DELFT UNIVERSITY OF TECHNOLOGY

Cross Culture Analysis to Reconstruct the Dimensions of

Long-term Orientation and Uncertainty Avoidance

Name: Shi Zhe

Student ID: 4180046

First Supervisor: Sun Li

Date: 2015.12

This paper presents the research topic and its relevant background and methodology for the EPA master degree graduating thesis

Acknowledgement

Executive Summary

The cross cultural analysis has increasingly become an important research field. One of its merit is to facilitate understanding how the people from different cultural background make decisions differently. The most famous work is done by Hofstede, who introduce a powerful cultural model with 6 cultural dimensions. However, two of these dimensions, Uncertainty Avoidance (UA) and Long-term Orientation (LTO) is not as convincing as others, both theoretically and practically. The paper aims to figure out whether better alternative dimensions can be found to give clarifications.

Covering both UA and LTO dimension, this research is implemented by three parts: theoretical modelling, facts overview and empirical analysis.

In the theoretical modelling part, a conceptual framework of UA and LTO is designed based on an integration of all related cultural theories, and 13 values are selected as potential values for UA and LTO after comparing and filtering. These values are made to be the input of statistical analysis by linking each of them into questionnaire items to form new dimensions.

In the practical analysis part, plenty of case study and evidences are presented and compared with theoretical interpretation of UA and LTO to show that the application of these two dimension is problematic. Significant differences between reality and theories can be found especially in eastern Asian and Confucian countries. On the basis of these findings, assumptions are made that the failure of application might be caused by the inappropriate grouping of cultural values.

In the empirical analysis part, statistical test is conducted, by mapping the 13 values into special question items based on the data from the World Value Survey (WVS). Quantitative relations are found within the conceptual model, presented as four culture dimensions as **Monumentalism, Uncertainty Avoidance, Confucian Dynamism and Post-materialism**. The definition and country rankings are discussed to evaluate the validity and applicability of these four dimensions. It is argued that the new dimension gives an alternative solution in understanding how these cultures influence peoples' decision making. The differences in decision making and management between various nations, especially in Asian countries are also better explained.

Even though new dimensions can be generated to give certain clarifications, cultural analysis is never right or wrong. There is conflicting aspects in every cross culture theory, to understand how the people are impacted by difference of UA and LTO in decision making and management still needs further research.

Table of Content

List of Tables

List of Figures

Chapter 1　Introduction

1.1　Background of Research

The analysis of culture differences has attracted much more attention during the past three decades. Its impact on many social areas has been increasingly realized, such as policy making. As a result, more and more scholars did extensive studies to understand these differences, and categorized them in to different dimension models. Findings in this field contribute to better understand how the decision making procedure is impacted by culture and therefore made differently in different cultural background.

1.1.1　People from different cultural backgrounds make decisions in different ways

When the Iran hostage crisis took place in 1979, the Carter administration launched a rescue plan, which was to swoop in and land eight military helicopters to extract the hostage and then escape. The similar case happened in 2004 when seven Chinese were kidnapped in Iraq while China's rescue plan was contacting both officials of the interim governing body in the country and "people of the other walks of life" to help with the rescue. The first priority of Chinese diplomat was to build connection with the local authorities and the tribe leaders.

One can recognize the "relationship" or "connection" concepts in the Chinese way of decision making, and the U.S. government's rescue plan was quite direct by give the fast and concrete action plan. Although the context was not exactly the same one, the objective was—rescuing hostages. However, the U.S. government and Chinese government took two very different decisions and made two different rescue plans. The culture played and important roles inside the decision making process, and even before the planning was discussed. The draft was drawn in every decision makers' mind, under the framework of "culture". The next question is how the decision making is impacted by the culture differences.

1.1.2　Decision making is impacted by culture

How culture impacts the decision should be analyzed in several topics.

Firstly, the decision making is irrational and biased. Classic decision making theory argues that the decision making are rational. The decision maker has a clear objective, complete knowledge and exhaustive alternatives to solve a problem. The decision making will generate one solution which is the best one. However, in reality most decisions are made irrationally. The decision making procedure can be divided into 7 steps: Identify the decision to be made, gather relevant information, identify alternatives, weigh evidence, choose among alternatives, take action and review decision and consequences. Biases usually creep into each decision-making processes. For

instance:

- **Cognitive inertia:** unwillingness to change existing patterns.
- **Recency**: People tend to place more attention on more recent information and either ignore or forget more distant information. (Plous, 1993)
- **Underestimating uncertainty and the illusion of control:** People tend to underestimate future uncertainty because of a tendency to believe they have more control over events than they really do.

Secondly, culture has significant impact on people's cognitive procedure, preferences and biases. Culture, described by Hofstede as "programming of mind", is one main factor that affect people's way of perceiving things, learning, processing information and valuing. Thus, different cultures generate different biases, or vary the biased degrees.

As a result, decision making can be impacted by culture in each steps. Based on the connection between decision theory and culture theories, it is clear that each steps in decision making process can be biased by culture variances, which, make decision not predicable from context to context, and culture to culture. Decision making therefore is never independent from cultures. When analyze and understand how a decision is made, it is very important to take culture factors into account.
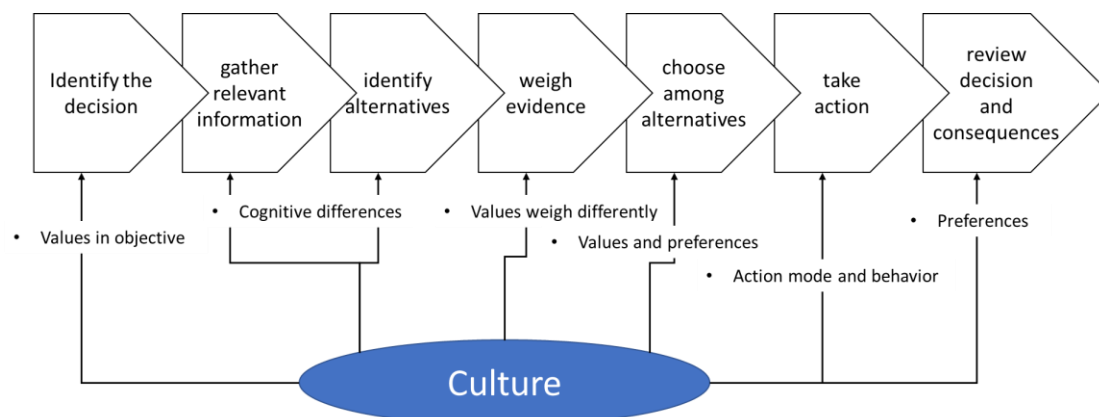
Figure 1.1-1 The culture impacts each processes in decision making

1.1.3   Numbers of cross-cultural dimensions had been proposed

A great deal of conceptual culture research emerged when culture difference became increasingly relevant for social, economic and political reasons. Nevertheless, it is believed that Hofstede's work opened the gate of cross culture analysis and provide one powerful paradigm named culture dimension. Based on his unique and empirical study at IBM employees in 53 countries, Hofstede firstly proposed four culture dimensions, i.e. power distance, uncertainty avoidance, individualism, and masculinity (Hofstede, 1980). Later in 1991, in his published book *Culture and Organizations*, Hofstede included a new dimension called long-term orientation, which is actually from another scholar, Michael Bond's Chinese Value Survey (1987). In 2007, Hofstede added the sixth dimension into his model, namely, indulgence versus self-restraint，as a

result of co-author Michael Minkov's analysis of data from the World Values Survey (2007). Hofstede's final culture model of Hofstede thus are consisted of six dimensions.

A numbers of research was inspired by this paradigm, and continues to make contribution in this field. In his book, Misho Minkov (2007), another famous cross culture researcher, also introduced three culture dimensions as Exclusionism versus Universalism, Indulgence versus Restraint, and Monumentalism versus Flexumility, based on the data from WVS database.

As the director of the WVS, Ronald Inglehart did factor analysis to the national-level data from the 43 societies obtained in the 1990 survey. He then found two main dimensions, Traditional versus Secular-Rational and Survival versus Self-Expression that accounted for more than 70% of the cross-national variance. (Inglehart, 2006; Inglehart & Baker, 2000)

Shalom Schwartz defines culture values as "conceptions of the desirable that guide the way social actors select actions, evaluate people and events, and explain their actions and evaluations" (Schwartz, 1999). Like Hofstede, Schwartz also acknowledges that cultural value orientations are relatively stable although cultural values do change gradually (Schwartz, 2006). Schwartz developed his model theoretically, after which he empirically examined it with large-scale national samples instead of doing empirical study just like Hofstede. Seven dimensions of national culture, which in turn can constitute three bipolar cultural dimensions: Embeddedness (or Conservatism) versus Autonomy; Hierarchy versus Egalitarianism; and Mastery versus Harmony were derived from his work (Schwartz, 2006).

The GLOBE (Global Leadership and Organizational Behavior Effectiveness) research program defines culture as "shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives and are transmitted across age generations" (House, Javidan, Hanges, & Dorfman, 2002). Like Schwartz, the GLOBE project is asserted to extend Hofstede's work in a theory driven fashion. GLOBE finally introduced nine cultural dimensions: Performance Orientation, Future Orientation, Gender Egalitarianism, Assertiveness, Institutional Collectivism, In-Group Collectivism, Power Distance, Humane Orientation, and Uncertainty Avoidance. (Maleki, 2014)

1.2   Problem Delineation

Although Hofstede's Culture model provided enormous insight about national variance. There are still some confusions need to be clarified. This section illustrates the problems in the two of Hofstede's dimensions, uncertainty avoidance (UA) and Long-term orientation (LTO). The problems and issues are illustrated from an emic (from the observation of Chinese) point of view and then combined with theoretical supports.

1.2.1 Issues of Uncertainty Avoidance

Hofstede defined the uncertainty avoidance as the extent to which the members of culture feel threatened by ambiguous or unknown situation.

However, there are some issues about UA as follows:

- **Countries like China show conflicting behaviors when encountering ambiguity and uncertainties.** Such demonstration implies the possibility that the interpretation of Hofstede to UA is problematic. For instance, according to Hofstede, one characteristics in uncertainty accepting countries is that teachers may say "I don't know", this is not common in China, as a matter of fact, teachers in China are expected to know the "answer" to any questions, this is especially obvious in elementary and middle schools. When it comes to educations and other social events that related to one's own family, Chinese people tend to be very deliberate. However, Chinese people's behaviors in business area are showing the feature of uncertainty accepting. Most of the business rules are flexible and people get accustomed to them.

- **It is suspicious that the interpretation that Hofstede made to UA is appropriate.** This concern is from the methodological angle. Since the original UA was derived from three questions about working stress, which will be discussed in the next chapter. Hofstede interpreted the score of these questions to a much bigger and general concept, this may be the cause of the first issue.

This is not to say that Hofstede's dimension is confusing just because of Chinese culture or so. The differences can also be found in some other Asian countries such as Japan, Korean and so on. There are clear clues that uncertainty avoidance is a complex concept, involving more considerations such as time and collectivism, and it could be more insightful if more in-depth analysis is performed.

1.2.2 Issues of Long term-orientation

With the development of cross-culture research, more and more culture elements were analyzed to help understand the divergence of decision making in countries of different culture backgrounds. Hofstede uses LTO to measure the time-orientation of different countries. He defined this dimension as follows:

"*The long-term orientation stands for the fostering of virtues oriented towards future rewards—in particular, perseverance and thrift. And on the other hand, the short-term orientation, stands for the fostering of virtues related to the past and present – in particular, respect for tradition, preservation of 'face' and fulfilling social obligations.* "

However, studies show that LTO have similar issue with UA:

- **With this definition, China is located in the long-term oriented pole. However, the fact demonstrates much more complications than putting China in a single pole.** China's over 25% aggregate household saving rate is one of the highest in the world (Wang, 2011), while an inside look at the Chinese business psyche reveals that short-term orientation, such as opportunity-driven behaviors and heavy reliance on cash transactions to expedite business deals, has been a salient Chinese trait throughout history (Chen, 2001, 2002). Running after short-term commercial interests without long-term vision in business ethics is an overriding problem of Mainland Chinese business enterprises (Zhang, 2001).

- **Comparing with other dimensions, the LTO was in some extent more confusing and not convincing to many other cross culture researchers.** A few cross cultural researchers chose to not discuss the fifth dimensions in their papers (e.g. Gudykunst et al., 1996), a comprehensive survey of reviews, citations and replications of Hofstede does not even include the fifth dimension (Søndergaard, 1994), In Triandis's (1993) review of Hofstede's (1991) Cultures and Organizations, the fifth dimension is not mentioned at all (Fang, 2003). The rest of them came up with different ideas. The most famous critiques of LTO was by Fang (2003), who claimed that many value items in the LTO were inter-correlated, which implied the selection of values were redundant. The second issue of LTO mentioned in Fang's paper was the problem of bipolarity. In Hofstede's other dimensions, same values form two poles of one dimension by high or low level of each. But in LTO, the long-term orientation was originally defined by values like "thrift", "perseverance" while the short-term pole was defined by other values such as "face" and "tradition". Fang believes this is also a problem of LTO from the aspect of defining a dimension.

- **The LTO was reported as the most difficult dimension to apply.** Redpath and Nielsen (1997: 329) comment: 'this dimension is probably the least relevant to the analysis. It was the most difficult to apply, because distinctions between the two ends of the spectrum are unclear and often seem contradictory.' Kalé (1996: 22) remarks: 'Since this book [Hofstede, 1980] was published, Hofstede has added a fifth dimension, however, conceptual and empirical support for this dimension is not very exhaustive (Hofstede 1991).' Yeh and Lawrence (1995) find that Hofstede's two cultural dimensions, individualism and Confucian dynamism (long-term orientation), appear to be highly interrelated; therefore the robustness of his conceptualization of these two dimensions in the same research scheme is questioned.

1.2.3 UA and LTO might share some similar values

This is because UA is quite similar with LTO when considering the interpretation of values on Chinese culture, there are numbers of evidence that Chinese culture is not always accepting uncertainties. Moreover, the similarity between LTO and UA might be due to the correlation of values in them. For instance, the time orientation, which means one focus on present or future, is a relevant conception to uncertainty, since future is unknown and implies certain degree of uncertainty. Therefore, it is worthwhile to consider and analyze both two of the dimensions and define clear differences between them.

1.3   Research Objective, Scope and Implication

In the previous section it is argued that the LTO is confusing and contested by a lot of authors, some of which also proposed theoretical reasons. In this study, the work is structured by some theories and hypothesis.

1.3.1   Research objective and scope

Due to the issues that UA and LTO contain and the implication that cross culture analysis have towards the decision making in real world, this paper aims to study and clarify those complications and confusions. In short, the research objective of this paper is to **discover more meanings of UA and LTO to the decision making and management in real world.**

The research scope of this paper will then be focusing on the analysis of UA and LTO. Apart from LTO and UA, other culture dimensions or clusters are not in the scope of this research. It is not to say that the other culture dimensions are completely not independent and have nothing related to LTO, however, considering the fact that most of them are comparatively more robust dimensions with clear and convincing interpretations.
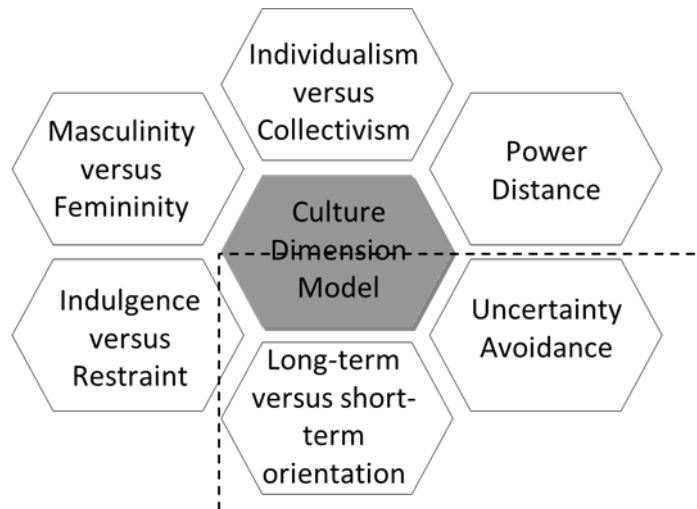
Figure 1.3-1 the research will focus on the analysis of LTO and UA

First of all, taking a look at Hofstede's culture dimension model, the power distance (PDI), Masculinity (MAS) and Individualism (IDV) are quite independent conceptions. Moreover, these dimensions do not cause any confusion when applying them to the Far East countries, while the LTO and UA do.

The last issue is about the sixth dimension of Hofstede's model, the indulgence versus restraint (IND). In Hofstede's book, indulgence is defined as "tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun", and the opposite pole, restraint, is defined as a conviction that such gratification needs to be curbed and regulated by

strict social norms." Like LTO, the IND is later added into Hofstede's model, and one may think the value of thrift and perseverance in LTO-CVS has to do with IND. However, it will not be the research objective in this study for the following reasons:

- Firstly, from the angle of its origin, the IND is firstly proposed by Minkov, together with his other two dimensions: Exclusionism versus Universalism, Monumentalism versus Flexumility, and the later one is one of the core dimensions in the LTO clusters. Therefore the LTO and IND might already be divided in Minkov's model. The inclusion of IND into this study is expected to generate a similar result.

- At the aspects of value selection, the values of IND are chosen from the facet of world values survey, while the LTO used a value set with 40 values that might be interrelated and with a strong Eastern background.

- Most of all, the ranking of countries for IND is not as confusing as LTO: most Asia countries are located in the restraint pole, and there is no concrete example to show that the cultures of those countries also have some features in the indulgence pole.

As a result, in this study, the scope of this research will be focusing on the LTO and UA.

1.3.2 Implication of research

To summarize, the implication of UA and LTO are still not clarified, a lot of work need to be done to answer different questions about them.

An in depth study of UA and LTO will facilitate in understanding the decision differences considering these two aspects. Confusions about how the policies and other decisions in different culture context are impacted will be addressed clearly. Furthermore, the analysis will help to know what will probably happen when different country make decision with similar situation and how the world will be affected by these policies. In the first place, as the paper makes efforts on analyzing the core values of LTO as well as their impacts in behaviors, the results of analysis will be a good reference when understanding and seeking for reasons for different outcomes of decision making processes. Secondly, as the study aims to form a new construct of LTO and other related concepts, it is expected the new constructs will provide a new framework when studying new policies. At last, this study aims to help the future decision making process. The study was fundamentally a refining of one culture dimension, therefore, with a better interpretation of LTO, more powerful tool is made to help decision makers to be more confident since they will better consider the meaning of time-orientation and incorporate this consideration into the varieties of decision making context, from the domestic to the foreign affairs.

1.4 Research Questions

This paper aims to answer the following research question:

Can there be other cultural dimensions that cover the values of LTO and UA, and give better explanation about how these cultural difference impact peoples decision making?

In order to answer this question, several sub-questions need to be answered in each sections of the paper:

1.4.1   What is the meaning of the values in original LTO and UA?

In another word, it is essential to firstly review the work of different cross culture models about LTO and UA. Before the empirical analysis of culture, it is critical to have a theoretical understanding of the genesis of UA and LTO. As both dimensions' problems can be caused from the very beginning of analysis, a new theoretical model is required to support the research. Extensive theory reviewing will firstly show the evidence that the dimension of UA and LTO are not as convincing as others, and more importantly, attempt will be put in finding the clue to seek for the appropriate culture values in each dimensions to formulate new ones.

1.4.2   What is really happening in real word concerning UA and LTO culture characteristics?

If the UA and LTO is problematic, what in the real world reflect these issues? Which aspects or features cause the most complications? To answer this, practical analysis with concrete cases are necessary to be discussed. This will also provide conceptual hints for the subsequent value selecting in empirical study.

1.4.3   What are the alternative framework of UA and LTO?

As argued above, LTO and UA might have overlap in terms of some value and it will impact the result of factor analysis. Therefore, after knowing the meaning of underlying values related to LTO and UA, the correlation between these two dimensions is the next question, and later the construct of this analysis will be formulated and direct the selection of values. Thus, the main goal is to know the connection between LTO and UA and to find out the "ambiguous" or "vague" values that might cause the confusion of LTO and UA, this will be based on the collection and analysis of alternative culture models.

1.4.4   What is the result of analysis based on the new framework?

As the values are analyzed and construct are generated, the empirical experimenting will be conducted as the direct exploitation to get new dimensions. This will be the core finding in this paper. The method is to run factor analysis towards the values selected and based on the sample data from the "World Value Survey", which is an open online data source for studying values around the world. The results of this analysis will basically be a series of factors that explain most

of the variances in the samples. Subsequently, each factor will be regarded as a single robust cultural dimensions for further analysis and integration.

1.4.5 Are these dimensions better at explaining the decision making differences between nations?

After the analysis, it is also important to interpret and explain the meaning of the results. What the similarity and difference are between the new model and Hofstede's, and can the new dimension better explain how the decision making in impacted by cultural differences? Since there are no true culture models but more useful ones, it is critical to evaluate the results in terms of complexity, validity and interpretation.

1.5   Structure of the Report

Figure 1.6.1 shows the general framework of the research.
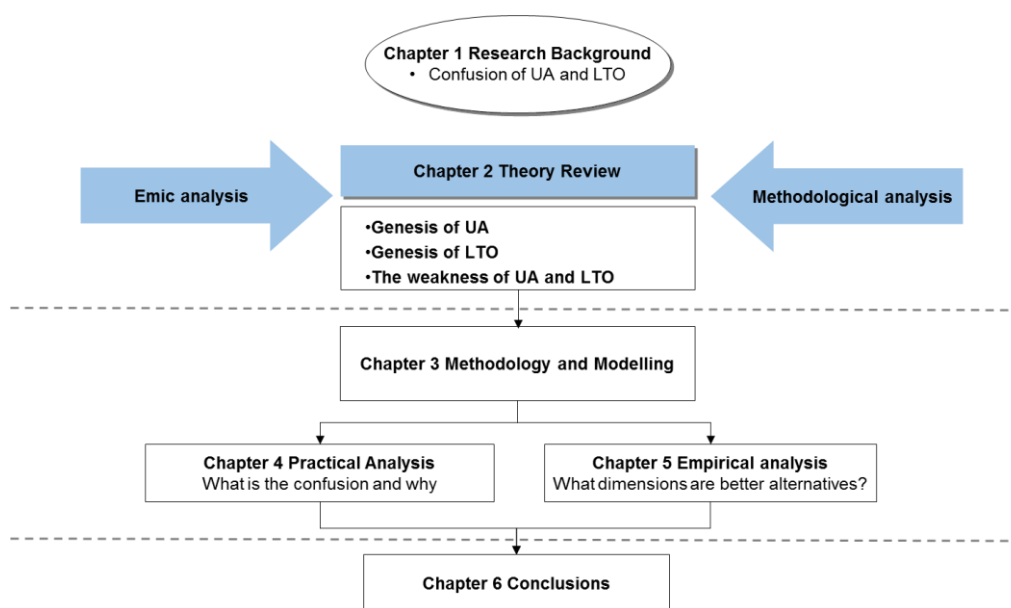
Figure 1.5-1 general framework of the research

A view of the current situation of cross culture analysis has been sketched in the Introduction chapter. In chapter 2, the genesis and extension of UA and LTO are reviewed in details, the goal is to help understanding the underlying meaning of these two dimensions and the flaws in them. In chapter 3, the methodologies of this studies are discussed and the conceptual framework is formulated by synthesising the results of most cross culture research and their interpretation towards UA and LTO. Case analysis is performed in chapter 4 on the basis of qualitative examples, which becomes the evidence that the UA and LTO is confusing and inter-related. Empirical test is performed in chapter 5 with integrated value items and data from the WVS database.

Chapter 2 Literature Review of Long-term Orientation and Uncertainty Avoidance and their drawbacks

This Chapter provides an overview of literatures specifically related to the genesis and development path of culture dimension UA and LTO. The first section tells what culture is and defines some basic conceptions relevant to this study. Section 2.2 and 2.3 illustrates the theories of UA and LTO. The next section syntheses other opinions towards these two dimensions, which is theoretical support for the proposition. The practical evidences will be discussed in the next chapter.

2.1   Culture, Cultural Dimension and Application

There are a great deal of definitions about culture:

- Transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behaviour. (Kroeber and Parsons, 1958, p. 583)

- 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 artefacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values. (Kluckhohn, 1951, p. 86)

Here the definition of culture by Hofstede (2001) is adopted as following:

"Culture is a collective programming of the mind that distinguishes the members of one group or category of people from another."

Culture is composed of several elements. Cultural differences manifest themselves in various ways and different levels. The classic culture model is consisted with *Values* in the core, and then *Rituals, Heroes and Symbols.*
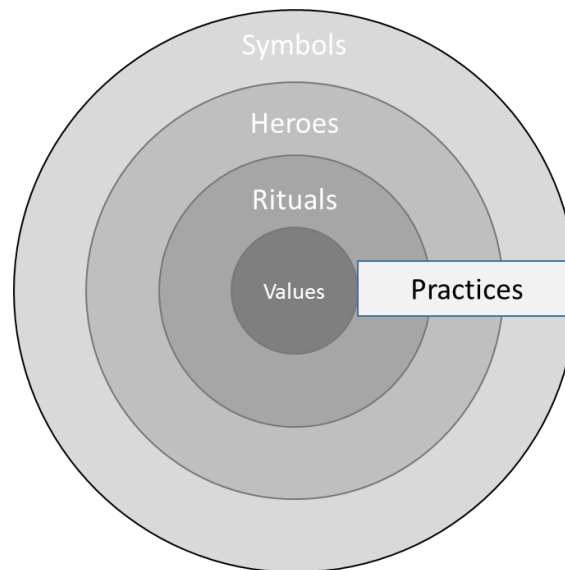
Figure 2.1-1 Manifestation of culture at different levels of depth

"***Symbols*** *are words, gestures, pictures, or objects that carry a particular meaning which is only recognized by those who share a particular culture. New symbols easily develop, old ones disappear. Symbols from one particular group are regularly copied by others. This is why symbols represent the outermost layer of a culture.*

Heroes *are persons, past or present, real or fictitious, who possess characteristics that are highly prized in a culture. They also serve as models for behavior.*

Rituals *are collective activities, sometimes superfluous in reaching desired objectives, but are considered as socially essential. They are therefore carried out most of the times for their own sake (ways of greetings, paying respect to others, religious and social ceremonies, etc.). "*

The core of a culture is formed by values. *They are broad tendencies for preferences of certain state of affairs to others (good-evil, right-wrong, natural-unnatural). Many values remain unconscious to those who hold them. Therefore they often cannot be discussed, nor can they be directly observed by others. Values can only be inferred from the way people act under different circumstances.*" (Hofstede, 2010, p. 8)

Symbols, heroes, and rituals are the tangible or visual aspects of the practices of a culture. The true cultural meaning of the practices is intangible; this is revealed only when the practices are interpreted by the insiders.

Study cultures with dimension concepts is the most popular method in recent decades. Hofstede's cultural dimensions theory is a framework for cross-cultural communication. Hofstede developed his original model as a result of using factor analysis to examine the results of a world-wide survey of employee values by IBM between 1967 and 1973. The theory was one of the first that could be quantified, and could be used to explain observed differences between

cultures. Culture has certain impact to decision makings and policy making is one sort of decision making. The dimension research of culture can be wildly applied, including the fields of international communication, international negotiation, international marketing and management.

2.2   Theory Review of Uncertainty Avoidance

2.2.1   The definition of UA

The UA is firstly proposed by Hofstede from three IBM questionnaire items. Differences among countries on uncertainty avoidance were originally discovered as a by-product of power distance. (Hofstede, 2012). At that time, work stress emerged as one issue in the employee interview. And a corresponding question in the surveys had shown strikingly regular country differences, but these were unrelated to power distance. The analysis through the ecological correlation matrix revealed two other questions associated with the work stress question. They were also related to each other (r= .59, 40, and .44 across 40 countries; r = .58, .46, and .44 across 50 countries and three regions) (Minkov, 2013). The three questions that were used to form the UA index are as follows (Hofstede, 1980):

(1) Rule orientation: Agreement with the statement "Company rules should not be broken—even when the employee thinks it is in the company's best interest"

(2) Employment stability: Employee's statement that they intended to continue with the company until retirement (4) or at least more than five years (3) rather than from two to five years (2) or for two years at the most (1).

(3) Stress, as expressed in the mean answer to the question "How often do you feel nervous or tense at work?"

At first glance, these three questions appears unrelated items and there is no association among them. The combination of these phenomenon looks not making any sense: why should someone who feels more stress would prefer rules to be respected and want his or her career to be long-term? But this was a false interpretation as claimed by Hofstede. The data actually does not refers to individuals but the national level. The organization sociology and political science literatures introduced an explanation of all three as societal reactions to ambiguity. The term "uncertainty avoidance" was derived from the work of the U.S. organization sociologist Richard M. Gyert and James G. March (1963). It measures the level of demand for structure instead of ways of dealing with power. As a matter of fact, research shows that power distance and uncertainty avoidance produce a meaningful 2 x 2 classification of prevalent ways of organization across countries (Minkov, 2013).

Hofstede then made computation of the UA index in the weighted aggregation way: for the question (2), the percentage was used, and then mean scores on five-point Likert scales for (1)

and (3). These mean scores were multiplied by 30 for (1) and 40 for (3) to make the range, and thus they roughly make equivalent contributions to UA, considering with the percentage range in the answers to question (2). The mathematical format of the original UA index (UAI) is as follows:

UAI = 30*scores of question (1) + 40*scores of question (3) + percentage for question (2)

Hofstede made extension for this value from working stress to the acceptance of uncertainty and ambiguity. He defined uncertainty avoidance a follows (Hofstede, 1980):

"The extent to which the members of culture feel threatened by ambiguity or unknown situations."

This feeling is expressed through nervous stress and in a need for predictability: a need for formal or informal rules. The interpretation of UA contains several features.

2.2.2 The features and country rankings of UA

As Hofstede defined UA as above, he actually made a big leap from the original meaning of UA to a much wider scope, then he made some description of features between strong and weak uncertainty avoidance countries.

Table 2.2-1 Key differences between weak and strong uncertainty avoidance societies

WEAK UNCERTAINTY AVOIDANCE	STRONG UNCERTAINTY AVOIDANCE
I. General norms	
■ Uncertainty is a normal feature of life, and each day is accepted as it comes.	■ The uncertainty inherent in life is a continuous threat that must be fought.
■ Low stress and low anxiety	■ High stress and high anxiety
■ Aggression and emotions should not be shown	■ Aggression and emotions may at proper times and places be vented.
■ In personality tests, higher scores on agreeableness	■ In personality tests, higher scores on neuroticism
■ Comfortable in ambiguous situations and with unfamiliar risks	■ Acceptance of familiar risks; fear of ambiguous situations and of unfamiliar risks
■ Lenient rules for children on what is dirty and taboo	■ Tight rules for children on what is dirty and taboo
■ Weak superegos developed	■ Strong superegos developed
■ Similar modes of address for different others	■ Different modes of address for different others
■ What is different is curious.	■ What is different is dangerous
II. Family	
■ Family life is relaxed.	■ Family life is stressful
■ If country is affluent: satisfaction with	■ If country is affluent: worried about cost

family life.	of raising children.

III.   Health, Education, and Shopping

▪ Fewer people feel unhappy.	▪ More people feel unhappy
▪ Students are comfortable with open-ended learning situations and concerned with good discussions	▪ Students are comfortable in structured learning situations and concerned with the right answers.
▪ Results are attributed to a person's own ability.	▪ Results are attributed to circumstances or luck.
▪ Used cars, do-it-yourself home repairs	▪ New cars, home repairs by experts
▪ Risky investments	▪ Conservative investments

IV.   Work, Organization, and Motivation

▪ There should be no more rules than strictly necessary.	▪ There is an emotional need for rules, even if they will not work
▪ Work hard only when needed	▪ There is an emotional need to be busy and an inner urge to work hard.
▪ Top managers are concerned with strategy.	▪ Top managers are concerned with daily operations
▪ Better at invention, worse at implementation	▪ Worse at invention, better at implementation

V.   The Citizen and the State

▪ Few and general laws or unwritten rules	▪ Many and precise laws or unwritten rules
▪ Citizen protest is acceptable	▪ Citizen protest should be repressed
▪ Citizens are interested in politics	▪ Citizens are not interested in politics
▪ Outside observers perceive less corruption	▪ Outside observers perceive more corruption

VI.   Tolerance, Religion, and Ideas

▪ In philosophy and science, there is a tendency toward relativism and empiricism.	▪ In philosophy and science, there is a tendency toward grand theories.
▪ Literature dealing with fantasy worlds	▪ Literature dealing with rules and Truth

Source: Hofstede, Culture and Organizations, 2010

According to the interpretation, the UAI values for 76 countries and regions are listed in the following table:

Table 2.2-2 Uncertainty avoidance index for 76 countries and regions based on the IBM database

RANK	AMERICA C/S	EUROPE S/SE	EUROPE N/NW ANGLO WORLD	EUROPE C/E EX-SOVIET	MUSLIM WORLD M.E & AFRICA	ASIA ASIA SE	EAST	INDEX
1		Greece						112
2		Portugal						104
3	Guatemala							101

4	Uruguay					100
5			Belgium Nl			97
6		Malta				96
7				Russia		95
8		El Salvador				94
9-10			Belgium Fr			93
9-10				Poland		93
11-13					Japan	92
11-13				Serbia		92
11-13	Suriname					92
14				Romania		90
15				Slovenia		88
16	Peru					87
17-22	Argentina					86
17-22	Chile					86
17-22	Costa Rica					86
17-22		France				86
17-22	Panama					86
17-22		Spain				86
23-25				Bulgaria		85
23-25					S Korea	85
23-25		Turkey				85
26-27				Hungary		82
26-27	Mexico					82
28					Israel	81
29-30	Colombia					80
29-30				Croatia		80
31-32	Brazil					76
31-32	Venezuela					76
33		Italy				75
34				Czech Rep.		74
35-38			Austria			70
35-38			Luxembourg			70
35-38					Pakistan	70
35-38			Switzerland Fr			70
39					Taiwan	69
40-41					Arab ctrs	68
40-41					Morocco	68
42	Ecuador					67
43-44			Germany			65
43-44				Lithuania		65
45					Thailand	64
46				Latvia		63
47-49					Bangladesh	60

47-49	Canada Quebec			60
47-49		Estonia		60
50-51	Finland			59
50-51			Iran	59
52	Switzerland Ge			56
53	Trinidad			55
54			Africa W	54
55	Netherlands			53
56			Africa E	52
57-58	Australia			51
57-58		Slovakia		51
59	Norway			50
60-61	New Zealand			49
60-61			S Africa (wte)	49
62	Canada total			48
63			Indonesia	48
64	United States			46
65			Philippines	44
66			India	40
67			Malaysia	36
68	Great Britain			35
69	Ireland			35
70-71			China	30
70-71			Vietnam	30
72-73			Hong Kong	29
72-73	Sweden			29
74	Denmark			23
75	Jamaica			13
76			Singapore	8

Source: Hofstede, Culture and Organizations, 2010

Hofstede also made his explanation of uncertainty avoidance differences. According to him, the origin of UA could be dated back to the Roman Empire and older Chinese Empire, as well as power distance. However, unlike PDI, which was influence by the power-centralized regulations, the two empires differed in terms of laws and rules. The Roman Empire invented one unique and strict system to be applied to all people, while the Chinese was guided by broad general principles. This also explains why the UA has association with PDI but not completely the same.

2.3 Theory Review of Long-term Orientation

Cultures linked to time orientations has been studied for decades. The original dimension of

long-term orientation was firstly proposed not by Hofstede but in the study of Chinese Culture Connection by Michael Bond, a Canadian cross-cultural psychologist. Later this dimension was studied by several other scholars.

2.3.1   Michael Bond and his Chinese Value Survey

At the early period of cross culture research, most of the analysis was conducted on a western basis, thus most of the western values were tested since the westerner consider them important. Michael Bond believed the analysis need to integrate the values that were in eastern mind. In 1987, Michael Bond and his colleagues made the Chinese Value Survey (1987), which is on an eastern basis, saying that, Michael asked some Chinese scholars to list 40 values that they think important. The statistical analysis generated actually 4 value groups or dimensions: integration, Confusion work dynamism (Long-term orientation), human-heartedness, and moral discipline. In addition, at that moment, the data of Mainland China was not included. The score was added later.

The Confucian work dynamism dimension was defined by the following values and norms.

Table 2.3-1 Values and the factor loadings of Confucian work dynamism

Values	Factor loading
Ordering relationship	0.64
Thrift	0.63
Persistence	0.76
Having a sense of shame	0.61
Reciprocation	-0.58
Personal steadiness	-0.76
Protecting face	-0.72
Respect for tradition	-0.62

Source: Based on Minkov, Cross Cultural Analysis, 2013

These factors form two poles for these dimensions, although all these values are taught by Confucian and regarded important norms in ancient China. In one hand, the values are dynamic Confucian values, as they will value more on thrift, persistence, etc. While in the other hand, the people will value more on static norms such as personal steadiness and protecting face.

Table 2.3-2 Original interpretation of long-term orientation

Long-term orientation pole	Short-term orientation pole
● Persistence	● Personal steadiness
● Ordering relationships	● Protecting your "face"
● Thrift	● Respecting for tradition
● Having a sense of shame	● Reciprocation

Source: Based on Hofstede (1991: 165–6; 2001: 354–5)

According to Bond, the dimension was dimension that represents the feature of rituals and norms in terms of time.

2.3.2 The inclusion of Confucian work dynamism as Hofstede's fifth dimension

In 1991, Hofstede published Cultures and Organizations, a revised and popularized version of Culture's Consequences. One of the big changes in the book is the inclusion of "Confucian dynamism" as the fifth dimension. He named this dimension as *long-term versus short-term orientation* (Hofstede, 1991). In Hofstede's latest book, the fifth dimension was defined as follows (Hofstede, 2010):

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

There are several points need to be noticed in the inclusion of Confucian work dynamism:

- **The reason why Hofstede made this inclusion.** Firstly, comparing with other dimensions in the CVS, the Confucian work dynamism is not related with any of Hofstede's previous four dimensions, Hofstede explained this as the missing of consideration by western researchers. Secondly, Confucian work dynamism is significantly correlated with economic growth (Hofstede, 2010), Hofstede considered it an essential addition for a global instrument.

- **The change behind the name of dimension.** According to Hofstede (1991), persistence and thrift reflect an orientation toward the future, whereas personal stability and tradition can be seen as a static orientation toward the present and the past. The underlying meaning of this dimension has been changed slightly, from the concept related to Confucian's teaching to a time orientation.

The original LTO scores for 23 countries and regions are listed below:

Table 2.3-3 Long-term orientation index and factor scores from 23 countries and regions

Score rank	Country or region	LTO score
1	China	118
2	Hong Kong	96
3	Taiwan	87
4	Japan	80
5	South Korea	75
6	Brazil	65
7	India	61

8	Thailand	56
9	Singapore	48
10	Netherlands	44
11	Bangladesh	40
12	Sweden	33
13	Poland	32
14	Germany FR	31
15	Australia	31
16	New Zealand	30
17	USA	29
18	Great Britain	25
19	Zimbabwe	25
20	Canada	23
21	Philippines	19
22	Nigeria	16
23	Pakistan	0

* China was not included in the original empirical study of 22 countries conducted by The Chinese Culture Connection (1987). China was later included in Hofstede (1991).

Sources: Factor scores from The Chinese Culture Connection (1987: 153); LTO scores from Hofstede (1991: 166).

2.3.3   The replication study by Minkov

Later Hofstede, Hofstede and Minkov (2012a) did another study to expand the analysis of LTO both in terms of samples and underlying values with the data from World Value Survey, since the original results only cover 23 countries. The replication study combined some other values stemming from Steven Heine's theory, which were regarded as complementary to the time orientation facet in LTO. The research produced a similar dimension but with more complex meanings, which is also related to Minkov's culture dimension name monumentalism. The values of LTO-WVS is as following:

- Pride
- Service to others
- Self-steadiness

After the replication, the long-term orientation is then a more complex dimension, and the original time orientation became one facet of it, the rest part of this dimension contains some values similar with Minkov's Monumentalism, such as self-enhancement and self-stability. The scores of this replication then covered 93 countries.

2.4   The Research Community of UA and LTO

Hofstede's first four dimensions have generated enormous numbers of replications, citations and discussions (Smith, 1996; Søndergaard, 1994; Triandis, 1982); they have also attracted criticism

(Lowe, 2001; McSweeney, 2002a, b; Roberts and Boyacigiller, 1984; Tayeb, 1988, 1994, 2000, 2001; Yeh and Lawrence, 1995) and in some cases further refinements (Schwartz, 1992).

Some studies proposed dimensions related to uncertainty avoidance both in theoretical studies and empirical researches. In Parson's 5 pattern variables, the Universalism versus Particularism is described as applying general standards versus taking particular relationships into account. The same name appeared in Triandis's 10 cultural syndromes, shorty described as treating others on the basis of universal criteria versus relationships. Most empirical studies also included this values groups as one big dimension. In GLOBE project, one dimension is also under the name of UA but with different conceptual meaning. Venaik and Brewer (2010) have convincingly argued that according to the associated question items for this dimension, the measured country scores and its correlations with other dimensions and phenomena, GLOBE's UA represents the cultural trait of "rule-orientation."

2.5   Conclusion

Although the culture dimension of UA and LTO had been studied for decades, the way of how they were derived various significantly. As a result, there are lots of theories, even though Hofstede's theory is the most influential one, and all the study results are not significantly converging to a certain model. Just as scholars said, there is no single truth in cross-cultural study but only the one which is more useful.

This chapter illustrates how the UA and LTO is obtained and related researches. It is learned that the UA is firstly derived from three of Hofstede's IBM survey items, which were related to stress in workplace. Later these dimension is explained by Hofstede as the degree of acceptance in ambiguous circumstances. Thus the UA was proposed, and many research results also contain this dimension. While comparing with UA, the LTO is not derived from Hofstede's own study. In fact it firstly appeared in Michael Bond's Chinese Value Survey, with the name of Confucian work dynamism. Hofstede adopted this dimension as his fifth dimension since he thinks this dimension was based on the eastern cultural background and also it correlates with countries economic growth. However, this new dimension is not very convincing to his reviewers.

Chapter 3 Methodology and Model Specification

This chapter illustrates how the research of this paper is conducted. The first part of this chapter is the introduction of methodology adopted in this paper, including practical analysis and empirical analysis. The second part is the designing of the new model in this paper, which is done by reviewing and integrating most related cross culture study results and proposing the research hypothesis about the probable relationship between UA and LTO. This will then be the guide of further research work that will be presented in subsequent chapters.

3.1   Research Methodology

To answer the research questions in this study, the methodology in this paper is designed as following:

3.1.1   the practical analysis based on case studies

To understand how UA and LTO fail to explain the decision variance in reality, the case study is fundamental as the evidence to support the arguments in this paper, but more importantly, to provide clues to analyze why they are confusing especially in some Asian countries.

The practical analysis, which will be basically based on the case studies, is conducted in following way:

As learned from UA and LTO, there are numbers of manifestation of these two dimensions. People from different cultural background will behave differently in some topics such as attitude towards general norms, education, shopping, family life and working.

Given these features, it is feasible to conduct practical research to find numbers of facts for each area. For example, the UA will impact people's decision making towards the consumption of certain kinds of products, also the requirements and expectation in education.

As a result, some features may be proved to be true while the rest may be conflicting with facts. Then, based on all the finding, the problematic values underlying UA and LTO are found and analyzed. Hypothesis will be made about why the features of UA and LTO are conflicting and how they can be improved to form better dimensions.

3.1.2   the empirical analysis based on statistical test

Combining with the facts found in practical analysis, the possible reasons for the confusion and the pre-designed models, the empirical analysis is executed as the core of this study.

This research will follow the paradigm of cross cultural analysis. The strength of factor analysis is

obvious, while the weakness of it is that the result of factor analysis is hard to replicate since it is high impacted by the selection of items. As mentioned above, a similar dimension about LTO was only generated when Minkov and Hofstede (2012a) did a replication study that factor analyzed "Confucian work dynamics" together with "integration". Therefore, it is believed that factor analysis is possible to provide different insight when combining different values on a rigorous theoretical basis.

In order to apply factor analysis, it is essential to firstly select the value items. In this study, the values to be studied will be selected by reviewing extensive literatures. A thorough theoretical analysis will be conducted firstly as complementary to choose value items from the cluster of time orientation, and uncertainty avoidance.

And tracing the development of this dimension, it is found the values selection in the analysis is critical to impact the final result. Therefore, to better analyze and understand the implication of LTO and other related dimension, the core is to have a clearer and comprehensive set of value. This will be the essential part in this study.

After selecting the related culture values, the values will be mapped into corresponding questionnaire items in the World Value Survey. And then the result of each question items will be collected and factor analyzed. It is proposed to apply the data from the World Value Survey for the following reasons.

- First of all, in terms of data representativeness, the WVS provides country representative samples. This is a salient advantage of WVS comparing to other data that obtained from the matching samples, such as sampling from students or university teachers in each country.

- Secondly, the sample number is significant due to its scope of cultural groups.

- At last, there are extensive questions in the survey, thus the related value items can be linked to certain question and analyzed.

After mapping the values into questions items in WVS, and the factor analysis is chosen as the main statistical analysis tool. Correlation analysis will be the final step to assess the validity and meaning of the dimensions that derived from the FA.

3.2   Model Specification

The model in this paper frames the research scope and facilitate the choosing of related values in UA and LTO. To make this model, most renown cross culture works will be the input. After reviewing and discussing these related dimensions, the model is composed of the most related values with possible correlations.

3.2.1   Culture Cluster of UA

There are other theories researching the similar dimension of UA, which can provides some clues. A number of scholars (Parsons & Shills, 1951; Triandis, 2002; Trompenaars & Hampden-Turner, 1997) have introduced a cultural dimension of rule- versus relationship orientation (or universalism vs. particularism)

UA and Project GLOBE

In the results of GLOBE, there is also a dimension with the label UA; however, it measures something conceptually different. Venaik and Brewer (2010) have convincingly argued that according to the associated question items for this dimension, the measured country scores and its correlations with other dimensions and phenomena, GLOBE's UA represents the cultural trait of "rule-orientation." Hofstede also stated in his book that the GLOBE's UA "as is" correlated strongly negatively with Hofstede's UA, and the GLOBE's UA "should be" just correlates weakly positively with Hofstede's UA. (Hofstede, 2010)

Although Hofstede claims that the reason for the differences is due to the different questions asked, and thus GLOBE's UA just made a confusion, he also acknowledged that the UA contains the feature of societal stress, neuroticism and need for rules.

In GLOBE's questionnaire, questions like "In this society, orderliness and consistency are stressed, even at the expense of experimentation and innovation" are asked, which is actually about rule orientation. Nevertheless, this measures a related concept in UA. Thus, when considering the values about uncertainty avoidance, the values measured in GLOBE has to be taken into consideration.

UA and Triandis's model

Triandis (1989) presents the cultural dimension of "tightness" (vs. looseness), which represents to what extent rules and norms exist and are respected in a society. This dimension has a conceptual commonality with UA as well as rule-orientation. It has also been assumed to be a feature of other cultural constructs, that is, individualism (Triandis, 2004) and indulgence (Minkov, 2007).

In the dimension of tightness vs. looseness, Triandis put it that "culture is to society what memory is to individuals." Tightness and looseness are examples of cultural syndromes. In some cultures, there are many social norms that apply across many situations. Minor deviations are not allowed and therefore would be criticized and punished. While in other cultures, there are few norms, and only major deviations from norms would be criticized. Those with many social norms belong to tight culture and those with few norms are loose culture. According to Triandis, Tightness is highly situational. He took some regional cultures as examples. The United States is rather loose in marital arrangements but tight in banking regulations. Japan is tighter overall than the United States, because there are many more rules concerning many more situations, and people are extremely concernedly about not breaking them.

UA and Kluckhohn's model

Kluckhohn's dimension of time orientation also deserves notice. The reason to put this dimension related to UA is because among other time period, the future is of most uncertainty. So the planning for future is a value that both related to UA and LTO.

The difference in Kluckhohn's time orientation, comparing with other model, is that this dimension contains three parts: past-orientation, present-orientation and future-orientation. The following are details for these parts:

Table 3.2-1 Basic concepts in Kluckhohn's time-orientation

Question	Orientation	Description
Time	Past	We focus on the past (the time before now), and on preserving and maintaining traditional teachings and beliefs
	Present	We focus on present (what is now), and on accommodating changes in beliefs and traditions
	Future	We focus on the future (the time to come), planning ahead, and seeking new ways to replace old

Source: Hills, Kluckhohn and Strodtbeck's Values Orientation Theory, 2002

This dimension has two meaningful aspects. Firstly, this dimension proved that planning for future is a complex concept that may partly belongs to UA and partly to LTO. More importantly, it provides one possible idea that the LTO is not necessarily divided into two poles, which is past and present versus future. A long-term oriented culture may also values past and future at the same time. It is therefore meaningful to integrate the values in this dimension into analysis.

3.2.2 Culture Clusters of LTO

During these decades, more and more cross cultural researchers proposed their own dimensions of national cultures. The values of LTO can be seen in other different dimensions. In Schwartz's (1994) study of the values of university student and teachers, reciprocation and some other value related to tradition formulated the dimension of conservatism. In the GLOBE (2004) project, the values related to honor and pride was in the dimension of "in-group collectivism" while the values like plan for the future was in the dimension of "Future orientation". On the other aspects, some major culture theories also showed the possible bound between the conceptions of time orientation, relationship and so on. In Kluckhohn's (1961) study about 5 values orientation, he proposed time-orientation as an independent value-orientation. Hall (1990) also divided the cultures into three dimensions as context, space and time. Later Maleki (2014) made a study to cluster culture dimensions from most of the researches and build a comprehensive culture model.

LTO and Mikov's Monumentalism

Minkov's Monumentalism versus flexhumility dimension is published in 2007, based on his

analysis of World Value Survey data. This dimension was highly and negatively correlated with Hofstede's LTO, which implies that this two dimensions share common underlying values. This dimension was inspired by the study of Canadian psychologist Steve Heine, who saw a link between self-enhancement (a tendency to seek positive information about oneself) and self-stability or self-consistency (a tendency to believe that one should have unchangeable value, beliefs, and behaviors that do not depend on shifting circumstances).

In this dimension, the measurement of pride and religiousness did correlated and formed a strong cultural dimension (self-enhance feeling and a feeling for unchangeable values and beliefs). While on the other side, the values like humility, flexibility, and adaptability to changing circumstances formed the one pole.

Comparing this dimension with LTO-CVS, saving face can be considered as a form of self-enhancement, and personal steadiness and stability is the same as self-consistency; both values appears at the short-term pole of the LTO-CVS dimension. In this dimension, East Asian countries formed a compact cluster at one pole (flexhumility) and African and Islamic countries were found closer to the opposite pole (monumentalism), and so was the United States (Hofstede, 2010). Later, as the monumentalism did not contain the value of thrift while the LTO-CVS was not about religiousness, Minkov did another search for integration of these values. That's how the LTO-WVS is formulated.

The integrated concept of LTO-CVS plus LTO-WVs is no longer barely western or eastern background based. It contains several big parts as thrift, pride (face), religiousness (self-consistency), service to others and so on.

LTO and Inglehart's model
We can argue that Schwartz's embeddedness, which has a feature of conservatism, is partly related to this cultural orientation.

In order to draw a worldwide geography of values, and map different cultural groups in corresponding positions, Schwartz and his colleagues conducted a survey with 31 countries. They introduced "Schwartz values survey", and from theoretical aspects, divided national culture into seven dimensions. He believes that the characteristics of cultures are derived from the interaction and integrations of these seven dimension or orientations. The first dimension is called Embeddedness, which is a dimension concerning the relation and bound between individual and groups. On end of this dimension is autonomous while the other one is embedded. In the society of autonomous culture, the individuals are regarded as autonomous entities with clear boundary, it is encouraged to express the uniqueness of oneself. This sort of autonomous is emphasized both in terms of knowledge and emotion. For instance, curiosity, creativity, pleasant, exciting and colourful life. In a society with embedded culture, people are embedded into groups. Every single person is required to obtain the sense, value or meaning through the collective objectives and projects. Thus, in this kind of society, the social order, traditions, security, obedience and wisdom is considered fundamental.

Figure 3.2-1 Schwartz's seven cultural dimension model

LTO and Project GLOBE

In GLOBE study, the dimension inspired by LTO was called future orientation. This is a link between UA and LTO as this dimension also contains concepts relevant to uncertainty avoiding. This have already been argued this in the previous section.

When it comes to the LTO, Hofstede claimed that GLOBE's attempts to replicate long-term orientation as "future orientation" was completely failed. GLOBE's future orientation "as is," meant to express long-term orientation, did not correlate with either of measures of LTO but did with a combination of low UAI and low PDI. It is about planning for the future, and GLOBE respondents in relatively relaxed, egalitarian societies claimed to do more of this. GLOBE's future orientation "should be" correlated with a combination of high PDI and low LTO-WVS. It stands for "the accepted norm should be to plan for the future" and "people should worry about current crises." Respondents in cultures that are more authoritarian and with more of a short-term orientation were more likely to agree with such "should" statements.

GLOBE's replication to LTO might not be successful, but it provides a possibility to learn more about LTO and UA. Therefore, it is worthwhile to take the values into consideration.

3.3   New Culture Dimension Framework

Through the analysis of the most significant and important culture theories and their dimensions, it is necessary to form the new cultural framework. Focusing on the cultural dimension of UA and LTO, this paper proposes a model with two big parts as UA dimension parts and LTO dimension

parts. Each of this dimension is consisted of several values, which are considered relevant and significant to this study. The two big parts are both identical but also interrelated, just as the Schwartz culture model. The hypothetical culture framework is therefore as following:
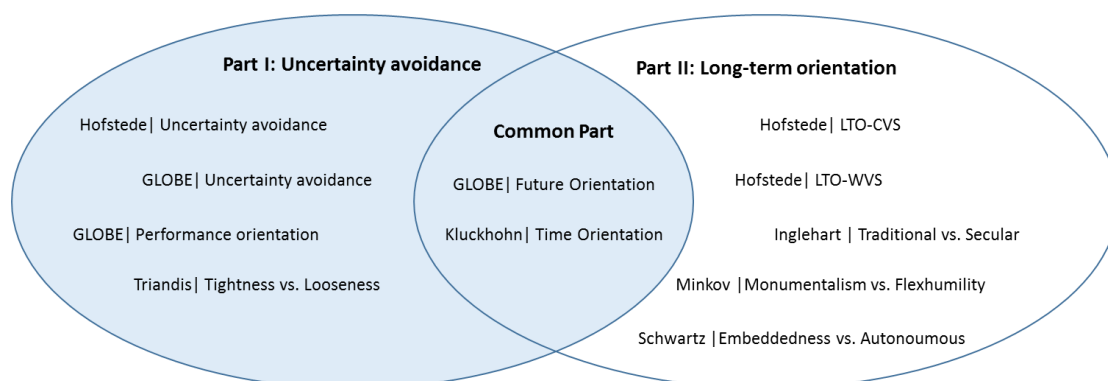
Figure 3.3-1 Theoretical framework of UA and LTO

The value selection follows three steps. Firstly, all the concepts, values, behaviour and features in the dimensions related to LTO and UA are listed. Then, these values for each dimension will be filtered according to certain principles. At last, the values for the two dimensions will be integrated as the final values list

At meanwhile the selection and re-organization should follow several principles.

1) **Scientific validity.** In this case, since this study are analysing the underlying values but not the individual behaviours or superficial phenomenon. Special attention has to be paid to exclude those features out of the listed values, as they probably would be the external performance of certain values.

2) **The selection will basically and firstly start from the most confusing dimensions**, in this research, the values of LTO-CVS, LTO-WVS and Hofstede's uncertainty avoidance will be the departure point of selection. Since these dimension contain most values that cause confusions.

3) **The values will be mutually exclusive**. As some of the dimensions have values that are correlated with each other. They might be cause-effect relationships or even have the same meaning. So the selection of values has to be followed by interpretation and integration. The objective is to make the selected values as mutually exclusive as possible.

4) **Completely exhaustive.** It is important to list the values that cover all the scope of analysis. Thus, values in other related dimensions of LTO and UA will be added as a complementary part to make the list as complete as possible while keeping the level of relevance.

Here is the list of main facets in LTO and UA:

Table 3.3-1 Main underlying values related to UA in each cultural theory

Theory	Dimension	Main Facet of values
Hofstede	Uncertainty avoidance	• Acceptance of uncertainty in life • Ease, low stress, self-control, low anxiety

		• Tolerance of deviant persons and ideas
		• Comfortable with ambiguity and chaos
		• Teachers may say "I don't know"
		• Changing jobs no problem
		• Dislike of rules
		• In politics, citizen feel competent when dealing with authorities
		• Outside observers perceive less corruption
		• In religion, philosophy and science: relativism and empiricism
Project GLOBE	Uncertainty avoidance	• Social norms, rules and procedures
		• Unpredictability of future events
	Future orientation	• Plan for the future
		• Plan ahead
	Performance orientation	• Strive for continuous improved performance
Triandis	Tightness versus looseness	• Minor deviate are not allowed
		• Need agreement for norms
		• Functional in cultures with high population density
Kluckhohn	Time orientation	• Past orientation: tradition is important
		• Present-oriented: moment has most significance
		• Future-oriented: time as straight line

Table 3.3-2 Main underlying values related to LTO in each cultural theory

Theory	Dimension	Related Values (one pole)
Hofstede	LTO-CVS	• Persistence (perseverance)
		• Ordering relationship
		• Thrift
		• Having a sense of shame
		• Personal steadiness
		• Protecting "face"
		• Respect for tradition
		• Reciprocation
	LTO-WVS	• Service to others
		• Thrift
		• Perseverance
		• National pride

		• Self-stability
Inglehart	Traditional versus secular	• Importance of God in life
		• Rejection of abortion
		• National pride
		• Need for greater respect for authority
		• Importance of obedience
		• Religious faith
		• Importance of independence
		• perseverance
Minkov	Monumentalism versus flexumility (effacement)	• Proud
		• Unchangeable
Schwartz	Embeddedness	• Social order obedience
		• Respect tradition
		• Self-discipline
Kluckhohn	Time orientation	• Past orientation: tradition is important
		• Present-oriented: moment has most significance
		• Future-oriented: time as straight line
Project GLOBE	Future orientation	• Plan for the future
		• Plan ahead

According to the value selection, the listed values are selected to be analysed:

Table 3.3-3 Values selected as the facet for further analysis

values & concepts	values & concepts
• Level of Ease, self-control, anxiety	• Personal steadiness
• Tolerance of different ideas and deviates	• Importance of "face " Sense of shame and humility
• Acceptance of changes risks and flexibility	• Respect for traditions
• Need and respect for authorities, obedience to orders	• Reciprocation and Service to others
• Importance of rules, norms and procedures	• National pride
• Thrift	• Importance of god in life, religious faith
• Perseverance	

These 13 values are designed as the value facet which need to be the input of factor analysis in chapter 5. To conduct the factor analysis, each these values will be connected to one survey items in World Value Survey, in other word, 13 survey items will be chosen as the representative of these values to be analyzed and finally form several dimensions.

3.4 Conclusion

In this chapter an alternative framework based on the search of various other cultural theories is formulated. The new framework differs with Hofstede's model in some aspects. Firstly, this model is based on both western and eastern cultural background, since the values for each cultural background is considered and integrated. Secondly, comparing with Hofstede's dimension model, the new model implied some correlation between UA and LTO with specific values underlying. Thus it proposes a question for further analysis, that is, the statistical is aimed to clarify the boundary between UA and LTO, or introduce more independent dimensions. But no matter what the results is, the new dimensions need to give more clarity and be more convincing.

Chapter 4 Practical Findings of Confusion of UA and LTO in Application

Both UA and LTO are confusing when considering China and some eastern countries' cultural values and features. This direct feeling is actually one of the main origins of this paper. Both two dimensions give a relatively extreme position for most of the eastern countries (low uncertainty avoidance and long-term oriented), however in reality the situation is more complicated. This chapter illustrates numbers of emic analysis results, as a practical support for the theoretical reviews and conclusions and more importantly, to give insight for the subsequent formulating of analysis structure.

4.1 Most Confucian Countries Appears to be Complex in Terms of UA in Reality

As discussed above, according to Hofstede's IBM survey, most Confucian countries, such as China, Singapore, and South Korea are uncertainty-accepting. However, reality shows more complication than this. Some uncertainty-accepting countries shows many uncertainty-avoiding features claimed by Hofstede.

4.1.1 Chinese tend to be very uncertainty avoiding in Education

According to Hofstede, the uncertainty avoidance dimension should have following key differences between weak and strong UA societies in terms of education:

Table 4.1-1 Key differences in education between week and strong uncertainty avoidance societies

WEAK UNCERTAINTY AVOIDANCE	STRONG UNCERTAINTY AVOIDANCE
■ Students are comfortable with open-ended learning situations and concerned with good discussions.	■ Students are comfortable in structured learning situations and concerned with the right answers.
■ Teachers may say, "I don't know."	■ Teachers are supposed to have all the answers.
■ Results are attributed to a person's own ability.	■ Results are attributed to circumstances or luck.
■ Teachers involve parents.	■ Teachers inform parents.

Source: Hofstede, Culture and Organizations, 2010

Given these description, Chinese tend to be entirely in the strong uncertainty avoidance pole. To make this statement more Tones of literatures has compared Chinese education system with western education system. Firstly one case is listed here as an example to show the differences

between Chinese and Western education.

"Darin Yokel is an art teacher from one primary school in Cincinnati, America; she is also a current student of Miami University. To be as one of the exchange teacher with Chinese, she came to Kunming, Yunan to have an academic interchange. Her objective is split into 3 parts, teaching Chinese students, communicating with Chinese teachers and independent training.

"In Kunming, Darin found out that the painting skills of Chinese students are very good. One day, she gave out one topic which is called "happy festival" to her students, but all the students were drawing the same Christmas tree. At first she thought that Chinese students are friendly so when they met a western teacher, they drew the Christmas tree for her. But later she found that every Christmas tree those children drown are with the same batten. She looked closer, discovered that all the students were looking toward the same direction where one of the classroom wall. Then she realized that there was one Christmas tree painting on the wall which prepared by the school as the purpose of creating a suitable painting atmosphere for students.

Darin covered the painting on the wall and asked the students to create their own picture, to her surprise; she was so disappointed that once she covered the wall painting, the students could not draw a "happy festival". Some students were scratching the head, some biting the pencil, some staring at each other, but no one knew how to start their work. With the intention of solving the embarrassment, Darin has to open the cover of wall painting."

These case illustrates a core value in Chinese education, that is, teaching versus guiding. Comparing with guiding principle in western education system, in China, the *Teaching* concept is more commonly used, which is based on textbook contents. Students learn knowledge through classes that are dominated by teachers. Besides it is being used in Chinese family education, students perceive knowledge by listening to what the parents have told them and textbooks which parents ask them to read. Comparing with western education which focuses on guiding, the *Teaching* method implies high degree of uncertainty avoidance, since the knowledge is printed in the books and student learn knowledge by memorizing mechanically. And most exercises are in certain modes and with one right answers. Comparing western cultures in which the students are asked to prepare for the new listen, teachers in China normally spend hours to prepare one class as they are regarded to know all the answers. In the meantime, the child's performance is normally informed to the parents in the way of parents meeting, while the rest of time the parent are not involved in school life. All these aspects show that the uncertainty avoidance in Chinese education is quite strong. This phenomenon conflicts entirely with Hofstede's explanation of UA in Education.

4.1.2 Chinese and Confucian countries tend to be partly uncertainty avoiding in workplace

Apart from the education system, the eastern Asian countries are partly uncertainty-accepting In terms of work, organization and motivation. Some key characteristics of UA in these aspects are

as following:

Table 4.1-2 Key differences in work, organization and motivation between weak and strong uncertainty avoidance societies

	WEAK UNCERTAINTY AVOIDANCE		STRONG UNCERTAINTY AVOIDANCE
■	There should be no more rules than strictly necessary.	■	There is an emotional need for rules, even if they will not work
■	Work hard only when needed	■	There is an emotional need to be busy and an inner urge to work hard.
■	Top managers are concerned with strategy.	■	Top managers are concerned with daily operations
■	Better at invention, worse at implementation	■	Worse at invention, better at implementation

Source: Hofstede, Culture and Organizations, 2010

The second point is most conflicting to reality. It claims people in weak uncertainty countries only work when needed. However, as discussed above, one ritual of Confucian's teaching is to work hard and to be persistence, and this values impacts deeply in Confucian countries such as China and some other eastern Asian countries.

Another issues concerning these aspects is that weak uncertainty avoidance countries are expected to be better at invention but worse at implementation, since the people in these societies are more comfortable with uncertain and ambiguous situations so better at creating unknown things. This is partly true, examples are like USA and some other countries, the people are willing to do adventures and take risks, great commercial inventions are more often born in those countries. While in China, as a weak uncertainty avoidance country, it is not really the case. One of the most famous feature of Chinese know by the world should be the ability of Copycatting. This can be explained mainly by two reasons. First of all, the Chinese thinks that to create a new product cost too much so they are keen to take advantage from current successful products and make some adjustment. But the economical reason, the underlying reason is that in Chinese people's mind, the innovation contains a lot of uncertainty and risk. So the choice is made to go through a safer way. Again the explanation of UA is not completely applicable when considering Asian countries.

4.1.3   Other cases in Confucian countries also shows the confusion of UA

There is some other phenomenon which make the UA confusing.

The first phenomenon is the immigration in China because of uncertainty. Reports shows there are increasingly number of immigrations of riches in China. In 2013, the Hurun Report showed that the number of immigration increased 6.7%, comparing with 2012. Boston Consulting Group reported 450 billion dollars' loss from China to other countries through the immigration. BCG also reported the number of Chinese riches will be three times more in coming 3 years. A research

instituting in London named Wealth Insight showed that about 658 billion dollars of Chinese wealth are now stored abroad, which account for more than 30% of Chinese yearly government income (Zhang, Ouyang, & Wu, 2014).

One main reason for the increase of immigration is the fear of uncertainty. Most Chinese riches are not confident in Chinese education, lifestyle, environment and political factors. This also shows the Chinese appears to be quite uncertainty avoiding.

Another example is the used cars rate. According to Hofstede, the strong uncertainty avoidance has strong belief in expertise so that people in those society buy new products since the quality of new products can be assured comparing with second hand products. And in opposite, the people in weak uncertainty country are comfortable with second hand products such as used cars. But comparing with the volume of used car business, China is the one with lowest rate of used car. And the eastern Asia countries shows lower rate of used cars compared with
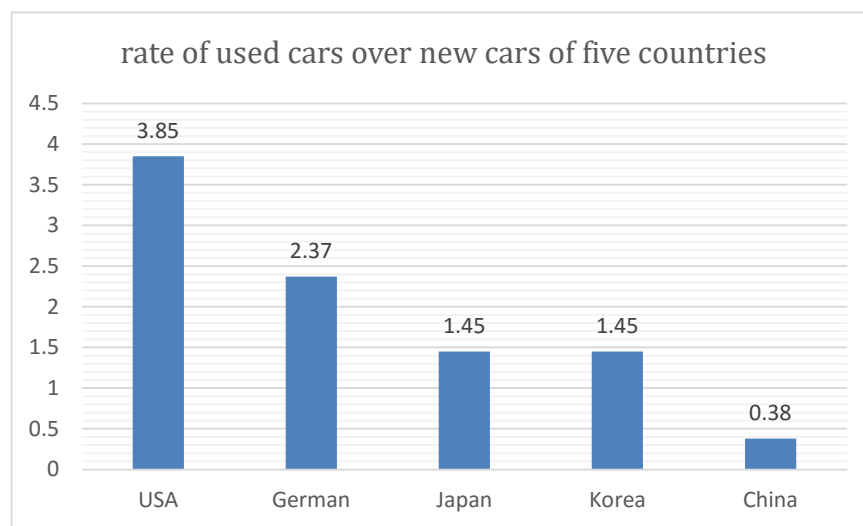
Figure 4.1-1 China has the lowest rate of used cars over new cars

There are many other example that shows the UA does not give clarity in reality, such as the people's attitude towards politics, allowance of protests, etc. Thus, the possible reasons will be discussed latter.

4.2   LTO Causes Confusion in Reality

Many Confucian countries are not as long-term oriented as the scores of them indicate. In a numbers of situations, they also appear short-term oriented. As a matter of fact, the original short-term orientation pole is combined of four norms or ritual of China. The designers believed they were fundamental values in Chinese society inherited from Confucian.

4.2.1   Tradition is one of the most important concept in Chinese culture

China is the world's oldest civilization, with a 5000-year history. A reason why the Chinese culture is so enduring is because the Chinese people are proud of their traditions and profoundly respect them. Instead of using the term 'Confucianism', Professor Wei-Ming Tu (1984, 1990), a world authority on Confucianism prefers to call Confucianism 'Confucian tradition', 'Confucian philosophy' or 'Confucian thought'.

Redding's (1990: 209) following analysis of Chinese culture allows us to see the causal relationship between the Chinese respect for tradition (a negative value in Hofstede's fifth dimension), willing compliance ('observing this order', a positive value in the fifth dimension) and perseverance (also a positive value in the fifth dimension):

"One of the outcomes of this vertical cooperativeness is willing compliance. This tendency is also reinforced by early conditioning of people during childhood and education, and the respect for authority figure, deeply ingrained in the Confucian tradition, tends to be maintained through life. . . . An extension of this willingness to comply is willingness to engage diligently in routine and possibly dull tasks, something one might term perseverance."

Chinese respects for tradition results in tons of cultures in many aspects, some of which also impact other countries in East Asia even in modern time:

Table 4.2-1 List of Chinese traditional articles

Culture contents of China	Main articles
Dance	Lion dance and dragon dance
Music	Music of China
Opera	Chinese opera
Handicraft	silk, Chinese paper art, Chinese Painting
Clothing	Hanfu
Cuisine	8 category of Chinese Cuisine
Games	Xiangqi, Mah-jong
Hobby	Chinese tea culture

Among these tradition, most of them are still popular in modern societies, for instance, in regions like Guangdong and Hong Kong, the Lion Dance was quite popular. When there are event or celebration, the host normally asks for the performance of Lion Dance, which is regarded as a tradition and sign for good luck and success in future.

Figure 4.2-1 Lion dance is still popular in regions like Guangdong and Hong Kong

Kluckholn and Strodtbeck (1961: 14) observe that 'China was a society which gave first-order value preference to the Past time orientation. Ancestor worship and a strong family tradition were both expressions of this preference.' The past time orientation is also found to be a core Chinese value by Chinese scholars on the mainland and overseas (Chan, 1998; Fan, 2000; Ouyang, 1995; Yau, 1988, 1994). This explains why these traditions are kept through so many years.

The respect for tradition is even impacting Chinese decision making style. When making important decisions, Chinese people tend to take experience from past and traditional teachings, for instance, the marriage in China still have to follow traditional conventions.

4.2.2 Chinese culture values the face extremely

Take 'face' as another example. This is among the most important elements in Chinese social psychology. Although a universal phenomenon, face is particularly salient in the Chinese culture (e.g. Hu, 1944; Lin, 1939; Redding and Ng, 1982). In fact, the concept of face is Chinese in origin (see The Shorter Oxford English Dictionary on Historical Principles, 1975: 716). According to Hofstede's country scores on Confucian dynamism, compared with China, western countries like the USA, Great Britain and Canada are more short-term oriented, being placed toward the lower end of the LTO scale, suggesting that these national cultures are more face oriented. Anyone with intimate cross cultural life and work experience will find this confusing and will wonder how westerners, such as North Americans and the English, could be more face-caring ('protecting your face', a key value in 'short-term orientation') than the Chinese from China, Hong Kong, Taiwan and Singapore.

In Chinese society, face as a self-regulating moral mechanism finds its most telling exposure. Face, in Chinese, is conceptualized in terms of two words: lian (lien) and mianzi (Hu, 1944). Both convey more or less moral connotations and are linked to family and group. The need for face (yao lian, or yao mianzi) is intrinsic to various aspects of personal and interpersonal relationship development in the Chinese culture (Gao, 1996). Face is an essential element of Chinese

politeness; 'to be polite is to be face-caring' (Gu, 1990: 241).

4.3   Analysis and Hypothesises about Confusion of UA and LTO

Above examples have shown that the interpretation of UA and LTO cause lots of confusion when considering the behaviours of China and other eastern Asia countries. This confliction between theory and reality make us seek for an explanation. Why these two dimensions does not give clarity in application and how this problem can be solved? To answer this main research question, some pre-analysis and hypothesises are necessary.

4.3.1   Each dimension contains value facets that may not be correlated.

Given the background of how these two dimension are generated. There are two aspects deserve a deep analysis, the methodology and interpretation.

The genesis of UA are derived from three questions in IBM questionnaires. Which were mainly focusing on the degree of feeling about stressfulness in workplace. Hofstede expanded this concept to a much wider scope of acceptance of uncertainties. However, is the degree of stressfulness a good indicator for uncertainty avoidance?

While studying eastern cultures, 40 values or norms are selected as the value pool for analysis, while the correlations between each of them are not identified. In Fang's (2003) criticism of Hofstede, the author claimed that the 40 values are mutually related. This correlation, as a result, will impacts the final results of factor analysis.

The issues in these two dimensions, thus, generate one similar result. In UA, the interpretation contains the respect and need for rules, the attitude towards uncertainty, etc. While in terms of LTO, the contained facets are even more, the connection between each of the original 8 values are not clear. In Mikov's replication, the thrift and persistence are regarded as one facet while the rest are consisted of self-enhancement and self-steadiness. The LTO-WVS then theoretical includes three facets of values.

4.3.2   UA and LTO are conceptually correlated or partly overlapped.

In this paper it is assumed that the UA and LTO are conceptually correlated. To be specific, the following values in UA and LTO are conceptually correlated based on this analysis:
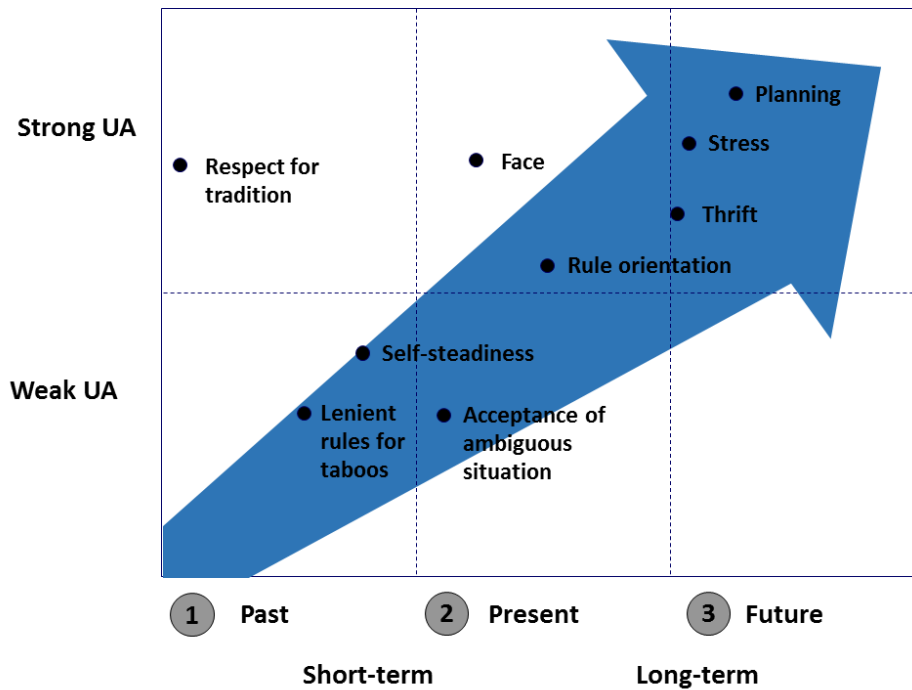
Figure 4.3-1 Hypothetical correlations between UA and LTO

The basis of analysis and hypothesis is that, the uncertainty varies with time. Normally, the future contains most of uncertainty while the past has lest. Thus is to say, the values in LTO is also correlated conceptually with UA. For instance:

- Thrift and persistence is an attitude towards the uncertainty in the future, this is because the reason for being thrift and saving is to prepare well for the contingencies in the future such as disease and accidence. People are encourage to have a saving and when accidences take place, they will not be worried about money, so the uncertainty for dealing with these accidences are reduced.

- Tradition is one reference to reduce uncertainty. When people make decisions, they want to learn from the past, as a result, people look for tradition ways of doing things, as the tradition method is justified by the past, they think through this way, the uncertainty can be reduced.

- Self-steadiness is a manifestation of weak uncertainty avoidance. People believe that the no matter how the external environment changes, they will keep constant if they make their minds stable. Thus, they can accept more uncertainty outside.

Other values like ordering relationship and face also contain temporal elements inside. Consequently, an inappropriate division will cause certain degree of confusion while an analysis focusing on these two dimensions and their values will provides numerous insights. And the study of these values also facilitates the analysis in application such as decision making and policy analysis.

4.4   Conclusion

In this chapter, the emic study is conducted. As Chinese and even scholars who study Chinese cultures will find conflicting behaviour related to uncertainty avoidance and the time-orientation. This phenomenon is not only in China but also eastern Asia countries impacted by Confucian's philosophy.

In these countries, it is found that uncertainty is partly accepted and partly avoided. People's attitudes towards uncertain and ambiguous objects various. This is similar with LTO, Chinese sometime shows short-time orientation, especially in the business decision makings. Most Confucian countries also value face and respect traditions.

A useful dimension will facilitate to understand what is going on in different countries with various cultural backgrounds, while in opposite, if the dimension cannot give clarity in reality, there are room for improvement for this dimension.

Chapter 5   Empirical Analysis of UA and LTO

In this chapter, quantitative study is conducted based on the theoretical structure made in chapter 3. The factor analysis is adopted to analyse the data from the World Value Survey, with question items selected through several principles. The objective of this chapter is to generate culture dimensions related to UA and LTO, and to check the hypothesis.

5.1   Link Values to Related Question Items

To conduct statistical analysis, it is essential to map the value items into specific questionnaire items, which is discussed in this section. According to the scope of research, 13 specific question items in the WVS are selected to represent the values or concepts.

1.   For the concept of "level of ease, self-control and anxiety":

V55: average score about how much freedom of choice and control over own life

This questionnaire item measures the level of respondent's feeling of freedom. It is considered a good reflection of the level of ease and self-control, as more freedom of choice and control over own life will make life less stressful. This was also an interpretation of UA in Hofstede's IBM model, which asked similar question but only limited in workplace. Comparing with Hofstede's three question, this item in WVS is more general.

2.   For the concept of "Tolerance of different ideas and deviates":

V70: average agreement with the statement that It is important to this person to think up new ideas and be creative; to do things one's own way

This items is chosen as the measurement of tolerance of different ideas and deviates is also understandable. Normally being creative implies that the person need to think things differently. So a society which encourage innovations will certainly have higher tolerance of different opinions and ideas.

3.   For the concept of "Acceptance of changes, risks and flexibility":

V76: average agreement with the statement that Schwartz: Adventure and taking risks are important to this person; to have an exciting life.

This concept is similar with the one above, the difference is mainly about the acceptance of risks, which is a more severe concept comparing with deviates. The adopted questionnaire items is therefore more about adventure and taking risks.

4.   For the concept of "Need and respect for authorities, obedience to orders":

V69: percentages of respondent who thinks greater respect for authorities is a good thing in the near future

This concept is also related to uncertainty avoidance. In a society high UA score, the people normally have intention to obey and respect for authorities and orders, as this one way to reduce a great level of uncertainties. The corresponding questionnaire items is also regarded adequate and suitable.

5. For the concept of importance of rules, norms and procedures:

V138: average agreement with the statement that obeying to their rulers is an essential characteristics of democracy

This is a similar question related to risk reducing by obeying rules.

6. For the concept of perseverance and persistence:

V18: percentage of respondents who selected perseverance as a desirable trait for children from a list of items

Perseverance and persistence firstly appeared in CVS as a norm of Confucian, this concept constantly appears in most researches. Minkov also studied this value in his analysis based on WVS, choosing the same questionnaire item. In this test this was kept the same.

7. For the concept of thrift:

V17: percentage of respondents who selected thrift as a desirable trait for children from a list of items

This values is also same with perseverance. There is also a representative item provided in WVS.

8. For the concept of personal steadiness:

V19: percentage of respondents who selected religious faith as a desirable trait for children from a list of items

In Minkov's monumentalism, he claims that the personal steadiness can be reflected in the religious faith, as the people with a stronger religious faith will keep consistency in his or her mind. In this study this is considered acceptable explanation and reason for choosing this items as the measurement of personal steadiness.

9. For the concept of "face ", sense of shame and humility:

V49: average agreement with the statement that one goal in this person's life is to make parent proud

The concept of face is not measured directly in any questionnaire items of WVS, as this is a very eastern idea with complicated interpretation. From the emic analysis, which means from the understanding of Chinese, the value of face is related to the honour of oneself as well as his or her family. Minkov also links the value of face to the concept of proud. This mapping is considered not completely exhaustive but convincing enough.

10. For the concept of "respect for traditions":

V79: average agreement with the statement that tradition is important to him/herself.

There is a direct questionnaire items available in WVS.

11. For the concept of "Reciprocation and Service to others":

V20: percentage of respondents who selected unselfishness as a desirable trait for children from a list of items

This mapping is not as direct as the ones above since there is not such a question that measures this value. Some assumption and interpretation are made to provide the link. It is assumed that in a society which values reciprocation and service to other, the people tend to be more unselfishness, because reciprocation and service to others are never a duty of person. Only when the people are more unselfish, he or she will help each other, give feedback of greeting as politeness and serve others.

12. For the concept of national pride

V211: average levels about how proud of nationality

There is a direct questionnaire items to measure this value.

13. For the concept of future orientation

V81: percentage of respondents who selected "Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs"

It is also difficult to find a direct item in WVS to represent the concept of future orientation. The item about balance between environment and economy is chosen, since it is assumed that a country with higher orientation towards future will take more care of their environment. The situation of environment will not affect the society currently but for sure will have impact in the next generations. A country only cares about the economic growth at the expense of environment is regarded short-term oriented.

5.2　Data Collecting and Pre-processing:

The data of this test is collected from the WVS, with 50 males and 50 females for each country or region, from year 2010 to 2015 (Wave 6). One may question whether the numbers of respondent should vary to match the population of each country, this is a good suggestion to make the sample more representative to the world. However, it is not necessary in this research as the main goal of sampling in this test is to make the sample representative to the country, since this is national level study.

To make the data suitable for statistical test, some pre-processing are conducted. Including the processing of missing values. For missing values, some details of processing are following:

V74: Spain is missing, therefore scored as the means
V81: Trinidad and Tobago are missing, therefore scored as the means

5.3　Factor Analysis Results

After the data processing and factor analysis, four factors are obtained, following the principle of Eigen value greater than 1. The results are following:

Table 5.3-1 FA loadings of factor 1

items	loadings
Parental pride	.90
Obey Ruler	.85
Religious Faith	.74
National Pride	.75
Respect Authority	.58
Importance of Tradition	-.82

Factor 1 contains most values. From the results, it appears conceptually resembles Minkov's Monumentalism. The first one with highest factor loading is "Parental pride", which implies that this factor represent mostly about the concepts related to "face". This was supported by the fact that the "National pride" is also included in this factor with high loading of 0.75. The value of self-steadiness, which is measured by the "Religious faith" is also included.

One conflicting finding in this factor is the loading of "Importance of tradition", in the LTO dimension, the value of tradition is considered as one main value in the short-term pole. However, the loading of this dimension is negative in this result, with loading of -0.82. This means that a country with high level of orientation towards present (face and self- steadiness are representatives for the orientation towards present) is not necessarily a country that respect tradition. The original classification of LTO of past, present, and future is problematic. In other word, a country with short-term orientation only focus on the present while the others look

towards future as well as past (Long-term oriented).

In addition, as discussed in Chapter 2, in Minkov's study, he did not include the value of tradition into his analysis, it is the reason that this issues are not found before.

Table 5.3-2 FA loadings of factor 2

items	loadings
Taking risk	-.57
Tolerance of new idea	-.76

This factor represents parts of the concept of uncertainty avoidance but from the opposite side. There is no value relevant to stressfulness, which is the genesis of Hofstede's UA.

Table 5.3-3 FA loadings of factor 3

items	loadings
Importance of Perseverance	0.78
Importance of Thrift	0.81
Importance of unselfishness	0.48

Factor 3 is a facet of values of original LTO-CVS. "Perseverance" and "Thrift" are strongly correlated and form a robust facet of long-term orientation. The third value of "Unselfishness" is also in this combination, this can be explained that a culture orientated to future will also be unselfish, since this value and the resulted behaviour will be paid back in future.

Table 5.3-4 FA loadings of factor 4

items	loadings
Freedom of choice and control life	0.79
Protecting Environment	0.80

This combination surprisingly appears as the last factor. The first value is supposed to be the measurement of stressfulness and uncertainty avoidance, while the second one is about the planning for future and long-term orientation. This factor implies societies that people feel less stress also have a long-term orientation.

This factor therefore, can be regarded as a connection between the UA and LTO. In addition, it also shows that the stressful is not necessarily one main value in UA (direct acceptance of risk and uncertainty is already a strong value facet), though Hofstede obtained UA from stressfulness.

5.4 Dimensions and Country Ranking

Given the factor generated from the analysis, the new cultural model in this study is composed of

four dimensions. The nature of this model is actually a re-combination and interpretation of values related to UA and LTO. The correlation between this model and UA and LTO is demonstrated as following:

<table>
<tr><td rowspan="2">**Weak UA**</td><td>**dimension 2**
Uncertainty Acceptance
• Taking risks
• Tolerance of new idea</td><td>**dimension 4**
Post-materialism
• Ease of life \| Self-control
• Planning for future</td></tr>
<tr><td>**dimension 1**
Monumentalism
• Face \| Pride
• Self-Steadiness \| Religious Faith
• Respect rule and Authority
• Importance of present</td><td>**dimension 3**
Confucian Dynamism
• Perseverance
• Thrift
• Reciprocation \| Unselfishness</td></tr>
<tr><td>**Strong UA**</td><td>**Short-term**</td><td>**Long-term**</td></tr>
</table>

Figure 5.4-1 Manifestation of four dimensions in terms of UA and LTO

There are numbers of differences. Firstly, the time-orientation is not divided as past, present and future but literally consistent with LTO—just long and short-term orientation. In the long-term pole, the past and future are both valued while in the short-term pole the society mainly focus on present. Thus, the model is formulated as a matrix of four parts. More interestingly, the four factors can be allocated into each part with explanation. It is not to say that the new dimensions are just a combination of UA and LTO, it is better to say that the UA and LTO are just one of the many classification ways of behaviours derived from these dimensions.

5.4.1   Dimension 1: Monumentalism

Given the value combinations in the first factor, dimension 1 is a dimension consisted of values similar to Minkov's monumentalism. Hence, in this study it is given the same name as **Monumentalism, a measurement of the importance of self-enhancement feeling in the moment.**

People in a culture with high score of this dimension will have strong religious faith and sense of pride. People tend to respect for authority but do not put tradition and convention as their instruction, for them the rules and orders in the moment is more important.

The values of this dimension have certain degree of influence on people's time-orientation and attitude towards uncertainty. For instance, the face and honour are normally a feeling in the moment, which last a short period. Apart from this, the importance of authority is related to the acceptance of uncertainty, as authority reduce the uncertainty and ambiguous by giving instruction and guide.

In terms of the country rankings, the Muslim world and Africa countries are at the top of list, which form are strong group. 88% (23 of 26) of the chosen countries score positively. The Latin American countries are scores less but also mostly positive. Most Europe countries, surprisingly score negatively in this dimension. At last, Asian countries form two clusters, the south eastern Asian countries have relatively high score like Malaysia and Philippines. On the other hand, China and some other eastern countries get lower scores. The ranking of this dimension is following:

Table 5.4-1 Dimension 1 scores of 60 countries on the basis of WVS data

RANK	AMERICA C/S	EUROPE S/SE	EUROPE N/NW ANGLO WORLD	EUROPE C/E EX-SOVIET	MUSLIM WORLD M.E & AFRICA	ASIA EAST ASIA SE	INDEX
1					Qatar		189
2					Yemen		164
3						Malaysia	158
4					Uzbekistan		143
5					Jordan		139
6					Egypt		127
7					Morocco		119
8					Ghana		117
9					Libya		113
10						Philippines	95
11					Georgia		92
12					Tunisia		84
13					Kuwait		76
14					Pakistan		75
15	Ecuador						74
16					Palestine		67
17						Thailand	57
18						India	55
19					Azerbaijan		54
20				Armenia			53
21	Argentina						48
22					Nigeria		47
23					Iraq		46
24					Kazakhstan		43
25					Zimbabwe		40
26					Algeria		33

Rank						Value
27				Kyrgyzstan		26
28	Colombia					25
29				Turkey		20
30	Trinidad and Tobago					19
31				Rwanda		13
32	Chile					8
33	Mexico					6
34				South Africa		2
35	Peru					-3
36			Russia			-17
37			Belarus			-18
38				Cyprus		-35
39					Singapore	-38
40		Ukraine				-39
41		Poland				-41
42		Romania				-42
43	Brazil					-51
44		Spain				-52
45		Estonia				-71
46					South Korea	-77
47					China	-84
48				Lebanon		-92
49					Taiwan	-95
50				Bahrain		-96
51			United States			-97
52	Uruguay					-98
53		Slovenia				-107
54			Australia			-121
55					Hong Kong	-151
56			Netherland			-170
57			New Zealand			-172
58			Germany			-195
59			Sweden			-213
60				Japan		-256

5.4.2 Dimension 2: Uncertainty Acceptance

The second dimension is about the degree of acceptance of uncertainty at present, the consisted values are taking risks and tolerance of different ideas. Comparing with values like planning for future and thrift, both of these two values are relatively short-term oriented, since the risk is actually a feeling that felted at the moment, and feelings about deviates also occurs when it takes place. Thus, this dimension is named as **Uncertainty Acceptance**, but the meaning of it has a

temporal conception, so this dimension refers to **the acceptance of ambiguous and uncertain ideas, situations occurred at present.**

Considering the scores of this dimension, some European countries top the list, such as Australia, Slovenia and United States, while the rest like Germany locates at the bottom. Most of Latin American countries are also with high scores of this dimension. At last, most Asian countries get negative scores.

Countries like China is reported as uncertainty accepting in this study, but only when the uncertainty people face is short-term. In other words, people in some Asian countries feel comfortable in uncertain environments and tend to be flexible in some short-term affairs. The value of being flexible like a water is one example in Chinese old sayings. Thus, some rules can be broken in some "special cases". But this does not mean that these countries are also accepting uncertainties in long run. This can be seen in the previous examples such as used-cars markets. When it is linked to a long-term issue, such as transportation tool choosing, people in countries like Korea, Japan and China are more willing to buy new cars, as the acquiring of one vehicle will have big influence in a long-time (more than 2 years normally), especially concerning security issues, and the used-car market are full of uncertainties in these countries, which cannot be accepted in this time. To conclude, it is argued that some countries are uncertainty avoiding in short-term but uncertainty accepting in long-term while other countries are the other way around. This might be the reason why Hofstede's UA is confusing, and it is argued this new dimension gives a better explanation.

The rankings are following:

Table 5.4-2 Dimension 2 scores of 60 countries on the basis of WVS data

RANK	AMERICA C/S	EUROPE S/SE	EUROPE N/NW ANGLO WORLD	EUROPE C/E EX-SOVIET	MUSLIM WORLD M.E & AFRICA	ASIA EAST ASIA SE	INDEX
1					Nigeria		222
2					Rwanda		169
3					Cyprus		132
4	Ecuador						129
5					Ghana		126
6			New Zealand				115
7			Australia				113
8					South Africa		110
9					Kuwait		109
10					Pakistan		105
11	Argentina						102
12		Slovenia					98
13					Zimbabwe		92
14					Lebanon		86
15						India	84

16	Colombia						71
17	Uruguay						69
18					Bahrain		64
19			Sweden				60
20	Chile						59
21					Kyrgyzstan		46
22					Turkey		44
23	Trinidad and Tobago						42
24			United States				41
25					Jordan		34
26					Algeria		32
27						Philippines	31
28					Tunisia		26
29		Spain					26
30	Mexico						25
31						Thailand	12
32					Qatar		11
33					Iraq		7
34	Peru						4
35						Singapore	-7
36					Libya		-19
37	Brazil						-20
38						Japan	-22
39					Palestine		-32
40					Egypt		-34
41				Poland			-46
42				Russia			-50
43		Romania					-56
44		Estonia					-66
45				Armenia			-85
46			Germany				-89
47			Netherlands				-92
48						South Korea	-109
49					Yemen		-111
50						Hong Kong	-112
51					Uzbekistan		-124
52					Azerbaijan		-125
53						Malaysia	-126
54					Kazakhstan		-135
55						China	-141
56	Morocco						-147
57					Georgia		-152

RANK	AMERICA C/S	EUROPE S/SE	EUROPE N/NW ANGLO WORLD	EUROPE C/E EX-SOVIET	MUSLIM WORLD M.E & AFRICA	ASIA EAST ASIA SE	INDEX
58						Taiwan	-180
59		Ukraine					-190
60				Belarus			-223

5.4.3   Dimension 3: Confucian Dynamism

The third dimension is about some classic Confucian norms towards working. This dimension is named as **Confucian Dynamism**, since it contains and only contains a robust group from the norms taught by Confucius. Moreover, this combination also has impacts on the cultures orientation towards time and uncertainty. **Thus, it is defined as Confucian norms towards long-term things**.

For instance, being thrift will make more savings to guarantee the future, and being unselfish and serving others will help building a good relationship (Guanxi), and this might be helpful when needed. To summarize, cultures have high score of dimension tend to reduce the uncertainties in the future. The results also make sense; as most Confucian countries are at the top of the list. The rankings are following:

Table 5.4-3 Dimension 3 scores of 60 countries on the basis of WVS data

RANK	AMERICA C/S	EUROPE S/SE	EUROPE N/NW ANGLO WORLD	EUROPE C/E EX-SOVIET	MUSLIM WORLD M.E & AFRICA	ASIA EAST ASIA SE	INDEX
1	Argentina						343
2		Estonia					259
3						India	256
4						Thailand	169
5						Japan	147
6						Malaysia	140
7		Slovenia					133
8						South Korea	108
9					Kazakhstan		107
10	Chile						94
11					Rwanda		72
12					Pakistan		61
13					Uzbekistan		59
14					Kyrgyzstan		53
15						Singapore	50
16				Russia			48
17			Australia				45
18	Ecuador						45
19					Azerbaijan		28

20				Belarus			18
21						China	17
22						Taiwan	10
23						Philippines	7
24					Yemen		3
25		Ukraine					-2
26					Zimbabwe		-8
27					Turkey		-13
28			New Zealand				-18
29					Algeria		-19
30					Kuwait		-28
31	Uruguay						-32
32					Armenia		-33
33					Ghana		-34
34			Netherlands				-35
35		Spain					-37
36					South Africa		-37
37					Palestine		-37
38						Hong Kong	-38
39	Mexico						-40
40					Jordan		-48
41					Cyprus		-49
42					Libya		-51
43			United States				-53
44			Sweden				-60
45	Colombia						-63
46					Morocco		-66
47	Peru						-84
48					Tunisia		-84
49			Germany				-86
50		Poland					-86
51					Nigeria		-91
52					Qatar		-98
53					Iraq		-100
54					Georgia		-104
55					Egypt		-110
56					Lebanon		-117
57	Brazil						-119
58	Trinidad and Tobago						-126
59		Romania					-130
60					Bahrain		-135

Considering the countries scores of this dimension, some "counterintuitive" results are found. For

instance, in this ranking, Latin American countries spread from the top to the bottom of the list. Argentina gets the highest scores of Confucian Dynamism, even higher than all Asian countries. Chili and Ecuador also have high score in this dimension. There is clearly evidence that Latin Americans are connected with Confucian teachings from ancient times. Thus this issues need to be considered in the future research, the Confucian norms might have some common values with Latin Americans, if it is true, there need to be more work to discover this connection. Or it is just due to some issues happened in empirical analysis such as sampling and survey translation, etc.

5.4.4 Dimension 4: Post-materialism

The last dimension is composed of values related to stressfulness and future orientation. It is named as **Post-materialism.** Literally it is one dimension related to **values like protection of our environment and plan for the next generations**.

Cultures score high in this dimension will be more uncertainty accepting and also be more future-oriented. In terms of the result, most Latin American countries and Asian countries get very high scores. The rankings are following:

Table 5.4-4 Dimension 4 scores of 60 countries on the basis of WVS data

RANK	AMERICA C/S	EUROPE S/SE	EUROPE N/NW ANGLO WORLD	EUROPE C/E EX-SOVIET	MUSLIM WORLD M.E & AFRICA	ASIA EAST ASIA SE	INDEX
1	Mexico						217
2	Uruguay						198
3	Colombia						196
4					Uzbekistan		152
5						Malaysia	146
6					Qatar		143
7			Australia				141
8	Ecuador						137
9	Peru						124
10	Brazil						115
11	Chile						99
12			Sweden				94
13						Taiwan	93
14						Thailand	82
15						China	76
16						Philippines	75
17	Trinidad and Tobago						66
18		Slovenia					65
19			New Zealand				61
20					Kazakhstan		60

#								Score
21	Argentina							52
22						Kyrgyzstan		52
23						Libya		31
24							Hong Kong	23
25						Cyprus		11
26				United States				9
27				Netherlands				6
28		Romania						0
29						Turkey		-10
30						Ghana		-13
31					Belarus			-32
32				Germany				-33
33						Jordan		-36
34		Spain						-37
35						Azerbaijan		-38
36						Palestine		-39
37						Kuwait		-39
38			Ukraine					-39
39						Georgia		-42
40		Estonia						-44
41						Pakistan		-58
42						Morocco		-67
43						Yemen		-73
44						Armenia		-74
45						Iraq		-75
46							Singapore	-83
47						Bahrain		-84
48						Lebanon		-85
49						South Africa		-97
50							South Korea	-100
51						Rwanda		-102
52					Russia			-107
53						Tunisia		-110
54		Poland						-113
55						Zimbabwe		-116
56						Nigeria		-125
57						Egypt		-134
58						Algeria		-142
59							Japan	-180
60							India	-196

In terms of countries' score of this dimension, there are also some points need to be noticed. Firstly, some countries like South Korea and Japan get very low scores, which implies confusions.

Because from the emic point of view, these countries should be more aware of the importance of sustainable development. This conflicting finding also need to be analysed in further research.

5.5   Conclusion

In this chapter the statistical analysis is conducted. As a result, four factors are obtained according to certain data analysis principles. This gives evidence that UA and LTO is confusing partly because it contains many value facets respectively. The four factors in this study forms a re-combination of values in UA and LTO. Moreover, the new combination of values gives some explanation of confusion and also provides clues for a better portfolio of dimensions representing the UA and LTO. For instance, the definition of LTO is the difference of length of vision and focus, but the grouping of the time variable (Past, Present and Future) is not necessarily like what Hofstede did, as the respect for tradition correlates negatively with values that focus on present.

This chapter answers the question for alternative dimension model of UA and LTO by giving these four factors or facets of values. In next Chapter the results of each chapters will be synthesized to conclude the study.

Chapter 6   Conclusions

In this chapter, the answers to all the questions raised in chapter 1 will be presented first. Recommendations are proposed based on the results of the research. At last, research limitations of this study are discussed aiming to facilitate the further researches.

6.1   Conclusions for Research Questions

To reach the objectives of the research:

To discover more meanings of UA and LTO to the decision making and management in real world.

We devised the main research question of this paper as:

Can there be other cultural dimensions that cover the values of LTO and UA, and give more convincing interpretation for these culture?

This question is answered within the boundary delineated in chapter 1. The conclusion can be drawn by answering the sub-question. The general view is that by understanding the underlying theories and relationships between each cultural values, and conducting empirical analysis based on proper values facets will produce more convincing culture dimensions than LTO and UA.

The sub-questions can be grouped into three categories: theoretical questions, practical questions and empirical research questions. The first one is aiming to find theoretical flaws of UA and LTO. The practical questions are studied for giving evidence to show the issues in applying these two dimensions and analyse the reason of these issues from the emic perspective. The last one attempts to give alternative dimensions to UA and LTO.

Theoretical question:
What is the genesis and meaning of original LTO and UA?
It is learned that the UA is firstly derived from three of Hofstede's IBM survey items, which were related to stress in workplace. Later these dimension is explained by Hofstede as the degree of acceptance in ambiguous circumstances. Thus the UA was proposed, and many research results also contain this dimension. While comparing with UA, the LTO is not derived from Hofstede's own study. In fact, it firstly appeared in Michael Bond's Chinese Value Survey, with the name of Confucian work dynamism. Hofstede adopted this dimension as his fifth dimension since he thinks this dimension was based on the eastern cultural background and also it correlates with countries economic growth. However, this new dimension is not very convincing to his reviewers.

Practical question:
What is really happening in real word concerning UA and LTO culture characteristics?
As Chinese and even scholars who study Chinese cultures will find conflicting behaviour related

to uncertainty avoidance and the time-orientation. This phenomenon is not only in China but also eastern Asia countries impacted by Confucian's philosophy. In these countries, it is found that uncertainty is partly accepted and partly avoided. People's attitudes towards uncertain and ambiguous objects various. This is similar with LTO, Chinese sometime shows short-time orientation, especially in the business decision makings. Most Confucian countries also value face and respect traditions. Therefore, it is difficult to use UA and LTO to explain why in some areas people with long-term oriented cultures are making short-term oriented decisions such as some Chinese's business behaviours, and why some Asian countries with uncertainty accepting cultures tend to be conventional and risk avoiding in making decisions related to their families and lives. As a result, the hypothesis is made that these two dimension has some certain kind of correlation and their values are not correctly grouped, and a new analysis concerning these underlying values will reveal what can be the better dimensions about UA and LTO.

Empirical questions:

What are the alternative framework of UA and LTO? What is the result of analysis based on the new framework? And if these dimensions better at explaining the differences between nations?

In Chapter 3 a new model is constructed based on many cross culture theories and relevant analysis. The new framework differs with Hofstede's model in some aspects. Firstly, this model is based on both western and eastern cultural background, since the values for each cultural background is considered and integrated. Secondly, comparing with Hofstede's dimension model, the new model implied some correlation between UA and LTO with specific values underlying.

As a result, four factors are obtained according to certain data analysis principles. This gives evidence that UA and LTO is confusing partly because it contains many value facets respectively. The four factors in this study forms a re-combination of values in UA and LTO. Moreover, the new combination of values gives some explanation of confusion and also provides clues for a better portfolio of dimensions representing the UA and LTO. For instance, the definition of LTO is the difference of length of vision and focus, but the grouping of the time variable (Past, Present and Future) is not necessarily like what Hofstede did, as the respect for tradition correlates negatively with values that focus on present.

Combination of the conclusions:

The explanatory power of UA and LTO is limited in terms of Asian countries especially the Confucian countries. The lack of clarity in explaining the reality, comparing with other dimensions, is both due to the methodology and interpretation. A replication of cultural value analysis in this studies shows these values in UA and LTO dimensions can be re-grouped into new dimensions, which delivers different understandings. Four new dimensions can be used to explain some confusions caused by the original UA and LTO, in a way that the time orientation and uncertainty avoidance level are regarded as a feature based on other values. As a result, this study provides an alternative to better understand how the people with different cultural background make time or uncertainty related decisions differently.

6.2 Research Strengths, Limitations and Suggestions for Further Research

6.2.1 Research strengths

In this research, the generation of new cultural dimensions can be attributed to some aspects:

Firstly, the emic analysis played an important role. As Chinese, the confusion of Hofstede's UA and LTO in application is stronger than people from other background. Therefore, when this research question is raised, the author of this paper strongly feels the same way. Hence, it is easier to understand which part of analysis in previous studies might be the cause of problem, how those values can be better interpreted (comparing with Michael Bond's interpretation for 40 values, see in appendix), and what values need to be integrated into analysis. To summarize, the emic point of view makes the interpretation of LTO and UA more valid.

Nevertheless, without the integration of other culture theories and research results from western background, the emic analysis might be a limitation as well. Therefore, the second strength of this study is the integration of most convincing cross culture theories such as project GLOBE, Schwartz' cultural model and so on. Comparing with previous studies, some of which are started with brief listing of values without enough theoretical references (Hofstede's analysis started as a survey to learn the satisfaction of IBM employees), the power of synthesis is strong. Because of the synthesis of other cross cultural studies, the opinions are not cultural bounded, the related values are exhaustive and results are more convincing. Two strengths of this study produced a logical framework, and with that framework presented in chapter 3, hypothesizes are made (for instance, the cause of confusion of UA and LTO, the correlation between these two dimension, etc.).

At last, a research led by hypothesis has serval advantages, it is much more clear which direction to go, easy to adjust the analysis methodologies. Hypothesizes in this paper are connected with the original UA and LTO, on the other hand, it is also assumed that the UA and LTO can be regarded as two features and the re-grouping of the underlying values can make better alternatives. These assumptions are finally checked in analysis sections so that research questions can be answered with the proposition of the four new dimensions structured as a matrix. The result proves that hypothesis leads this research to the right direction.

6.2.2 Research limitations

1) Theoretical limitation
As there is no single true theory for cross cultural analysis, the choosing of values, interpretations and mapping to concrete question items are very much dependent on emic analysis, previous research conclusions and experiences. After all the cross cultural analysis is mostly an empirical study. However, comparing with some studies that started with a potential theoretical instruction,

such as Minkov's monumentalism, the research about national variances of LTO and UA might be improved while there is more comprehensive theoretical analysis.

2) Methodological limitation
The methodological limitation of this paper is mainly about the data sampling and question items selecting. This is mainly due to the fact that the data for empirical analysis is collected from the WVS, which adopt 50 samples in each country or region. Firstly, it is not clear that if this samples can be representative enough for the country. There are countries with large population as well as complex combinations of ethnic groups. Secondly the mapping of values cannot be customized according to the requirement, some interpretation is taken in the mapping process. This limitation is calculated however, since the WVS is of advantages in the scope and authority.

3) Limitations of countries scores in this study
The countries score produced in chapter 5 also have some issues, which show the limitations in this study. The limitation here is that there is no appropriate way to explain the odd points in some country rankings, such as the score of Argentina in Confucian Dynamism and negative scores of South Korea and Japan in Post-materialism. These odd points are somehow counterintuitive, but it is not sure whether these issues are caused by statistical problem, or the interpretation of dimensions.

6.2.3 Further research suggestions

Since there is increasing interests of research in cross culture studies and other sociology research is providing more and more inspiring studies. The further research of this topic can work on the finding of a comprehensive theories about UA and LTO cultures and their characteristics. This etic theoretical analysis is a promising research area and will turn back to facilitate the empirical studies.

The second the research suggestions are about the improvement of data collecting. If possible, a worldwide survey with specific questions that strongly linked to the analyzed values will be more powerful and convincing. And moreover, the samples of the survey can be adjusted according to the real situation of that country or region.

6.3   Recommendations for Understanding Decision Making

With four new dimensions generated, this paper provides recommendations for understanding how the decision making are impact by cultures, especially by the dimensions related to this study.

Linking back to the first chapter, it is learned that firstly, decision making is irrational and biased, and the cultures impact decision making in many processes and influence the level of biases in irrational decision makings. For instance:

Table 6.3-1 Examples of how the four culture dimensions will impact the decision making

Dimensions	Identify problems	Gather information	Identify alternatives	Weigh Evidence	Choose alternatives
Monumentalism		Self-enhanced information	Recency		Cognitive inertia
Uncertainty Acceptance	Illusion of Control		Recency		
Confucian Dynamism				Temporal bias	Cognitive inertia
Post-materialism	Illusion of Control				Temporal bias

- Considering Monumentalism and Confucian Dynamism, people with these kinds of cultures are more likely to have the cognitive inertia, as changing implies uncertainties and unknown results. But on the other hand, cultures with high scores in Uncertainty Acceptance and Post-materialism might choose to try new alternatives to replace the existing options in their decision making.

- Cultures that are more short-term oriented, such as Monumentalism and Uncetainty Acceptance, are more likely to have the recency bias since the most recent situations are more important.

- Some cultures are willing to take risk because people are more comfortable in uncertain environment or they somehow underestimate the risks. In this way they tend to be less stressful than others. Thus people with uncertainty accepting and post-materialized cultures tend to be over-optimized and make risky decisions rather than the others.

Thus, it is recommended to take this four dimension into account when trying to understand how the different decisions are made by people from different cultural background.

Reference

Chan, A.M. (1998) 'Construction of a Chineseness Value Scale and a Chineseness Ethnicity Scale', paper presented at the Association for Consumer Research Asia Pacific Conference (June), Hong Kong.

Chen, M.J. (2001) *Inside Chinese Business: A Guide for Managers Worldwide.* Boston: Harvard Business School Press.

Chen, M.J. (2002) 'Transcending Paradox: The "Middle Way" Perspective', *Asia Pacific Journal of Management* 19: 179–99.

Chinese Culture Connection. (1987). Chinese values and the search for culture-free dimensions of culture. *Journal of Cross-Cultural Psychology*, 18, 143-164.

Fan, Y. (2000) 'A Classification of Chinese Culture', *Cross Cultural Management* 7(2): 3–10.

Fang, T. (2003). A critique of Hofstede's fifth national culture dimension. *International Journal of Cross- Cultural Management*, 3(3), 347- 368.

Gao, G. (1996) 'Self and Other: A Chinese Perspective on Interpersonal Relationships', In W.B. Gudykunst, S. Ting-Toomey and T. Nishida (eds) Communication in Personal Relationships across Cultures, pp. 81–101. Thousand Oaks, CA: Sage.

Gu, Y.G. (1990) 'Politeness Phenomena in Modern Chinese', *Journal of Pragmatics* 14(2): 237–57.

Gudykunst, W.B., Ting-Toomey, S. and Nishida, T. (eds) (1996) *Communication in Personal Relationships across Cultures*. Thousand Oaks, CA: Sage.

Hills, M. D. (2002). Kluckhohn and Strodtbeck's Values Orientation Theory. *Online Readings in Psychology and Culture*, 4(4). http://dx.doi.org/10.9707/2307-0919.1040

Hofstede, G. (1980) *Culture's Consequences: International Differences in Work-related Values.* Beverly Hills, CA: Sage.

Hofstede, G. (1991) *Cultures and Organizations: Software of the Mind*. London: McGraw-Hill.

Hofstede, G. (1997).*Cultures and Organizations: Software of the mind.* New York: McGraw Hill.

Hofstede, G. (2010). *Dimension data matrix*. Retrieved from http://www.geerthofstede.nl/ dimension-data-matrix

House, R., Javidan, M., Hanges, P. J., & Dorfman, P. (2002). Understanding cultures and implicit

leadership theories across the globe: An introduction to project GLOBE. *Journal of World Business*, 37, 3-10.

Hu, H.C. (1944) 'The Chinese Concepts of "Face"', *American Anthropologist* 46(1): 45–64.

Inglehart, R. (2006). Mapping global values. *Comparative Sociology*, 5(2/3), 115-136.

Inglehart, R., & Baker, W. (2000). Modernization, cultural Change and the persistence of traditional values. *American Sociological Review*, 65(1), 19-51.

Kalé, S. (1996) 'How National Culture, Organizational Culture and Personality Impact Buyer–Seller Interactions'., in P. Ghauri and J.-C. Usunier (eds) *International Business Negotiations*, pp. 21–37. Oxford: Pergamon.

Kluckholn, F.R. and Strodtbeck, F.L. (1961) *Variations in Value Orientations*. Evanston, IL: Row, Peterson and Co.

Lin, Y.T. (1939) *My Country and My People.* London: William Heinemann.

Lowe, S. (2001) 'In the Kingdom of the Blind, the One-eyed Man is King', *International Journal of Cross Cultural Management* 1(3): 313–32.

Maleki, A., & Jong, M. D. (2014). a Proposal for clustering the dimensions of national culture. *Cross-culture Research*, Vol. 48(2) 107-143.

Minkov, M. (2007). *What makes us different and similar: A new interpretation of the World Values Survey and other cross-cultural data.* Sofia, Bulgaria: Klasika I Stil.

Minkov, M., & Hofstede, G. (2012a). Hofstede's fifth dimension: New evidence from the World Value Survey. *Journal of Cross-Cultural Psychology*, 43(1), 3-14.

Minkov, M. (2013). Cross-cultural Analysis: the Science and art of comparing the world's modern societies and their cultures. CA: Sage.

Ouyang, W.M. (1995) *Confucian Culture and Chinese Economy*. China: North western Finance and Accounting University Press (in Chinese).

Parsons, T., & Shils, E. A. (1951). *Toward a general theory of action.* Cambridge, MA: Harvard University Press.

Plous, Scott (1993). *The psychology of judgment and decision making.* Philadelphia: Temple University Press.

Redding, S.G. (1990) *The Spirit of Chinese Capitalism.* Berlin: Walter de Gruyter.

Redding, S.G. and Ng, M. (1982) 'The Role of "Face" in the Organizational Perceptions of Chinese Managers', Organization Studies 3(3): 201–19.

Redpath, L. and Nielsen, M.O. (1997) 'a Comparison of Native Culture, Non-native Culture and New Management Ideology', *Canadian Journal of Administrative Sciences* 14(3): 327–39.

Roberts, K. and Boyacigiller, N. (1984) 'Crossnational Organizational Research: The Grasp of the Blind Man', in B.M. Staw and L.L. Cummings (eds) *Research in Organizational Behavior*, vol. 6, pp. 423–75. Stamford, CT: JAI Press.

Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology: An International Review*, 48, 23-47.

Schwartz, S. H. (2004). Mapping and Interpreting Cultural Differences around the World, in H. Vinken, J. Soeters and P. Ester (Eds.), *Comparing Cultures, Dimensions of Culture in a Comparative Perspective* (Leiden, The Netherlands: Brill)

Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative Sociology*, 5(2/3), 137-182.

Smith, P.B. (1996) 'National Cultures and the Values of Organizational Employees: Time for Another Look', in P. Joynt and M. Warner (eds) *Managing across Cultures: Issues and Perspectives.* London: International Thomson Business Press.

Søndergaard, M. (1994) 'Research Note: Hofstede's Consequences: A Study of Reviews, Citations and Replications', *Organization Studies* 15(3): 447–56.

Triandis, H.C. (1982) Book Review. *'Hofstede's Culture's Consequences: International Differences in Work-related Values', Human Organization* 41(1): 86–90.

Tayeb, M.H. (1988) *Organizations and National Culture: A Comparative Analysis.* London: Sage.

Tayeb, M.H. (1994) 'Organizations and National Culture: Methodology Considered', *Organization Studies* 15: 429–46.

Tayeb, M.H. (2000) 'Hofstede', in M. Warner (ed.) *International Encyclopaedia of Business and Management*, 2nd edn, pp. 2574–9. London: International Thomson Business Press.

Tayeb, M.H. (2001) 'Conducting Research across Cultures: Overcoming Drawbacks and Obstacles', *International Journal of Cross Cultural Management* 1(1): 91–108.

Triandis, H. C. (1989). Cross-cultural studies of individualism-collectivism. In J. Berman (Ed.), *Nebraska Symposium On Motivation: Cross-Cultural Perspectives* (pp. 41-133). Lincoln: University

of Nebraska Press.

Triandis, H. C. (2002). Generic individualism and collectivism. In M. J. Gannon & K. L. Newman (Eds.), *The Blackwell handbook of cross-cultural management* (pp. 16-45). Malden, MA: Blackwell.

Triandis, H. C. (2004). The many dimensions of culture. *Academy of Management Executive,* 18(1), 88-93.

Trompenaars, F., & Hampden-Turner, C. (1997). *Riding the waves of culture.* London, England: Nicholas Brealey Publishing Limited.

Tu, W.-M. (1984) *Confucian Ethics Today: The Singapore Challenge*. Singapore: Federal Publications.

Venaik, S., & Brewer, P. (2010). Avoiding uncertainty in Hofstede and GLOBE. *Journal of International Business Studies*, 41, 1294-1315.

Wang, X., & Wen Y. (2011) Can Rising Housing Price Explain China's High Household Saving Rate? *Federal Reserve Bank of St. Louis Review*, March/April 2011, 93(2), pp. 67-87.

Yeh, R.-S. and Lawrence, J.J. (1995) 'Individualism and Confucian Dynamism: A Note on Hofstede's Cultural Root to Economic Growth', Journal of International Business Studies 26(3): 655–69.

Yau, O.H.M. (1988) 'Chinese Cultural Values: Their Dimensions and Marketing Implications', *European Journal of Marketing* 22(5): 44–57.

Yau, O.H.M. (1994) *Consumer Behaviour in China: Customer Satisfaction and Cultural Values.* London: Routledge.

Zhang, W.Y. (2001) *Property Rights, Government and Reputation*. Beijing: San Lian Shu Dian (in Chinese).

Zhang, B., Ouyang, X.H., & Wu, S., Why Chinese riches choose to immigrate: fear of uncertainty of policy. Retrieved from http://www.360doc.com/content/14/0225/08/14132722_355464988.tml

Appendix I: Questionnaire Items Details

1) level of ease , self-control and anxiety

V55	How much freedom of choice and control over own life	Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "no choice at all" and 10 means "a great deal of choice" to indicate how much freedom of choice and control you feel you have over the way your life turns out:	3		1##No choice at all 2##2 3##3 4##4 5##5 6##6 7##7 8##8 9##9 10##A great deal of choice -5##SG: Missing; DE:Inapplicable; RU: Inappropriate response{Inappropriate} -4##Not asked in survey -3##Not applicable -2##No answer -1##Don´t know

2) Tolerance of different ideas and deviates

V70	Schwartz: It is important to this person to think up new ideas and be creative; to do things one's own way	Now I will briefly describe some people. Using this card, would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? "It is important to this person to think up new ideas and be creative; to do things one's own way. "	3		1##Very much like me 2##Like me 3##Somewhat like me 4##A little like me 5##Not like me 6##Not at all like me -5##BH: Missing; RU: Inappropriate response{Inappropriate} -4##Not asked in survey -3##Not applicable -2##No answer -1##Don´t know

3) Acceptance of changes, Unchangeable or flexibility

| V76 | Schwartz: Adventure and taking risks are important to this person; to have an exciting life | Now I will briefly describe some people. Using this card, would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? :

"Adventure and taking risks are important to this person; to have an exciting life" | 3 | | 1##Very much like me
2##Like me
3##Somewhat like me
4##A little like me
5##Not like me
6##Not at all like me
-5##BH: Missing; RU,DE: Inappropriate response{Inappropriate}
-4##Not asked in survey
-3##Not applicable
-2##No answer
-1##Don´t know |

4) Need and respect for authorities, obedience to orders

| V69 | Future changes: Greater respect for authority | I'm going to read out a list of various changes in our way of life that might take place in the near future. Please tell me for each one, if it were to happen, whether you think it would be a good thing, a bad thing, or don't you mind?:

"Greater respect for authority" | 3 | | 1##Good thing
2##Don´t mind
3##Bad thing
-5##EC,DE,SE:Inapplicable ; RU:Inappropriate response{Inappropriate}
-4##Not asked in survey
-3##Not applicable
-2##No answer
-1##Don´t know |

5) Importance of rules, norms and procedures

| V138 | Democracy: People obey their rulers | Many things are desirable, but not all of them are essential characteristics of democracy. Please tell me for each of the following things how essential you think it is as a characteristic of democracy. Use this scale where 1 means "not at all an essential characteristic of democracy" and 10 means it definitely is "an essential characteristic of democracy":

 People obey their rulers | 3 | | 1##Not an essential characteristic of democracy
 2##2
 3##3
 4##4
 5##5
 6##6
 7##7
 8##8
 9##9
 10##An essential characteristic of democracy
 -5##DE,SE:Inapplicable ; RU:Inappropriate response; Missing{Inappropriate}
 -4##Not asked in survey
 -3##Not applicable
 -2##No answer
 -1##Don´t know |

6) Importance of perseverance

| V18 | Important child qualities: Determination, perseverance | Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?:

 Determination and perseverance | 3 | | 1##Mentioned
 2##Not mentioned
 -5##DE: Inapplicable;RU: Inappropiate response{Inappropriate}
 -4##Not asked
 -3##Not applicable
 -2##No answer
 -1##Don´t know |

7) Importance of thrift

| V17 | Important child qualities: Thrift saving money and things | Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?: | 3 | | 1##Mentioned
 2##Not mentioned
 -5##DE: Inapplicable;RU: Inappropiate response{Inappropriate}
 -4##Not asked
 -3##Not applicable
 -2##No answer |

		Thrift, saving money and things			-1##Don´t know

8) Personal steadiness

V19	Important child qualities: Religious faith	Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?: Religious faith	3		1##Mentioned 2##Not mentioned -5##DE: Inapplicable;RU: Inappropiate response{Inappropriate} -4##Not asked -3##Not applicable -2##No answer -1##Don´t know

9) Importance of "face"

V49	One of my main goals in life has been to make my parents proud	For each of the following statements I read out, can you tell me how strongly you agree or disagree with each. Do you strongly agree, agree, disagree, or strongly disagree?: "One of my main goals in life has been to make my parents proud"	3		1##Agree strongly 2##Agree 3##Disagree 4##Strongly disagree -5##BH: Missing; AM,DE,SE: Inapplicable; RU: Inappropriate response{Inappropriate} -4##Not asked in survey -3##Not applicable -2##No answer -1##Don´t know

10) Respect for traditions

| V79 | Schwartz: Tradition is important to this person; to follow the customs handed down by one's religion or family | Now I will briefly describe some people. Using this card, would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you?:

"Tradition is important to this person; to follow the customs handed down by one's religion or family" | 3 | | 1##Very much like me
2##Like me
3##Somewhat like me
4##A little like me
5##Not like me
6##Not at all like me
-5##DE,SE:Inapplicable ; RU:Inappropriate response; Missing{Inapplicable}
-4##Not asked in survey
-3##Not applicable
-2##No answer
-1##Don´t know |

11) Reciprocation and Service to others

| V20 | Important child qualities: Unselfishness | Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?:

Unselfishness (* In Spanish "generosity") | 3 | | 1##Mentioned
2##Not mentioned
-5##DE: Inapplicable;RU: Inappropiate response{Inappropriate}
-4##Not asked
-3##Not applicable
-2##No answer
-1##Don´t know |

12) National pride

| V211 | How proud of nationality | How proud are you to be [Nationality]*?:

* [Substitute your own nationality] | 3 | | 1##Very proud
2##Quite proud
3##Not very proud
4##Not at all proud
5##I am not [nationality]
-5##DE,SE:Inapplicable ; RU:Inappropriate response; BH: Missing{Inappropriate}
-4##Not asked in survey
-3##Not applicable
-2##No answer
-1##Don´t know |

13) Future orientation

V81	Protecting environment vs. Economic growth	Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view?:	3		1##Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs 2##Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent 3##Other answer -5##DE,SE:Inapplicable ; RU:Inappropriate response; Missing{Inappropriate} -4##Not asked in survey -3##Not applicable -2##No answer -1##Don´t know
V182	Worries: Not being able to give one's children a good education	To what degree are you worried about the following situations? Not being able to give my children a good education	3		1##Very much 2##A great deal 3##Not much 4##Not at all -5##BH: Missing; Unknown{Inappropriate} -4##Not asked in survey -3##Not applicable -2##No answer -1##Don´t know

Appendix II: Statistical Settings and Details

Table II-1 KMO and Barlett's test shows the samples and suitable for factor analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.748
Bartlett's Test of Sphericity	Approx. Chi-Square	409.403
	df	78
	Sig.	.000

Table II-2 Four factors explain 71.73% of the variance

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.397	41.518	41.518	5.397	41.518	41.518	4.073	31.328	31.328
2	1.601	12.316	53.834	1.601	12.316	53.834	2.034	15.645	46.972
3	1.515	11.651	65.485	1.515	11.651	65.485	1.844	14.184	61.156
4	1.045	8.041	73.526	1.045	8.041	73.526	1.608	12.370	73.526
5	.850	6.537	80.063						
6	.568	4.373	84.436						
7	.490	3.773	88.209						
8	.412	3.166	91.375						
9	.330	2.542	93.917						
10	.295	2.269	96.186						
11	.238	1.827	98.013						
12	.153	1.176	99.189						
13	.105	.811	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot
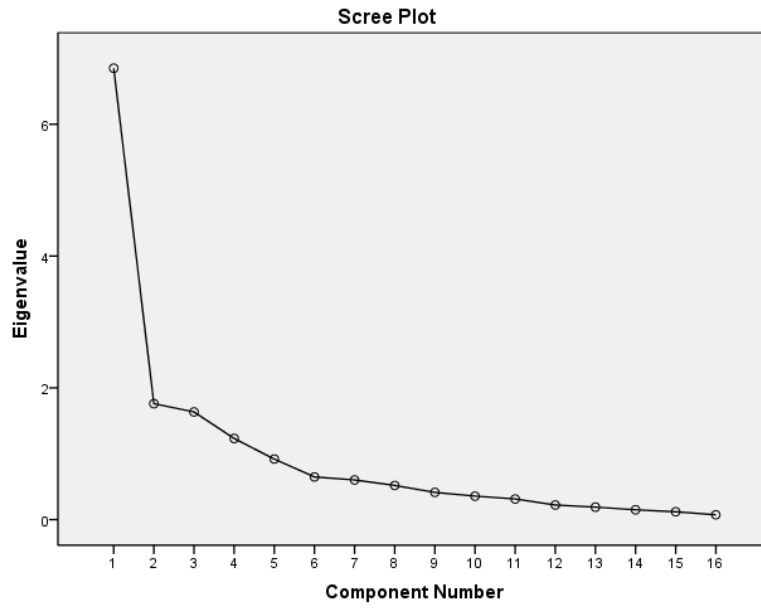
Table II-3 The factor loadings after varimax rotation

Rotated Component Matrix[a]

	Component			
	1	2	3	4
FreedomControl	.025	-.199	.352	.793
ToleranceNewidea	-.314	.332	-.763	-.049
TakingRisk	-.424	.048	-.568	.313
RespectAuthority	.580	-.421	.195	.286
ObeyRuler	.846	.017	.153	.107
ImpPerseverance	-.330	.776	.104	-.089
ImpThrift	-.165	.813	-.288	-.003
ImpReligiousFaith	.742	-.212	.283	-.200
ParentalProud	.898	-.197	.158	-.021
ImpTradition	-.823	.335	.032	-.028
ImpUnselfishness	.095	.481	.592	.249
NationalProud	.747	-.081	.404	.185
ProtectingEnv	.068	.083	-.199	.800

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

Table II-4 Correlation matrix of selected values

Correlation Matrix

		FreedomControl	ToleranceNewidea	TakingRisk	RespectAuthority	ObeyRuler	ImpPerseverance	ImpThrift	ImpReligiousFaith	ParentalProud	ImpTradition	ImpUnselfishness	NationalProud	ProtectingEnv
Correlation	FreedomControl	1.000	-.357	.010	.351	.152	-.185	-.158	.011	.128	-.130	.204	.335	.403
	ToleranceNewidea	-.357	1.000	.600	-.408	-.373	.245	.456	-.542	-.471	.416	-.216	-.469	-.007
	TakingRisk	.010	.600	1.000	-.213	-.405	.094	.193	-.403	-.493	.353	-.062	-.463	.138
	RespectAuthority	.351	-.408	-.213	1.000	.545	-.409	-.509	.502	.577	-.542	.060	.608	.083
	ObeyRuler	.152	-.373	-.405	.545	1.000	-.258	-.247	.536	.724	-.628	.204	.663	.068
	ImpPerseverance	-.185	.245	.094	-.409	-.258	1.000	.574	-.418	-.393	.514	.223	-.287	-.040
	ImpThrift	-.158	.456	.193	-.509	-.247	.574	1.000	-.309	-.373	.365	.096	-.344	.091
	ImpReligiousFaith	.011	-.542	-.403	.502	.536	-.418	-.309	1.000	.742	-.638	.155	.600	-.174
	ParentalProud	.128	-.471	-.493	.577	.724	-.393	-.373	.742	1.000	-.778	.047	.739	.014
	ImpTradition	-.130	.416	.353	-.542	-.628	.514	.365	-.638	-.778	1.000	.085	-.568	-.064
	ImpUnselfishness	.204	-.216	-.062	.060	.204	.223	.096	.155	.047	.085	1.000	.305	.045
	NationalProud	.335	-.469	-.463	.608	.663	-.287	-.344	.600	.739	-.568	.305	1.000	.038
	ProtectingEnv	.403	-.007	.138	.083	.068	-.040	.091	-.174	.014	-.064	.045	.038	1.000

		FreedomControl	ToleranceNewidea	TakingRisk	RespectAuthority	ObeyRuler	ImpPerseverance	ImpThrift	ImpReligiousFaith	ParentalProud	ImpTradition	ImpUnselfishness	NationalProud	ProtectingEnv
Sig. (1-tailed)	FreedomControl		.003	.470	.003	.123	.079	.114	.468	.166	.162	.059	.004	.001
	ToleranceNewidea	.003		.000	.001	.002	.030	.000	.000	.000	.000	.049	.000	.479
	TakingRisk	.470	.000		.051	.001	.238	.069	.001	.000	.003	.318	.000	.146
	RespectAuthority	.003	.001	.051		.000	.001	.000	.000	.000	.000	.324	.000	.265
	ObeyRuler	.123	.002	.001	.000		.023	.029	.000	.000	.000	.059	.000	.302
	ImpPerseverance	.079	.030	.238	.001	.023		.000	.000	.001	.000	.043	.013	.380
	ImpThrift	.114	.000	.069	.000	.029	.000		.008	.002	.002	.234	.004	.246
	ImpReligiousFaith	.468	.000	.001	.000	.000	.000	.008		.000	.000	.118	.000	.091
	ParentalProud	.166	.000	.000	.000	.000	.001	.002	.000		.000	.361	.000	.458
	ImpTradition	.162	.000	.003	.000	.000	.000	.002	.000	.000		.258	.000	.315
	ImpUnselfishness	.059	.049	.318	.324	.059	.043	.234	.118	.361	.258		.009	.365
	NationalProud	.004	.000	.000	.000	.000	.013	.004	.000	.000	.000	.009		.388
	ProtectingEnv	.001	.479	.146	.265	.302	.380	.246	.091	.458	.315	.365	.388	

Appendix III: Values of Michael Bond's Chinese Value Survey

1. *Xiao* — Filial piety
2. *Qinlao* — Industry
3. *Rongren* — Tolerance of others
4. *Suihe* — Harmony with others
5. *Qianxu* — Humbleness
6. *Zhongyu Shangsi* — Loyalty to superiors
7. *Liyi* — Observation of rites and social rituals
8. *Li Shang Wang Lai* — Reciprocation of greetings, favors, and gifts
9. *Rennai* — Kindness
10. *Xueshi* — Knowledge
11. *Tuanjie* — Solidarity with others
12. *Zhongyong Zhidao* — Moderation, following the middle way
13. *Xiuyang* — Self-cultivation
14. *Zun Bei You Xu* — Ordering relationships
15. *Zhengyigan* — Sense of righteousness
16. *En Wei Bing Shi* — Benevolent authority
17. *Bu Zhong Jingzheng* — Non-competitiveness
18. *Wenzhong* — Personal steadiness and stability
19. *Lianjie* — Resistance to corruption
20. *Aiguo* — Patriotism
21. *Chengken* — Sincerity
22. *Qinggao* — Keeping oneself disinterested and pure
23. *Jian* — Thrift
24. *Naili* — Persistence
25. *Naixin* — Patience
26. *Baoen yu Baochou* — Repayment of both the good or the evil
27. *Wenhua youyuegan* — A sense of cultural superiority
28. *Shiying huanjing* — Adaptability
29. *Xiaoxin* — Prudence
30. *Xinyong* — Trustworthiness
31. *Zhi chi* — Having a sense of shame
32. *You limao* — Courtesy
33. *An fen shou ji* — Contentedness with one's position in life
34. *Baoshou* — Being conservative
35. *Yao mianzi* — Protecting your 'face'
36. *Zhiji zhijiao* — A close, intimate friend
37. *Zhenjie* — Chastity in women
38. *Guayu* — Having few desires
39. *Zunjing chuantong* — Respect for tradition

40. Caifu	Wealth

Note: The original Chinese characters have been replaced with the Chinese pinyin spelling for the convenience of western readers.

Source: Based on The Chinese Culture Connection (1987: 147–8).