

The Bachelor Thesis

The Influence of Long Term Orientation on Entrepreneurial Decision Making Processes in China

ABSTRACT: This research focuses on the influence of long term orientation on entrepreneurial decision making processes in China. The Sarasvathy's effectuation theory (2001) and the Hofstede's (2001) five cultural dimensions framed the basic theoretical foundation for this study. This paper contribute on the study of cultural influence on entrepreneurial processes. The results suggest even there is not enough evidence to prove long term orientation significant influence Chinese student entrepreneurs on all dimensions of causal decision making tendency, but there is a surprising finding that long term orientation has significant influence on one dimensions named attitudes toward unexpected contingencies. So it is still meaningful for further deeply related study.

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1. Introduction

Entrepreneurship is one of the mainly factors to influence the growth and development of nowadays' socioeconomic. Entrepreneurship maximum incentive personal potential and significant influence national prosperity and competitiveness (Zahra, 1999). Entrepreneur offers a variety of goods and services to the consumers, provide millions of job opportunities to the citizen. Through control their firms, entrepreneur take economical or environmental responsibility to the society (Sarasvathy, 2008). However, there are so many different researchers to explain entrepreneurship. 'Entrepreneurship consist of the competitive behaviors that drive the market process.' Besides that, entrepreneurship should be based jointly on behavior and outcomes (Davidson, 2004, P110).

With the development of entrepreneurship, different countries have different levels of entrepreneurship. In 2014 Global Entrepreneurship Monitor Global Report, it separated variety of countries into 3 groups based on countries' economic development level. This paper's focused country-China is classified as Efficiency-driven Economies. Other three typical countries Japan, Netherlands and United States are classified as Innovation-driven Economies with strong entrepreneurial atmosphere (Singer, Amorós, & Arreola, 2014).

Here are the findings for these four selected countries based on the 2014 Global Entrepreneurship Monitor Global Report. The result showed China had the highest score in three elements for 'perspective of social values toward entrepreneurship'. Three elements are seeing entrepreneurship as 'A good career choice', 'High status to successful entrepreneurs' and 'Media attention for entrepreneurship'. This means the social values toward entrepreneurship had a strong power to incentive Chinese entrepreneurs. The result for another dimension 'Individual attributes in the GEM economies in 2014' showed Chinese entrepreneurs got the highest score in entrepreneurial intentions. This means to compare with other three Innovation-driven Economies' countries, Chinese entrepreneurs had more strong willingness to start their entrepreneurial road. In the perspective 'Motivation for early-stage entrepreneurial activity', Chinese entrepreneurs got highest score in Entrepreneurial activity and Necessity driven as well. This can be understood that Chinese entrepreneurs had more rigid demand to start their entrepreneurship (Singer, Amorós, & Arreola, 2014).

Just like this report, the results of Chinese entrepreneurs' data part bring us a new signal. It is nowadays Chinese entrepreneurial situation is different from our mind's inertia cognition. Based on that, although entrepreneurship be studied as an area of intellectual and academic over two hundred years (Morris, 1998), a specific research filed which only focus on Chinese entrepreneurship is still lacking (Aldrich & Baker, 1997). Above all, nowadays China's political and economic fields are continuing change. Innovative thinking, modernization, and individualism profound impact Chinese entrepreneurial

developing path. Because of that, the younger Chinese generation showing a stronger tendency to entrepreneurial spirit than the old generation (Sang M, 2014). What's more, the variable nature of entrepreneurship itself (Morris, 1998) combined with interdisciplinary nature of entrepreneurship (Low & Macmillan, 1988) offers the inspiration. It is further research can focus on different perspectives which have the possibility to influence the entrepreneurship. So based on Chinese entrepreneurs, especially nowadays' Chinese student entrepreneurs are lack of research attention. Other influencing Chinese student entrepreneurship's factors are interesting to be studied as well. A research about which factor will influence nowadays' Chinese student entrepreneurs' entrepreneurial behaviors naturally emergent.

So here is the structure for the first chapter. The first step for finally inference the research question should be the study of entrepreneurial process. Following that, the decision making should be significantly considered, because it is an important phrase within entrepreneurial process. Based on this inference from broad concept to detailed concept, the third step is to explain two main decision making methods called causation and effectuation. Next step is exploring the factors which will influence Chinese student entrepreneurs' decision making method chosen, so the broad concept named 'Culture' appear. After explaining the broad culture concept, the fifth step is detailed explaining Hofstede's 5 dimensions of national culture theory. After the explanation of these related topic's concepts, the gap between existing research and this paper's interested research topic will be expounded. Finally the research question will be naturally lead out and then be described. In order to make the reader not confused about the boundaries of first two parts, the subject of this paper's second chapter 'literature review', will closely relate to the research object 'Chinese student entrepreneurs'. So in the literature review part, only this paper's independent variable 'Long-term orientation in China' and dependent variable 'Causation and Effectuation in China' will be fully explained.

1.1 Entrepreneurial process

In order to further research which factor will influence nowadays' Chinese student entrepreneurs' entrepreneurial behaviors, entrepreneurial process should be considered at the first step. Because entrepreneurial process is the first manner to truly discover what entrepreneurs do and how they do it (Moroz & Hindle, 2011). It is also the foundations to understanding the entrepreneurs in a systematic and comprehensive way. It is who "do" and their motives for doing support how to start an entrepreneurship (Moroz & Hindle, 2011).

Follow this logic, the insight to mean this concept is 'entrepreneurial process involved all the functions, activities, and actions associated with opportunities and creation of organizations to pursue them.' (Bygrave & Hofer, 1991, P14). In order to make the entrepreneurial process more figurative to be perceived, Hisrich (2005) completed a

model to show how the entrepreneurial process can happen and what the entrepreneurial process truly are in the actual combat scene. There are four different important phrases in the actual entrepreneurial process. The scene begins with the forces to start the entrepreneurship, which can be described as the identification and evaluation of the opportunity; second phrase called development of the business plan, which is to clear the new company's vision, mission and strategy; the third implementation phrase for entrepreneurs to focus on is determination of the required resources; after the operation part is management part, which means final managing the resulting business venture (Hisrich et al. 2005).

As the entrepreneurial process present an eclectic set of activities that coherently connected (Moroz and Hindle, 2011), so none of these four phrases can single exist and making the entrepreneurial process working well without other phrases corporate. The entrepreneurial process be influenced by the external factors like environment. It also be strongly influenced by the internal factors like personal factors, sociological factors and organizational factors as well, especially the personal factors. Moroz and Hindle (2011) identified 32 models with regard to entrepreneurial processes from literatures, personal decision making becomes the focused stage.

1.2 Decision making

Decision making takes a predominant role for entrepreneurs during their entrepreneurial process (Moroz, 2012). Here, for the entrepreneurs who is involving in their entrepreneurial process, the decision making present like when to starting a new venture; deciding the leadership style; choosing vision and strategy; defining the market; meeting payroll; choosing when and how to financing; making product development; defining how to transforming this product into a profitable venture; deciding to hire or fire employees; choosing when to exist the market and other decisions in building a new venture around it (Dew, Read, Sarasvathy & Wiltbank, 2009).

In order to further explore the entrepreneurial decision making, a new term be defined as “effectuation”. This moment the ‘effectuation’ be placed in the temporal issues of the dynamic, change-based nature of entrepreneurship by considering the differences between parts of the entrepreneurial process (Sarasvathy, 2001). The Sarasvathy's Dynamic Model of Effectuation can be found in figure 1.

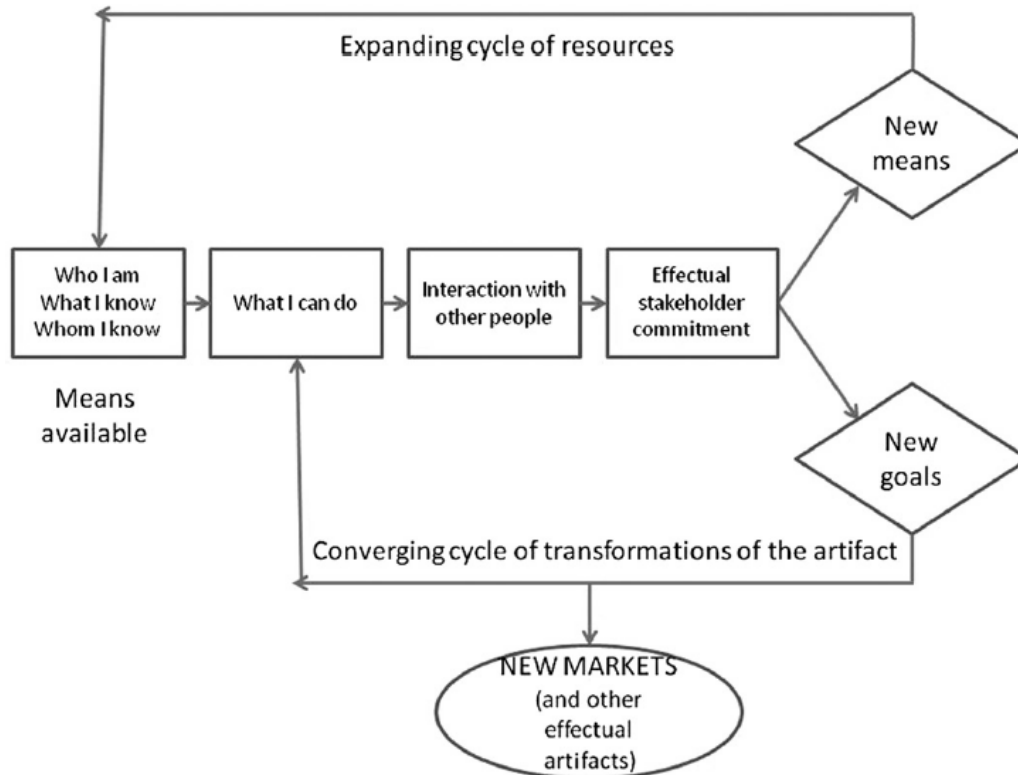


Figure 1. The Sarasvathy's Dynamic Model of Effectuation (Source: Sarasvathy, 2001, P101)

There is an opposite decision making approach named causation. In order to know the differences between effectuation and causation, there are 4 perspectives need to be considered. For problems perspective, causal problems are problems of decision while effectual problems are problems of design. For logic perspective, causal logics help to choose while effectual logics help to construct. For future perspective, causal strategies are useful when the future is predictable, goals are clear and the environment is independent of our actions; effectual strategies are useful when the future is unpredictable, goals are unclear and the environment is driven by human action (Sarasvathy, 2001). A simulation scenarios can be made for these two concepts, the causal actor will begin with an effect he wants to create and asks, 'What should I do to achieve this particular effect?', however on the other hand, the effectuator will begin with her means and asks, 'What can I do with these means?' And then again, 'What else can I do with them?' (Sarasvathy, 2001). Not only satisfied by these simple explains like 'the biggest differences between an effectual and a causal logic of action just like the differences between contrasting metaphors of a patchwork quilt and a jigsaw puzzle capture.' (Sarasvathy, 2001, P88), a detailed comparison between causation process and effectuation process is pressing demand. This detailed comparison table can be found in figure 2, the more detailed research relate to 'effectuation' and 'causation' in China will be illustrated in 2.1.

The 5 categories of differentiation in relation to causal logic and effectual logic:

Differentiation	Causal	Effectual
View of the future	Predictive logic of the future	Creative logic of the future
Basis for taking action	Goal-orientation	Means-orientation
View of risks and resources	Expected return	Affordable loss
Attitude toward outsiders	Competitive relationship	Use of alliances or partnerships
Attitude toward contingencies	Avoid contingencies	Leverage contingencies

Figure 2. The 5 categories of differentiation in relation to causal logic and effectual logic.
(Source: Sarasvathy, 2001, P290)

As Decision making takes the irreplaceable role for entrepreneur's entrepreneurial process. It can help entrepreneurs to become visionary to see further future; to more quickly and efficiently catching the profitable opportunities than others; and more handy to integrate key resources, key employees and key capitals to create a sustainable competitive advantage (Sarasvathy, 2001). Since knowing culture can make a strong influence on entrepreneurship profile's features all over the world (Ozgen, 2012), Culture becomes one of the most important factors which can influence entrepreneurs' decision making behaviors and attractive to be further researched (Moroz, 2012).

1.3 Culture

Culture is a complex whole which acquired by man as a member of society and includes morals, law, custom, belief, knowledge, art, and any other capabilities and habits (Tylor, 1871). Culture relate to all human fields, becomes more and more important to all human concern fields. Because in the end human beings will act as part of the ideologies, dogmas, myths, and undeveloped theories (Denzau & North, 1994). Therefore, it is very hard to consider entrepreneurship which is not influenced by all these customs, traditions and moral values generate culture (Güney & Nurmakhamatuly, 2007).

Since it was proved that the cognitive processes which included thinking method, world value, norms, personal attitudes and different kinds of behaviors externalization are all influenced by the culture, many studies shows that culture have a significant role on individual decision-making (Choi & Geistfeld, 2004).

For example, there are 32 models used to describe entrepreneurial processes which provide us an extensive overview. Within these scientific models there are 5 scholars mention 'culture' as a significant factor to influence entrepreneurial processes (Moroz,

2011). In Russell's static framework, he mentioned culture map which included creativity norms and value for innovation to make a strong effect on company's entrepreneurship. (Russell, 1999) Just like Russell's framework, Fayolle (2007), Gartner (1985), Ireland, Hitt, Sirmon (2003) and Covin, Selvin (1991) all mentioned that culture stand as an essential factor to influence the entrepreneurial process in their entrepreneurial framework.

Culture can be seen as norms and priorities' perspective (Sirmon & Lane, 2004), belief's perspective (Schooler, 1996), while Hofstede see culture as values' perspective (Hofstede, 1980). Based on that, culture should exist in different levels which logic like: national, organizational, company and personal culture (Hofstede, 2001). Since nations are the best represented culture level (Hofstede, 2001; Trompenaars, 1994), different national level culture studies should be carried out.

The first study should be considered is Hofstede's world famous work '5 national culture dimensions' which remains the dominant model for research on national culture (Venaik & Brewer, 2010). Hofstede developed 5 dimensions to measure national culture through survey instruments by obtaining average values for a particular group of people (Venaik & Brewer, 2010). The dimensions he identified are Power Distance, Uncertainty Avoidance, Individualism, Masculinity and Long Term Orientation (Hofstede, 2001). Another world famous study called The GLOBE study (House et al., 2004) was implemented in the mid 1990's which was designed to replicate and expand on Hofstede's (1980) work and to test various hypotheses that had been developed in particular on leadership topics (Venaik & Brewer, 2008). Just like Hofstede's study, THE GLOBE study develops national culture into nine dimensions which are consist of Performance Orientation, Future Orientation, Gender Egalitarianism, Assertiveness, Institutional Collectivism, In-Group Collectivism, Power Distance, Humane Orientation and Uncertainty Avoidance (House et al., 2004).

Hofstede's contribution on culture showed a very high level of generalization (Chapman, 1997). Because Hofstede's study spend two decades to collect the respondents' cultural attributes. His survey consisted a big amount of employees of IBM who comes from more than 70 countries and born from 1967 to 1973 (Venaik & Brewer, 2008). What's more, not like The GLOBE study's less criticized, Hofstede himself provides several critical reviews to validate his data and keep updating and expanding his data base until 2001. The most famous critical issues are come from McSweeney (2002) and Baskerville (2005). Because of that Hofstede argues that the GLOBE study is focus too much on the US which fails to capture what is intended through the questionnaire. What's more, THE GLOBE study test 18 dimensions in total which are unnecessary (Venaik & Brewer,

2008). Based on these reasons, this paper will use the Hofstede's five national cultural dimensions to continue further coming study.

1. 4 Hofstede dimensions of national culture

Hofstede's 5 national culture dimensions is the most comprehensive study in terms of the national cultures (Smith et al., 1996). Hofstede appointed indexes on researched 70 nations by creating these five dimensions, and linked the dimensions with demographic, geographic, economic, and political aspects of a society (Kale & Barnes, 1992). In this way, his work can be stated as the most valuable one which unmatched by other frameworks.

In Hofstede's define, the first culture dimension to define national culture difference named power distance index. (PDI) It should be understood in this way: "Power distance is the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally." (Hofstede, & Minkov, 2010, P60). Based on this definition, in low power distance culture's country, the hierarchy among people which from different levels are inequalities established for convenience; decentralization is comparable popular; the relationships among each other are pragmatic and the status symbols are frowned upon. While on the other hand, in high power distance country, the hierarchy among people which from different levels are reflect existential inequalities; centralization is comparable popular; the relationships among each other are emotional; and the status symbols are popular and expected (Hofstede, 2001).

The second national cultural dimension named Individualism (IDV) vs. Collectivism which be defined by Hofstede as "The degree to which individuals are integrated into groups." (Hofstede & Minkov, 2010, P90). To make it easier to understand, in collectivism tendency countries, people tend to feel himself more like part of a shared group and pursue that group's interest; the link between each other are moral, like a family link; because of that the mobility is lower; and the most important factor is relationship prevails over task. While on the other hand, in Individualism tendency countries, people tend to feel himself more like 'rational agents' who can compete against each other; the link between each other are natural or strictly contractual; because of that the mobility is higher; and the most important factor is task prevails over relationship (Hofstede, 2001).

The third national cultural dimension named Masculinity vs. Femininity which be defined by Hofstede as "The distribution of emotional roles between the genders." (Hofstede & Minkov, 2010, P138). In this way, in masculine culture societies there should be a sharp distinction in gender roles. Men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned

with the quality of life. While on the other hand, in feminine culture societies when gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life (Hofstede, 2001).

The forth national cultural dimension named Uncertainty avoidance index (UAI) which be defined by Hofstede as: "a society's tolerance for uncertainty and ambiguity." (Hofstede & Minkov, 2010, P189). In low UAI culture countries there should be no more rules than strictly necessary; based on that the whole society's tolerance level for ambiguity and chaos are relative high; and the motivation are more come from achievement and esteem or belonging. While on the other hand, in high UAI culture countries, there should be more emotional need for rules, precision and formalization; because of that the whole society's tolerance level for ambiguity and chaos are relative low; and the motivation are more come from security and esteem or belonging (Hofstede, 2001).

The last national cultural dimension named Long-term orientation (LTO) which come from the updating data base especially from the Chinese respondents who strongly influenced by Confucianism for a long time. Long-term orientation (LTO) put the dimension called 'time' into the culture which 'describes the time orientation of a culture. Long-term oriented cultures are more concerned with the future, while short-term oriented cultures tend to put more emphasis on the present and the past.' (Hofstede & Minkov, 2010, P236).

Even Hofstede's work received both ardent praise and strongly criticize at the same time, but it is undeniable that his work deserved to be seen as the beginnings of the foundation that could help scientific theory building in cross-cultural research (Sekaran, 1983, P69).

In Hofstede's study, he scored every researched countries on a range of 0 to 100 per dimension to make sure it is apparent to see the cultural differences among different countries (Hofstede, 2001). In this way, Cultural characteristics of each country is obviously to see, especially by contrasting two different countries' culture, the unique nature for the focused country's culture will be particularly significant to reflect. In order to explore the Chinese culture characteristic, here a histogram include scores for China and The USA are displayed in Figure 3.

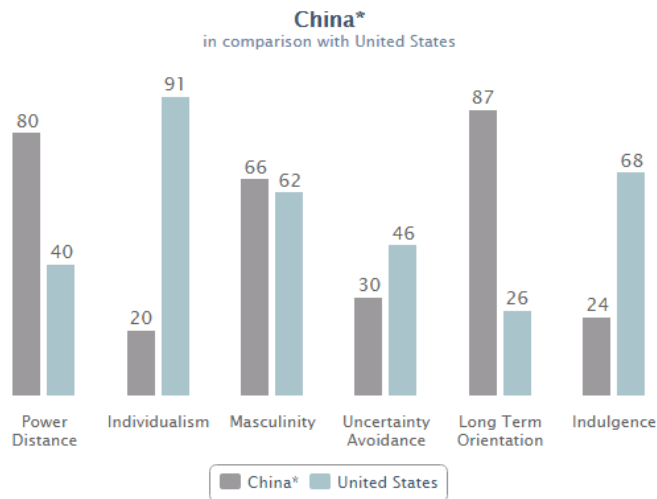


Figure 3: Score on dimensions for both China and The USA Hofstede (2001)

Based on figure 3, it is clearly to see Chinese culture presents distinctive features which are different from The USA's culture. The top three dimensions relate to the biggest difference between these two countries are: Individualism, Long term orientation and Power distance. This three dimensions can be seen as the most prominent three characteristics for Chinese culture as well. For the detailed Chinese culture characteristics for the focused dimension will be illustrated in 2.1.

1.5 Gap

Along with the development of Chinese economy in recent years, the situation of Chinese business enterprise has changed correspondingly. In the last two decades, China's economy has grown at a highly speed which surprised even the most optimistic foreign observers (Tan, 2006). Especially after joining in the World Trade Organization (WTO) in 2001, China has gradually issued a set of programs and measures which provide the conditions to liberalize the economy (Tan, 2006). Not only a plenty of policies to encourage investment promotion from overseas, but also a big amount policies to encourage self-entrepreneurship. These peripheral changes have led to more domestic and international competition/cooperation (Tan & Litschert, 1994). As well as to the emergence of more flexible, self-financed, technology-based firms (Tan, 2006). Fellow this 'national entrepreneurship' tide, Chinese private entrepreneurs move in quickly and fill the niche (Tan, 1996). Meanwhile, the small size and simple structure pre-positioned Chinese entrepreneurs have its natural advantages to surprising the economy. For example reacting quickly to opportunities in the environment or using new strategy to win over established competitors (Tan & Litschert, 1994).

In the beginning of this paper, the research proved there is a reality that Chinese younger generation, are developing an entrepreneurial spirit characterized by innovative thinking,

modernization, and individualism (Lee, 2014). Even Chinese young generation entrepreneurs created a new era for Chinese nowadays economic development (Tan, 2006), however there are only very few literature to focus the research topic on Chinese young generation entrepreneurs' entrepreneurial behavior. Based on that, the far-reaching transition in Chinese young entrepreneurs' entrepreneurship will continue to offer fascinating opportunities to refine existing theories and to build new research (Tan, 2006).

Just like this thesis' clear previous exposition, there are different scholars' studies proved decision making takes a predominant role for entrepreneurs during their entrepreneurial process (Saravathy, 2001). While on the other side of the model is Culture, it becomes one of the most important factors to influence entrepreneurs' decision making behaviors and attractive to be further researched (Moroz, 2012). Follow this logic, the thesis attempt to research the topic is ready to come out, that is: Does Chinese cultural dimension have an influence on the Chinese student entrepreneurs for choosing either causal or effectual business decision model?

As stated in the earlier part of this paper, there is a relationship between national cultural dimensions and entrepreneurship. To focus on Hofstede's (1980, 2001) culture research, the theory recognized culture into six dimensions – power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity, long-term vs. short-term orientation, and indulgence vs. restraint (Hofstede & Minkov, 2010); the first four dimensions are frequently studied in the literature on entrepreneurship while the last two dimensions need to be further researched in the same field (Hayton et al., 2002). However, be elaborated in this thesis' previous culture part, long term orientation dimension is one of the most significant national culture especially for China. Long term orientation inspire the Hofstede from Chinese Confucius theory (Hofstede & Minkov, 2010). This special cultural dimension have the big possibility to make effect on Chinese young generations entrepreneurs' decision making behavior.

Based on all of the previous exploration and explanation, the research question be developed as: **“Does Chinese long term orientation cultural dimension have a significant influence on the Chinese student entrepreneurs for choosing either causal or effectual business decision model?”**

The logic of this thesis will be shown as follows: First should be the theoretical framework which provided for Chinese long term orientation and Chinese entrepreneurs' effectuation and causation. Second should be 4 hypotheses for this research which illustrate the relationship between Chinese long term orientation and causal or effectual business decision model. Later on the framework for this thesis's 4 hypotheses will be shown. Thirdly the method of operationalization and execution of the research will be

described. In forth part, the paper will discuss the data analysis' findings. The fifth part will be discussion and conclusions based on the results, and the final part is limitations and further research suggestions.

2. Literature Framework

2.1 Long-term orientation in China

Long-term orientation 'stands for the fostering of virtues oriented towards future rewards, in particular perseverance and thrift.' (Hofstede, 2001, P359). As the fifth expanded cultural dimension for the first four (Bond, 1987), long term orientation stand for a range of Confucian values. It termed Confucian Dynamism which came from the study of 23 countries using the Chinese Value Survey as well (Chinese Culture Connection, 1987). In this way, 'LTO has roots in Confucian values concerning time, tradition, perseverance, saving for the future, and allowing others to "save face."' (Bearden, Money, & Nevins, 2006, P457). Following the study progress, the forward-looking versus present- and past-looking attribute was the firstly conceptualized for this dimension. Later this dimension developed in a more suitable define as the long-versus short-term designation (Hofstede, 1991).

Based on Hofstede's empirical research, the score embody national culture characteristics in somewhat. After the data collection, if the country get low score on this dimension, it means this country prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. On the other hand if the country get higher score means the countries' culture tend to be more pragmatic, it encourages thrift, diligent and self-discipline as a way to prepare for the future (Hofstede, 2001).

The Hofstede empirical research result showed China get scores 87 in this dimension, which means it is a very pragmatic culture (Hofstede, 2001). China followed a 'pragmatism' principle for a long time in order to balance the reform's pace and keep social stability (Lin, 1998; Tan, 2005). What's more, due to sensitive political and social considerations, institutional reforms have been non-linear, often displaying a mix of progress and regression.' (Nee, 1992; Nolan, 1995, P251). The power of 'pragmatism' add the power of traditional Chinese values' root -- Confucianism, which can be defined as 'a sense of order, of vertical and horizontal relationships, of obligation to the group, a preference for harmony and cooperation in interpersonal relationships.' (Gao & Schachler, 2003, P44). Based on that, it is very hard for Chinese culture not tend to high level in this long term orientation dimension.

2.2 Causation and Effectuation in China

The word "causal" always be seen as the opposite side of the word "effectual". Causation begin with rationality and the pre-determined goal. In order to constantly achieve the

given goal, a given set of optimal means should be considered and remain the same all along (Sarasvathy, 2001). On the other side of the coin, effectuation start without the specific clear goal, instead, it believes every purposes will keep on changing in a contingently environment which different things can happen at any time. So effectuation begins with a given set of means which come from related people's diverse aspirations and different kinds of imagination (Sarasvathy, 2001). Based on the result of Sarasvathy's research, effectual process is the entrepreneurship's decision making way in real life (Sarasvathy, 2001). Figure 4 showed the differences between causal reasoning and effectual reasoning.

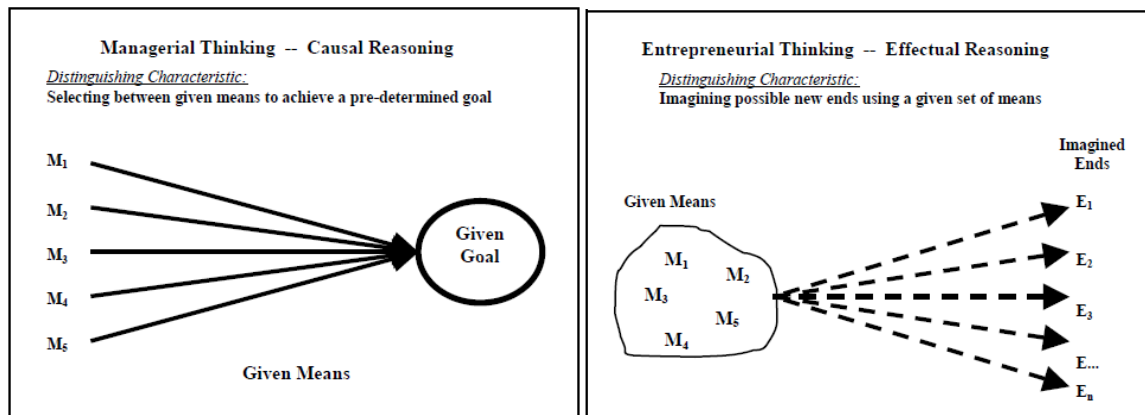


Figure 4. The differences between causal reasoning and effectual reasoning. (Sarasvathy, 2001, P3)

There are several distinct features in Chinese tradition culture which will influence individual's entrepreneurial decision making method chosen. There named personal steadiness, respect for tradition and avoid risk-taking (Hofstede, 2001). In Chinese culture, steadiness be recognized as prudent, reliable, and trustworthy. Another similar but different concept named 'Persistence' defined as an attitude relate to never ending commitment to achieving given goals through one's strong and persistent determination (Hofstede & Bond, 1988). After the research, Hofstede clearly claimed that China's high levels of personal steadiness and persistence will have negative effect on individual entrepreneurial decision making method chosen (Hofstede and Bond, 1988).

The first way to distinguish Chinese student entrepreneurs tend to causation or effectuation is creative thinking. Causal reasoning have relative low motivation to involve in creative thinking than effectual reasoning (Sarasvathy, 2001). While both causal and effectual reasoning need specific-fied skills and training, effectual reasoning still call on something more – no hiding imagination, risk-taking, and inherently creative ability (Sarasvathy, 2001). However in China, the value of respect for tradition emphasizes to honor the customs, suppression of imagination and not take adventurous practices (Schwartz & Sagiv, 1995). The value also show low preference tendency toward significant changes' to avoid uncertainties (Oh, 1992).

Another dimension to guiding distinguish china tend to causation or effectuation is using the first principle for effectual reasoning. Causal reasoning focuses on achieving expected return by planning the cost to invest, while effectual reasoning emphasizes try to take risk to invest the cost as long as the result is affordable to loss (Sarasvathy, 2001). However, thrift is one of Hofstede's three Chinese culture characteristics, the value thrift is a Confucian work virtue that encourages frugality (Lim & Lay, 2003). This statement is indicative of a preference for a cost-conscious approach to run a business in the business context (Browaeys & Price, 2008).

Based on the literature review, as reflected by staying steadiness, avoiding risks, being resistant to take initiative actions, and rejecting to change, China tend to show a strong causal reasoning by using the managerial thinking way.

2.3 Hypothesis

2.3.1 Long term orientation and View of the future

The Long term orientation as it defined means 'how every society has to maintain some links with its own past while dealing with the challenges of the present and future.' (Hofstede & Minkov, 2010, P236). While for the country which has strong tendency to long term orientation means this society prefer to compromise the present and predict the future in order to gain long term benefits (Hofstede, 2001). Logically, the first differently dimension between causation and effectuation named View of the future. It means for Causal frame, people tend to predict the future instead of Effectual frame's creating the future.

Follow this way, Causal logic frames the future as a continuation of the past, no matter in which situation, accurate prediction is the factor which should be firstly considered (Sarasvathy, 2001). On the opposite, Effectuation shaped the future and treat it in the particular way. In effectuation's perspective, prediction is useless and unparticular. In short, the core difference between Causal logic and Effectual logic to predict the future is 'Causal reasoning is based on the logic, to the extent that we can predict the future, we can control it. Effectual reasoning, however, is based on the logic, to the extent that we can control the future, we do not need to predict it.' (Sarasvathy, 2001, P6).

Along this path, one characteristic which represent under Chinese long term orientation is Chinese steadiness and respect for tradition. In Hofstede's point of view, there appears to be an inverse relationship between personal steadiness and respect for tradition on one hand and risk-taking on the other (Hofstede, 2001). The strong values of personal steadiness and respect for tradition emphasize decision-makers to predict the future step by step. So the situation can keep on growing in a stability and accountability way (Fang, 2003). The decision-makers' stability tendency is likely to discourage their willingness to

bear more operational risks to get this moments' benefits. However, this kind of decision-maker prefer to predict the future to gain long term support (Ji & Dimitratos, 2013).

Follow this logic, Chinese high level of long-term orientation should influence Chinese student entrepreneurs tend to choose predicting the future instead of shaping the future when they need to make the decisions relate to 'view of future'.

Hypothesis 1: Chinese long-term orientation will significant influence the Chinese student entrepreneurs to predicting the future.

2.3.2 Long term orientation and Basis for taking action

The second differently dimension between causation and effectuation related to 'basis for taking action'. The differences between causation and effectuation in one words through this dimension is causal reasoning focuses on goal, effectual reasoning emphasizes means (Sarasvathy, 2001). This means in causal frame everything start with a pre-determined goal or sub-goals. It is goals which determine actions through the entrepreneurial process. Based on that entrepreneurs will seek to find the optimal solutions to achieve the given goal in the most suitable way (Sarasvathy, 2001). While for effectual reasoning, goals managed by the imagining actions based on given means instead of beginning with a specific goal. What's more, means be allowed to change over time from the dynamic situation and entrepreneurs' dynamic mind (Sarasvathy, 2001).

For culture part, China be proved to get a relative high score on long term orientation, it means the value of persistence in China focuses more on long-term gains than short-term gains. This kind of long term gains based on the step by step plans, Confucian especially emphasized the importance of thinking before taking actions, prepare for the future and making specific goals before starting a new task (Hofstede & Bond, 1988; Jaw et al., 2007; Wah, 2001). Accordingly, in a business context, the long term orientation mainly underline the persistence value focus more on future market positions rather than immediate returns (Browaeys & Price, 2008).

In this way, Chinese long-term orientation should influence Chinese student entrepreneurs tend to choose Goal-oriented rather than Mean-oriented when they need to make the decisions which relate to 'basis for taking action'.

Hypothesis 2: Chinese long-term orientation will significant influence the Chinese student entrepreneurs to focus on goal-orientation.

2.3.3 Long term orientation and Predisposition toward risk/ resources

The third differently dimension between causation and effectuation related to 'Predisposition toward risk and resources'. The differences between causation and

effectuation in one words through this dimension can be causal reasoning focuses on expected return while effectual reasoning emphasizes affordable loss (Sarasvathy, 2001). When using causation process, it suggested the entrepreneurs not lose control on the risk when gaining the maximum opportunity. Try to adjust risk and use affordable resource to acquire the most efficient outcomes is the wise way (Sarasvathy, 2001). While to focus on the effectuation processes, entrepreneurs should attempt to satisfy their aspiration by using the resources as rich as possible until they cannot afford to lose. No matter in which situation, immediate disposal can ensure not miss any potential opportunities is the most important thing (Ji & Dimitratos, 2013).

As Hofstede mentioned, one Chinese culture characteristic called ‘thrift’ influence the cultural dimension tend to high level long term orientation. The value of thrift come from the traditional Confucian virtue, it encourages the society’s frugality. The influence of thrift in Chinese culture is strong and long-lasting until today (Lim & Lay, 2003). In a business context, this predisposition toward risk and resource illustrate a preference for a cost-conscious approach during the entrepreneurial process (Browaeys & Price, 2008). In truly business world, most Chinese private firms prefer resource saving and cost control. What’s more, this factor will influence the entrepreneurs’ decision making behavior tend to a strongly avoid risk way (Morck et al., 2008). Consequently, there is an inverse relationship between thrift, resource commitment and decision making (Ji & Dimitratos, 2013).

Follow this logic, Chinese long-term orientation should influence Chinese student entrepreneurs tend to choose expected return rather than affordable loss when they need to make the decisions which relate to ‘Predisposition toward risk and resources’.

Hypothesis 3: Chinese long-term orientation will significant influence the Chinese student entrepreneurs to choose expected return.

2.3.4 Long term orientation and Attitudes toward unexpected contingencies

The forth differently dimension between causation and effectuation related to ‘attitudes toward unexpected contingencies’ is the third principle of effectual reasoning. It is also the heart of entrepreneurial decision making method, which means the power to transfer unexpected opportunity to the profitable result (Sarasvathy, 2001). One sentence to distinguish this dimension can be causal reasoning urges the exploitation of pre-existing knowledge and prediction, while effectual reasoning stresses the leveraging of contingencies (Sarasvathy, 2001). In causal point of view, unexpected contingencies should be avoided by detailed planning, careful predictions and accurate focus on targets. However in effectual point of view, successful entrepreneurial firms are outcomes of the leveraged contingencies. Beyond the serious goal and plan, imaginative rethinking of potential possibilities make more sense in real business world, because targets are

continual transformations. Knowing how to take advantage of environmental contingencies is the most useful way (Sarasvathy, 2001).

However, Persistence is one characteristics of Chinese culture. View in this way, the value of persistence stresses the patience of Chinese private firms for improving their entrepreneurial ability through avoiding risks and continuous efforts in the long run (Hofstede, 2001). According to that, decision-makers are likely to choose a detailed logically pattern to gain incrementally because of believing the strong persistence values (Browaeys & Price, 2008). In doing so, Chinese entrepreneurs are likely to prioritize less profitable entrepreneurial activities rather than more dynamic expansion activities. Try to get benefits from dynamic contingencies just like the word ‘ambition’ is not the correct way to practice Confucius’ humanism and ethical value (Ji& Dimitratos, 2013). This entrepreneurial behavior is different from effectual logic which can effective run in settings characterized by greater levels of uncertainty (Sarasvathy, 2001). Overall, there appears to be an inverse relationship between persistence and the level of uncertainty.

Follow this logic, Chinese long-term orientation should influence Chinese student entrepreneurs prefer avoiding rather than leveraging unexpected contingencies when they need to make the decisions which relate to ‘Attitudes toward unexpected contingencies’.

Hypothesis 4: Chinese long-term orientation will significant influence the Chinese student entrepreneurs to avoiding unexpected contingencies.

2.3.5 The model

Figure 5 is the model to virtually elaborate the relationship between Chinese long-term orientation and decision making logic which include four hypothesis as well.

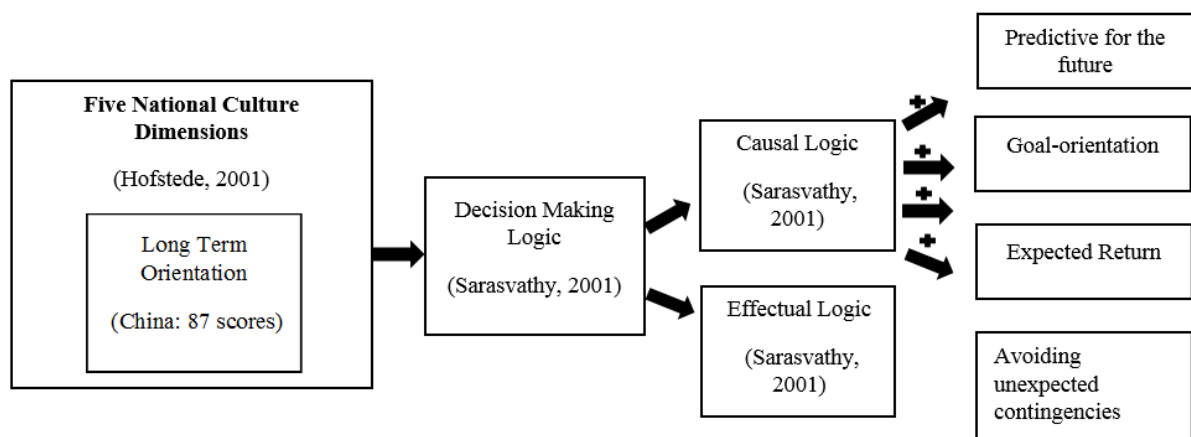


Figure 5: the relationship between Chinese long-term orientation and decision making logic.

3. Methodology

3.1 Sample

The units of analysis for this study are “Chinese student entrepreneurs”. Student entrepreneurs means within the college students who has the desire to start the entrepreneurship. This group of students are sensitive to finding opportunities, integrate various resources to independently participate in creating new business, new product or offer new service. Through a series of business activities, student entrepreneurs ultimately achieve its business purpose. In the process of Chinese entrepreneurship, college students are a strong force in the business of the army. In today's social and economic situation in China, student entrepreneurs will face more market opportunities to compare to the past.

It is not an easy thing to find another country's student entrepreneurs to participate in the student entrepreneurs' research. However during the author's 2015 summer internship experience in Beijing China, the author met a group of Chinese students' entrepreneurs who come from different cities, with different family and knowledge backgrounds, bring different entrepreneurial interests and motivations, and devote for different fields of entrepreneurship. In such a group of student entrepreneurs, the author chose 10 Chinese student entrepreneurs to take part in, so there are 10 protocols in total. All of them are university students, while 6 of them are male and the other 4 are female. Different from the previous research, the majority of the selected student entrepreneurs were born between 1985 and 1995, which means the new-90s generation in China, they are the youngest force to rise in the students' entrepreneurial community at present.

Based on the research require at the minimum of 20 subjects to maintain the research reliability, there are other 50 data used for this paper which was collected by Shao Chen and Anni Chen. They are two former Chinese master students who studied at the University of Twente and collected 50 data for their related master research. The supervisor gave author the authorization to use and analysis those 50 data, because of that, the smooth progress of the paper cannot be separated from the data collectors' support and contribution. As reliability is the quality of the measurement method (Babbie, 2007). Based on that, it is necessary to check whether the 50 data which collected by Shao Chen and Anni Chen is reliable or not. According to Chenlu Shao and Lelin Rao's work, (Shao, 2015) the Cohen's kappa test be used to check 50 data's inter-rater reliability, the result showed there is a substantial agreement between two coders for the same set of data. The computed Kappa was above 0.7, so using these 50 collected data got validly provident.

Based on that, there are 60 collected data in total, which resulted in an upgraded version of the database. Within these 60 Chinese student entrepreneurs, 38 entrepreneurs are male while 22 entrepreneurs are female, and 59 of them are university students. The majority of the population was born between 1980 and 1995, which consist of a new group generation in china called the new-80s90s generation.

3.2 Data Collection methods

3.2.1 The case

The case used to identify the Chinese students' entrepreneurial decision-making tendency in this paper is concentrate on every steps of starting up a new company. The case has been designed by Martin Stienstra and Rainer Harms (2012) as part of the EPICC Project. The original research content and research ideas are come from Sarasvathy's decision making logic framework (2008). At the beginning of case, the student entrepreneurs were asked to use creative imagination to put themselves in the role of the lead entrepreneur in building a campus coffee corner. There are two backgrounds for the respondents, one is limited start-up money, and the other is five years related working experience. After discussed with Mr. Martin, it is more suitable to change coffee corner into milk tea corner for Chinese respondents. Because milk tea is more popular in China and milk tea corner is more common in China, so that Chinese student entrepreneurs can be more convenience to respond based on their daily experience. After that, the student entrepreneurs asked to answer ten decision problems which react ten phases in a completed entrepreneurial process step by step. These ten decision problems begin with identifying the market; later is based on the market research to re-identifying the market; next one is how to meeting payroll; forth decision is relate to different options to financing; fifth decision is concern about company's leadership and vision; sixth decision is relate to product re-development; seventh decision is about growing the company when it develop into a new stage; eighth decision concentrate on hiring professional management; ninth decision is about developing the goodwill and the final decision is relate to how to exit the market.

The detailed ten decision problems had deeply meaning behind each one, which means every Chinese student entrepreneurs' responds can be decoded to the related Sarasvathy's (2008) decision-making logic. Based on that the tendency about causal or effectual decision-making logic for each respondents is clear to research as well.

3.2.2 The think aloud method

Think aloud is an effective method for collecting, interpreting and analyzing the protocols by asking respondents to think about problem-solving as precise as possible. It is used as the theoretical foundation for data analysis (Ericsson, 1993). By using this method, the respondents are asked to think and speak out their thinking process then

answer the related problem-solving questions one by one, as much as possible. Even some of them do not have an available answer immediately. Thinking aloud during problem solving not only means speak as detail as possible but also means encourage the subject to keep on talking, speak out their opinion whenever thoughts come to mind. Based on that, the think aloud method can capture all respondents' thoughts even when the subject remains silent for a while (Somerén, Barnard, & Sandberg, 1994).

After the interview part, the research already recorded all the participants' answers by using audio-tape, the process of execution come follow it. In the process of execution, the researcher will begin with transcribe the interviews, and the transcription should be done exactly the same as what the entrepreneurs say (Somerén, Barnard, & Sandberg, 1994). In other words, as Mr. Martin pointed out, to transcript as precise as possible means euh's and ah's should also be included; when an entrepreneur pauses, the researchers can use "....."; when participants read the case out loud, the researchers can use {CASE} in the transcript to make it clear. So the only role for researcher is to keep Chinese student entrepreneurs talking. Researcher is not allowed to answer any questions from participants, if something is unclear on the audio-tape, researcher should type 'unclear' instead of replacing the respondents to answer (Somerén, Barnard, & Sandberg, 1994).

Based on that, Think Aloud Method is a good way to help researchers to directly acquire the respondents' background, thinking process and problem solving methods so that can finally contribute on the subjects' cognitive thinking patterns (Ericsson, 1993).

3.3 National culture of China

As described earlier in this paper, Hofstede scored China for long-term orientation dimension at 87 in a scale from 0 to 100, which illustrate a relative high long-term orientation index (Hofstede, 2001). Besides it, China scores 87 means it is a very pragmatic culture and present some typical cultural characteristics like compromise present for the future; avoid risk; goal oriented; using the resources according to plan and avoid contingencies. All of these characteristics point out that it is not a very entrepreneurial culture. However some research showed to focus on long term orientation, the result of statistic cannot prove there is a significant difference between Chinese and American entrepreneurs, which is different from Hofstede's research (Tan, 2002). This difference reminds that entrepreneurs might have different scores than the overall population of a culture. Based on that, it is necessary to use the refreshing 60 data to see nowadays Chinese student entrepreneurs' score. It will be valuable if the result present there is a difference between the overall population of China and Chinese student entrepreneurs regarding the long term orientation.

3.4 The VSM 08 Survey

VSM 08 survey means the values survey module which designed by Hofstede to analysis each country's cultural level in related five cultural dimensions (2008).

This survey require at least 20 respondents to participate to make sure the survey's reliability. Within VSM 08 survey, there are 34 questions in total to test national cultures. The first six questions are contribute on participants' background information, like the gender, age, educational level, employment, present nationality, and so on. (Hofstede & Vinken, Values Survey Module 2008 Manual). The other 28 questions are separate into 7 clusters which relate to Hofstede's 7 culture dimensions and each clusters had 4 related cultural content questions. Here this paper only focus on the long term orientation, which belongs to Hofstede's earlier measured 5 national culture dimensions (2008). The other two cluster questions are relate to Michael Minkov's study (2007).

Based on the VSM 08 manual, LTO refers to the long term orientation index, and the formula to calculate is:

$$LTO = 40(m18 - m15) + 25(m28 - m25) + C (ls)$$

The scores for VSM 08 manual range from 1 to 5, here m18, m15, m28, m25 all means the mean score for question 18, 15, 28 and 25. C (ls) is a constant (positive or negative) that depends on the nature of the samples which had no influence on the comparison between countries, here the score for C (ls) is 0. (Hofstede, & Vinken, Values Survey Module 2008 Manual). The total score for this index is 100 points, and the range is from 0 to 100.

Based on the refreshing 60 data base, m18=3.05, m15=1.80, m28=2.07, m25=2.08, so the calculated VSM score for the refreshing 60 data set is 49.58, which shows a medium level of LTO. In this way, the independent variable is a fixed value at 49.8 which can be seen as a random variable. While the dependent variable of this research is 60 samples' individual level score for 7 dimensions of causation, which can be seen as ordinary variable. However, there is no correlation between ordinary and random variables (Field, 2009). Because in order to test the significant relationship between Chinese long term orientation (LTO) and causation, the correlation coefficient test should be used. But the prerequisite to using the correlation coefficient test is both independent and dependent variables should be random and none of them can be fixed value.

In order to solve this statistic problem, the researcher discussed with Dr. Harry van der Kaap, who is an assistant professor at the department of Political Science and Research Methods (POLMT) at the University of Twente. Based on the characteristics of variable, Dr. Harry suggested the researcher to separate the 60 samples into 3 groups, each group have 20 samples. Because the minimum accepted sample size for using this method is 20, the researcher can split the 60 samples into 3 groups from the low level of LTO scores

through medium level of LTO scores to the high level of LTO scores. In this way, on one hand the data follow all the Hofstede's requirements for using VSM 08 to get the national level score, the minimum sample size is 20; on the other hand the 60 sample separated into 3 groups which changed the independent variable from the ordinary variable to random variable.

In this way, after calculation the LTO score for the first group is:

$$\text{LTO} = 40(m_{18} - m_{15}) + 25(m_{28} - m_{25}), m_{18}=1.75, m_{15}=2.4, m_{28}=1.85, m_{25}=2.25.$$
$$\text{LTO}=-36.$$

The LTO score for the second group is:

$$\text{LTO} = 40(m_{18} - m_{15}) + 25(m_{28} - m_{25}), m_{18}=2.75, m_{15}=1.7, m_{28}=2.1, m_{25}=2.2.$$
$$\text{LTO}=39.5.$$

The LTO score for the third group is:

$$\text{LTO} = 40(m_{18} - m_{15}) + 25(m_{28} - m_{25}), m_{18}=4.1, m_{15}=1.3, m_{28}=2.25, m_{25}=1.8.$$
$$\text{LTO}=123.25.$$

So based on VSM 08 survey's requirements, Chinese long term orientation (LTO) showing three different levels, which are -36, 39.5 and 123.25(Hofstede & Vinken, Values Survey Module 2008 Manual).

3.5 Explanation of variables

3.5.1 The Independent variable

The independent variable for this paper's statistics test is "LTO" instead of other four national cultural dimensions. Just like this paper's 3.4 stated, the refreshing 60 Chinese entrepreneurs' samples showing three different levels for Chinese long term orientation (LTO), which are -36, 39.5 and 123.25.

To clarify the independent variable in this case is the first step in Field's (2009, P 822) designed decision tree in order to make a decision about which statistical model should be used for analyzing data based on various factors. After confirmed that 60 Chinese entrepreneurs' LTO score is the independent variable, a distinction about this independent variable are continuous or categorical variables must be considered following.

Based on Field (2009, P783) to distinguish the variables are continuous variable or categorical variables is depending on whether there are gaps between a value so that the variable could take on any other permitted values or not. According to that time is a continuous variable, because time can be measured to any level of precision without gap limitation (Field, 2009, P782). Just like time, this research's independent variable national culture should be qualitative as continuous variable as well. Although in this

research according to Hofstede's national culture study, culture is divided into different dimensions, it still cannot be categorized as a categorical variable. Because there is no limited gap between values of national culture, Culture can be measured at any level of precision and there is no level can strictly distinguish culture.

3.5.2 The Dependent variable

The dependent variable in this research is entrepreneurial decision making logic. The entrepreneurial decision making logic has been divided in effectual and causal clusters. Both of them have been divided into seven dimensions. Figure 6 showed these seven dimensions. In order to know each respondents' scores for each elements, every respondents' written case need to be coded based on EPICC project developed coding scheme. The theory behind the coding scheme comes from the characteristics of the causal and effectual entrepreneurial process (Saravathy, 2001). Every sentence of each respondents' answers are going to be analyzed and coded through 7 dimensions of the causal and effectual entrepreneurial process. Figure 6 is an example for the coding scheme.

First Respondent-An Qiao

Causal		Effectual	
G -Goal-driven	8	M -Means-based	19
R -Expected returns	19	L -Affordable loss	4
B -Competitive analysis	12	A -Use of alliances or partnerships	1
K -Existing market knowledge	3	E -Exploration of contingency	4
P -Predictions of the future	22	C -Non-predictive control	12
Z -Emphasis on analysis of data	0	D -Distrusting or opposing marketing research	0
X -Causal (no subcategory given)	1	N -Effectual (no subcategory given)	0

Causation: 65

Effectuation: 40

First Respondent-An Qiao

Problem 1: Identifying the market

A1 B8 E2 M1 P8 R2 S1

Problem 2: Defining the market

C2 G1 M2 P1 R5

Problem 3: Meeting Payroll

C4 L2 K1 M1 X1

Problem 4: Financing

B1 K1 M2 P1 R1

Problem 5: Leadership/Vision

B1 P2 R2 G2

Problem 6: Product Re-development, Part Two

B1 C2 E1 M7 P2 R4

Problem 6: Product Re-development, Part Two

B1 C2 E1 M7 P2 R4

Problem 7: Growing the Company, Part Two

C1 G2 L1 M2 P1

Problem 8: Hiring Professional Management

C1 K1 M4 P3

Problem 9: Goodwill

G2 L1 P1 R1

Problem 10: Exit

B1 C2 P1 R2

Figure 6: An example for the coding scheme.

After the coding is done, in order to get a good overview of the each respondents' score for each elements, every respondents' coded case will be separately put in Excel database. After putting every respondents' databases together, all the scores of the each aspects of causal and effectual logic will be added up. So that a good overview for the whole case will be given.

Based on the hypothesis part's explanation, there are four dimensions be selected to become this research's dependent variable. The first one is predicting logic of the future, after the coding and calculation, causal logic got the score 336 while effectual logic got the score 176. The second one is Goal-orientation, after the coding and calculation, causal logic got the score 134 while effectual logic got the score 265. The third one is looking forward to expected return, the causal logic got the score 469 while effectual logic got the score 465. The last one is avoiding contingencies, causal logic got the score 269 while effectual logic got the score 108. The total of the causal and effectual logic will be compared to see as well. Based on the refreshing data base, total causal logic got the score 1692 while effectual logic got the score 1298. In chapter 4, the detailed data analysis for these dependent variables will be shown. For example in statistical phrase, the first variable "prediction of future" will create for hypothesis 1. "Prediction of future" represents each respondents' counts for the "View of the future" element from the coding result under the causal category.

3.5.3 Statistical Model

After the conclusion in this paper's 3.5.1 and 3.5.2, the dependent t-test or a Wilcoxon matched-pairs test should be used to analyze 60 Chinese entrepreneurs' data. Because the independent variable in this case is a continuous variable and dependent variable is a categorical variable.

The core difference between dependent t-test and Wilcoxon matched-pairs test is the data which be used to analysis in this case are parametric or not (Field, 2009). Parametric statistics assumes the analyzing data comes from a sort of probability distribution and the parameters of the distribution can be inferenced. Most well-known elementary statistical methods are parametric like dependent t-test. In order to distinguish the 60 Chinese entrepreneurs' data base are parametric or not so that a choice can be made between two test methods. Four basic assumptions are list to test: normally distributed sampling distribution, homogeneity of variance, interval or ratio data, and independence (Field, 2009, P791).

According to that the Kolmogorov-Smirnov test and the Shapiro-Wilk test should be used to check if 60 Chinese entrepreneurs' data present the normally distributed sampling distribution or not, so that the first assumption for parametric tests can be met. For the

result part, if $p > .05$ after the test, then the distribution of 60 Chinese entrepreneurs is not significantly different from a normal distribution, which means the sample revealed the normally distributed characteristic, vice versa (Field, 2009, P144). Another test named Levene's test is used to check sample's homogeneity of variance, however because this research only focus on one group of data, so the diversity groups test method Levene's test is not necessary to implement here (Field, 2009, P149).

So in the end, after all the normality test, it can be determined to use either Pearson test or Spearman test or Kendall's tau-b to test the relationship between 60 Chinese entrepreneurs' LTO score and their decision making method tendency. After that, the regression test will be performed to test if 60 Chinese entrepreneurs' LTO level have an influence on four categories of the Sarasvathy's causal and effectual reasoning model or not. Therefore 4 tests will be implement one by one to test related four hypotheses which be detailed illustrated in this paper's 2.3 part.

4 Findings

4.1 Causation versus Effectuation

After data collection, 60 samples from Chinese students' entrepreneurs consist of the data base. The summary of the subjects' scores per element is given in figure 7. It is analyzed by Sarasvathy's decision making logic's requirements and EPICC Project's protocols.

Elements	Causal	Effectual
Goal-Driven / Means Based	134	265
Expected Returns / Affordable Loss	469	465
Competitive Analysis / Use of Alliances or Partnerships	218	137
Existing Market Knowledge / Exploration of Contingency	269	108
Predictions of the Future / Non-predictive Control	336	176
Emphasis on Analysis of Data / Distrusting or Opposing Marketing Research	222	12
Causal / Effectual (No subcategory given)	44	126
Total Causal / Effectual	1692	1289

Figure 7. The summary of 60 samples' results

Based on figure 7, it is clear to see the differences between causal and effectual logic exist in each of the categories. However in order to observe the specific differences in size of these seven dimensions under two kinds of decision making behavior, it is necessary to use pairwise comparison of histogram.

Figure 8 showed the use distribution of causal and effectual elements in 7 categories of the case. The blue part of the figure clarifies the use of causal reasoning and the red part of the figure clarifies the use of effectual reasoning for each elements in the case. The total use of causation is 1692 which is higher than the total use of effectuation's score 1289. Besides the total calculation, the score for causation is higher than effectuation in 5 other categories as well. Based on the analysis of histogram,

the data indicates a strong tendency on causation especially in these 4 fields: View of the future; basis for taking action; predisposition toward risk and resources and attitude toward unexpected contingencies (Sarasvathy, 2001).

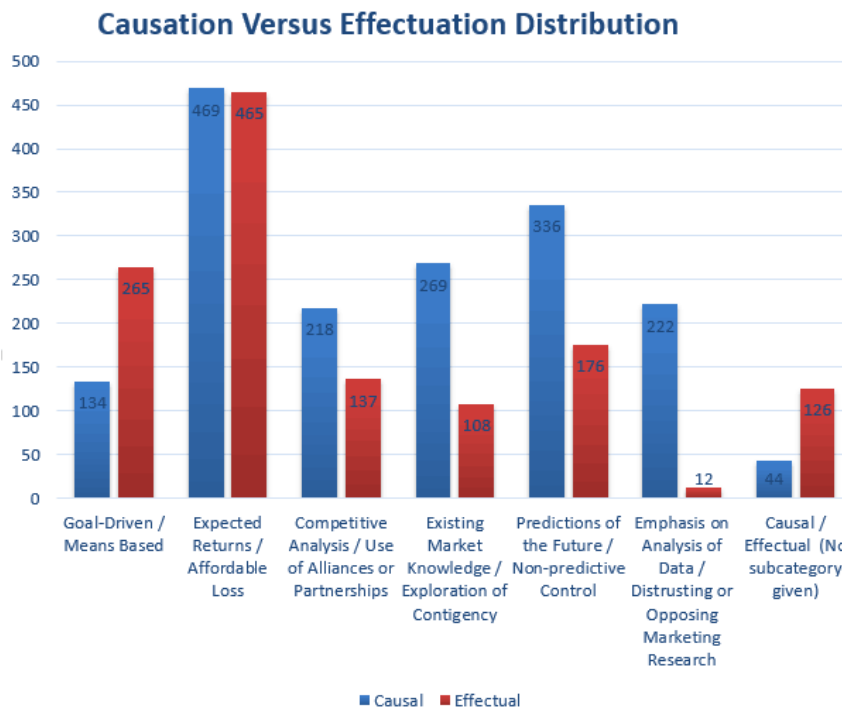


Figure 8. Causation Versus Effectuation Distribution for 60 samples

According to the observation that 60 samples' data not only clarify a strong differences in both causation and effectuation decision making method, but also point the heavy tendency for the causation method. It is necessary to use dependent t-test or Wilcoxon matched-pairs test to test the differences between these two decision making method for 60 samples is significant or not. As methodology part mentioned, the test of normality for 60 samples' data should come first. Later based on the result, the parameter test or non-parameter test to use is very easy to clarify.

This time the results of the coded case have been entered in IBM SPSS Statistics 20. The Kolmogorov-Smirnov and Shapiro-Wilk test be carried out to test the data is normal distribution or not. The figure 9 illustrated the results of the test of normality.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Causal Total	.157	60	.001	.870	60	.000
Effectual Total	.115	60	.046	.947	60	.012

a. Lilliefors Significance Correction

Figure 9. Test of Normality for 60 samples.

Figure 9 produced by SPSS contains the K-S test and S-W test which are two typical test to test the data's normality. In these two tests, if the significant value is less than .05 which indicates a deviation from normality. Based on that if the K-S test and S-W test all highly significant, this clearly clarify the distribution for data is not normal (Field, 2009).

As can be seen, in figure 9 the results from the test of normality regarding the case show no matter in the Kolmogorov-Smirnov test or the Shapiro-Wilk test, the value is less than 0.05 which means significant. This means the distribution of the data are strongly deviation from normality. According to that, the Wilcoxon matched-pairs test should be used to analyze the significant difference for data (Field, 2009). As mentioned in methodology part, the Wilcoxon matched-pairs test is used when the data is not normal distribution and there are two sets of scores which come from the same subjects of data to compare (Field, 2009).

Figure 10 presented the Wilcoxon matched-pairs test's result from the 60 samples' total causal and total effectual score.

Descriptive Statistics								
	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
Causal Total	60	28.200	15.5037	7.0	78.0	17.250	23.500	34.750
Effectual Total	60	21.483	9.3817	6.0	50.0	14.250	21.000	26.000

Test Statistics ^a	
	Effectual Total - Causal Total
Z	-3.772 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Figure 10. The significant difference between total causal and total effectual score.

Based on the result of using the Wilcoxon matched-pairs test on the case scores, it can be concluded that the differences between 60 Chinese student entrepreneurs' score on total causation and total effectuation is significantly. Combining with the observing result of figure 7, it can be inferred that 60 Chinese student entrepreneurs' score on total causation is significant higher than total effectuation ($P < .05$).

Test Statistics ^a							
	Means Based - Goal Driven	Affordable Loss - Expected Returns	Use of Alliances partnership - Competitive Analysis	Exploration of contingency - Existing Market Knowledge	Non- predictive Control - Predictions of the Future	Distrusting or Opposing Marketing Research - Emphasis on Analysis of Data	Effectual (No subcategory given) - Causal (No subcategory given)
Z	-4.702 ^b	-.452 ^b	-3.932 ^c	-4.567 ^c	-4.584 ^c	-5.885 ^c	-4.273 ^b
Asymp. Sig. (2-tailed)	.000	.651	.000	.000	.000	.000	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on positive ranks.

Figure 11. The significant difference between 7 dimensions for both causal and effectual logic.

Figure 11 present the Wilcoxon matched-pairs test's result from the 60 samples' 7 dimensions for both causal and effectual logic score. It is an overview of the significant difference between 7 dimensions. According to the result, it can be concluded that there is a significant difference between the score for student entrepreneurs' means-based and goal-driven. ($P < .05$) Combining with the observing result of figure 7, it can be inferred that the score for student entrepreneurs were significantly higher for goal-driven than for means-based. Following this logic, the score for Chinese student entrepreneurs were not significantly higher for expected returns than for affordable loss. ($P > .05$); the score for student entrepreneurs were significantly higher for use of competitive analysis than for alliances or partnership. ($P < .05$); the score for student entrepreneurs were significantly higher for market knowledge than for exploration of contingency. ($P < .05$); the score for student entrepreneurs were significantly higher for predictions of the future than for non-predictive control. ($P < .05$); the score for student entrepreneurs were significantly higher for emphasis on analysis of data than for distrusting or opposing market research. ($P < .05$); the score for student entrepreneurs were significantly higher for causation (no subcategory given) than for effectual (no subcategory given). ($P < .05$)

To sum up, it can be say there is a significant difference in the scores for 60 samples between the total element scores of effectuation and causation and showed the strong tendency to the causation part. Besides that, there are 6 of 7 elements proved the significant difference and all of these 6 elements tend to causal decision making method.

4.2 The relationship

As mentioned in methodology part of this paper, the relationship between effectuation/causation and Chinese long term orientation (LTO) is going to be tested. As Chinese long term orientation (LTO) showing three different levels: -36, 39.5 and 123.25(Hofstede & Vinken, Values Survey Module 2008 Manual). Each sample have a related independent variable LTO score and the related dependent variable 7 dimensions of causation. So the first step is using correlation coefficient to test in the end whether there is a significant relationship between independent variable and dependent variable or not. But correlation coefficient cannot state the direction, this means in order to know which variable influence which variable and the influence is significant or not, the regression test should be used follow it (Field, 2009).

There are three options in correlation coefficients, the first one is Pearson which be used to analyze the continuous variables of the unknown distribution, non-equal distance measure. The second one Kendall can be used to analyze the continuous, non-equal distance measured variables; the discrete variables; the data are not subject to the normal distribution or the total distribution pattern is unknown. The final one is Spearman, this can be used to analyze the data which is not subject to the two variables' normal

distribution or the total distribution is unknown (Field, 2009). After using the K-S test, the Kendall test and Spearman test is chosen because 5 of the 6 variables are not normal distribution.

The following logic of this part is testing the 4 hypothesis one by one by using the Kendall test and Spearman test to test the significant correlation firstly. Then using liner regression test to test the significant influence from independent variable to dependent variable.

4.2.1 Hypothesis 1: LTO and View of the Future.

Hypothesis 1 states that the Chinese LTO will significantly influence the Chinese students' entrepreneurs to choose 'prediction of the future' in the 'view of the future' dimension (Sarasvathy, 2001). The result of the Kendall and Spearman's correlation test can be found in figure 12, and the result of the liner regression test can be found in figure 11.

Correlations			Long term orientation	Predictions of the Future
Kendall's tau_b	Long term orientation	Correlation Coefficient	1.000	.049
		Sig. (2-tailed)	.	.642
		N	60	60
	Predictions of the Future	Correlation Coefficient	.049	1.000
		Sig. (2-tailed)	.642	.
		N	60	60
Spearman's rho	Long term orientation	Correlation Coefficient	1.000	.072
		Sig. (2-tailed)	.	.585
		N	60	60
	Predictions of the Future	Correlation Coefficient	.072	1.000
		Sig. (2-tailed)	.585	.
		N	60	60

Figure 12. Results Kendall and Spearman's correlation test; LTO and prediction of the future.

The output of Kendall and Spearman's coefficient shows a coefficient of $r = 0.049$ and 0.072 , this is a positive relationship between the two variable. But there is no significant relation found, the 2-tailed sig equal to 0.642 and 0.585 (0.321 and 0.293 for one tail), which is great higher than $\alpha=0.05$. This means there is not significant correlation between Chinese LTO and prediction of the future.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.682	1	1.682	.080	.778 ^b
	Residual	1216.718	58	20.978		
	Total	1218.400	59			

a. Dependent Variable: Predictions of the Future

b. Predictors: (Constant), Long term orientation

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	5.709	.705		.000
	Long term orientation	-.003	.009	-.037	.778

a. Dependent Variable: Predictions of the Future

Figure 13. Results liner regression test; LTO and prediction of the future.

The output of liner regression test coefficient shows $t = -0.283$, and there is no significant influence found. The 2-tailed sig equal to 0.778 (0.389 for one tail), which is much higher than $\alpha = 0.05$. This means there is not significant influence from Chinese LTO to prediction of the future. So that hypothesis 1 is not supported.

4.2.2 Hypothesis 2: LTO and Basis for Taking Action.

Hypothesis 2 states that the Chinese LTO will significantly influence the Chinese students' entrepreneurs to choose 'goal driven' in the 'Basis for Taking Action' dimension (Sarasvathy, 2001). The result of the Kendall and Spearman's correlation test can be found in figure 14, and the result of the liner regression test can be found in figure 15.

Correlations			Long term orientation	Goal-Driven
Kendall's <u>tau_b</u>	Long term orientation	Correlation Coefficient	1.000	-.006
		Sig. (2-tailed)	.	.961
		N	60	60
	Goal-Driven	Correlation Coefficient	-.006	1.000
		Sig. (2-tailed)	.961	.
		N	60	60
Spearman's rho	Long term orientation	Correlation Coefficient	1.000	-.005
		Sig. (2-tailed)	.	.969
		N	60	60
	Goal-Driven	Correlation Coefficient	-.005	1.000
		Sig. (2-tailed)	.969	.
		N	60	60

Figure 14. Results Kendall and Spearman's correlation test; LTO and goal driven.

The output of Kendall and Spearman's coefficient shows a coefficient of $r = -0.006$ and -0.005 , this is a negative relationship between the two variable, and there is no significant

relation found. The 2-tailed sig equal to 0.961 and 0.965 (0.481 and 0.483 for one tail), which is great higher than $\alpha=0.05$. This means there is not significant correlation between Chinese LTO and goal driven.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.374	1	1.374	.032	.858 ^b
	Residual	2463.360	58	42.472		
	Total	2464.733	59			

a. Dependent Variable: Goal-Driven

b. Predictors: (Constant), Long term orientation

Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.332	1.003		2.324	.024
	Long term orientation	-.002	.013	-.024	-.180	.858

a. Dependent Variable: Goal-Driven

Figure 15. Results liner regression test; LTO and goal driven.

The output of liner regression test coefficient shows $t=-0.180$, there is no significant influence found, the 2-tailed sig equal to 0.858 (0.429 for one tail), which is great higher than $\alpha=0.05$. This means there is not significant influence from Chinese LTO to goal driven. So that hypothesis 2 is not supported.

4.2.3 Hypothesis 3: LTO and Predisposition toward risk and resources.

Hypothesis 3 states that the Chinese LTO will significantly influence the Chinese students' entrepreneurs to choose 'expected returns' in the 'Predisposition toward risk and resources' dimension (Sarasvathy, 2001). The result of the Kendall and Spearman's correlation test can be found in figure 16, and the result of the liner regression test can be found in figure 17.

Correlations					
			Long term orientation	Expected Returns	
Kendall's <u>tau_b</u>	Long term orientation	Correlation Coefficient	1.000	.045	
		Sig. (2-tailed)	.	.672	
		N	60	60	
	Expected Returns	Correlation Coefficient	.045	1.000	
		Sig. (2-tailed)	.672	.	
		N	60	60	
Spearman's rho	Long term orientation	Correlation Coefficient	1.000	.053	
		Sig. (2-tailed)	.	.685	
		N	60	60	
	Expected Returns	Correlation Coefficient	.053	1.000	
		Sig. (2-tailed)	.685	.	
		N	60	60	

Figure 16. Results Kendall and Spearman's correlation test; LTO and expected return.

The output of Kendall and Spearman's coefficient shows a coefficient of $r = 0.045$ and 0.053 , this is a positive relationship between the two variable, but there is no significant relation found. The 2-tailed sig equal to 0.672 and 0.685 (0.336 and 0.343 for one tail), which is much higher than $\alpha=0.05$. This means there is not significant correlation between Chinese LTO and expected return.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.235	1	1.235	.104	.748 ^b
	Residual	687.748	58	11.858		
	Total	688.983	59			

a. Dependent Variable: Expected Returns

b. Predictors: (Constant), Long term orientation

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	7.723	.530		.000
	Long term orientation	.002	.007	.042	.748

a. Dependent Variable: Expected Returns

Figure 17. Results liner regression test; LTO and expected return.

The output of liner regression test coefficient shows $t=0.323$, and there is no significant influence found, the 2-tailed sig equal to 0.748 (0.374 for one tail), which is great higher than $\alpha=0.05$. This means there is not significant influence from Chinese LTO to expected return. So that hypothesis 3 is not supported.

4.2.5 Hypothesis 4: LTO and Attitudes toward unexpected contingencies.

Hypothesis 4 states that the Chinese LTO will significantly influence the Chinese students' entrepreneurs to choose 'existing market knowledge' in the 'Attitudes toward unexpected contingencies' dimension (Sarasvathy, 2001). The result of the Kendall and Spearman's correlation test can be found in figure 18, and the result of the liner regression test can be found in figure 19.

Correlations			Long term orientation	Existing Market Knowledge
Kendall's tau_b	Long term orientation	Correlation Coefficient	1.000	.309**
		Sig. (2-tailed)	.	.003
		N	60	60
	Existing Market Knowledge	Correlation Coefficient	.309**	1.000
		Sig. (2-tailed)	.003	.
		N	60	60
Spearman's rho	Long term orientation	Correlation Coefficient	1.000	.382**
		Sig. (2-tailed)	.	.003
		N	60	60
	Existing Market Knowledge	Correlation Coefficient	.382**	1.000
		Sig. (2-tailed)	.003	.
		N	60	60

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

Figure 18. Results Kendall and Spearman's correlation test; LTO and existing market knowledge.

The output of Kendall and Spearman's coefficient shows a coefficient of $r = 0.309$ and 0.382 , this is a positive relationship between the two variable, and there is a significant relation found. The 2-tailed sig equal to 0.003 (0.0015 for one tail), which is lower than $\alpha=0.05$. This means there is a significant correlation between Chinese LTO and existing market knowledge.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	173.290	1	173.290	8.607	.005 ^b
	Residual	1167.693	58	20.133		
	Total	1340.983	59			

a. Dependent Variable: Existing Market Knowledge

b. Predictors: (Constant), Long term orientation

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	3.379	.691		.000
	Long term orientation	.026	.009	.359	.005

a. Dependent Variable: Existing Market Knowledge

Figure 19. Results liner regression test; LTO and existing market knowledge.

The output of liner regression test coefficient shows $t=2.934$, and there is a significant influence found, the 2-tailed sig equal to 0.005 (0.0025 for one tail), which is lower than $\alpha=0.05$. This means there is a significant influence from Chinese LTO to existing market knowledge. So that hypothesis 4 is strongly supported.

In order to check the degree of reaction for the liner regression test, two charts are used here. The first is histogram to check the normal distribution of residuals for dependent variable: existing market knowledge. The more residuals for dependent variable tend to normal distribution, the better for the degree of reaction for the liner regression test. (Field, 2009) The second one is normal P-P Plot of regression standardized residual. If the residual are distribute near 45 degree, it means the reliability level for prediction is high. (Field, 2009) The figure 20 states the degree of reaction for this liner regression test is high, the figure 21 states the reliability level for prediction is relative high as well.

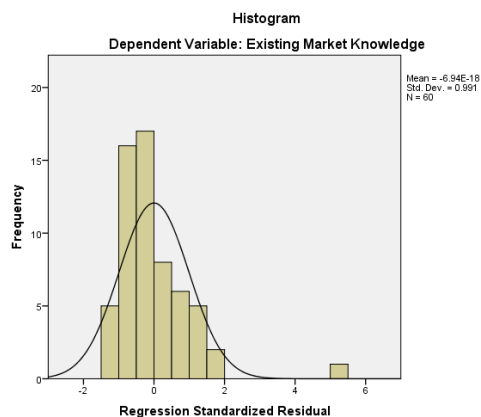


Figure 20. Results normal distribution of residuals tests; existing market knowledge.

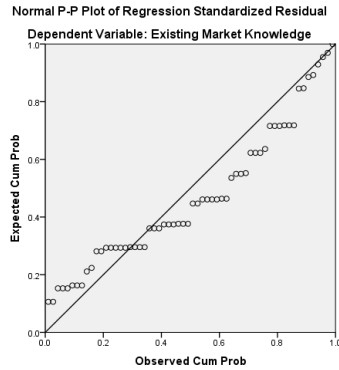


Figure 21. Results normal P-P Plot of regression standardized residual; existing market knowledge.

4.2.5 LTO and causal decision making process.

Based on the previous four tests all had the related results about 4 dependent variables be significant influenced by the independent variable or not. It is time to test does Chinese LTO will significantly influence the Chinese students' entrepreneurs tend to choose causational decision making method. The result of the Kendall and Spearman's correlation test can be found in figure 22, and the result of the liner regression test can be found in figure 23.

Correlations			Long term orientation	Share-Causation
Kendall's tau_b	Long term orientation	Correlation Coefficient	1.000	.144
		Sig. (2-tailed)	.	.158
		N	60	60
	Share-Causation	Correlation Coefficient	.144	1.000
		Sig. (2-tailed)	.158	.
		N	60	60
Spearman's rho	Long term orientation	Correlation Coefficient	1.000	.199
		Sig. (2-tailed)	.	.127
		N	60	60
	Share-Causation	Correlation Coefficient	.199	1.000
		Sig. (2-tailed)	.127	.
		N	60	60

Figure 22. Results Kendall and Spearman's correlation test; LTO and causal decision making process.

The output of Kendall and Spearman's coefficient shows a coefficient of $r = 0.144$ and 0.199 , this is a positive relationship between the two variable, but there is no significant relation found. The 2-tailed sig equal to 0.158 and 0.127 (0.079 and 0.064 for one tail), which is a little higher than $\alpha=0.05$. This means there is not significant correlation between LTO and causal decision making process.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	146.148	1	146.148	.604	.440 ^b
	Residual	14035.452	58	241.991		
	Total	14181.600	59			

a. Dependent Variable: Share-Causation

b. Predictors: (Constant), Long term orientation

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	27.186	2.395		11.352	.000
	Long term orientation	.024	.031	.102	.777	.440

a. Dependent Variable: Share-Causation

Figure 23. Results liner regression test; LTO and causal decision making process.

The output of liner regression test coefficient shows $t=0.777$, but there is no significant influence found, the 2-tailed sig equal to 0.440 (0.220 for one tail), which is much higher than $\alpha=0.05$. This means there is not significant influence from LTO to causal decision making process. So that hypothesis 5 is not supported.

5. Conclusion

The research's results clearly clarify that there is a significant difference between the use of causal and effectual entrepreneurial processes for Chinese student entrepreneurs. The result of this difference stand for Chinese student entrepreneurs make significantly more use of causal than effectual decision making logic during the entrepreneurial processes. For the national culture part, based on the result of VSM08 survey, Chinese student entrepreneurs have relative lower scores for long term orientation dimension than the Hofstede's (2001) overall Chinese culture score in the same dimension. Follow this logic, the reflection can be made that based on the 60 samples, there is a significant difference between Chinese students entrepreneurs' long term orientation dimension and the overall normal Chinese population argued by Hofstede (2001).

The main research question for this paper is: "Does Chinese Long term orientation is a factor to significant influence the Chinese student entrepreneurs for choosing either causal or effectual business decision model?" In order to answer the research question, the results of the statistical test should be compared to see if the hypotheses can be accepted or not. Based on the finding part of this paper, the statistical results pointed that there is no evidence to conclude a significant relationship between Chinese long term orientation and the share of causation, and there is no evidence to show Chinese long term orientation significant influence the share of causation either. But focusing on the

more specific relationship as assumed in the hypotheses, there is a surprising finding that Chinese Long term orientation has a significant positive influence on 'Attitudes toward unexpected contingencies' dimension, Chinese students' entrepreneurs prefer to choose 'existing market knowledge' instead of 'exploration of contingency'. But for the other three dimensions of share-causation, the significant influence from Chinese long term orientation is not proved.

According to the results, there is enough evidence to conclude that Chinese long term orientation do not significant influence all dimensions of Chinese student entrepreneurs' decision making method chosen. For example: view of the future; basis for taking action and predisposition toward risk and resources. But Chinese long term orientation has significant influence on one dimensions of entrepreneurial processes named attitudes toward unexpected contingencies. Therefore the research question can be answered with the conclusion that Chinese long term orientation has some influence on Chinese student entrepreneurs' entrepreneurial processes, but not all the dimensions on entrepreneurial processes got the significant influence from Chinese long term orientation.

6. Discussion

The conclusion part stated that student entrepreneurs in China had medium level score in long term orientation dimension, which different from overall normal Chinese population. Chinese student entrepreneurs use causal entrepreneurial processes significantly more than effectual entrepreneurial processes. The results based on statistic test clarified that there is not empirical evidence to prove Chinese long term orientation significant influence the whole entrepreneurial processes. But one dimension within share causation named attitudes toward unexpected contingencies be proved that significant influenced by long term orientation.

In order to explore why these research results happened, there are at least four different perspectives can be provided to explain.

The first one called entrepreneurial experience. There is a difference between experts and novices venture showed different entrepreneurial decision making logics. This means the experience in running start-ups or the study years of the entrepreneurs have a strong influence on entrepreneurs to choose using which entrepreneurial decision making method (Dew, Read, Sarasvathy, & Wiltbank, 2009). The research object for this study are Chinese student entrepreneurs who born from 1985 to 1995 and most of them start with their first business. Some of them are still university students while at the same time run their own business. This means almost of the interviewees are lack of truly experience in running business and textbook guide them a lot during their entrepreneurial processes.

In the recent two years, the Chinese government provide a policy named 'public entrepreneurship, public innovation' to encourage college students to entrepreneurship. Government through implementing series of relevant policies and deepening reforms to inspire millions of Chinese potential talents in the entrepreneurial and innovative fields. This will help China to change promoting the economy from rely on investment driven to innovation driven (State Council, 2015). This policy build engine for Chinese economy's sustainable development (State Council, 2015). During implementing the 'public entrepreneurship', the College students becomes the main force, the government introduced policies to encourage the young talent to show itself in entrepreneurial and innovative fields. Based on that, the general office of the State Council aimed at 9 tasks to deepening reform college students' innovation and entrepreneurship education, within more than 30 specific measures, the mainstream methods are classroom entrepreneurship teaching; autonomous learning from book or case, but lack of practice experience (State Council, 2015).

However based on Sarasvathy's study, results showed expert entrepreneurs framed problems in a dramatically different way than students' entrepreneurs. It demonstrates that entrepreneurial experts tend to use effectual decision making logic, while entrepreneurial novices tend to use causal decision making logic and normally 'go by the textbook' (Dew, Read, Sarasvathy & Wiltbank, 2009). Just like Chinese government's 30 specific measures to encourage college students to start their own business, most of the service are still offer courses in entrepreneurship. Based on that Business planning stand in the central of course content and offer to college students. The research in core functional areas such as marketing research techniques; strategic management; competitive analyses and financial valuation methods becomes important (Dew, Read, Sarasvathy, & Wiltbank, 2009). This showed 'public entrepreneurship' influence today's Chinese student entrepreneurs spend big amount of brainpower on developing predictive models. And this content just based on the Causal reasoning logic--To the extent that we can predict the future, we can control it. This is very different from entrepreneurial experts' behavior. For example entrepreneurial experts only invest the amount which they afford to lose; more caring about the existing resources on hand; pay less attention to predictive information; and emphasize the power of networks and relationships (Sarasvathy, 2001). According to the general office of the State Council's research, now every year about 700 million college graduates in China, 2% among them pioneering go on the entrepreneurial road, which is coupled with the previous graduates (State Council, 2015). In the future, if college class can invite more entrepreneurs and successful entrepreneurs to open lectures or exchange with students to the practical business battle, the spirit of entrepreneurship will grow stronger in Chinese young student entrepreneurs' heart.

The second perspective is the same person can use both causal and effectual decision making logic at different circumstances. Just depending on what is the most important influencing factor in that moment. Because in fact, the concepts causal and effectual decision making logic are not totally opposed with each other, if companies can grasp the tips of how to use both of the decision making logic in different circumstances and treat these two decision making methods service for each specific business issues, the benefits of using the correct decision making method will be enlarged to a new extent (Sarasvathy, 2001). So the best entrepreneurs use both modes well, according to Sarasvathy's research, best entrepreneurs prefer to use effectual decision making method in the early stages when running a new venture, and need to put some causal decision making methods in the latter stages. Because company's growing size, more difficult to manage problems and more shareholders' benefit distribution problems (Sarasvathy, 2001).

The third perspective is there are some moderators like country's economic, political/legal, and social characteristics which are the factors to influence the relationship between culture and entrepreneurial process (Sang & Suzanne, 2014). One research showed after statistical test, there is no significant difference between Chinese entrepreneurs' and American entrepreneurs' long term orientation score (Tan, 2006). The reason is Chinese political and regulatory environment make a strong influence in Chinese entrepreneurial growth. Because of Chinese legal and institutional uncertainty, Chinese entrepreneurs showed a relative high level of willingness to take risks when initiating and operating a private venture (Tan, 2006). Besides these macro background factors, the role of individual's background should also be considered. For example the pre-entrepreneurship labor market experience and individual's persistence in entrepreneurship. These are two factors which be proved to have significant influence in entrepreneurs' entrepreneurial processes chosen (Atsushi, 2009).

The forth perspective comes from Confucian dynamism, if we focus on the national cultural dimension long term orientation, as explained in theoretical part, Hofstede's long term orientation concept comes from the Confucian dynamism (Ji & Dimitratos, 2013). However in Hofstede's research, Confucian dynamism expressed as individual differences include the work values (Jaw et al., 2007); knowledge learning (Yeh & Xu, 2010); attitudes toward money (Lim, 2003); and self-management (Li & Madsen, 2009). More importantly, the values of these factors are changeable between different generations of Chinese entrepreneurs. This can be the reason to explain why this 1985-1995 generation Chinese student entrepreneurs have relative lower scores for long term orientation dimension than the Hofstede's (2001) overall Chinese culture score in the same dimension.

7. Limitations

Just like every coin had double sides, this research has three limitations as well. The first one is the language used in this research's interview. Based on the real situation is almost all of selected native Chinese student entrepreneurs had more or less difficulties in using English. Especially when they are asked to reading the case in English and talking aloud in English. However, the case and questionnaires were done in English, before the interview, the researcher offered two version of the case and questionnaires let the interviewee to choose, one is in Chinese the other is in English. All of the interviewee choose Chinese language version, the reason is only in this way they could freely express their thoughts as completely as possible. Based on that a limitation cannot be avoided is the role of interviewer who translate all of the case and questionnaires showed subjective tendency to some extent. According to the fact that some interviewee asked interviewer to explain some business concepts during the interviewing process because he/she cannot fully understand the question. By doing so the interviewee inevitable influenced by the interviewer's explanation. However one important restrictions in using think aloud method is let the interviewee to express their opinion as much as possible, and the interviewer should keep silence as much as he/she can. So the language translation and explanation during the interviewing process reduce the research reliability.

The second limitation is the subjective tendency for researcher to decode interviewees' responding content. Because every researcher can have their own understanding about 5 dimensions of two entrepreneurial processes which described by Sarasvathy's, as long as the rationality of each decoding results can be interpreted by the researcher (Sarasvathy, 2008). What's more each researcher had different personal cognitive abilities, personal output abilities, and it is also easy for researcher to mix up the two elements in the same dimension. Based on that the reliability of the research is reduced.

Thirdly, the interviewees' different educational backgrounds; family backgrounds; economic backgrounds and different abilities to understanding the same questions will also reduce the reliability of this research. If the sample size of the Chinese student entrepreneurs can become bigger, the quality of this research will be improved as well.

So all in all Chinese cultural and economic situation will influence the development of Chinese entrepreneurship, and the factor named 'culture' will have more strong influencing power in the future (Tan, 2006). Even in this research paper there is not enough evidence to prove the Chinese culture 'long term orientation' significant influence Chinese student entrepreneurs to choosing causal logic during the entrepreneurial process. But an interesting finding about Chinese culture 'long term orientation' significant influence one share of casual logic named 'attitudes toward unexpected contingencies' will encourage the coming researchers to put more effort in

exploring this field. If the big amount of sample size can be used or some intermediate variables can be used to analyses in the next time, the relationship between Chinese culture 'long term orientation' and other shares of causal decision making logic have more possibility to be found. In the end, doing the research about a country's entrepreneurship can help both individuals and societies to make better use of the entrepreneurial method in unleashing human potential to attain long term benefits (Sarasvathy, 2008).

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References

- Browaeys, M. -J., & Price, R. (2008). Understanding cross-cultural management. England: Pearson.
- Bygrave, W. D., & Hofer, C. W. (1991). Theorizing about Entrepreneurship. *Policy*, 16(2), 13-22. Blackwell Publishing Limited.
- Bond M. Chinese values and the search for culture-free dimensions of culture. *J Cross-Cult Psychol* 1987; 18:143 – 64 [June].
- Bearden, W. O., Bruce, R., Jennifer L. (2006). The measure of long-term orientation Development and Validation. *Long-term orientation* 456-467
- Casson, M. (1995). Entrepreneurship and business culture. Studies in the Economics of Trust, Vol. 1. UK: Aldershot, Edward Elgar.
- Cochran T. C. (1949). Role and sanction in American entrepreneurial history. In Harvard University Research Center in entrepreneurial history, Change and the entrepreneur. *Cambridge: Harvard University Press*.
- Chapman, M. Preface: Social anthropology, business studies, and cultural issues. *International Studies in Management & Organization*, 1997, 26(4), 3–29.
- Dew, N., Read, S., Sarasvathy, S. D., & Wiltbank, R. (2009). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal of Business Venturing*, 24(4), 22.
- Ericsson, K. A. S., & A., H. (1993) Protocol Analysis: Verbal Reports as Data. MIT press.
- Fang, T. (2003). A critique of Hofstede's fifth national culture dimension. *International Journal of Cross Cultural Management*, 3, 347 – 368.
- Field, A. (2009). Discovering Statistics Using SPSS. In A. Field, *Discovering Statistics Using SPSS* (pp. 1-822). London: Sage Publications Ltd.
- Güney, S. & Nurmakhmatuly, A. (2007). Kültürün girişimciliğe etkisi, Kazakistan ve Türkiye üniversite öğrencilerinin girişimcilik özelliklerinin belirlenmesine yönelik kültürlerarası araştırma. *Balıkesir Ünv. Sosyal Bilimler Enstitüsü Dergisi*, 10(18), pp. 62-86.
- Hofstede, G., & Bond, M. H. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16(4), 5 – 21.

- Hofstede, G. H. (1980). *Culture's consequences: international differences in work-related values*. Sage Publications.
- Hofstede, G. H. (2001). *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks: Sage Publications.
- House, R. J., P. J. Hanges, M. Javidan, P. W. Dorfman, & G. Vipin. (2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks: Sage.
- Hofstede, G. (1980). *Cultural consequences: International differences in work-related values*. Beverly Hills, CA: Sage Publications.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind*. Columbus, OH: McGraw Hill.
- Hayton, J. C., George, G., & Zahra, S. A. (2002). National culture and entrepreneurship: A review of behavioral research. *Entrepreneurship Theory and Practice*, 26(4), 33-52.
- House, R., Javidan, M., Hanges, P., & Dorfman, P. (2002). Understanding cultures and implicit leadership theories across the globe: An introduction to project GLOBE. *Journal of World Business*, 37(1), 3–10.
- Hofstede, G., Hofstede, G. J., & Vinken, H. (n.d.). *Values Survey Module 2008 Manual*.
- Ji, J., Dimitratos, P. (2013). Confucian dynamism and Dunning's framework: Direct and moderation associations in internationalized Chinese private firms. *Journal of Business Research*, 2, 2375-2382
- Jaw, B. -S., Ling, Y. -H., Wang, C. Y. -P., & Chang, W. -C. (2007). The impact of culture on Chinese employees' work values. *Personnel Review*, 36, 763 – 780.
- Küçük, O. (2005). Girişimcilik ve küçük işletme yönetimi, 2. Ed., Ankara: Seçkin Yayıncılık, p. 32.
- Lin, Z., 1998. Memorandum of China's Reform 1989 – 1997. East Publishing Centre, Shanghai.
- Li, J., & Madsen, J. (2009). Chinese workers' work ethic in reformed state-owned enterprises: Implications for HRD. *Human Resource Development International*, 12(2), 171 – 188.
- Lim, C., & Lay, C. S. (2003). Confucianism and the Protestant work ethic. *Asia Europe Journal*, 1, 321 – 322.

Moroz, P. W., & Hindle, K. (2011). *Ent Perspectives entrepreneurship as a Process: Toward Harmonizing Multiple Perspectives*. Baylor University.

McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: A triumph of faith; a failure of analysis. [10.1177/0018726702055001602]. *Human Relations*, 55, 89-118.
Morck, R., Yeung, B., & Zhao, M. (2008). Perspectives on China's outward foreign direct investment. *Journal of International Business Studies*, 39, 337 – 350.

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

Nee, V., 1992. Organizational dynamics of market transition: hybrid forms, property rights and mixed economy in China. *Administrative Science Quarterly* 37, 1 – 27.

Nolan, Peter, 1995. *China's Rise: Russia's fall*. Macmillan, London.

Oh, T. K. (1992). Inherent limitations of the Confucian tradition in contemporary East Asian business enterprises. *Journal of Chinese Philosophy*, 19(2), 155 – 169.

Ozgen, E. (2012). The effect of the national culture on female entrepreneurial activities in emerging countries: An application of the GLOBE project cultural dimensions. *International Journal of Entrepreneurship*, 16, Special Issue, pp. 69-92.

Sharma, M., Chaudhary, V., Bala, R. & Chauhan, R. (2013). Rural entrepreneurship in developing countries: Challenges, problems and performance appraisal. *Global Journal of Management and Business Studies*, 3(9), pp. 1035-1040.

Singer, S., Amorós, J., & Arreola, D. (2014). Global Entrepreneurship Monitor 2014 Global Report. *Global Entrepreneurship Monitor 2014 Global Report*, ISBN: 978-1-939242-05-1, 20-68.

Simons, J. (1996). The youth movement. *U.S. News and World Report*, September 23: 65–68.

Sarasvathy, S. D. (2008). Effectuation: elements of entrepreneurial expertise. [Press release]

Sekaran U. Methodological and theoretical issues and advancements in cross cultural research. *J Int Bus Stud* 1983;14:61–73 [Fall].

Sarasvathy, S. D. (2001). What makes entrepreneurs entrepreneurial? [Press release]

Schwartz, S. H., & Sagiv, L. (1995). Identifying culture-specifics in the content and structure of values. *Journal of Cross-Cultural Psychology*, 26(1), 92 – 116.

Shao, C. (2015). The Influence of Uncertainty Avoidance on Entrepreneurial Decision Making Processes in China

Sang M, L., & Suzanne J., P. (2014). Culture, Entrepreneurial Orientation, and Global Competitiveness. *Entrepreneurial Orientation*, 401-415.

Trompenaars, F. (1994). *Riding the waves of culture*. London: Nicholas Brealey.

Tan, J., 2005. Venturing in turbulent water: a historical perspective of economic reform and entrepreneurial transformation. *Journal of Business Venturing* 20, 689 – 704.

Tsang, E. W. K. (1996). In search of legitimacy: the private entrepreneur in China. *Entrepreneurship Theory and Practice*, 21(1): 21–30.

Tan, J. (2002). Culture, Nation and Entrepreneurial Strategic Orientations: Implications for an Emerging Economy. *Entrepreneurial Theory and Practice*, (1024-2587-02-264), 95-111.

Tan, J. & Litschert, R. J. 1994. Environment-strategy relationship and its performance implications: An empirical study of Chinese electronics industry. *Strategic Management Journal*, 15: 1-20.

The Directive opinion from State Council on accelerating the construction of 'public entrepreneurship' and 'public innovation' support platform. (2015). *State Council Statement*, 000014349/2015-00158.

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

Van Someren, M. W., Bernard, Y. F., & Sandberg, J. A. C. (1994). The think aloud method: A practical guide to modeling cognitive processes. [Press release]

Wah, S. S. (2001). Chinese cultural values and their implication to Chinese management. *Singapore Management Review*, 23(2), 75 – 83.

Yeh, Q. -J., & Xu, X. (2010). The effect of Confucian dynamisms on learning about science and technology knowledge and morality. *Journal of Business Ethics*, 95, 111 – 128.