

EXAMINING ENTREPRENEURIAL INTENTION THROUGH A COGNITIVE APPROACH IN CHINA BY USING GEM DATA

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ABSTRACT: *The basic aim of this research manuscript is to examine entrepreneurial intentions through the cognitive approach of Chinese adults. Data for analysis have been acquired from the database of GEM 2011 APS Global Individual Level. The sample size of the year 2011 survey in China was 3,690 adults. The entrepreneurial intention was a dependent variable while independent variables were Individual perceptions, Socio-cultural perceptions and Perceptions of economic opportunities. Four logistic regressions were employed to test three hypotheses shown in the theory section regarding examining the influence of perceptual variables on the Chinese adults' entrepreneurial intentions. The results of Role model and Risk aversion are positive and significant while amazingly Self-efficacy is negative. Chinese adults perceive the availability of ample entrepreneurial opportunities where they are living. Both male and female have almost same entrepreneurial intentions.*

Key Words: Entrepreneurial Intentions, Logistic Regression, Individual perceptions, GEM Data.

1. INTRODUCTION

“Jumping into a sea” often used as the other name of entrepreneurship because of a high risk, uncertainties and time pressure, which are affecting entrepreneurs' level of perceptions. But, even though, across all the periods of human history, entrepreneurship has served an important function in the progress of the modern civilization [1]. “Entrepreneurship has become more important than ever in recent years, and it has received attention as a leading factor in achieving economic growth, high employment, strong job creation, and positive social [2]”. Various scholars [3] said that entrepreneurship has been emerged as the most potent economic force the world has ever experienced”. “Another scholar [4] defined the creation of new ventures is deemed as one of the most important propelling forces for economic development. Hisrich [5] defined entrepreneurship as a process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risk, and receiving the resulting rewards. The entrepreneurial activities affect an economy in three different aspects. *First*, knowledge spills are created through entrepreneurial activities. *Second*, competition increases in the economy as the number of business entities increase. The increased competition in turn enhances the quality of products. *Finally*, knowledge diversification also occurs as an output of entrepreneurial activities [6]. Entrepreneurship is a behavior [7-8] and mostly forms voluntarily but as the prophet Mohammad (PBUH) said “people's actions depend on their intentions”. Therefore, before any entrepreneurial behavior or action happens, an entrepreneurial intention is formed. “Entrepreneurial intention has been defined as a state of mind which directs and guides the actions of the individual towards the development and implementation of new business concepts [9]”. Thus, the formation of entrepreneurial intentions is very important to understand entrepreneurial behavior [10]”. When an individual agrees to launch a new business, it is the process of starting entrepreneurship. “In order to foster more entrepreneurship, it is therefore necessary to understand how people make that decision [11]”. “Over the last 15 years, there has been

increasing interest in understanding entrepreneurship through the lens of cognitive theory perspective [12-13]”. “Researchers using this approach believe that cognitive theory perspectives are the elements that distinguish entrepreneurs from non-entrepreneurs [14]”. It also reflects the critical role that entrepreneurs and their cognitive attributes play in the entire process of a new venture creation from the decision to become an entrepreneur to opportunity recognition and performance and growth of the business [15-16-14]. “Following a multidisciplinary focus, the cognitive approach is acquiring a great relevance now a days to explain entrepreneurship not only at the individual level [17], but also at the aggregate level [18]”. Every entrepreneur perceives about factors in an external environment in different ways, and these perceptions are a cognitive construct.

None or very few studies have examined the relationship between cognitive approaches and entrepreneurial intentions among adults in China. Therefore, this study is an attempt to bridge this gap. Therefore, the major research questions of this study are:

1. Do individual perceptions factors hinder individuals to enter into entrepreneurial intentions?
2. Do social and cultural factors hinder individuals to form entrepreneurial intentions?
3. Does perception of economy hinder individuals to form entrepreneurial intentions?
4. Which perception is the strongest in the formation of entrepreneurial intentions in China?
5. Do entrepreneurial intentions differ between genders?

Data for this research paper have been taken from the Adult Population Survey (APS) of the Global Entrepreneurship Monitor (GEM) project for China for the year 2011. Further, this study regarding the connection between perceptions and entrepreneurial intentions has been restricted to China. There are five sections of this paper. First section contains introduction, while second section reviews the literature and then hypotheses were driven from the literature, third section is about a methodology which describes the sample and measures used as well as present and descriptive statistics. In the fourth section, we test our hypotheses using SPSS21.

The last section provides the summary of the findings and discussion of results.

2. Review of Literature

2.1 Individual Perceptions and Entrepreneurial Intentions

Intention is a cognitive representation of an individual. "Some research are based on the idea that whatever the individual thinks, says or does is influenced by the cognitive processes through which individuals acquire, use and process information [19-20]"

Perceptions about the environment have a great impact on entrepreneurial intentions of adults. "Bandura's [21] work has emphasized the relevance of two important perceptions in social learning: role model perception and self-efficacy". "Role model theory explains the process of learning by copying the action of other persons through observing them doing it. Individual decisions to engage in a certain behavior are often influenced by the behavior and opinions of others, the demonstration of their identity and by the examples they provide [22-23]". "This may, in turn, positively influence entrepreneurial intentions and, ultimately, entrepreneurial activity [17]"

The entrepreneurial potential of an individual is largely predicted by personal capabilities. "People, therefore, like to enter into those jobs in which they feel a higher level of self-efficacy and tend to avoid those in which they do not feel at ease [24]". Therefore, "self-efficacy is an important construct in behavioral management and [21] describes self-efficacy as ones level of confidence in performing a specific task and is the central cognitive motivator predicting behavior". According to "Ryan [25], self-perception plays an important role in the development of intention". "Higher self-efficacy is associated to entrepreneurship and creation [26-27-28]". Individuals with a high level of entrepreneurial self-efficacy also have a higher level of belief that they possess a feasible idea for a new business.

"Risk propensity of entrepreneurs was firstly studied during the 1970s as a factor which could differentiate entrepreneurs from non-entrepreneurs". How entrepreneurship and fear to fail are linked, is a question which has long been dealt with by authors [29]. Propensity to Take the Risk was defined by a researcher [30] denotes to "acceptation of risk when engaging in an activity and hence related to the probability of success of any activity being less than 100%." With the increasing competition, challenging environment, stiffened regulatory frameworks, unpredictably shifting economic paradigms, changing customer preferences, and law and order situation in certain regions of the world, the fear of failure likely emanates among aspirant entrepreneurs. According to a researcher [31], some entrepreneurs are unable to tolerate the business failure despite knowing that it is a common phenomenon among such ventures. This attitude obstructs the aspiring entrepreneurs. "Another researcher [32] found that a more positive attitude towards risk and independence leads to stronger entrepreneurial intentions".

Summarizing, the following hypothesis has been established:

H1. *Individual perceptions have a positive effect on entrepreneurial intentions in China.*

2.2 Socio-cultural Perceptions and Entrepreneurial Intentions

"Good cultural values also influence the entrepreneur intention. Culture includes some social, moral ethical values norms and beliefs that must be socially acceptable [33]". Normally, "researchers analyzed that culture facilitated the entrepreneurship because of high individuality, low ambiguity, and low in power remoteness, and high intention for commencement of new business [34]". "From an empirical point of view, studies about the cultural influence on entrepreneurial behaviors [35-36-37] have used [30] four dimensions of national culture: masculinity (MAS), power-distance (PDI), individualism (IND) and uncertainty avoidance (UAV). In general, as McGrath [35] argue, entrepreneurs tend to exhibit high masculinity (MAS+), high power distance (PDI+), high individualism (IND+) and low uncertainty avoidance (UAV-) across cultures. Other scholars, however, such as Mueller and Thomas [36], have found that low power distance (PDI-) would favor entrepreneurship". Differences around the countries were detected in the level and nature of ability and willingness about cognitions. "In a subsequent study [38-39] entrepreneurial cognitions across cultures were found to be broadly similar, but with significant differences depending on the national culture".

Summarizing, the following hypothesis has been formed:

H2: *Socio-cultural perceptions have a positive effect on entrepreneurial intentions in China.*

2.3 Perceptions of Economic Opportunities and Entrepreneurial Intentions

The process of entrepreneurship starts with the opportunity perception [1]. An opportunity is the chance to fulfill the demand prevailing in the marketplace by creatively combining there sources in order to supply the demanded product or service [40]. According to "Krueger [41] opportunities are not found, but constructed. The perception of opportunities develops more among those who are entrepreneurially alert". Entrepreneurially alert individuals are sensitive to identify unemployed resources like land, technology or inventions which have not yet been exploited, and areas of commercial activity which have not been tried yet [42]. Recently," empirical evidence [31-43-18] also suggests that the ability to perceive opportunities is positively associated with entrepreneurial endeavors". In accordance with a researcher [44], "the entrepreneurial economic conditions in a nation may influence the creation of new firms". "Both a positive and a negative relationship have been confirmed between economic growth and the rate of entrepreneurship [45-46]". "A positive correlation between entrepreneurship rates and economic development is detected in high-income countries, while in low and middle-income countries, these correlations tend to be negative [47]". "An important question is whether the perception of entrepreneurial opportunities is an antecedent of other perceptions, such us self-efficacy or risk perception, or not". In this sense, "according to Krueger [48], the perception of entrepreneurial opportunities could act as a

precipitating factor because it reinforces other individual perceptions in the formation of intentions”.

Therefore, these arguments direct to a following proposition:

H3: *Perceptions of economic opportunities have a positive effect on entrepreneurial intentions in China.*

3. Theoretical Framework

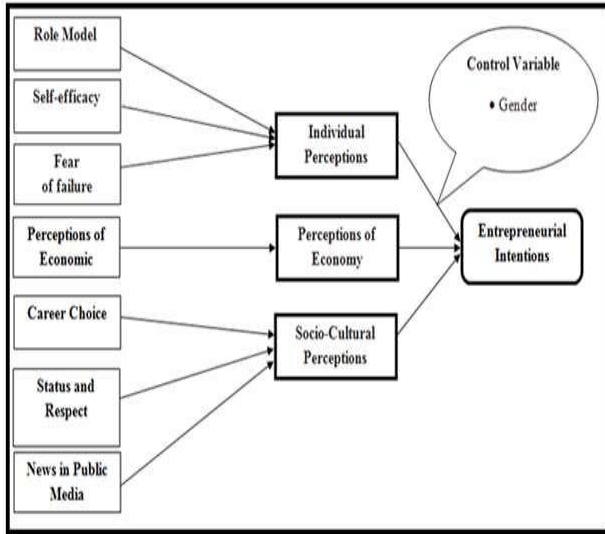


Figure 01 shows factors which affect the entrepreneurial intention.

Research model shown in figure 01 has been designed after going through the literature review. Therefore, the same research model has been applied here to examine the effects of cognitive factors (Individual perceptions, Socio-cultural perceptions and Perceptions of economic opportunities) on entrepreneurial intentions of adults.

Data for analysis have been acquired from the database of GEM 2011 APS Global Individual Level. The sample size of the year 2011 survey in China was 3,690 adults. Table 01 shows the sample profile for China. The respondents contain an ample number of both genders with the same number of representatives from the different age group starting from 18 years old to 64 years old.

Table 01
Sample Profile

		Age of Respondents					
Country	Gender	18-24	25-34	35-44	45-54	55-64	Total
China	Male	301	459	530	387	212	1889
	Female	277	420	454	380	270	1801
	Total	578	879	984	767	482	3690

The Global Entrepreneurship Monitor is the world's foremost study of entrepreneurship. The Global Entrepreneurship Monitor (GEM) was designed to capture various aspects of entrepreneurship across countries. This survey is being conducted every year in order to understand the perceptions and attitudes of the adult population (18-64 years of age) towards entrepreneurship. The data have

been collected over the course of 16 years and include responses from individuals in over 100 countries.

The data are gathered using telephone based interviews with the adult population (GEM website). Due to application of tough techniques by GEM experts, there is no issue of validity and reliability of this survey data among the scholars' community. GEM questionnaires include some cognitive items that may allow analyzing entrepreneurial intentions at an aggregate level [49]. The specific variables and their explanations used to measure cognitive concepts of intentions are shown in the table 02:

RESULTS

A co-linearity analysis was performed to avoid biased estimations of the co-efficient. The Variance Inflation Factor (VIF) and Condition indexes were used for this purpose. "The multi-co-linearity test was satisfactory, since the highest VIF was 11.99 and the highest condition index 8.79 well below the 20.0 threshold suggested by a researcher [50]". Four logistic regressions were employed to test three hypotheses shown in the theory section regarding examining the influence of perceptual variables on the Chinese adults' entrepreneurial intention. Model 01 includes Gender and model 02 is about individual perception. While model 03 includes socio-cultural perceptions and last model contains an individual's perception about economy. The findings in a table 03 given below described that the Omnibus test is always significant (<0.0005), denoting acceptance of the hypothesis that β coefficients are different from zero. The test gives an overall indication that the model is performing well. The results of Hosmer and Lemeshow test are also shown in a table 03. SPSS states that this test is the most reliable test of model fit. Poor fit is indicated by a significance value <0.05 in this test. Cox and Snell R^2 and the Nagelkerke R^2 values give a sign of the amount of variation in the independent variable explained by the model. These are described as pseudo- R^2 statistics.

Model 01 is a basic model because it includes control variable of Gender. Results in table 04 show that Gender has a slight negative effect on entrepreneurial intentions. Value of .939 shows that there is no difference between both genders regarding their entrepreneurial intentions in China.

Model 02 has tried to verify H1 where a role model, self-efficacy and risk aversion are suggested to have an influence on the intentions of adults to start a business and results are mentioned in table 05. The results showed that expected signs. The effects of role model and ratios are 1.447 and 1.466 respectively. On the other side, self-efficacy did not show a significant coefficient, the score has a negative sign showing decreasing entrepreneurial intentions. Therefore, H1 has partially been supported.

The Model 03 includes socio-cultural perceptions along with gender as a control variable in order to test proposition 03, and results are mentioned in a table 06.

The Results support only two perceptions (career choice and public media) with positive coefficients. This means that the odds ratio for career choice is 1.035 while the same for

Table 02
Description of Variables

Category of Variables		Name of Variables	Explanation	Measure
Dependent Variable	Entrepreneurial Intention	1. Entrp. Intention	Respondents were asked whether they intend to start a business within 03 years.	0= No 1= Yes
Independent Variables	Individual Perceptions	1. Role Model	Respondents were asked whether they personally knew someone who had started a business in the two years preceding the survey	0= No 1= Yes
		2. Self-efficacy	Respondents answered if they believed they had the required skills and knowledge to start a business	0= No 1= Yes
		3. Fear of Failure	Whether fear of failure would prevent them from setting up a business or not	0= No 1= Yes
	Perception of Economy	1. Entrepreneurial Opportunities	Respondents stated if they thought there would be good opportunities to start a firm in the area where they live in the six months following the survey.	0= No 1= Yes
	Socio-Cultural Perception	1. Career Choice	Respondents' perception that in their country, most people consider starting a new business a desirable career choice	0= No 1= Yes
		2. Status and Respect	Agreement with the statement that in their country, those successful at starting a new business have a high level of status and respect	0= No 1= Yes
3. News in Public Media		Agreement with the statement that in their country, they will often see stories in the public media about successful new businesses	0= No 1= Yes	
Control Variable	Gender	Gender	Gender of respondents.	0= Female 1= Male

Table03

Result of Goodness-of-fit

Test	Model1	Model2	Model3	Model4
Omnibus test (sig. level)	.939	.011	.000	.000
Cox and Snell pseudo-R ²	.000	.004	.016	.033
Nagelkerke pseudo-R ²	.000	.005	.022	.044
Hosmer-Lemeshowtest (sig. level)	.000	.983	.077	.005
% correct	56	56	56	56

Table 04
Gender and Entrepreneurial Intentions

Variables	B	Exp(B)
Gender	-.005	.939
Constant	-.242	.785

Table 05
Individual Perceptions and Entrepreneurial Intentions

Variables	B	Exp(B)
Gender	-.050	.951
Role Model	.369	1.447
Self-efficacy	-.003	.997
Risk aversion	.382	1.466
Constant	-.737	.479

Table 06
Socio-Cultural Perceptions and Entrepreneurial Intentions

Variables	B	Exp(B)
Gender	-.049	.952
Career Choice	.034	1.035
Respect	-.202	.817
Public media	.221	1.247
Constant	-.284	.783

Table 07
Individual's Perception of Economy and Entrepreneurial Intentions

Variables	B	Exp(B)
Gender	-.023	.978
Entrep. Opport.	.459	1.583
Constant	-.213	.808

think entrepreneurship to be a desirable career choice and have a positive influence on the intention level of adults Proposition 03 has been verified in a model 04 and this model includes another variable of measuring individual's perception about the availability of entrepreneurial opportunities in residence. The results of this model are available in a table 07. H3 is satisfactorily accepted because this variable has a significant and positive β coefficient of an odds ratio of 1.035.

4. DISCUSSION AND CONCLUSION

As the objective of this research paper is to examine entrepreneurial intentions through cognitive perceptions to predict entrepreneurial intentions of adults. The basic model of study includes gender as a control variable. Gender is a slightly negative and insignificant predictor of

public media is 1.247. It may be assumed that the media is giving a high weight to entrepreneurs and those adults who

entrepreneurship in China. It means that males and females have exhibited almost same interest regarding entrepreneurial intentions. Further, "It is also evident from a GEM report 2011; the Total Entrepreneurial Activity (TEA) rate for females was 22.4 % (25.7 % for males)". This rate of female TEA was the second highest of countries surveyed in 2011. This second position shows that there is no dissimilarity between intentions of male and female. These results are consistent with a previous study [51]. According to Chu [52], the Mao led revolution of 1949 changed and elevated the status of women in Chinese society. Therefore, females are as actively playing their role in development of the economy as their counter parts. Further, during the stay in China the author of this paper has personally observed the high level involvement of females in launching and running their businesses.

The first important finding of this research paper is about individual perceptions (self-efficacy, role model and risk aversion) as proposed by literature. There is a positive and strong effect of role model and risk aversion on entrepreneurial intentions. While self-efficacy is slightly negative, but a strong predictor of entrepreneurial intentions. "The results of the role model and self-efficacy are consistent with the assertions and findings that support these variables as an important construct towards entrepreneurial intention [48-65]". In our social settings, we usually follow our successful peers/people in our life endeavors. The success stories serve for us as role models and motivating factors. "Bosma [56] argued that role models provide living evidence that certain goals are achievable and it enhance the desire to become an entrepreneur by providing legitimization and encouragement to turn entrepreneurial ambitions into reality [57-58-59]." Therefore, it is highly significant to introduce and promote popular entrepreneurs and their experiences through the media to encourage adults to choose entrepreneurship as a career. Risk aversion is also positive and significant. These results are in line with studies conducted in the global context. Chu [52] claims that Chinese are born entrepreneurs. They like to be their own boss. The results of this study validate their claim. A phenomenal number of 4.3 million SMEs and their contribution up to 60 percent in GDP of China can also be taken as an indicator to validate our findings. Second, findings are about social and cultural variables. Career choice and public media are positive and highly significant have intentions to adopt entrepreneurship as their career rather than working for others and this may be due to continuous promotion of entrepreneurs through public media. But amazingly, respect to entrepreneurs is negative and insignificant. Lastly, perception about the availability of opportunities is also positive and significant. Further, according to a GEM report, the 33% Chinese foresee business opportunities in areas where they are living [60].

Various stakeholders (society, media, universities and teachers in universities, government and commercial banks) have to play their key roles to promote entrepreneurship and entrepreneurial intentions among youth. The government has also to play an important role by making policies to promote entrepreneurship among adults. Therefore,

governments should make commercial and micro-finance banks responsible to extends loans to adults who want to run their businesses and also to establish institutions which can extend advices to potential entrepreneurs. Further, newly establish businesses also require the efficient legal system which can protect them whenever it becomes necessary for them. Media is also responsible to explore and promote successful entrepreneurs in the country as young people can be encouraged to choose entrepreneurship as their career.

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