme. Higher uncertainty avoidance societies do not fully fit the profile described before. They can also assume characteristics that are general more related with low uncertainty avoidance societies. National cultures are placed on the continuum between the two extremes. Also the connotations have different weights from country to country and its individuals can widely vary from those characteristics (Hofstede, 2001).

Hofstede also portrayed the general societal norm behind low and high uncertainty avoidance (see table 5):

<b>Low Uncertainty Avoidance Society</b>	<b>High Uncertainty Avoidance Society</b>
Easy way of dealing with Uncertainty	Continuous feel of threat in life
Lower stress	High Stress
Less anxiety	Anxiety
Appeal of novelty and convenience	Neuroticism
Being busy is not a virtue per se	Inner urge to be busy
Suppress of emotions	Easy expression of emotions
Good subjective well-being	Less subjective well-being
Openness to change	Conservatism
Willingness to take unknown risks	Law and order

Tolerance for diversity	Xenophobia
Curiosity for what is different	Different is equal to dangerous
Younger people are respected	Respect and fear for the older people
Comfortable with ambiguity and chaos	Need for structure and clear view
Belief that the owns ability can change the world	Appeal to purity and powerlessness toward external forces

**Table 5 - Characteristics of Hofstede's UA societies - General societal norms**

In his research Hofstede desired not only to connect his study with studies of other authors in the same field, but also to understand the consequences it would have over society's life. In order to better capture this he compared and studied the relationship between his study about uncertainty avoidance and social studies on family, school, motivation and work fields. In those respects and basing his research on some important studies available, he uncovered some key differences between high and low uncertainty avoidance societies:

- Family situations with the help of studies mainly from anthropologist Mary Douglas (1966) and Kashima and Kashima (1998) can be seen below (see table 6):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Parents behave in a less emotional way	Parents behave more emotionally
Better satisfaction with home life	Lower satisfaction with home life
Relative truth	Real truth
Less rules and willingness to change it	More rules and more unwillingness to change it
Less and weaker superegos developed	More and stronger superegos developed
More exposing of children to the unknown	More protection for the children to the unknown
Learn of world as benevolent	Learn of world as hostile place
Less formal ways of address	More formal way of address
Less importance of traditional gender roles	Preference for traditional gender roles

**Table 6 - Characteristics of Hofstede's UA societies - Key differences**

- School based mainly on the studies of Stroebe (1976), Chandler, Shama, Wolf, and Planchard (1981), Yan and Gaier (1994), Oettingen (1995) and Gerritsen (1995) can be seen below (see table 7):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Students expect open ended ways of learning	Students expect more structured ways of learn
Students seek for discussing the answers	Students seek for answers
Truth is relative	Truth is absolute
Students attribute success to own ability	Students attribute success to effort, context and luck
Teachers less unwilling to say "I don't know"	Teachers unwilling to say "I don't know"
Teachers seek by parents ideas	Parents are seen as an extension of teachers
The children rate themselves with higher self-efficiency	Children rate themselves with a lower self-efficiency
The dialect is positive valued	The dialect is negative valued
The society has not traditional role models for female students	The society has traditional role models for female students

**Table 7 - Characteristics of Hofstede's UA societies at School**

- Motivation, enhanced by the studies of David McClelland (1961) among others can be seen below (see table 8):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Traditional children's stories stress achievement motivation	Traditional children's stories stress strong security motivation
Hope of success	Fear of failure
Preference for tasks with uncertain outcomes, calculated risks and requiring problem solving	Preference for tasks with sure outcomes, no risks, and following instructions

**Table 8 - Characteristics of Hofstede's UA societies in Motivation**

- Work and work atmosphere were compiled by Hofstede based on studies such as among many others, Wildeman et al. (1999), Blanchflower and Oswald (1998), Schneider and De Meyer (1991). It can be seen below (see table 9):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Weaker loyalty to the employer	Strong loyalty to the employer
Shorter average duration of employment	Long average duration of employment
Preference for smaller organizations	Preference for larger organizations
Less self-employment	More self-employment
Weaker appeal for technologies solutions	Stronger appeal for technologies solutions
Independent innovators	Innovators constrained by rules
Less resistance to innovation	Strong resistance to innovation
Innovations are taken less seriously	Innovations are taken more seriously
Renegade championing	Rational championing
Top managers involved in strategy	Top managers involved in operations
Power of superiors depend on the position and relationship	Power of superiors depend on the control of uncertainties
Superiors are more optimistic about employees' ambition and leadership capacities	Superiors are more pessimistic about employees' ambition and leadership capacities
Less structure and formalize conception of management with tolerance for ambiguity	Higher structured and formalized conception of management without place to tolerance for ambiguity
Appeal of transformational leader role	Appeal of hierarchical control role
Precision and punctually learned and managed	Precision and punctually come naturally
More relationship orientation	More task orientation
Flexible working hours less popular	Flexible working hours more popular
More belief in generalists and common sense	More belief in specialists and expertises

**Table 9 - Characteristics of Hofstede's UA societies at work**

Furthermore, uncertainty avoidance changes the way citizens behave and the reactions to new experiences and new concepts. In this line of thinking, Hofstede studied the relationship between uncertainty avoidance and differences in consumer behaviour, political system, legislation, nationalism and xenophobia, religion and theories and games. In those respects and rooting his research upon some important studies available, he unveiled differences between high and low uncertainty avoidance:

- By associating consumer behaviour with uncertainty avoidance, Hofstede based mainly in the studies of De Mooij (1998) concluded that some characteristics of consumer behaviour could also be differentiate between high and low uncertainty avoidance societies (see table 10):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Consumption tend to be of more convenience products and less purity products	Consumption tend to be more purity products and less convenience products
More reading books and newspapers	Less reading books and newspapers
More use of internet	Less use of internet
Preference for second hand car	Preference for new car
Do works at home by themselves	Contract specialists to do works at home
Investment in stocks	Investment in precious metals and gems
Preference for short term pay bills	Preference for long term pay bills

**Table 10 - Characteristics of Hofstede's UA societies in Consumer Behaviour**

- In relation to political systems Hofstede with the help of other studies as Almond and Verba (1963), Kaase and Marsh (1976) and Lynn and Hampson (1975; 1977) among others (see table 11):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Citizens are more competent toward authorities	Citizens are more incompetent toward authorities
More confidence in civil service	Less confidence in civil service
More participation in voluntary associations and activities	Less participation in voluntary associations and activities
Stronger interests in politics	Weaker interests in politics
Older democracy in general	Younger democracy in general
Repress less citizens' protests	Repress more citizens' protests
Citizens are not obliged to carry identity card	Citizens obliged to carry identity card
Decisions about infrastructure are slower	Decisions about infrastructure are faster
Civil servants like politics	Civil servants dislike politics
Less experts in key positions	More experts in key positions
In wealthy countries exists less corruption	In wealthy countries exists more corruption
Government tend to intervene less in the economy	Government tend to intervene more in the economy

**Table 11 - Characteristics of Hofstede's UA societies in Political System**

- In the relationship with legislation some differences were found (see table 12):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Tend to have less precise laws and regulations	Tend to have more and more precise laws and regulations
Citizens have a positive view about the legal system	Citizens have a negative view about the legal system
Citizens saw the law "in my side"	Citizens saw the law "against me"
Law should not be broken even if unjust	Law should be broken if unjust
Lower speed limits in motorways	Higher speed limits in motorways

**Table 12 - Characteristics of Hofstede's UA societies in legislation**

- And regarding nationalism and xenophobia (see table 13):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Stronger appeal for left-wings politics	Strong appeal for right-wings politics
More proud of own nation	Less proud of own nation
More willingness to fight for the nation	Less willingness to fight for the nation
Less rejection of other races as neighbours	Reject more other races as neighbours
More tolerance to immigrants	Less tolerance to immigrants
More willingness to compromise with opponents	Less willingness to compromise with opponents
Worried more with day by day	More worried about the future
More prepared to live abroad	Less prepared to live abroad
More wide societies	More tight societies

**Table 13 - Characteristics of Hofstede's UA societies related with nationalism and xenophobia**

- In the field of theories and games Hofstede in his studies identified also some key differences (see table 14):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Philosophy and science are based in the relativism and empiricism	Philosophy and science are based in absolute theories and ultimate values
More use of induction	More use of deduction
More probability of scientific opponents being personal friends and less personal enemies	Less probability of scientific opponents being personal friends but more personal enemies

**Table 14 - Characteristics of Hofstede's UA societies in theory of games field**

Even after the publishing of his study from 1980, Hofstede tried to strengthen it. These strengthen came by comparing it with other studies as Hoppe's Survey studies (1990; 1993) and other surveys as EMS (European Media and Marketing Survey) 97. Hofstede in his developments of the study changed his survey.

Those were the foundations of the new studies that came after the publication of Hofstede's work (1980). This work had a lot of negative (McSweeney, 2002; Soutar et al., 2007; Smith et al., 2002), but it was mainly looked at it as the very first step in this field and where future studies found a basis to start working on. That can be observed in the GLOBE project with a previous literature review mainly focused on Hofstede's work.

The knowledge of the social levels of study gave a different approach from GLOBE. Even levied mainly on Hofstede, it focused also on important social studies from before and after Hofstede's work. The understanding of the various levels of a social research was the primary concern. Social research can be built in three different levels:

- Individual
- Organizational, and
- National or societal.

The knowledge in this field started with this perspective in order to better understand the existing previous research and also to have a better overview before stressing the focus of their own study.

GLOBE project validated Hofstede's work in general and its relation with other studies. It also referred to some lacks in the body of knowledge that should be analysed and understood. Hofstede's (1980) main correlations were also the targeted study by the GLOBE project. It found both validation and flaws on the Hofstede's correlation with uncertainty avoidance index.

GLOBE project emphasised several deficiencies of knowledge. First, it emphasized on the roots of uncertainty avoidance definition itself. In the work of Cyert and March (1963) was referred that higher uncertainty avoidance would lead to an increasing focus on short term performance (Zhang, 2000) whereas Hofstede (1980) stated that higher uncertainty avoidance was more associated with long term orientation. GLOBE did not reject any of these statements per se, but questioned them for future developments mainly because the statements were done at two different levels, organizational and national.

Second, many studies were constructed around Hofstede's work and GLOBE project realized that these works were extrapolated to many other fields of analysis that



could lead to misnomers. However it accepted these extrapolations arguing that Hofstede's work had implications at all levels (House et al., 2004).

Third, by analysing all levels (individual, organizational and national) Hofstede corroborated his results under different levels of analysis. GLOBE project denoted that the way that the questions were done already suggested which study level would be (House et al., 2004).

Hofstede did the survey at the organizational and individual levels and conveyed them to results in national level. Hence, it is apparent that the set of questions chosen were not the best. GLOBE project thus criticised all questions regarding uncertainty avoidance (House et al., 2004).

When analysing the employment stability question, it can be observed that it mattered how much time someone was in the company when answering to the survey. As an example, if someone worked in the company for ten years and intended to be five more it would increase the UAI. However, if a person is new in the company and intended to work for ten years more it would decrease the UAI. In this perspective, the question was doubtful per se and did not fully reflect what Hofstede wanted to measure. The rule orientation question is also criticized by GLOBE project as it argued that rule orientation per se should not mean coping uncertainty. The last question, stress, emphasised that the environment outside the profession scope, for instance unemployment, wealth increase, or job security could increase or decrease its value without any regards for the culture per se. This leads to the impression that this item was fickle (House et al., 2004).

Furthermore, based in d'Iribarne (1997), GLOBE project argued that this kind of project needed an ethnographic approach, emphasizing the issue of neutral questions and interpretation of the same questions. The GLOBE project also alleged that many correlations could be interpreted in two or more ways depending on cultural manifestations.

Finally, the project questioned Hofstede's conclusions. The only study with a population of respondents similar to Hofstede's was Lowe (1996), which found similar rankings in all the dimensions of Hofstede's work except in uncertainty avoidance. From the GLOBE project point of view this find led to a categorization of the

definitions as speculative which should be regarded merely as a strong reference that brought many achievements in this area. No one should take it as granted or a dogma.

Moreover, all the associations between uncertainty avoidance and other items were consistent with stress levels. This raised some questions as whether the uncertainty avoidance index created by Hofstede was more a stress index than a pure uncertainty avoidance index. However, this hypothesis was not further tested.

After the literature review done by GLOBE project the overview they produced on uncertainty avoidance can be summarised as follows (see table 15).

<b>Low uncertainty avoidance societies</b>	<b>High uncertainty avoidance societies</b>
Tendency to not formalize relationships, documents, agreements in legal contracts	Tendency toward formalizing relationships, documents, agreements in legal contracts
Less order	More order
Not keeping records	Keeping records
Less documenting of meetings	Documenting all the conclusions of the meetings
Rely on informal policies and procedures	Rely on formalized policies and procedures
Verifying less communications in writing	Verifying communications in writing
Less calculated risk, more uncontrolled risk	More calculated risk
More facilitate to develop new products	Less facilitate of new products development
Less facilitate to implement a new product	More facilitate of implementation of new products
Less resistance to change	Stronger resistance to change
Less desire for rules	Stronger desire to make rules to better predict behaviours and less tolerance to break rules

**Table 15 - GLOBE's overview knowledge of UA previous works**

On this basis GLOBE Project started its own research by differentiating two levels of analysis, organizational and societal. The latter replaced the term national, since GLOBE Project and other studies found that one nation could have more than one culture, and the country's borders are not a meaning of culture. Thus, they identified that societal could better name the level of the culture analysed. Those two levels of analysis, as previous with studies, focused on societies or organizations. In order to pursue this aim of not mixing both levels of analysis, as had been done in other works, GLOBE project started by projecting all the society levels to organizational levels and vice versa and had them both measured at the same time (House et al., 2004).

Furthermore, GLOBE project criticized Hofstede about the uncertainty avoidance index for mixing “values” items and not classified items. The project was more aware of what was being measured which drove to a split between two types of measures inside of each level of analysis, values and practices (House et al., 2004).

Regarding values, GLOBE project intended to take into consideration what the society or organization thought that should be, presenting not what was happening but what they projected that should happen. As practices, GLOBE project meant the actual things that were happening in society or organization (House et al., 2004).

These two divisions made this project more complex, thus the measure of culture had four different approaches instead of one: organisational values and practices and societal values and practices. This process was applied to all the dimensions of culture proposed by GLOBE.

The validation of GLOBE questionnaire went through four steps: Q-sorting, item evaluation, translation and back-translation and finally pilot studies, which will be studied in more detail in the methodology chapter (House et al., 2004).

Moreover, and because GLOBE project was based on surveys, the responses between cultures could be different even if it presented the same values, because each culture had their own pattern of response. For instance, Mediterranean cultures tended to avoid middle point scale to not appear too committed whereas Asian culture tended to avoid extreme points of scales to not appear divergent. In order to solve some issues, which could appear with the cultural response bias, GLOBE project developed an extension of the Triandis (1994) work and corrected the scales in country rankings. The average correlations ( $\rho$ ) between Triandis scales and GLOBE scales were .95 to

GLOBE's societal cultural practices and .93 to GLOBE's societal cultural values. These values showed that cultural response bias played a role in the questionnaires. However, it is a small role in the cultural scales (House et al., 2004).

Furthermore, GLOBE project also compared their scales and measures with other well recognized authors in this area, as Hofstede and Schwartz. Hofstede's uncertainty avoidance was the ascendant of GLOBE's uncertainty avoidance. However it should be noted that Hofstede did not differentiate practices from values, having in his three items scale one value item (rule orientated) and two not defined items (stress and employment stability). The correlation between Hofstede's UAI and GLOBE's uncertainty avoidance cultural values scale was a modest .32. However, it showed a stronger but negative correlation with GLOBE's uncertainty avoidance cultural practices, -.61, as the values and practices scales in uncertainty avoidance were negatively correlated (House et al., 2004).

In 1992, Schwartz developed human values at the societal level that could differentiate cultures. His work was based in a different taxonomy, based on seven dimensions with a different label from GLOBE (House et al., 2004). However, it was expected to have correlations between both works. In the case of uncertainty avoidance society values, it was significantly positively related, .74, with Embeddedness dimension from Schwartz (1999), which measured the level of an individual restrain itself, in order not to break off with the group rules and behaviours (Taylor and Wilson, 2012). And it was also significantly related, -.61, with intellectual autonomy dimension from Schwartz (1999), measured the degree in which the society encouraged the individuals to think by themselves and run their lives without taking into regard what a society thought they should do and behave (Taylor and Wilson, 2012). These two correlations were already expected and made GLOBE's work more generalist, as Schwartz's work had a completely different approach that GLOBE project did not have.

These two main works correlated with uncertainty avoidance, GLOBE project had the evidence that the items questions were valid and that the survey could go further and spread all over the world including 62 different societies (House et al., 2004).

Thus, uncertainty avoidance index was composed by four questions that only differed to frame in the measure wanted:

Uncertainty avoidance index of societal practices (House et al., 2004, p. 30 and 619; Venaik and Brewer, 2008, p. 10; GLOBE, 2006, p.5 and 7):

- *“In this society, orderliness and consistency are stressed, even at the expense of experimentation and innovation”*
- *“In this society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do”*
- *“Most people lead highly structured lives with few unexpected events”*
- *“This society has laws and rules or laws to cover situations.”*

And in uncertainty avoidance index of societal values (House et al., 2004, p.30 and 619; Venaik and Brewer, 2008, p. 10; GLOBE, 2006, p.14 and 16):

- *“I believe that orderliness and consistency should be stressed, even at the expense of experimentation and innovation”*
- *“I believe that societal requirements and instructions should be spelled out in detail so citizens know what they are expected to do”*
- *“Most people should lead highly structured lives with few unexpected events”*
- *“I believe that society should have rules or laws to cover situations.”*

The country ranking for societal practices of uncertainty avoidance scored between 5.37, Switzerland, and 2.88, Russia. Our focus, Germany was ranked in 5th (West) and 7th (East), 5.22 points (West) and 5.16 points (East), what indicated a high uncertainty avoidance and Portugal was ranked in place 39th with 3.91 points, what indicated low uncertainty avoidance (House et al., 2004).

In the ranking for societal values of uncertainty avoidance the ranking was unexpectedly upside down, the scores were between 5.61, Thailand, and 3.16, Switzerland. Portugal scored 4.43, 41st in the ranking, what indicated a light high uncertainty avoidance values and Germany scored 3.32 (West) and 3.94 (East), ranked in 59th (West) and 52nd (East), indicating a low uncertainty avoidance values (House et al., 2004).

These results were interesting and indicated that scores high in values corresponded to low scores in practices, and vice-versa. These scores suggested that societies with high uncertainty avoidance had a need to leave out the structure somehow. For example, Switzerland and Germany, which are high in uncertainty

avoidance practices, but both strongly used and implemented strongly flexitime in the workplace (House et al., 2004).

GLOBE project looked at the relationships between the different societal dimensions of culture with uncertainty avoidance practices and values. They found correlations between uncertainty avoidance practices and future orientation practices, .76, which indicated that reducing the uncertainty and having a more structured society enhanced the possibility of thinking in a more long-term. Between uncertainty avoidance practices and performance orientation practices, .58, this could indicate that structured societies with a better management of uncertainty could focus more in performance. And it seemed that uncertainty avoidance practices were driven by collectivism, in-group, -.60 in practices and -.45 in values, and institutional, .40 in practices and -.32 in values. So, GLOBE projected that uncertainties are reduced through collectivism groups (House et al., 2004).

Regarding uncertainty avoidance values, the correlations showed that the societies with less uncertainty desire also preferred thinking in a more long term, as demonstrated by the correlation with societal future orientation values, .67. Those societies also had a tendency to enhance the collectivism whether in-group, .80 and .30, practices and values respectively, or institutional, .42 in values.

In addition, not only correlations and relationships inside the study between dimensions were studied, but also relationships between the results obtained and the results obtained by similar studies. The most similar and well-known study done until GLOBE was the work published by Hofstede (1980). This work, as previously criticized, was of difficult comparison due to the different type of measurement, individual and organizational, and some categories of measures, values and unknown categories of items. Therefore, interpretation of correlations would always be doubtful. Even like that, the correlation between uncertainty avoidance practices and Hofstede uncertainty avoidance index has a negative coefficient of -.62, and between societal uncertainty avoidance values and Hofstede's uncertainty avoidance index the correlation coefficient was positive, .35. These correlations results indicated that the uncertainty avoidance index of Hofstede did not have the same focus on societal uncertainty avoidance practices of GLOBE as expected previously by GLOBE (House et al., 2004).

Regarding Schwartz's study (1992), the most important dimension related with societal uncertainty avoidance index was autonomy versus embeddedness, since embedded in relationships enhance the social order, security and autonomy boosted more the informal contracts and relationships. The correlation of Schwartz's embeddedness dimension is positively related, .42, with societal uncertainty avoidance practices and it was negatively related with societal uncertainty avoidance value, -.73.

Furthermore, in order to explore the behaviours of the societies relatively to uncertainty avoidance, project GLOBE also tried to correlate the results with some economic and social factors as The World Values Survey (Inglehart, Basanez and Moreno, 1998), the United Nations Human Development Report (United Nations Development Program, 1998) or the World Competitiveness (International Institute for Management Development, 1999). GLOBE project found correlations with economic factors (see table 16) (House et al., 2004):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Avoidance Societies</b>
Less prosperous in consumption and growth	More prosperous in consumption and growth
Less government support	More government support
Less competitive in the global marketplace	More competitive in the global marketplace

**Table 16 - GLOBE's correlation of Uncertainty Avoidance with economic factors**

GLOBE project also found correlations with Human condition factors (see table 17):

<b>Low Uncertainty Avoidance Societies</b>	<b>High Uncertainty Societies</b>
Less general satisfaction	Greater general satisfaction
Less life quality and human development	Greater life quality and human development
Less assurance of individual freedom, safety and security	Greater assurance of individual freedom, safety and security

**Table 17 - GLOBE's correlation of Uncertainty Avoidance with Human conditions**

Furthermore, and in other factors, GLOBE found positive correlations between societal uncertainty avoidance practices and success in science and technology that showed that in high uncertainty avoidance societies, orderly and formalized cultures tended to be more successful in solving science and technology issues. And, at last, practice uncertainty avoidance societies also tended to have lower cash holdings and higher noncash transactions (House et al., 2004).

Moreover, the results obtained by the survey were also tested to be influenced by clusters. It was tested the geographic cluster and the climate influence in uncertainty avoidance ranking. The tests showed that the variance in the values of uncertainty avoidance were explained by this geographic clusters in 68% for practices and 75% for values, and the rest was explained by idiosyncratic and unique societal differences respectively. With respect to climate uncertainty avoidance it was explained in 33% for practices and 54% for values, considered that the rest was explained by idiosyncratic and unique societal differences.



## 2.2 Job Performance

Capitalism has enhanced competition between people and companies. In our society all institutions want to be the best and everybody wants to be top-notch. This competition towards being the best goes around performance in sports, in music, in school, in social relationships, in jobs, in companies and all over our life. At every single moment we want to be outstanding and we try hard to be the best of the best. Great performance is a current requirement for all individuals, but especially for all organizations. Furthermore, in order to reach these organizational requirements, institutions must incentivize departments, groups and ultimately individuals' performance. Training programs, selection processes, merit pay systems, among other human resources management policies, are designed in order to improve, select or reward job performance (Huselid, 1995; Koch and McGrath, 1996).

Many definitions of job performance have been proposed (Fletcher, 2001; Grant, 2008). In this thesis job performance will be considered a set of actions, behaviours and results which links with and contribute to organization achievements (Viswesvaran and Ones, 2000).

Nowadays, social scientists are more focused on how to predict individual job performance than on how to observe it. Many tools have been created in the last years with the objective of enhancing the power of prediction.

According to Viswesvaran and Ones (2000) the concept of job performance is broad and depends not only on competence, but also on work context. Moreover, social scientists found that job performance is not the same throughout times, even for the same person on the same task. Thus it cannot be measured equally between different types of jobs (Viswesvaran and Ones, 2000). Additionally, job performance is not only how you do your tasks, but also how you contribute in the overall workload of the institution.

In a dynamic and changing organizational context, practitioners prefer to predict job performance through active measures, where respondents really have to show their competence and ability. For this reason they are dropping down passive tests such as multiple-choice questions because they seem to have less predictive validity, as they

require honest attitude from the respondent while answering, which is difficult to obtain (Linn et al., 1990).

Lately, it seems to be consensual that job performance may be approached from two different methods, or in other words, divided in two types, task performance and contextual performance (Fletcher, 2001; O'Connell et al., 2007).

Task performance takes a more technical approach, as it goes specifically to the characteristics of the job task, and includes specific abilities and competences needed to perform a specific job. This approach will barely apply to across jobs because it focuses on role prescribed activities that are specific for each job (Viswesvaran and Ones, 2000).

The other type of job performance is named contextual performance (Borman et al., 2004), and involves all the activities and behaviours of any job that, in general, can help institutions to achieve goals. In other words contextual performance contemplates resilience, effort to complete tasks, volunteering work, helping and cooperating, follow rules and support the institution, which are considered by some author as extra-role behaviours or organisational citizenship (Conway, 1999; Viswesvaran and Ones, 2000).

Following, each type of job performance work, task performance and contextual performance, are below described in more detail.

### **2.2.1 Task Performance**

Task performance, as discussed before, measures effectiveness in each task. From task to task a different measure is associated, because each has different specifications. Therefore, it requires a previous job analysis, which entails many resources, such as time to collect data, including from interviews (Gomes et al., 2008).

Cognitive Ability Tests were found valid predictors of task performance (Scotter and Motowidlo, 1996; Schrank et al., 2010). They measure knowledge and intelligence, which are in general important to achieve quality and efficiency at work. There are an extensive group of cognitive abilities test (Ekstrom et al., 1976). It allows the researcher to choose the tool that fits better his/her needs as the big range of tools are valid, well accepted worldwide and used by many institutions in the selection of new workers.

However, these tools are not the only ones which can predict and analyse task performance. Several studies used other tools and were also found valid (Halbesleben and Wheeler, 2008; Kuvaas and Dysvik, 2009; Dysvik and Kuvaas, 2011). Kuvaas and Dysvik, for instance, analysed task performance through the auto-perception of work quality, which was also found a valid predictor of task performance.

In this thesis, we will use the perception of work quality as a predictor of task performance, as the one used by Dysvik and Kuvaas (2011). Regarding work quality we will use a recent questionnaire used by Dysvik and Kuvaas. Work quality measures the excellence of output and if the expected output was successfully met (Kuvaas and Dysvik, 2009; Dysvik and Kuvaas, 2011).

In both studies done by Kuvaas and Dysvik, they used a small questionnaire that was valid in both studies. The questionnaire used in 2011 will be the one relevant for us. It consists in five questions in a five item scale. It will be adapted in order to meet this thesis' settings, which will be what it will be further noticed in more detail in the chapter 3, methodology.

## **2.2.2 Contextual Performance**

Contextual Performance focuses on non-task prescribed activities. It involves the social dimension of work including helping and cooperating with others. It goes beyond the prescribed activities that favour organizational objectives such as persisting with enthusiasm and showing extra effort to successfully accomplish task activities (Viswesvaran and Ones, 2000). This dimension of performance is less related with the job and skills and more related with the person per se. Contextual performance was integrated in job performance as social scientists reached the conclusion that task achievement is not the only parameter that defined if an employee was helping a company to succeed (Borman and Motowidlo, 1997).

For instance, an employee may have a great task performance, may do all his/her tasks perfectly, with efficiency and effectiveness, but may have a lot of problems with his/her partners. He/she may not communicate with the team, steal from the company, not follow the schedule and neither other rules. This employee, even if doing his/her own tasks, does not promote and help the institution to achieve their goals. Social climate may become unbearable and increase the turnover, meaning more costs and less efficiency. These employees may force the team to do overlap work, may waste time because when they are needed the worker might not be in the office or make himself/herself available. His/her expectable behaviour is not consistent with the company's rules, which creates uncertainty that can mislead other employees. These examples show why social scientists made efforts in order to strengthen this type of performance that differentiates itself from the simple knowledge of the task and the efficiency and quality of what is done.

Many dimensions of contextual performance were found valid and useful. In order to predict contextual performance some tools were developed and met a consensus between scientists, mainly personality tests, for instance Organizational Citizen Behavior, OCB, (Williams and Anderson, 1991), CCST-skills (Meijer et al., 2001), interpersonal facilitation, altruism or helping Co-workers (Scotter and Motowidlo, 1996), and work effort (Kuvaas and Dysvik, 2009; Dysvik and Kuvaas, 2011).

We will focus more on the study done by Dysvik and Kuvaas (2011) about work effort. It does not measure the output, but how the success was achieved and the

predisposition of respondents in meeting previous expectations within adverse conditions not previously forecasted. This factor measures indeed the behaviour of each respondent towards the job (Kuvaas and Dysvik, 2009; Dysvik and Kuvaas, 2011), and it is relatively consensual to consider it as an important and a transversal dimension of any job.

Our thesis will use the questionnaire from the latest study, 2011, which has five multiple-questions in a five item scale. These multiple questions will be adapted in order to meet the objectives and settings of the whole study. It will be described with further detail in the chapter 3, methodology.

## **2.3 Objectives and hypotheses of the research**

This research is inspired on the studies carried on by Hofstede (1980) and GLOBE (House et al., 2004), concerning national culture, and on Dysvik and Kuvaas (2009; 2011), concerning job performance.

It aims to provide a comparison between two countries that are in the mouth of European Union in the last years after the economic crisis broke out. On the one side Germany has high levels of development and performance as a country. According to European Commission data (2015a; 2015b), its GDP per person is increasing in the last five years (average of 2.9% per year) and it has a fair public debt decreasing in the last five years (from 80,5% to 74,7%). On the other side, Portugal had a deep crisis and shows one of the lowest performances inside European Union. According to the European Commission data (2015a; 2015b), it has a stable GDP per person (average of - 0.5% per year) and it has an increasingly public debt in the last five years (from 96.2% to 130,2%).

After analysing national culture and job performance in the previous chapters, it is important to explore how the behaviour of the two different countries, Portugal and Germany, is. The ultimate aim of this thesis is to explore if these concepts are related. So, based in the previous literature seen above our main objectives are as follows:

First, we want to verify if differences within the national culture dimension, uncertainty avoidance, designed by GLOBE and Hofstede, also exist in a sample different from those studies, using participants other than managers.

The second aim of this thesis is to find a relation between job performance, work quality and work effort, and uncertainty avoidance. In which degree is cultural values are related with job performance? In which degree it can be said that a society with high uncertainty avoidance is better or worse on job performance than low uncertainty avoidance societies?

As discussed previously, national culture, and more specifically uncertainty avoidance, is quite different between Portugal and Germany (House et al., 2004). GLOBE project indicated higher values for Portugal than Germany. By his turn, Hofstede (2001) had found that Portuguese people showed more intolerance to uncertainty than German.

Therefore, the results of GLOBE (House et al., 2004) and Hofstede (2001) will construct two different hypotheses as they show different results:

Hypothesis 1: Portugal sample will score lower than Germany sample in GLOBE's uncertainty avoidance practices and higher than Germany sample in GLOBE's uncertainty avoidance values.

Hypothesis 2: Portugal sample will score higher in Hofstede's uncertainty avoidance measure than Germany sample.

In the previous chapters, it was discussed that uncertainty avoidance was related directly with neuroticism, anxiety, stress, conscientiousness, tolerance to ambiguity, time-management, efficiency and planning. Those low in uncertainty avoidance show in opposition high levels of innovation and flexibility (House et al., 2004; Hofstede, 2001; Boeing, 2013). These factors are observed in behaviours that modify performance at work (Bakker et al., 2011; Barrick and Mount, 1991; Barrick et al., 1998; AbuAlRub, 2004; Scullen et al., 2000; Barling et al., 1996; Motowidlo et al., 1986; Fried et al., 1998; Janssen and Van Yperen, 2004).

So, if uncertainty avoidance is associated with some behaviour that by their turn are connected with job performance, it is fair to expect that uncertainty avoidance is also linked with job performance.

Job performance as mentioned before will be analysed by two different measures, work effort and work quality. It is anticipated that task and contextual performance show different results of job performance.

Task performance, and more particularly work quality, seems to be negatively related with ambiguity or other stress factors (Penney and Spector, 2005). When people have low levels of conscientiousness (Bakker et al., 2011; Barrick et al., 1998), and planning discipline, it turns to efficiency and quality (Potter et al., 2000; Zwikael and Sadeh, 2007), however it competes against innovation. This shows that efficiency and good planning bring high work quality and flexibility and innovation low work quality. Hence, competences that require a good work quality are killing the competences of innovation (Miron et al., 2004).

Thus, with the ranking observed in GLOBE's study, Germany sample is supposed to have better work quality than Portugal.

Hypothesis 3: Portugal sample will score lower on work quality than Germany sample.

Regarding contextual performance, and more particularly work effort, it seems to be positively related with high emotional stability (Barrick et al., 1998) and conscientiousness (Trautwein et al., 2009; Barrick et al., 1993). And it is negatively correlated with neuroticism (Barrick et al., 1998) and ambiguity (Brown and Peterson, 1994). And, as it is implicit, innovations per se are sources of uncertainty. To be innovative requires effort, mainly to adapt and tolerate ambiguity and changes, which are constantly happening (Janssen and Van Yperen, 2004). Hence, work effort is implicit in a culture of flexibility and innovation, as uncertainty is always present in daily routine, whereas good planners - who control all situations, plan all tasks and have exact times for it - will avoid effort as it is synonymous of uncertainty. Therefore, Portugal should present a better work effort than Germany:

Hypothesis 4: Portugal sample will score higher on work effort than Germany sample



### **3. Methodology**

The following chapter will expose and describe the methodology behind the empirical approach, constructed to optimally answer the research questions and hypothesis of the thesis. We used an inquiry methodology through a questionnaire based on the previous studies from Hofstede (1980; 2001), GLOBE (House et al., 2004) and Dysvik and Kuvaas (2009; 2011) that will be explained below.

Further in the chapter the sample and the respondents' characteristics will be described.

The respondents of this thesis are not similar at all neither to the studies of Dysvik and Kuvaas (2009; 2011) which focus on Norway respondents, nor Hofstede's (1980; 2001) studies focused only on IBM workers, nor GLOBE project study focused only on leaders (House et al., 2004). The decision of not taking any of the similar samples of the previous studies will be shown below in the chapter 3.2, respondents and sample.

#### **3.1 Data Collection: Measures and Procedures**

This section presents a summary of methodology which the thesis is based on as well as of the thesis's methodology as such.

Firstly, we introduce the main studies that are the basis of this thesis, GLOBE (House et al., 2004), Hofstede (1980) and Dysvik and Kuvaas (2011).

Hofstede was responsible for the start of worldwide studies on national culture of nowadays. Hofstede began his study tied to one company and one data-base. Not in the position of creating questions, Hofstede limited his first research to observe and analyse the data created by the company that his study was associate, IBM. Even tied, Hofstede created a valid study that marked the beginning of this type of worldwide culture studies. He analysed all questions of the database and split them in valid dimensions. Then he saw its relationships and created an appropriate formula to better

observe the results and its consequences. We used the questions for uncertainty avoidance that he used in his study (1980).

GLOBE project, the worldwide study in vogue nowadays, tried to overcome the main boundaries of Hofstede's work. The project developed more the sense of societal culture and tried to rearrange the study without much influence of west world, get it more globalized and in a way that could fit all cultures. It used a long process of making questions, adding, filtering and then validating, which is described above (House et al., 2004):

- Q-sorting, which involved putting the questions in the proper categories of dimensions, it was done by seven PhD students of Maryland University and then by country co-investigators from 38 different countries. This procedure intended to see if the same question has in different cultures the same meaning or measure the same dimension. So, GLOBE reduced the probability of having different measures for the same question. Questions with less than 80% of sorters in the right category were drop off.
- Evaluate the items, reporting ambiguous or not adequately translated words or phrases in the questions and culturally inappropriate questions. In this case, GLOBE project tried to re-write the problematic questions to solve the problematic issues founded, but the majority of the questions reported were drop off.
- Translate the original version, English, to their native language, and then back-translate by other person to English. It was often done by professional translators one or both of the translations to secure the right translation. After this process, the final translation was send back to two authors, Hanges and Dickson, who compared the original version with the translated version. Mainly in this third step the questions were discuss and re-write.
- Two pilot studies were conducted to validate the scales. The first one was done with 877 white-collar employees or managers in 28 different countries where Portugal and Germany were included. It was added pertinent questions and conducted the second pilot study where the

dimension of uncertainty avoidance for societal level scores for internal consistency went up from .36 and .38 from the first study to .88 and .85, practices and values respectively, and the new interclass correlation .96 for both societal scales.

The questions are more suitable to being related to national culture, as a group of more than 200 investigators and co-investigators were involved on its process. GLOBE was focused on leaders as its main goal was to compare and discuss relationships between national culture and leadership.

Regarding our thesis, we used both set of questions from uncertainty avoidance index, practices and values.

This thesis is also based on job performance studies. In this thesis as referred before we used as reference the study of Dysvik and Kuvaas (2011). It is based previously on a work of Kuvaas (2006) which included effort and quality on the managers' job performance perspective. This work was upgraded during the last years (2009; 2011). This thesis used the questions about work quality and work effort of Dysvik and Kuvaas (2011) study, but they were modified in order to fulfil the thesis conditions, as they were directed to supervisors who had to evaluate their own employees and in this thesis the employees are also the respondents.

Finally, we contemplated one section with demographic and personal items with the objective of doing a control over the sample. These questions were based in demographic questions from GLOBE project survey. The questions, that might make sense for the purpose of this study, were extracted or adapted from GLOBE project (2004).

These studies were the base for the questionnaire that was structured in six parts:

- Society practices of GLOBE uncertainty avoidance, where people were questioned about how their society in their opinion is (House et al., 2004; Veraik and Brewer, 2008; GLOBE, 2006), can be seen below (see table 18):

<b>1.1</b>	In this society, orderliness and consistency are stressed, even at the expense of experimentation and innovation.
<b>1.2</b>	In this society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do.
<b>1.3</b>	In this society, most people lead highly structured lives with few unexpected events.
<b>1.4</b>	This society has rules or laws to cover situations.

**Table 18 – Questions of Uncertainty Avoidance practices**

- Society values of GLOBE uncertainty avoidance (House et al., 2004; Veraik and Brewer, 2008; GLOBE, 2006), where people were asked how they wished that the society should be in their own point of view, can be seen below (see table 19):

<b>2.1</b>	I believe that orderliness and consistency should be stressed, even at the expense of experimentation and innovation.
<b>2.2</b>	I believe that societal requirements and instructions should be spelled out in detail so citizens know what they are expected to do.
<b>2.3</b>	Most people should lead highly structured lives with few unexpected events.
<b>2.4</b>	I believe that this society should have rules and laws to cover situations.

**Table 19 – Questions of Uncertainty Avoidance values**

- Hofstede's uncertainty avoidance from 1980 (Hofstede, 2001), where the respondents were asked about their feelings relatively to the actual or last work was, can be seen below (see table 20):

<b>3.1</b>	How often do you feel nervous at work?
<b>3.2</b>	How long do you think you will continue working for your institution?
<b>3.3</b>	Companies rules should not be broken, even when it is in the company's best interests.

**Table 20 – Questions of Hofstede's Uncertainty Avoidance**

- Work Quality's index from Dysvik and Kuvaas (2011), where the respondents were questioned about their perception of their own work quality, can be seen below (see table 21):

<b>4.1</b>	The quality of my work is usually high.
<b>4.2</b>	The quality of my work is top-notch.
<b>4.3</b>	I deliver higher quality than can be expected.
<b>4.4</b>	I rarely complete a task before I know that the quality meets high standards.
<b>4.5</b>	Others in my organization look at my work as typical high-quality work.

**Table 21 – Questions regarding Work Quality**

- Work Effort's index from Dysvik and Kuvaas (2011), where the respondents were questioned about their perception of their own work effort, can be seen below (see table 22):

<b>5.1</b>	I try to work as hard as possible.
<b>5.2</b>	I intentionally expend a great deal of effort in carrying out my job.
<b>5.3</b>	I often expend extra effort in carrying out my job.
<b>5.4</b>	I often expend more effort when things are busy at work.
<b>5.5</b>	I usually do not hesitate to put in extra effort when it is needed.

**Table 22 – Questions regarding Work Effort**

- Social-demographic questions based on GLOBE's demographic questionnaire (GLOBE, 2006), which each respondent answered about its own life, can be seen below (see table 23):

<b>6.1</b>	How old are you?
<b>6.2</b>	What is your gender?
<b>6.3</b>	What is your country of citizenship/passport?
<b>6.4</b>	What country were you born in?
<b>6.5</b>	How long have you lived in the country where you currently live?

<b>6.6</b>	Have you ever lived more than a year in another country?
<b>6.7</b>	Do you have a religious affiliation? If yes, which?
<b>6.8</b>	What country was your mother born in?
<b>6.9</b>	What country was your father born in?
<b>6.10</b>	What language(s) were spoken in your home when you were a child?
<b>6.11</b>	How many years of full-time work experience have you had?
<b>6.12</b>	Which position are you working or in your last job?
<b>6.13</b>	How many years are you in the actual job?
<b>6.14</b>	How many years of formal education do you have?
<b>6.15</b>	What language(s) do/did you use at work?

**Table 23 – Social-demographic questions**

The questionnaire was translated directly from English to Portuguese and German, by native speakers and back-translated by another person, in order to reach the target population of this thesis. A pre-test with ten people, seven Portuguese and three German, was made to capture any misunderstandings.

The questionnaires in Portuguese and in German were added in annexes in table 38 and 39, respectively.

The majority of the questions used a scale between 1 - "Strongly agree" and 7 - "Strongly disagree" as proposed by GLOBE project. In Hofstede's questions was opted for the scale used in Hofstede's survey instead of the seven points scale from GLOBE and obviously in the group six of questions were more flexible in order to reach all the possible answers from the respondents.

The data collection was done in June 2015 with two completely different weather conditions. The collection in Osnabrück (Germany) was under grey sky, showers and 15°C, and in Porto (Portugal) under hot spring with temperatures around 30°C.

Our thesis used two approaches for getting data, one by approaching people in the streets, which resulted in thirty respondents at Osnabrück train station (Germany) and thirty five respondents in Porto streets. The other approach was by social networks, which resulted in twenty seven respondents from Germany and seventy two respondents from Portugal.

### **3.2 Respondents and sample**

Both national culture previous studies focused on a certain type of positions (House et al., 2004) or focused on a certain company (Hofstede, 1980; 2001). Our study did not focus on any profession or single company or in any position, but we preferred to pick up random people and to be closer to what society really is. In fact, IBM's employees are not a real representative of a society and leaders and managers are also not a truth sample of a society. As we did not focus on leadership or on any other conditions, but had workers as the sole condition, the sample of the society is wider and nearer the real society.

The sample included fifty seven Germans and hundred seven Portuguese. The two samples are balanced in gender even if both have more women than men. Germany has 55% women and Portugal 57%.

The average age of the two samples are balanced as German sample and Portuguese sample had in average 39 and 41,5 years old respectively. Samples ages are between 23 and 65 years old for the Portuguese and 19 and 66 years old for the German.

Religion beliefs are balanced as 51% of Germany sample and 52% of Portuguese sample answered that they followed one religion. However it is a huge difference in which religions the samples believed: Germany spread its beliefs by six different Religions, 4% Orthodox, 7% Islamic, 21% Catholic, 10% Christian, 10% Protestant and 48% Evangelic, and Portugal only followed one religion 100% Catholic.

The German respondents have a more diverse cultural background, as 15% does not have roots in Germany ( 2 of Turkey, 2 of Portugal, 1 of Angola, 1 of Georgia, 1 of Kazakhstan, 1 of Russia and 1 of Poland), however they have German nationality or lived in Germany at least for the last 10 years. The Portuguese respondents have a less diverse cultural background with only 5,6% without initial roots in Portugal (3 of Angola, 2 of Mozambique and 1 of Brazil) even if they lived as long as 39 years in Portugal. It is interesting to see that in Portugal the initial roots are all from a Portuguese language speaker country but in Germany the initial roots come from completely different countries. The Germany sample lived abroad for one year or more in 26% of the respondents against only 19% of Portugal sample that already had the experience of living in another country for one year or more.

In terms of experience on average the Germany sample has 15,5 years against the almost 19,5 years of Portugal sample. In the job where they are right now, Germany sample has an average of 11,4 years and the Portugal sample an average of 12 years.

In terms of study 65% reach University studies in Germany sample and 60% in Portugal sample.

At work only 10% of Portugal sample spoke one or more languages besides native language against 47% of Germany sample. In both samples the second language is English (95% and the ones that do not work with English but with another language that is not the native are all in Germany sample).

Therefore, for a better overview of the characteristics from both samples, a summary table will be presented below (See table 24):

	<b>All Sample</b>	<b>Portugal Sample</b>	<b>Germany Sample</b>
<b>Number of Respondents</b>	164	107	57
<b>Age</b>	40,6 years	41,5 years	39 years
<b>Women</b>	56%	57%	55%
<b>Religion</b>	52%	52% (100% Catholic)	51% (Split by 6 different Religions)
<b>Other Country Roots</b>	9%	5,6% (100% ex-colonies)	15% (Split by 7 different Countries)
<b>Lived Abroad</b>	21%	19%	26%
<b>Experience</b>	18 years	19,5 years	15,5 years
<b>Time on Actual Job</b>	11,8 years	12 years	11,4 years
<b>University</b>	62%	60%	65%
<b>Speak Other Language in Work</b>	23% (95% English)	10% (100% English)	47% (92% English)

**Table 24 - Respondent Characteristics**



## **4. Results and conclusions**

This chapter presents in a first analysis the consistency and feasibility of the sample. Further, we will present the results found, the analysis about samples and their mainly statistical results. A discussion of thesis' results will integrate this chapter in a second part, where the main results will be evaluated. Following this, we will present the discussion for future research studies, where we will analyse limitations and strong points of the study to be developed. Finally, the conclusion will be drawn in the last part, where it will be resumed acknowledges and conclusions of our thesis.

### **4.1 Results and Data Analysis**

First of all, it is important to confirm the feasibility of factors presented in this thesis. It will be taken by a factorial analysis in a correlation matrix with a Varimax rotation and sphericity tests of Bartlett and KMO (García-Santillán et al., 2012). These analyses will be tested in two groups of factors, uncertainty avoidance factors and job performance factors.

In uncertainty avoidance factors, Hofstede's questions as they are do not match with the same system of the other questions (Linkert scale of 7 points). And, the factor calculation is not a simple average as the other ones. It is calculated by the formula described in chapter 2.1.1 in page 13. Because of these mismatches, uncertainty avoidance questions from Hofstede were not taken in the factor analysis.

In feasibility validation of sample we used some parameters as factorial coefficient  $> 0.4$ , higher than what was purposed by Udovičić et al. (2007) that was 0.25, and a Varimax rotation with a normalization of Kaiser, in order to ensure more reliable extractions and to make it simple and easier (Abdi, 2003). Both groups of factors, uncertainty avoidance and job performance, showed a good feasibility for a p-value of 0,00.

Uncertainty avoidance factor group showed a KMO of 0,732 with extraction done in two different factors that split group questions. In first factor, it can be found the questions 1.1, 1.2, 1.3 and 1.4. And in second factor, it can be found the questions

2.1, 2.2, 2.3 and 2.4 (see table 25). These factors explained 60% of total variance of the sample.

Rotated Component Matrix <sup>a</sup>	Component	
	1	2
1.1 – In this society, orderliness and consistency are stressed, even at the expense of experimentation and innovation.	.733	
1.2 – In this society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do.	.815	
1.3 – In this society, most people lead highly structured lives with few unexpected events.	.792	
1.4 – This society has rules or laws to cover situations.	.712	
2.1 – I believe that orderliness and consistency should be stressed, even at the expense of experimentation and innovation.		.689
2.2 – I believe that societal requirements and instructions should be spelled out in detail so citizens know what they are expected to do.		.745
2.3 – Most people should lead highly structured lives with few unexpected events.		.802
2.4 – I believe that this society should have rules or laws to cover situations.		.769

Method of Extraction: Principal Component Analysis.

Method of Rotation: Varimax with Kaiser Normalization

<sup>a</sup>. Rotation converged in 3 iterations

**Table 25 - Uncertainty Avoidance Factor Analysis**

The job performance factor group showed a better KMO, 0.799 with extraction done in two different factors which split the group questions. In first factor, it can be found the questions 5.1, 5.2, 5.3, 5.4 and 5.5. And in second factor, it can be found the questions 4.1, 4.2, 4.3, 4.4 and 4.5 (see table 26). These factors explained 61% of total variance of the sample.

These extractions from the feasibility ordered the items in four factors. As it was analysed in uncertainty avoidance factors (table 25), factor one matched with GLOBE's practices and factor two matched with GLOBE's values. And in job performance factors (table 26), factor one matched with work effort and factor two matched with work quality. So, it will be referred by the names previous mentioned in order to avoid misunderstanding with the number of factors.

Rotated Component Matrix <sup>a</sup>	Component	
	1	2
4.1 – The quality of my work is usually high.		.772
4.2 – The quality of my work is top-notch.		.801
4.3 – I deliver higher quality than can be expected.		.698
4.4 – I rarely complete a task before I know that the quality meets high standards.		.660
4.5 – Others in my organization look at my work as typical high-quality work.		.681
5.1 – I try to work as hard as possible.	.785	
5.2 – I intentionally expend a great deal of effort in carrying out my job.	.852	
5.3 – I often expend extra effort in carrying out my job.	.792	
5.4 – I often expend more effort when things are busy at work.	.825	
5.5 – I usually do not hesitate to put in extra effort when it is needed.	.738	

Method of Extraction: Principal Component Analysis.

Method of Rotation: Varimax with Kaiser Normalization.

<sup>a</sup>. Rotation converged in 3 iterations.

**Table 26 - Job Performance Factor Analysis**

Furthermore, after the good behaviour of feasibility, it is important to analyse the consistency of each factor, reliability. This analysis will come up by Cronbach's Alfa (Maroco and Garcia-Marques, 2006), what showed for each factor levels above 0.75, which was considered reasonable to good, less for Hofstede Index (see table 27).

	Cronbach's Alfa	Number of Items
<b>GLOBE practices</b>	0.77	4
<b>GLOBE values</b>	0.75	4
<b>Hofstede</b>	-0.00	3
<b>Work quality</b>	0.78	5
<b>Work effort</b>	0.86	5

**Table 27 - Cronbach's Alfa**

After the good results presented by feasibility and reliability, it was secure to do data analysis with the factors obtained in feasibility analysis. It was worth to know if samples were normally distributed or not to know which type of tests should be used. So, it will be used the test of Shapiro-Wilk as it was taken as the most powerful tool even in small samples (Razali and Wah, 2011).

A non-normal distribution was detected in all the factors (see table 41, 42, 43, 44 and 45 in annexes) with exception of factor GLOBE practices, that showed a level of significance a bit higher than 0.05 (0.054). As the values were very near of non-normal distribution and in order to simplify the analysis, distribution free tools will be used for all the factors, as those tools can also be used in parametric samples (Conover and Iman, 1981; Pajevic and Basser, 2003).

Therefore, in order to understand if between both samples the results were different and significant, we made use of the Mann-Whitney U test, as it is non-parametric and valid to understand if differences between sample results were enough to come up with a conclusion or not (Birnbaum and Klose, 1957; DeLong et al., 1988). Thus, it is presented the Mann-Whitney U test results for the five factors in the table 28:

	<b>Null Hypotheses</b>	<b>Sig.</b>	<b>Decision</b>
<b>1</b>	The distribution of GLOBE practices is the same across Portugal and Germany society's samples	.000	Reject the null hypothesis
<b>2</b>	The distribution of GLOBE values is the same across Portugal and Germany society's samples.	.000	Reject the null hypothesis
<b>3</b>	The distribution of Hofstede is the same across Portugal and Germany society's samples.	.000	Reject the null hypothesis
<b>4</b>	The distribution of work quality is the same across Portugal and Germany society's samples.	.894	Retain the null hypothesis
<b>5</b>	The distribution of work effort is the same across Portugal and Germany society's samples.	.000	Reject the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

**Table 28 – Independent samples Mann-Whitney U test for the five factors**

The H0 is the hypothesis of both samples being statistically the same. Or in other words, the differences between both samples are not significant, German sample = Portuguese sample. If H0 is rejected the samples are statistically different (Farris et al., 1995; Birnbaum and Klose, 1957).

It can be observed that for all factors both samples had significant differences minus one, quality. For this factor, even with different means, the difference between both samples was not significant.

Therefore, as it was shown characteristics and conditions of the sample to be well analysed, it is presented characteristics of the overall sample and then split in samples by country.

Below it is presented the main characteristics (means, standard deviations, value limits) of the overall sample and main interesting factors for our sample already grouped in the factors found above (table 29).

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
GLOBE practices	164	1,00	6,75	4,20	1,29
GLOBE values	164	1,75	7,00	4,78	1,31
Hofstede	164	-150	234	62	74
Quality	164	1,80	7,00	5,36	,91
Effort	164	2,80	7,00	6,00	,91
Age	164	19,00	66,00	40,63	12,26
Total Experience	164	,50	48,00	18,08	13,28
Time in Actual Position	164	,50	38,00	11,80	10,38

**Table 29 - Main Descriptive Statistics, Overall Sample**

As we will do mainly comparisons between respondents of Portugal and respondents of Germany, it was also split to easier visualization in Germany and Portugal samples. It is below the descriptive statistics for the samples, table 30 for Portugal sample and table 31 for Germany sample:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
GLOBE practices	107	1,00	6,50	3,69	1,18
GLOBE values	107	2,25	7,00	5,08	1,15
Hofstede	107	-150	230	41	70
Quality	107	1,80	7,00	5,33	,98
Effort	107	3,40	7,00	6,20	,80
Age	107	23,00	65,00	41,50	10,93
Total Experience	107	,70	48,00	19,48	12,90
Time on actual position	107	,50	36,00	12,01	10,19

**Table 30 - Portugal Main Descriptive Statistics**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
GLOBE practices	57	2,50	6,75	5,14	,92
GLOBE values	57	1,75	7,00	4,22	1,42
Hofstede	57	-28	234	100	67
Quality	57	3,20	7,00	5,43	,78
Effort	57	2,80	7,00	5,61	1,00
Age	57	19,00	66,00	39,02	14,40
Total Experience	57	,50	47,00	15,45	13,68
Time on actual position	57	,50	38,00	11,39	10,81

**Table 31 - Germany Main Descriptive Statistics**

As discussed in previous chapter, both samples have similar variables for demographic and social factors, "Age" and "Time in Actual Position" were statistically the same. However "Total Experience" was rejected to be statistically the same, it was used in these tests the Mann-Whitney U test (see table 32). Despite this difference, it was assumed that it would not influence the conclusions that are presented.

Bringing up GLOBE project study replicated in our thesis, as our main focus, it was interesting to see how the behaviour of our sample comparing to this big study was. In uncertainty avoidance practices Portugal scored 3.69 in our sample and 3.91 in GLOBE's sample. This shows that our random Portugal sample perceived Portuguese society less avoidant of uncertainty than Portugal GLOBE's managers' sample. And, regarding uncertainty avoidance values Portugal scored 5.08 in our sample and 4.43 in GLOBE's, showing that our random Portugal sample wants to avoid uncertainty more

than Portugal GLOBE's managers' sample. This little comparison between Portugal scores shows that the stronger the feeling that society does not avoid uncertainty, the stronger the feeling that society should avoid it.

	<b>Null Hypothesis</b>	<b>Sig.</b>	<b>Decision</b>
<b>1</b>	The distribution of Age is the same across Portugal and Germany samples.	.100	Retain the null hypothesis
<b>2</b>	The distribution of Total Experience is the same across Portugal and Germany samples.	.046	Reject the null hypothesis
<b>3</b>	The distribution of Time in Actual Position is the same across Portugal and Germany samples.	.554	Retain the null hypothesis

Asymptotic significance are displayed. The significance level is .05.

**Table 32 - Age, Total Experience and Time in Actual Position Mann-Whitney U Test**

Regarding Germany, our sample scored in practices 5.14 and GLOBE's sample scored 5.16 (East) and 5.22 (West). It shows that the scores between our sample and GLOBE's are near each other's, even if our sample perceives society less avoidant than GLOBE's sample. In values, our sample scored 4.22 and GLOBE's sample 3.32 (West) and 3.94 (East), showing that our sample wants to avoid uncertainty more than the sample from GLOBE. In addition the German data shows that the stronger the feeling is that the society does not avoid uncertainty, the stronger the feeling is that society should avoid it.

The comparisons between Germany and Portugal in this thesis were in harmony with comparison scores presented before by GLOBE's project. This met hypothesis 1 and 2 - Portugal will score lower in practices and higher in values than Germany – and it will be discussed in more detail in discussion chapter.

Our samples, even with a similar behaviour relatively to GLOBE's study, had a behaviour that did not follow previous studies done by Hofstede. Our Portugal sample scored 40.84 which were far away from the 104 of Hofstede's study, and our Germany sample scored 100.43 which were also far away from the 65 presented in Hofstede's study. A big change of numbers and also Portugal scoring a smaller score than Germany

were well noticed, which did not validate the hypothesis 3 of this thesis. Further in this chapter, we will focus more on it and discuss this result.

Regarding work quality the samples presented similar scores: Portugal scored 5.33 lower than the 5.43 from Germany. However as the Mann-Whitney U test pointed out the difference was not significant. According to this result the hypothesis 4 cannot be validated in this thesis.

Work effort in its turn got different results as Portugal, with a score of 6.2, had a higher score than Germany, which scored 5.61. These results validated also another hypothesis, 5, which said that Portugal had better work effort than Germany.

It is presented also for deep investigation the correlations between the main factors as an overall sample and split in two different samples, Portugal and Germany (see table 33, 34 and 35).

	GLOBE practices	GLOBE values	Hofstede	Work quality	Work effort	Age	Total Experience	Time in Actual Position
GLOBE practices	1,000	-,179*	,270**	,032	-,127	-,087	-,064	-,121
GLOBE values	-,179*	1,000	-,101	,069	,256**	-,034	,035	,002
Hofstede	,270**	-,101	1,000	-,030	-,199*	-,426**	-,415**	-,403**
Work quality	,032	,069	-,030	1,000	,346**	,006	-,002	,024
Work effort	-,127	,256**	-,199*	,346**	1,000	,106	,065	,006
Age	-,087	-,034	-,426**	,006	,106	1,000	,913**	,771**
Total Experience	-,064	,035	-,415**	-,002	,065	,913**	1,000	,778**
Time in Actual Position	-,121	,002	-,403**	,024	,006	,771**	,778**	1,000

Spearman's rho; N = 164  
 \*. Correlation is significant at the 0.05 level (2-tailed).  
 \*\*. Correlation is significant at the 0.01 level (2-tailed).

**Table 33 - Correlations between factors (all sample)**

In the table 33 some correlations were expected by the characteristics of the factors. “Age”, “Total Experience” and “Time in actual position” are strongly correlated between them (rho between 0.77 and 0.91). This was obvious because an older person had normally more experience and more probability of having more time on the actual job. More experience also increases the chance of having the same job or position for a longer time (Table 33).

Other correlations were not expected, mainly between Hofstede and GLOBE practices which showed a positive correlation, rho= .27 (p-value < .05), where in



GLOBE's study it showed a negative correlation,  $\rho = -.60$  (House et al., 2004). This is only explained because our thesis got completely different results in Hofstede's factor from the ones got in Hofstede's study.

The correlation between the two factors of GLOBE study was not as strong as in GLOBE study - even if it was still negative. In our thesis the correlation was weaker ( $\rho = -.18$ ) for a weaker level of confidence ( $p < .05$ ) than in GLOBE's ( $p < .01$ ,  $\rho = -.62$ ) (House et al., 2004). It showed a lighter tendency: the higher the practices, the lower the values are. Moreover, it was observed deeper by our thesis that in this correlation exist two groups of questions contributing for it, 1.2 and 2.2 ( $\rho = -0.26$ ) and 1.3 to 2.3 ( $\rho = -0.26$ ) for all sample (see table 40 in annexes).

**Correlations**

	GLOBE practices	GLOBE values	Hofstede	Work quality	Work effort	Age	Total Experience	Time in Actual Position
GLOBE practices	1,000	-,296**	,064	-,032	,000	-,059	-,022	-,205*
GLOBE values	-,296**	1,000	,027	,053	,135	,024	,059	,079
Hofstede	,064	,027	1,000	-,044	-,077	-,350**	-,343**	-,417**
Work Quality	-,032	,053	-,044	1,000	,403**	-,049	-,073	,021
Work Effort	,000	,135	-,077	,403**	1,000	-,038	-,028	-,092
Age	-,059	,024	-,350**	-,049	-,038	1,000	,900**	,693**
Total Experience	-,022	,059	-,343**	-,073	-,028	,900**	1,000	,713**
Time in Actual Position	-,205*	,079	-,417**	,021	-,092	,693**	,713**	1,000

Spearman's rho; N = 107

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Table 34 - Correlations between factors (Portuguese sample)**

**Correlations**

	GLOBE practices	GLOBE values	Hofstede	Work Quality	Work Effort	Age	Total Experience	Time in Actual Position
GLOBE practices	1,000	,479**	,058	,168	,147	,058	,095	,044
GLOBE values	,479**	1,000	-,051	,052	,228	-,248	-,152	-,205
Hofstede	,058	-,051	1,000	-,016	-,147	-,415**	-,430**	-,386**
Work Quality	,168	,052	-,016	1,000	,214	,091	,113	,016
Work Effort	,147	,228	-,147	,214	1,000	,173	,029	,083
Age	,058	-,248	-,415**	,091	,173	1,000	,889**	,878**
Total Experience	,095	-,152	-,430**	,113	,029	,889**	1,000	,871**
Time in Actual Position	,044	-,205	-,386**	,016	,083	,878**	,871**	1,000

Spearman's rho; N = 57

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 35 - Correlations between factors (German sample)**

Hofstede index in this sample had great correlations, with a level of significance of  $p\text{-value} < .01$  with mainly age ( $\rho = -.43$ ), experience ( $\rho = -.42$ ) and time in actual position ( $\rho = -.40$ ). These correlations indicated that the higher was Hofstede index the lower was the age, experience and time on position, what brought a real influence of age and its derivate, total experience and time on actual position to Hofstede index.

With a level of significance of  $p\text{-value} < .05$  Hofstede index had a significant correlation with effort index ( $\rho = -.2$ ), which indicated as much higher was Hofstede index less was the effort. Three reasons could be purposed: less effort when the members of the society wanted to stay less in the same company or same job, or when a society was more nervous, or when a society had fewer tendencies to break the rules. These reasons will be explored further on discussion chapter.

Effort index had two strong correlations, with a level of significance of  $p < .01$ , with GLOBE values ( $\rho = .26$ ) and with quality ( $\rho = .35$ ). The higher the effort is, the higher the GLOBE values and the higher the quality are. This means that when a society feels that uncertainty should be avoided, it makes more effort, and when a society makes more effort, it produces a better work quality.

In two different samples split by country, Germany and Portugal, the coefficients of correlations had an interesting change as it can be seen in both tables displayed below (see table 34 and 35), but the study will only focus on significant correlations,  $p\text{-value} < .01$ .

It can be observed that in German sample the correlation between GLOBE practices and GLOBE values was positive ( $\rho = 0.48$ ), instead of negative as it was presented in the correlation of the overall sample ( $\rho = -.17$ ) and in Portuguese sample ( $\rho = -.30$ ). This could indicate that German sample wanted less control of uncertainty, but Germans still did not want an extreme change from what they are, which happen with Portuguese sample that had a bigger tendency to answer in the opposite direction to both groups what could indicate that they were not completely happy about how the society was.

Both samples as well as the overall sample presented in relation to Hofstede a significant negative relation with age, total experience and time on actual position with values between  $\rho = -.34$  and  $\rho = -.43$ . However, it can be observed that only one question, *“How long do you think you will continue working for your institution?”*

(Hofstede, 2001, p.150) was correlated with age, time on actual position and total experience (see table 36):

Correlations						
	How often do you feel nervous at work?	How long do you think you will continue working for your institution?	Companies rules should not be broken, even when it is in the company's best interests.	How old are you?	How many years of full-time work experience have you had?	How many years are you in the actual job?
How often do you feel nervous at work?	1,000					
How long do you think you will continue working for your institution?	,026	1,000				
Companies rules should not be broken, even when it is in the company's best interests.	,063	-,090	1,000			
How old are you?	,113	,496**	,053	1,000		
How many years of full-time work experience have you had?	,112	,483**	-,030	,913**	1,000	
How many years are you in the actual job?	,115	,459**	,085	,771**	,778**	1,000

Spearman's rho; N = 164

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 36 - Correlation between Hofstede's Questions, Age, Total Experience and Time in Actual Position**

In Portuguese sample existed two relations that did not happen on the German sample, between quality and effort with a rho of .40, and also similar to the overall sample and a negative correlation with lower level of significance, p-value < .05 between GLOBE practices and time on actual position (rho = -.21). This value could indicate that the bigger the time in one position was, the lower the avoidance of uncertainty in society perceived by the individual was.

Lastly, regarding the main correlations results, it was interesting to observe the following table (37) where it was shown a negative correlation between practices and effort (level of significance <0.05) and a stronger positive correlation between values and effort (level of significance <0.01). These results showed what the studies of GLOBE indicated that effort will be more significant in less uncertainty avoidance societies and in societies that wanted to increase the level of uncertainty avoidance (House et al., 2004).

**Correlations**

	GLOBE practices	GLOBE values	Work Effort
GLOBE practices	1,000	-,179*	-,127
GLOBE values	-,179*	1,000	,256**
Work Effort	-,127	,256**	1,000

Spearman's rho; N = 164

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. A correlação é significativa no nível 0,01 (2 extremidades).

**Table 37 - Correlations between GLOBE scores and Effort (All sample)**

## 4.2 Discussion

The results presented above were interesting and it provided a good basis to discuss around the hypothesis presented in the beginning of this thesis.

Hypothesis 1: Portugal sample will score lower than Germany sample in GLOBE's uncertainty avoidance practices and higher than Germany sample in GLOBE's uncertainty avoidance values.

As in GLOBE, our thesis also ranked Portugal with lower uncertainty avoidance practices than Germany. It meant Portugal avoids less the uncertainty than Germany. Portugal has more uncertainty deeply rooted in its society compared with the German society that rather avoids it (House et al., 2004). As well as in practices, uncertainty avoidance values were also ranked in our thesis as in GLOBE. Portugal scored a higher uncertainty avoidance values than Germany. Those scores showed that Portugal needs to increase the level of avoiding uncertainty in its society. Germany by its turn due to the short difference between practices and values wanted slightly to reduce the level of avoiding uncertainty, mainly in the society's requirements and instructions as shown in by the low score of 3.51 in question *"In this society, societal requirements and instructions should be spelled out in detail so citizens know what they are expected to do."* (Venaik and Brewer, 2008, p.10). The Portuguese society believes that it should reduce uncertainty mainly by requirements and instructions, 5.81, and by rules and laws, 5.98, thus by the rules and political system. These two comparisons validated the hypothesis 1.

Hypothesis 2: Portugal sample will score higher in Hofstede's uncertainty avoidance measure than Germany sample.

Hypothesis 2 did not match and it was not validated in our thesis. However it will be interesting to deeply analyse it anyway. Portugal had a big gap in Hofstede's index in relation to Germany. It was expected that Portugal converged towards the same result in the three answers, lower than German answers in all factors (Hofstede, 2001).

In this data base Portugal had a lower score only in two out of three. Only the question 3.2 - "*How long do you think you will continue working for this institution?*" (Hofstede, 2001, p. 29) - was not lower which could be a consequence of the effect of crisis in Portugal. As unemployment rate was increasing, everyone was looking for a life job even if it was not perfect. Portuguese described themselves more stressed and eager to break the rules.

Hypothesis 3: Portugal sample will score lower on work quality than Germany sample.

This thesis did not validate the hypothesis 3 either. The significance score difference between Portugal and Germany was not enough to validate that hypothesis (see table 28). Even with no validation Portugal scored 5.32 against 5.42 from Germany. This could be interesting to analyse in future studies that involve bigger samples.

Hypothesis 4: Portugal sample will score higher on work effort than Germany sample

Finally, the hypothesis 4 was verified with clearer scores - Portugal scored 6.2 against a lower score from Germany, 5.61 - which indicated that Portugal society had a higher perceived work effort than Germany's. In order to observe if uncertainty avoidance really influenced effort, and if these scores were not only by chance, it was analysed the correlation between both GLOBE scores and work effort that showed a valid correlation between the factors (table 37).

### **4.3 Limitations and Future Research**

The present thesis, as all scientific works, has limitations triggered by choices and simplifications of reality. However, these same limitations also offer hints and indications for future research.

It is always complicated to put in order a cross societies/countries study mainly due to the different languages and cultures. A very good knowledge of both languages and cultures is a requirement if one wishes to perfectly control the equivalence between questions. In this thesis, two native speakers elaborated the questions in order not to lose meaning, as it was done before in other studies.

The thesis focused on German and Portuguese societies. Even though the majority of respondents were German and Portuguese, if we look at the demographic statistics of both countries we could see that those societies were not only constituted of Portuguese and German born, but also from people that were born abroad and after reallocated to these countries, bringing or forming families there. In a research study such as this it would be interesting to understand all the stages of integration and the results from people with different cultural roots, as acculturation is different from adaptation (Ward and Chang, 1997; Berry, 1997; Ward and Rana-Deuba, 1999; Berry et al., 2010). It would be also useful to understand when a person is fully integrated and playing a part in the society and which processes are taken inside of each society for that to become a reality.

Two societies were the sole focus of this thesis. It would be curious to broaden this scope and check if the validated hypothesis were only valid in this particular comparison, between Portugal and Germany, or if they were wide reaching hypothesis as at the previous worldwide studies.

Our thesis only concentrated on one dimension of culture, it could be thought provoking to study the other dimensions of behaviour in this sample and have better reaching conclusions about cultural differences of Portugal and Germany. As Hofstede and GLOBE found correlations between uncertainty avoidance and other culture's dimensions, it could be stimulating also to observe if the other dimensions would still correlate and if they also explained increasing performance.

Both Hofstede and GLOBE considered time as an important factor, in both age and passage of time. It would also be attention-grabbing to do a study such as this with age clusters and analyse the differences between age clusters in two different time frames in order to observe the evolution of the age clusters through time.

This thesis used a structured survey with groups of questions, instead of mixed questions as it wanted to make the questions clearer and produce an easy and sympathetic survey (Hart, 2010). As defined in some studies, mixed questions could break the mind of the respondent ensured more different answers from the same respondent for the same group of items, avoiding priming effect (Marsolek, 2003). It could be interesting to make mixed questions to see if the results are the same.

The results found were not far away from GLOBE study even with people with a different background. However, some people, mainly without higher academic education, asked for clarification of some questions, as they were a bit abstract. The questions were made by social researchers for a targeted group of managers and owners of companies, hence when the target group changed to a different type of background, this could lead to misunderstandings. In a further research with a wider targeted group, the questions should be adapted into a more concrete explanation of what is wanted in order to not create misunderstandings in the respondents that could lead to different results.

This thesis used two auto-perception measures, that are reasonable, but not outstanding due to honesty required from each respondent and his/her individual parameters could not be controlled (Paulhus and John, 1998). In this field, measures as cognitive ability tests, or direct performance evaluation, among other tools could be nearer of the real job performance (Arnold et al., 2005; Attorney, 2007).



## 4.4 Conclusions

Our thesis replicated Hofstede and GLOBE studies over a different sample. In GLOBE's replica case it had similar scores for both Portugal and Germany societies that validate the scores obtained for both values and practices. Hofstede's replica study got neither similar score nor similar ranking in the comparison between the two societies, consequently it was not validated. It is important to mention that it had very sensible variables that could explain the differences between the results got by Hofstede in 1980 and the results got by this study in 2015.

In these studies of GLOBE (House et al., 2004) and Hofstede (2001), uncertainty avoidance was correlated with different types of behaviours, which resulted in different job performance. As previously defined by these two main studies, two different types of job performance, work effort and work quality, were associated with two different levels of uncertainty avoidance, high and low. However, only one of the associations was valid - lower uncertainty avoidance society was higher in the work effort. The other association remained unclear even after this thesis. Even given the results that stressed the differences between the scores in those two countries, they were still not enough to validate it.

As in GLOBE study Portugal exhibited higher uncertainty avoidance values than Germany. These could also be detected in job performance, as Portugal demonstrated higher work effort. This result validated the prepositions assumed in GLOBE regarding the relation between uncertainty avoidance and contextual performance. GLOBE also defended that uncertainty avoidance values and practices behaved in opposite direction what was also validated in this study.

In sum, GLOBE seemed to be a more trustworthy study than Hofstede's when measuring uncertainty avoidance. GLOBE's uncertainty avoidance showed a valid correlation with work effort. Consequently, the myth regarding the lower job performance in Portugal relatively to Germany was not validated. In fact, this thesis demonstrated the exact opposite. Portuguese in general can increase work effort in a German company which could reveal extremely useful. In this specific case, we found characteristics that indicate that Portuguese labour is useful in German society. However, further study is needed to come up with stronger outcome regarding this

comparison between these two countries. Moreover, it indicates a relation between job performance and uncertainty avoidance, which should also be analysed deeper and wider to reach a worldwide apply.

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## Annexes

### Annex 1 Portuguese and German Questionnaires

<b>1.1</b>	Nesta sociedade, ordem e consistência são enfatizadas, mesmo em detrimento de experiência e inovação.
<b>1.2</b>	Nesta sociedade, os requisitos e as instruções sociais são detalhadamente explicados de forma a que os cidadãos saibam o que é esperado que façam.
<b>1.3</b>	Nesta sociedade, a maioria das pessoas vive uma vida altamente estruturada com poucos eventos inesperados.
<b>1.4</b>	Esta sociedade tem regras e leis que cobrem todas as situações.
<b>2.1</b>	Nesta sociedade, ordem e consistência deveriam ser enfatizadas, mesmo em detrimento da experiência e inovação.
<b>2.2</b>	Nesta sociedade, os requisitos e as instruções sociais deveriam ser detalhadamente explicados de forma a que os cidadãos saibam o que é esperado que façam.
<b>2.3</b>	Nesta sociedade, a maioria das pessoas deveria viver uma vida altamente estruturada com poucos eventos inesperados.
<b>2.4</b>	Esta sociedade deveria ter regras e leis que cobrissem todas as situações.
<b>3.1</b>	Com que frequência se sente nervoso no trabalho?
<b>3.2</b>	Quanto tempo espera continuar a trabalhar para esta instituição?
<b>3.3</b>	As regras de uma empresa ou organização não devem ser desrespeitadas, nem mesmo quando o empregado acha que desrespeitá-las beneficiaria a empresa ou organização.
<b>4.1</b>	A qualidade do meu trabalho é geralmente elevada.
<b>4.2</b>	A qualidade do meu trabalho é de topo.
<b>4.3</b>	A qualidade do meu trabalho é superior ao expectável.
<b>4.4</b>	Eu raramente concluo uma tarefa sem antes me certificar que é de elevada qualidade.
<b>4.5</b>	Tipicamente, outros colegas olham para o meu trabalho como sendo de elevada qualidade.
<b>5.1</b>	Eu tento trabalhar sempre o mais arduamente possível.

<b>5.2</b>	Intencionalmente esforço-me de forma a conseguir levar a cabo o meu trabalho.
<b>5.3</b>	Eu frequentemente coloco um esforço extra para conseguir levar a cabo o meu trabalho.
<b>5.4</b>	Eu frequentemente coloco um esforço acrescido quando há mais volume de trabalho.
<b>5.5</b>	Normalmente não hesito em pôr esforço extra quando é necessário.
<b>6.1</b>	Idade?
<b>6.2</b>	Género?
<b>6.3</b>	Qual a sua nacionalidade(s)?
<b>6.4</b>	Em que país é que nasceu?
<b>6.5</b>	Há quanto tempo reside no país onde reside actualmente?
<b>6.6</b>	Viveu mais do que um ano noutro país?
<b>6.7</b>	Tem alguma filiação religiosa? Se sim, qual?
<b>6.8</b>	Em que país a sua mãe nasceu?
<b>6.9</b>	Em que país o seu pai nasceu?
<b>6.10</b>	Que língua se falava em casa quando era pequeno?
<b>6.11</b>	Quantos anos de experiência têm?
<b>6.12</b>	Que posição você ocupa ou ocupou?
<b>6.13</b>	Há quantos anos exerce este cargo?
<b>6.14</b>	Quantos anos de formação académica têm?
<b>6.15</b>	Que linguagem se fala/falava no seu trabalho?

**Table 38 - Questionnaire in Portuguese**

<b>1.1</b>	In der Gesellschaft wird Wert auf Ordnung und Beständigkeit gelegt – auch auf Kosten von Experimentieren und Innovation.
<b>1.2</b>	In der Gesellschaft werden gesellschaftliche Anforderungen und Vorgaben detailliert dargelegt, sodass BürgerInnen wissen, was von ihnen erwartet wird, zu tun.
<b>1.3</b>	In der Gesellschaft haben die meisten Menschen eine stark strukturierte Lebensweise mit wenig unerwarteten Ereignissen.
<b>1.4</b>	Die Gesellschaft hat Regeln oder Gesetze, die jegliche Situationen regeln.
<b>2.1</b>	In dieser Gesellschaft sollte Wert auf Ordnung und Beständigkeit gelegt werden – auch auf Kosten von Experimentieren und Innovation.
<b>2.2</b>	In dieser Gesellschaft sollten gesellschaftliche Anforderungen und Vorgaben detailliert dargelegt werden, sodass BürgerInnen wissen, was von ihnen erwartet wird, zu tun.
<b>2.3</b>	In der Gesellschaft sollten die meisten Menschen eine stark strukturierte Lebensweise haben mit wenig unerwarteten Ereignissen.
<b>2.4</b>	Die Gesellschaft sollt Regeln oder Gesetze haben, die jegliche Situationen regeln.
<b>3.1</b>	Wie oft fühlen Sie sich nervös auf der Arbeit?
<b>3.2</b>	Was denken Sie, wie lange Sie für diese Institution weiter arbeiten werden?
<b>3.3</b>	Die Betriebsvorschriften sollten nicht gebrochen werden, auch wenn es im Interesse des Betriebs ist.
<b>4.1</b>	Die Qualität meiner Arbeit ist normalerweise hoch.
<b>4.2</b>	Die Qualität meiner Arbeit ist erstklassig.
<b>4.3</b>	Ich liefere höhere Qualität als von mir erwartet wird.
<b>4.4</b>	Ich beende selten eine Aufgabe, bevor ich weiß, dass die Qualität von hohem Standard ist.
<b>4.5</b>	MitarbeiterInnen bewerten meine Arbeit als typische hochqualitative Arbeit.
<b>5.1</b>	Ich versuche, so hart wie möglich zu arbeiten.
<b>5.2</b>	Ich unternehme große Anstrengungen zur Erfüllung meines Jobs.
<b>5.3</b>	Ich investiere oft Mehraufwand zur Erfüllung meines Jobs.
<b>5.4</b>	Ich unternehme oft mehr Anstrengungen, wenn viel zu tun ist.

<b>5.5</b>	Ich zögere in der Regel nicht, zusätzliche Anstrengungen zu unternehmen, wenn es erforderlich ist.
<b>6.1</b>	Alter?
<b>6.2</b>	Geschlecht?
<b>6.3</b>	Nationalität(en)?
<b>6.4</b>	In welchem Land sind Sie geboren?
<b>6.5</b>	Seit wann leben Sie in Deutschland?
<b>6.6</b>	Haben Sie länger als ein Jahr in einem anderen Land gelebt?
<b>6.7</b>	Haben Sie eine religiöse Zugehörigkeit? 6.7.1 - Wenn ja, welche?
<b>6.8</b>	In welchem Land ist deine Mutter geboren?
<b>6.9</b>	In welchem Land ist dein Vater geboren?
<b>6.10</b>	Welche Sprache hast du mit deinen Eltern gesprochen, als du Kind warst?
<b>6.11</b>	Wie viele Jahre Berufserfahrung haben Sie?
<b>6.12</b>	Welcher Arbeit gehen Sie derzeit nach? / Welcher Arbeit sind Sie zuletzt nachgegangen?
<b>6.13</b>	Wie viele Jahre sind/waren Sie in diesem Arbeitsbereich tätig?
<b>6.14</b>	Über wie viele Jahre akademische Bildung verfügen Sie?
<b>6.15</b>	Welche Sprache benutzen/benutzten Sie in Ihrer Organisation?

**Table 39 - Questionnaire in German**



## Annex 2 Other Correlations

Correlations								
	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4
1.1 - In this society, orderliness and consistency are stressed, even at the expense of experimentation and innovation.	1,000							
1.2 - In this society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do.	,518**	1,000						
1.3 - In this society, most people lead highly structured lives with few unexpected events.	,425**	,544**	1,000					
1.4 - This society has rules or laws to cover situations.	,327**	,448**	,468**	1,000				
2.1 - I believe that orderliness and consistency should be stressed, even at the expense of experimentation and innovation.	,052	,031	,019	,062	1,000			
2.2 - I believe that societal requirements and instructions should be spelled out in detail so citizens know what they are expected to do.	-,117	-,262**	-,242**	-,264**	,310**	1,000		
2.3 - Most people should lead highly structured lives with few unexpected events.	-,033	-,180*	-,258**	-,078	,443**	,457**	1,000	
2.4 - I believe that this society should have rules and laws to cover situations.	-,173*	-,267**	-,105	-,151	,342**	,559**	,452**	1,000

Spearman's rho; N = 164

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 40 - Correlations between GLOBE questions (All sample)**

## Annex 3 Parametric Test of Shapiro-Wilk

**Tests of Normality**

Society		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
GLOBE practices	German	,110	57	,083	,959	57	,054
	Portuguese	,077	107	,133	,988	107	,490

a. Lilliefors Significance Correction

**Table 41 - Shapiro-Wilk test GLOBE practices**

**Tests of Normality**

Society		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
GLOBE values	German	,121	57	,038	,965	57	,098
	Portuguese	,088	107	,039	,974	107	,032

a. Lilliefors Significance Correction

**Table 42 - Shapiro-Wilk test GLOBE values**

**Tests of Normality**

Society		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hofstede	German	,162	57	,001	,934	57	,004
	Portuguese	,104	107	,007	,979	107	,086

a. Lilliefors Significance Correction

**Table 43 - Shapiro-Wilk test Hofstede**

**Tests of Normality**

Society		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Quality	German	,156	57	,001	,949	57	,017
	Portuguese	,140	107	,000	,925	107	,000

a. Lilliefors Significance Correction

**Table 44 - Shapiro-Wilk test Quality**

**Tests of Normality**

Society		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Effort	German	,118	57	,046	,935	57	,004
	Portuguese	,178	107	,000	,861	107	,000

a. Lilliefors Significance Correction

**Table 45 - Shapiro-Wilk test Effort**