

## THE ASSOCIATION OF ENTREPRENEURSHIP AND HOFSTEDE'S MASCULINITY AND UNCERTAINTY AVOIDANCE ON BANDUNG HIGHER EDUCATION STUDENTS

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### ABSTRACT

Job seeker statistic in Indonesia shows that Higher Education Institution could not produce graduates who are accepted by industries. Industries in Indonesia still need employees, but Indonesian job seekers, especially educated job seekers, could not meet the competencies required by industries. (Eman Suparno, Minister of Workers, Opinion and Editorial [www.thejakartapost.com](http://www.thejakartapost.com), September 25, 2006). One of alternatives to reduce educated unemployment in Indonesia is by encouraging them to actualize their entrepreneurship characteristics, since zulganef and mudzakar (2008) found some entrepreneur characteristics in some higher education students. Universities could make some contributions to solve the problems starting by comprehending relationship between some culture dimensions and entrepreneurship characteristics, since culture is a mental program that could change attitude or behavior. Understanding the relations between culture dimensions and entrepreneurship will make higher educational institutions easier to develop their curriculum with entrepreneurship content, since masculinity and uncertainty avoidance are apart of mental programs designed by society, at least they have some empiric justification. The Hofstede's culture dimensions are considered as variables that could have an impact to the characteristics of entrepreneurship. This research found that masculinity has positive relationships with entrepreneurship characteristics, while uncertainty avoidance has negative correlations with entrepreneurship characteristics.

*Keywords: Masculinity, Uncertainty Avoidance Entrepreneurship*

### INTRODUCTION

Kompas (11 February 2008, p.14), a national daily journal, reported that job seekers growth in Indonesia. The National Job Seekers Survey Data (Data Survei Angkatan Kerja Nasional or Sakernas) on February 2007 was reporting the increasing number of job seekers in Indonesia which shows Indonesia educated unemployment increasing from 6.16% in 2006 to 7.02% in 2007, in addition, Pikiran Rakyat (May 24, 2004) a local daily journal described the increasing unemployment from 16.17 million people in 1998 to 16.21 million in 2002. The increasing number per year on the average is 157.118.

Suparno (Opinion and Editorial [www.thejakartapost.com](http://www.thejakartapost.com), September 25, 2006), Minister of Human Resource, cited Center of Statistical Bureau (Biro Pusat Statistik) that until June 30, 2006, the level of unemployment would reach 10.6% or about 11.6 million from 106 million employees, and it would increased by 2% from 9.5 million at the end of 2006. On the other hand, the employees who work less than 35 hours a week have increased to more than 43 millions.

One alternative to reduce educated unemployment is by giving them skills and encouragement to start their own business since they were in the higher educational, therefore, they do not depend on companies that can give them monthly salary anymore. Unfortunately, Kompas (February 11, 2008) reported that the job is most preferred by job seekers than running their own business, since being a worker makes them have some routine salary, only 5% who prefer to choose to be an entrepreneur. On the other hand, zulganef and mudzakar (2008) found some entrepreneurship characteristics in Bandung higher education students, such as self reliance and thought. The finding of Zulganef and Mudzakar (2008) shows that in reality educated unemployment in Indonesia, at least in Bandung should have a motivation to be an entrepreneur, consequently higher educational institution in Indonesia have an obligation to create graduates which can actualized their entrepreneurship potentials.

Poojary (1996) stated that entrepreneurship characteristics in a worker could be created through training as well as education. The Poojary (1996) finding shows that entrepreneurship could be created through the development of higher educational institutions programs or curriculum that encourage higher education students to actualize their entrepreneurship characteristics when they turn out to be an educated employment. The program and curriculum development could be commenced from understanding relationships between culture and entrepreneurship characteristics, since culture is a mental program that designed by society for their

members (Hofstede, 1994). The role of culture as a mental program stated by Hofstede (1994) made it as a tool for creating mindset, attitude, or behavior of members of the society. Hofstede (1994) explains some culture dimensions that could create a certain mental in a society, those are individualism, power distance, masculinity, and uncertainty avoidance.

Ferrara and Roberson (2008), and Tiessen (1997) found out that individualism had relations with entrepreneurs characteristics. Referring to Ferrara and Roberson (2008) finding, this research analyses the relation between another Hofstede's culture dimensions, those are masculinity and uncertainty avoidance, and entrepreneur characteristics. The authors choose masculinity and uncertainty avoidance since these two dimensions have not been much investigated by Indonesian investigators.

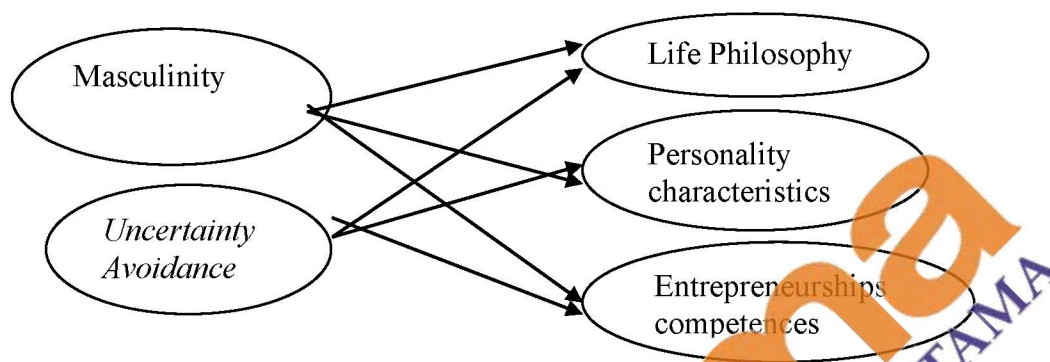


Figure 1: Research Model

Understanding the relations between masculinity and uncertainty avoidance, with entrepreneurs will make higher educational institutions easier to develop their curriculum with entrepreneurs content, since masculinity and uncertainty avoidance are apart of mental programs designed by society. Kazmi (1999) claims three characteristics of entrepreneurship, such as life philosophy, personality characteristics, and entrepreneurship competence which have relationship with culture. For that reason, this main research objective is to verify Kazmi (1999) work through a replication, consequently the model of this research is seen on figure 1.

According to the introduction above, the problems analyzed in this paper are:

1. Does Bandung higher education student masculinity orientation have relations with entrepreneurs characteristics?
2. Does Bandung higher education student uncertainty avoidance orientation have relations with entrepreneurs characteristics?

#### THE PURPOSE OF STUDY

The purposes of this research are as follows:

1. To analyze the relationships between students' masculinity orientation and entrepreneurs characteristics
2. To analyze the relationships between students' uncertainty avoidance and entrepreneurs characteristics

This research has theoretical and practical contributions as follows:

1. Theoretical: developing the entrepreneurs theory through exploring the relations between entrepreneurship and culture orientations (masculinity and uncertainty avoidance) through generalizations and lawlike generalizations (Hunt, 1990)

2. Practical: If the higher educational institutions know the relations between Hofstede's dimensions and the characteristics of students, for that reason, the higher educational institutions could find the starting point for developing students programs in term of creating entrepreneurs in Indonesia
3. Practical: If the higher educational institutions know the relations between Hofstede's dimensions and the characteristics of students, hence, the higher educational institutions could find the starting point for reducing educated unemployment in Indonesia through encouraging them to actualize some entrepreneurs characteristics in their rest of life.

The relations that depict in the model are explained in literature review section as follows

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Entrepreneurship

Kao (1989) defines that entrepreneurs is an effort to create value through business opportunities, managing risk based on existing opportunity, and mobilized human, financial, and material resources through communication and management skills to reach a project at fruition. Then Individuals who are practicing the definition above are defined by Kao (1989) as entrepreneurs.

Xu and Ruef (2004) cited French experts on economics, Cantillon and Say, who explain entrepreneur as a person who has motivation and skill to deal with financial risks. It is often described in economic theory that becoming an entrepreneur is a choice of someone or employee which depends on how their attitude towards risks.

Das (1999) cited Cooper who explains three factors that affect the establishment of entrepreneurship, those are antecedent factors which include: 1). Backgrounds, such as family's and friend's effects which influence motivation, skills, and knowledge. 2). Organization Incubator such as, the condition of the organization where the entrepreneur used to work before starting a business, skills learned in that organization. 3). Environment, such as economical condition, access to capitals and other supporting services, and role models. Das (1999) also explain that gender also affecting those three factors. For example, women have more difficulty in capital access, inadequate financial and skill resources, limited information system and network, and they also have lack of relevant experience related to entrepreneurship.

Kazmi (1999) investigates the second generation of entrepreneurs in India and reveals some characteristics possessed by entrepreneurs, the characteristics are: guiding philosophies; personality which includes intelligence, diligence, confidence, creativity, perseverance, and amiability; competition which includes achievement-oriented, leadership, human relations, motivation, administrative, innovative, risk taking, time management, predicting, and managerial skills. Based on the introduction mentioned above, this research verifies and replicates Kazmi's research (1999), since Kazmi's (1999) work conducted in India, while this research in Indonesia, culturally the two countries are different, hence, the authors motivate to verify the Kazmi (1999) finding through different cultures ( Aaker and Maheswaran 1997, Kellog 2000, Maholtra and McCort 2001, and Spreng and Chou (2002),

As a based concept to analyze further curriculum content as a solution of this research problems, the authors cited Bourner (1997) who explains six learning objectives of study which has ten teaching methods for each learning objectives, they are:

1. Disseminates up-to-date knowledge, in which the teaching methods are including: lectures, up-to-date textbooks, reading lists, hands out, guest lectures, practices to explore up-to-date knowledge, skill development through the use of library and other resources, directed private study, open learning materials, and internet use
2. Develops the capability to use ideas and information, in which the teaching methods are including: case studies, practices, work experience, project, demonstration, group working, computer based simulation, problem solving, discussion and debate, and essay writing
3. Develops the student's ability to test ideas and evidence, in which the teaching methods are including: seminar and tutorial, supervision, percentage, essays, feedback on written work, literature reviewing, exam papers, critical assessment, peer-assessment, and self-assessment
4. Develops the student's ability to generate ideas and evidence, in which the teaching methods are including: research, workshops on techniques of creative problem solving, group working, action

- learning, lateral thinking, brainstorming, mind mapping, creative visualization, relaxation technique, and problem solving.
5. Facilitates personal development of students, in which the teaching methods are including: feedback, action learning, learning contracts, role play, experiential learning, learning logs, structured experiences in groups, reflective documents, self-assessment, and profiling
  6. Develops the capacity of students to plan and manage own learning, in which the teaching methods are including: learning contracts, project, action learning, workshops, mentor, reflective logs and diaries, independent study, dissertations, work placement, portfolio development

The authors assumed that higher education management could develop curriculums and teaching methods - that are required to encourage students to actualize their entrepreneurs characteristics when they turn out to be educated employment - based on those Bourner (1997) learning objectives and teaching methods.

## Culture

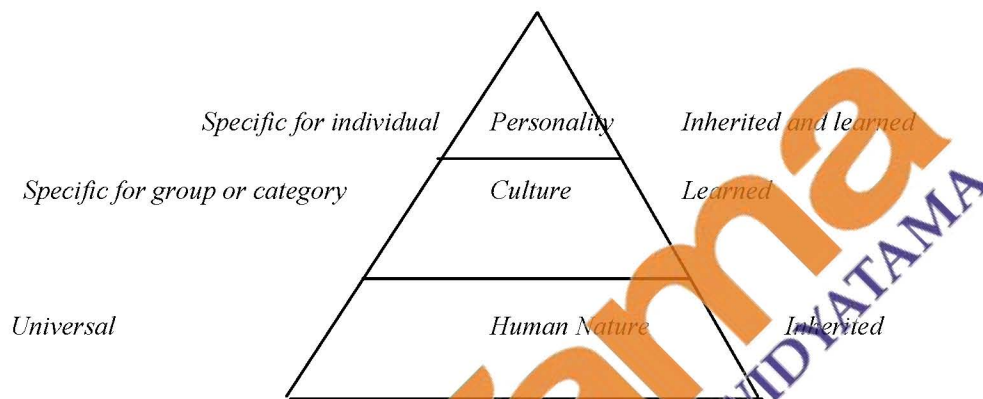


Figure 2: Levels of Mental Programming (Hofstede, 1994)

Hofstede (1994) defines culture as all thoughts, feelings and actions related to certain condition. In addition, Hofstede (1994) also states that culture is a mental program, which is programming collective thoughts that differs between one group to another. Thus culture is learned, not inherited genetically.

As seen in figure 2, Hofstede (1994) describes culture as three-level mental programming, which includes personality, culture and human nature levels as follows:

- *Personality mental program* is unique individual mental program which is not shared with another, and some are learned and some are inherited.
- *Culture mental program* is a collective thoughts mental program which differs from one group member or category to another.
- *Human nature mental program* is a universal mental software which can be understood by every single person. For example, the ability to express anger, love, happiness, sadness and the need to associate with others.
- *Human nature* is often correlated with an operating system in a computer while culture is software of mind.

The culture concept explained by Hofstede (1994) who gives an impression that culture develops thoughts, attitude, and behavior. This is because the mental programs are created by values, rituals, and other attitude or behavior, which are manifested by symbols, heroism, rituals and values. Symbols are words, gestures, images or objects which have particular meaning and can only be understood by those who share the culture. Heroes are humans, dead or alive, real or imaginary, who have respected characteristics in a culture and role models for the society. Rituals are collective activities which may technically seem superfluous in achieving the goal. However, in a culture, these activities are considered important socially: therefore, the society members do it for their own purposes. Values are everything that have positive and negative, for example good vs. bad, dirty vs. clean, ugly vs. beautiful, unnatural vs. natural, paradox vs. logical, and irrational vs. rational.

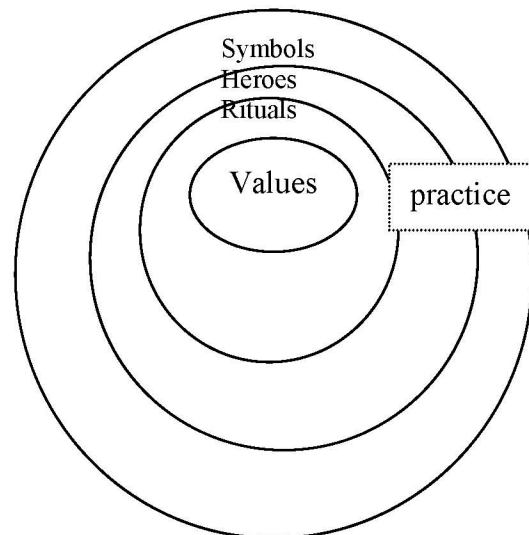


Figure 3: Culture Onion Ring (Hofstede, 1994)

Symbol, heroes and rituals are culture manifestations which are tangible because of their practices. However, values are intangible because their practices cannot be seen physically. Three culture manifestations, illustrated as onion ring on Figure 3, can be seen physically (tangible) such as, symbols, heroes, and rituals, while values are the only intangible aspect. In addition, Hofstede (1994) describes four culture dimensions in the society, they are: 1). Inequality in society which is manifested as power distance, 2). Individualism, 3). Gender role in society which is manifested as masculinity, and 4). Uncertainty avoidance.

### Masculinity

Hofstede (1994) defines masculinity as a condition in society where social gender roles are clear, for example, men are expected to be more open, persistence, focus to financial success, while women are expected to become more modest, kind, caring all qualities of life. Indonesia in line with West Africa scored 30/31 for masculinity dimension among 50 countries studied by Hofstede (1994). Index masculinity for Indonesia and West Africa are 46. Unlike individualism, masculinity does not relate with the economic development of a country.

The understanding of masculinity explained by Hofstede (1994) gives an image that it is one of the culture dimensions which affects thoughts, attitude and behavior of the society. Therefore it can be assumed that masculinity will have a relationship with entrepreneurship characteristics in a society. This is indicated by several other studies on culture relationships, such as Ferrara's and Roberson's (2008) and Tiessen's research (1997) which show relationship between culture dimensions, those are individualism, and entrepreneurship.

Ferrara and Roberson (2008) explain the relationship between individualism and entrepreneurship behavior, specifically strategic behavior, while Tiessen (1997) describes several propositions of his conceptual thought about the relationship between individualism and entrepreneurship.

Based on the individualism definition as a culture dimension, some investigations above, and the understanding of masculinity as a culture dimension, the authors develop the hypothesis 1, 2, and 3 for this study as follow:

1. There is a positive relationship between Masculinity and life philosophy of entrepreneurship among university students in Bandung
2. There is a positive relationship between Masculinity and entrepreneurship characteristics among university students in Bandung
3. There is a positive relationship between Masculinity and entrepreneurship competency among university students in Bandung

## Uncertainty Avoidance

The second Hofstede's (1994) culture dimension analyzed in this research is uncertainty avoidance, which is defined by Hofstede (1994) as a condition where the society feels threatened of uncertain or unknown situation. These feelings are reflected as stress, nervous, and the need of prediction including the need of written and unwritten rules. Indonesia is in line with Canada for its index uncertainty avoidance as much as 48 and ranked 41/42 out of 53 countries studied. The index uncertainty avoidance figure indicates that Indonesian society is not too worried with the future condition faced. In other words, Indonesian citizens are more confident in facing the future.

According to the definition, the authors see that uncertainty avoidance is similar to one entrepreneurship's characteristics, that is risk avoidance, especially for calmness in facing the future without stressed out, which also means being able to manage risks and become independent. These entrepreneur's characteristics give an image that one's success is relied on how much effort being put in and the more efforts means the more profits. On the other hand, Hofstede (1994: 54) describes further that in a country with high index of uncertainty avoidance (AI), the society tends to be more busy, emotional, aggressive and active. Conversely, countries with low AI tend to be more calm, easy-going, controllable, and lazy. According to this logical concept, Indonesia should have a calm, easy going, controllable, and lazy behavior

The author logical concept that is in line with Hofstede's (1994) uncertainty avoidance makes a chance to verify these phenomena. However, the authors see the function of culture as a mental program which affects thoughts, attitude and behavior of someone. Consequently, the authors take a position illustrated on hypothesis 4, 5 and 6 of this study:

4. There is a positive relationships between uncertainty avoidance and life philosophy of entrepreneurship
5. There is a positive relationships between uncertainty avoidance and personality characteristic of entrepreneurship
6. There is a positive relationships between uncertainty avoidance and entrepreneurship competency.

## RESEARCH DESIGN

### Research Type and Method

The research conducted by the authors was Explanatory research, which determined relationship between individualism and power distance with entrepreneurship characteristics among university students on their own perception. The method used was research's variables survey, which were masculinity, uncertainty avoidance, and entrepreneurship among university students in Bandung.

### Variables Operational and Measurement

Masculinity and uncertainty avoidance variables were operation based on the research done by Hofstede (1994), while entrepreneurship variable was operation based on Kazmi's research (1999). The authors analyzed the relationship between characteristics of entrepreneurship and masculinity and uncertainty avoidance using structural equation modeling (SEM) as the tool of analysis.

Data was collected using convenience sampling technique, through questionnaires distribution. 350 questionnaires were distributed to three private universities, including Management Institute of Telkom, Widyatama University, and STIE Ekuitas. 339 out of 350 samples were analyzed. These samples included 190 students of Widyatama University, 75 students of Management Institute of Telkom, and 74 students of STIE Ekuitas. 11 samples were considered not valid to be analyzed since respondent have not completed entrepreneurship class, entering the same number, or more than 30% the questions were not answered. The three universities were chosen because they have vision and missions which are closely related to entrepreneurship.

## RESULT

### Respondents' Culture Orientation

The orientation towards masculinity and uncertainty avoidance of respondents can be seen on Table 1. The mean value of respondents' answers is 4.22 from the scale of 1 to 5, indicating that generally the respondents

have strong gender orientation. This means that students in Indonesia acknowledge that there is a great difference between men and women role.

Table 1. Respondents' Culture Orientation

	N	Minimum	Maximum	Mean	Std. Deviation
MASCULINITY	332	2.14	5.00	4.2285	.52308
UNCERTAINTY_AVDNC	334	2.57	5.00	3.7391	.43629
Valid N (listwise)	329				

Respondents' orientation towards uncertainty avoidance is also great, indicated by the mean value at 3.7391 from the scale of 1 to 5. This figure signifies that most university students in Bandung have strong orientation to the future uncertainty. Meaning that these students do like future uncertainty, in other words they like facing risks.

## THE RELATIONSHIP BETWEEN MASCULINITY AND UNCERTAINTY AVOIDANCE WITH UNIVERSITY STUDENTS ENTREPRENEURSHIP IN BANDUNG

### Reliability Test

The reliability test used is item to total correlations test (cronbach alpha values). This method is used due to the probability of sampling errors (Pedhazur and Schmelkin, 1991: 104). Cronbach Alpha values of the five variables analyzed can be seen on Table 2.

Table 2 Reliability Values

Variables	Cronbach Alpha
Life Philosophy	0.570
Personal Characteristics	0.560
Entrepreneurship Competency	0.716
Masculinity	0.710
Uncertainty Avoidance	0.767

The cronbach alpha value of life philosophy variable is .57, the number was obtained after eliminating three philosophy variable items which are lp 3, lp 4 and lp 5. The cronbach alpha value of personal characteristics is .56 after removing items kp 10, kp 11 and kp 13. The alpha value of entrepreneurship competency is .716. The alpha value of masculinity is .71. Finally, the alpha value of uncertainty avoidance is .767 after deleting items ua 32, ua 33, ua 36.

The reliability values of those five variables are above 0.5. The minimum value of variable required to be considered as a reliable variable (Guilford and Fruchter, 1973: 407). Besides, unobserved variable that can be analyzed by structural equation modeling must at least have three variable indicators (Bagozzi, 1981).

### Validity Test

Bagozzi, Yi, and Phillips (1991) stated that a validity of a construct must be analyzed, especially to see the probability of systematic or sampling error. The validity test consists of convergent validity and discriminant validity. According to their opinion, the authors decided to conduct both convergent validity and the discriminant validity as well.

Both convergent and discriminant validity were tested based on measurement suggested by Hair, *et al.*, (1995: 653), and Chau (1997). Hair, *et al.*, (1995) and Chau (1997) measure construct validity by using construct reliability, while discriminant validity is measured by comparing the constructs correlations mean and variance extracted of each construct. Variance extracted is standardized regression weight mean of each variable. Thus the validity test was made based on congeneric model.

Table 3 is the measurement of discriminant validity on each variable. It can be seen on the table that variance extracted value of each variable is above 0.5. This figure indicates that life philosophy, personality, entrepreneurship competence, masculinity and uncertainty avoidance are convergent valid. This means that variable indicators used in this research are reflecting measured constructs, since variance extracted of these indicators are above or equal to 0.5.

Table 3 Variance Extracted value of each Variable

	Life Philosophy	Personality	Entrepreneurship Competency	Masculinity	Uncertainty Avoidance
SRW1	0.678	0.491	0.734	0.727	0.693
SRW2	0.564	0.670	0.518	0.535	0.716
SRW3	0.380	0.327	0.571	0.632	0.773
Mean	0.54	0.50	0.61	0.63	0.73

Source: Analyzed from data sources

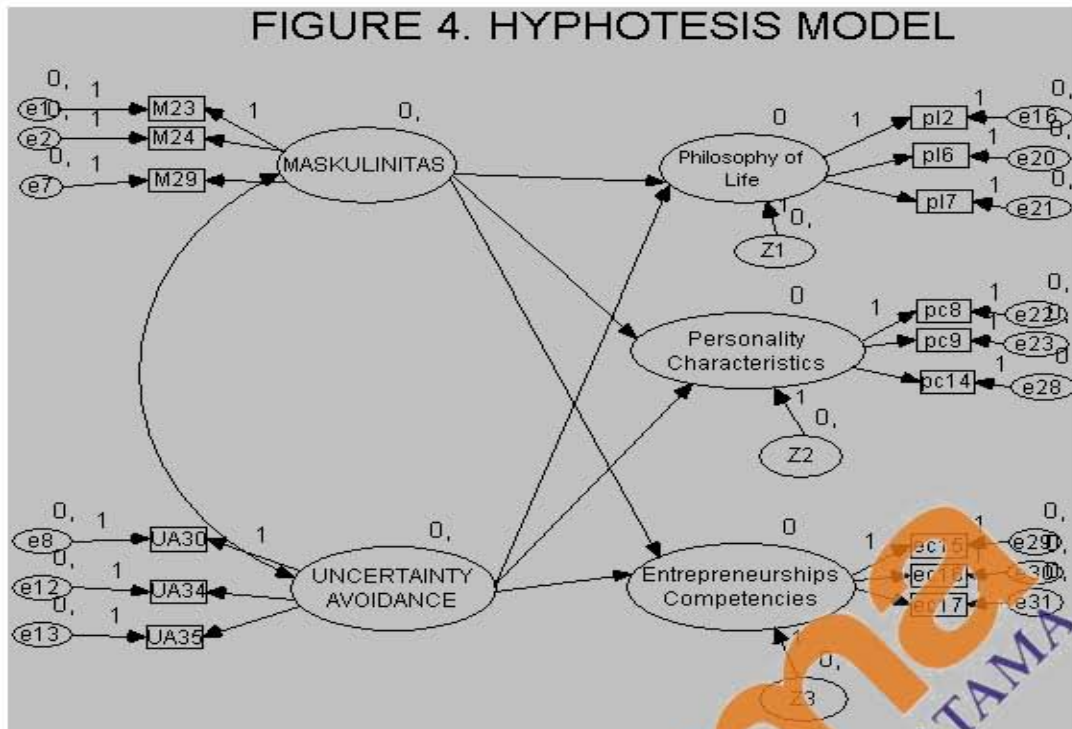
Table 4 Mean of Quadrant Correlation

	Life Philosophy	Personality	Entrepreneurship Competency	Masculinity	Uncertainty Avoidance
Life Philosophy		0.701	0.545	0.265	0.089
Personality	0.701		1.113	0.308	0.122
Entrepreneurship Competency	0.545	1.113		0.288	0.158
Masculinity	0.265	0.308	0.288		0.903
Uncertainty Avoidance	0.089	0.122	0.158	0.903	
Mean	<b>0.400</b>	<b>0.514</b>	<b>0.520</b>	<b>0.50</b>	<b>0.394</b>

The correlation mean of each variable can be seen on Table 4. The mean of each variable was compared with Table 3 variance extracted values in order to test the discriminant validity between variables, which is the comparison of the variance extracted values with the mean of variable correlation. This indicates that the variables analyzed were different from another which also means that it has accepted discriminant validity.

### Hypothesis Test

Hypothesis 1 to 6 was tested using analysis of two different technique which are the fit model analysis and structural analysis. The fit model analysis is analyzing the result of model fitness and the data through fit measurement index. Structural analysis is analyzing the relationship between variables through correlation values between variables (Anderson and Gerbing, 1988; Hair, *et al.*, 1995). Figure 4 is the analyzed hypothesis model.



**Fit Index Measurement Analysis**

Fit measurement index indicate good values. For instance, NFI = 0.889, RFI = 0.839; IFI = 0.950; TLI = 0.925; CFI = 0.948; RMR = 0.031; RMSEA = 0.065, and Parsimony value = 0.808. These values indicate that analyzed model have suitability with the data.

Joreskog and Sorbom (1988: 43) explained that the basic measurement which can identify the goodness of fit between the model and data is the chi-square statistic value. Joreskog and Sorbom (1988: 43), and Mueller (1996: 83) describe that evaluating model fit to the data by using chi-square can be done by dividing chi-square values with its degree of freedom. The smaller the result is, the better the model is (usually below 5).

The ratio of chi-square and the degree of freedom of the models which the authors analyzed is 1.739 (Cmin/df). This value is the result of chi-square (144,344) divided by degree of freedom (52). Since the result is below 5, therefore the model is fit with the data.

**Structural Model Analysis**

Table 5 indicates the relationship between variables analyzed, that is. the masculinity and three entrepreneurship (life philosophy, personal characteristics and entrepreneurship competence) relationships, and the relationship between uncertainty avoidance and those three entrepreneurship variables. They have a significant correlations value on trust which is below 5% ( $p < 0.05$ ). The relationships between masculinity and the three variables are positive, while the relationships between uncertainty avoidance and the three variables are negative.

Table 5 Structural Relationship

			Estimate	S.E.	C.R.	P
Life Philosophy	<---	Masculinity	1.977	0.725	2.729	0.006
Personal Characteristics	<---	Masculinity	4.069	1.337	3.043	0.002
Entrepreneurship Competencies	<---	Masculinity	4.982	1.559	3.197	0.001
Life Philosophy	<---	Uncertainty avoidance	-1.679	0.642	-2.613	0.009
Personal Characteristics	<---	Uncertainty avoidance	-3.526	1.195	-2.95	0.003
Entrepreneurship Competencies	<---	Uncertainty avoidance	-4.265	1.395	-3.058	0.002

P value for the relationship between masculinity and life philosophy is 0.006. P value for the relationship between masculinity with personal characteristics is 0.002. P value for the relationship between masculinity with entrepreneurship competence is 0.006. P value for the relationship between uncertainty avoidance with life philosophy is 0.009. P value for the relationship between uncertainty avoidance with personal characteristics is 0.003. Finally, p value for the relationship between uncertainty avoidance with entrepreneurship competence is 0.002.

Those six values are less than  $p = 0.05$ . This indicates that both masculinity and uncertainty avoidance have the association with entrepreneurship (life philosophy, personality and entrepreneurship competence). Therefore three out of the six hypotheses are supported. They are:

1. Masculinity has positive relationships with life philosophy of entrepreneurship among university students in Bandung
2. Masculinity has positive relationship with entrepreneurship characteristics among university students in Bandung
3. Masculinity has positive relationship with entrepreneurship competency among university students in Bandung

The other three hypotheses are not supported because the investigation result does not support these some instructions. The other three variables are as follow:

4. Uncertainty avoidance has negative relationship with life philosophy of entrepreneurship
5. Uncertainty avoidance has negative relationship with personality characteristic of entrepreneurship
6. Uncertainty avoidance has negative relationship with entrepreneurship competency.

## CONCLUSIONS AND DISCUSSIONS

The authors identify several facts to be concluded and discussed, they are:

*First*, the relationship between masculinity and entrepreneurship is positive, while the relationship between uncertainty avoidance with entrepreneurship is negative. This indicates the more masculinity orientation among university students in Bandung, the more entrepreneurship characteristics they will have. On the other hand, the more uncertainty avoidance they have, the less entrepreneurship characteristics they will have. Hence, the Higher Educational Institutions Managers should strengthen the existence of masculinity, and lessen the uncertainty avoidance that may exist in the Bandung Students Characteristics. One way to strengthen the masculinity and lessen the uncertainty avoidance is through developing the curriculum and teaching methods. The higher education managers should choose the teaching methods that close to strengthen the masculinity and lessen the uncertainty, for example through develops the capability to use ideas and information, develops the student's ability to test ideas and evidence methods, included case studies, practices, seminar and tutorial, essays, feedback on written work, and exam papers suggested by Bourner (1997).

*Second*, university students in Bandung have strong masculinity orientation, it means that they admit different kind of roles between men and women. They also have strong uncertainty avoidance, which means that they tend to avoid uncertainty of the future, do not like uncertain things, in other words, they do not like to take a risk. This characteristics could be improved through case studies, practices, and seminar and tutorial. This results also support that India (Kazmi 1991), Canada (Ferrara and Robersson, 2008), and West Africa (Tiessen, 1997) are different.

*Third*, the association between culture orientation and entrepreneurship above indicates that students who have masculinity are associated with students that have entrepreneurship characteristics, on the contrary, the students who have uncertainty avoidance are associated with students that have no entrepreneurship characteristics. This means that higher education management should minimize the Bandung higher educational students' uncertainty avoidance orientation. This could be done through practical teaching methods or case study of curriculum design, such as suggested by Bourner (1997).

Fourth, this research supports the previous research carried out by Ferrara and Roberson (2008), and Tiessen's proposition (1997) which shows the relationship between culture and entrepreneurship characteristics.

## RECOMMENDATIONS

Referring to the above conclusions, there are several steps to increase entrepreneurship among university students in Bandung, they are:

1. University management should consider culture values, especially masculinity, which is an orientation which differs function and roles based on gender, and uncertainty avoidance, which is an orientation for a high future. This means that the university management should strengthen masculinity values among students in Bandung, and reduce or even eliminate uncertainty avoidance, especially in designing the curriculum for entrepreneurship.
2. This research shows that masculinity can be the cause of the existence of entrepreneurship among university students. However, the initial data of this research (background) shows that only 5% of graduates who become entrepreneurs. Therefore, there is a need of developing a curriculum which can stimulate masculinity among university students. For example the curriculum content is filled by teaching methods emphasizing practice or case study
3. This research shows that students who do not like the uncertainty of future (high uncertainty avoidance values) have negative associations with entrepreneurship. This can be the reason for students who do not have intention to become entrepreneurs because of their fear of risks. As a result, there is a need for creating a curriculum which can encourage university students to face risks or uncertainty of the future.
4. The association between masculinity and uncertainty avoidance dimensions shows that universities should emphasize a curriculum which strengthens masculinity values and eliminates uncertainty avoidance.
5. Based on six learning goals and ten learning method described by Bourner (1997), the learning goals in developing entrepreneurship are the fifth and the sixth learning goals, which are, to facilitate personal development of students and to develop the capacity of students to manage and plan own learning. These two goals seem have strong relationship with strengthening masculinity and eliminating uncertainty avoidance.
6. There is a need of workshop or seminar in order to comprehend more about the curriculums that can stimulate entrepreneurship values, especially motivation to face uncertainty of the future.
7. Based on two learning goals above, the effective learning methods are: feedback, action learning, learning contracts, role play, experiential learning, learning logs, structured experiences in groups, reflective documents, self-assessment, profiling, project, action learning, workshops, mentor, reflective logs and diaries, independent study, dissertations, work placement, and portfolio development.

## LIMITATIONS AND FURTHER RESEARCH

This research has its limitations that need to be considered, which are:

1. The main recommendations as solutions of this research problem as mentioned above is the curriculum design which is filled in by some teaching methods, nevertheless the reason for choosing the methods is not quite clear. Consequently, it need to re-investigate the relations between masculinity and / or uncertainty avoidance and six teaching methods suggested by Bourner (2009)
2. This research was conducted only in three Universities in Bandung which cannot represent the condition of universities students in Bandung. This research needs to be extended by taking more samples which can represent the students in Bandung.
3. Some items in the questionnaire were not tested beforehand. Therefore, the probability of error is high, indicated by the reliability value of some variables. some unobserved variables are reliable after eliminating some indicator variables.

4. Sampling was not conducted in random. Therefore, there may be some probabilities of systematic error and sampling error which can affect the result of analysis. In addition, the research needs to be extended by using random sampling, for example, through cluster technique.
5. Eliminating some indicator variables during reliability and unidimension tests may have given a consequence in losing some important information.

## REFERENCES

- Agee, Tom, and Brett A. S. Martin (2001), "Planned or Impulse Purchases? How to create Effective Infomercials," *Journal of Advertising Research*, November-December, pp. 35-41
- Ajzen, Icek (1988), "Attitudes, Personality, and Behavior," *Open University Press*, Milton Keynes
- Ajzen, Icek and Martin Fishbein (1980), *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Inc., Englewood Cliffs, New Jersey.
- Aaker, J. L., and D. Maheswaran (1997), "The Effect of Cultural Orientation on Persuasion," *Journal of Consumer Research*, Vol.24, December, 315-328
- Allport, Gordon W. (1967), "Attitudes," in Martin Fishbein (ed), *Reading in Attitude Theory and Measurement*, John Wiley & Sons, Inc, New York
- Anderson, James C., and David W. Gerbing (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, Vol.103, No.3, 411-423
- Assael, Henry (1998), "Consumer Behavior and Marketing Action," *South-Western College Publishing*, Cincinnati
- Bagozzi, Richard P. (1981), "Evaluating Structural Equation Models With Unobservable Variables and Measurement Error: A Comment," *Journal of Marketing Research*, Vol. XVIII (August), 375-81
- Bagozzi, Richard P., Youjae Yi, and Lynn W. Phillips (1991), "Assessing Construct Validity in Organizational Research," *Administrative Science Quarterly*, 36: 421-458
- Bone, Paula Fitzgerald, Subhash Sharma, and Terence A. Shimp (1989), "A Bootstrap Procedure for Evaluating Goodness-of-Fit Indices of Structural Equation and Confirmatory Factor models," *Journal of Marketing Research*, Vol. XXVI, February, 105-111
- Chau, Patrick Y.K. (1997), "Reexamining a Model for Evaluating Information Center Success Using a Structural Equation Modeling Approach," *Decision Sciences*, Volume 28, Number 2, Spring, 309-334.
- Chow Siu, I.H. (1995), "Management education in Hong Kong: needs and challenges," *International Journal of Education Management*, Vol.9 No.5, pp.10-15.
- Clabaugh, M.G. and J.R. Wallace (1984), "MQIP: A Framework for Curricula Planning in an Academic Market," *Journal of Academy of Marketing Science*, Winter/Spring, 12,00001,pg.128.
- Das, M. (1999), "Women Entrepreneurs from Southern India: An Exploratory Study," *The Journal of Entrepreneurship*, 8, 2.
- Day, George S. & David E. Montgomery (1999), "Charting New Directions for Marketing," *Journal of Marketing*, Vol.63 (Special Issues), 3-13.
- Dessler, G. (2005), *Human Resource Management*, 10 Edition, Pearson Education International, Upper Saddle River, New Jersey.
- Dharmmesta, Basu Swastha (1998), "Theory of Planned Behaviour dalam penelitian sikap, niat dan perilaku konsumen," *Kelola*, No.18/VII, 85-103
- Dharmmesta, Basu Swastha (2003), "Sikap dan Perilaku Konsumen dalam Pemasaran: Sebuah Tinjauan Sosial-Kognitif," *Kajian Bisnis*, No.29, Mei, 1-25.
- Dreher, G. F. and T. W. Dougherty (2002), *Human Resource Strategy; a Behavioral Perspective for The General Manager*, McGraw-Hill Irwin, Boston
- Eide, E.R. and M.H. Showalter (2005), "Does Improving School Quality Reduce The Probability of Unemployment?" *Contemporary Economic Policy*, Oct, 23, 4.
- Ferrara, M., and Roberson, L. (2008), *Individualism-Collectivism in Entrepreneurial Decision-making Behavior*, ([maria.ferrara@uninav.it](mailto:maria.ferrara@uninav.it) dan [Loriann.Roberson@asu.edu](mailto:Loriann.Roberson@asu.edu)).
- Guilford, I.P., and Benjamin Fruchter (1973), *Fundamental Statistics in Psychology and Education*, fifth editon, McGraw-Hill, Kogakusha, Ltd, Tokyo
- Hair, Jr., Joseph F., Rolph E. Anderson, Ronald L. Tatham, and William C. Black (1995), *Multivariate Data Analysis with Readings*, prentice-Hall International, Inc., Englewood Cliffs, New Jersey.
- Hofstede, G. (1994), *Cultures and Organizations: software of the mind*, HarperCollins publishers, Hammersmith, London
- Hunt, S. D. (1990), "Truth in Marketing Theory and Research," *Journal of Marketing*, Vol.54, July, 1-15

- Joreskog and Sorbom (1988), *Lisrel 7: A Guide to the Program and Applications*, 2<sup>nd</sup> Edition, SPSS, Inc, Chicago, Illinois
- Kazmi, A. (1999), "What Young Entrepreneurs Think and Do: A Study of Second-Generation Business Entrepreneurs," *The Journal of Entrepreneurship*, 8, 1.
- Kao, J.J. (1989) *Entrepreneurship, Creativity, & Organization: Text, Cases, and Readings*, Prentice Hall, Englewood Cliffs, New Jersey.
- Kellogg, D. L. (2000), "A Customer Contact Measurement Model: An Extension," *International Journal of Service Industry Management*, Vol.11, No.1, 26-44
- Maholtra, N. K, and J. D. McCort (2001), "A Cross-Cultural Comparison of Behavioral Intention Models: Theoretical Consideration and An Empirical Investigation," *International Marketing Review*, Vol.18, No.3, 235-269
- Mueller, Ralph O. (1996), *Basic Principles of Structural Equation Modeling*, Springer-Verlag, New York
- Neuman, W. Lawrence (2000), *Social Research Methods: Qualitative and Quantitative Approaches*, Allyn and Bacon, Boston
- Pedhazur, E. J., and L. P. Schmelkin (1991), *Measurement, Design, and Analysis: An Integrated Approach*, Lawrence Erlbaum Associates Publishers, Hillsdale, New Jersey.
- Poojary M., C. (1996), "What Creates an Entrepreneur? Some Observations from a Micro Study", *The Journal of Entrepreneurship*, 5, 2.
- Schiffman, Leon G., and Leslie Kanuk (2000), *Consumer Behavior*, Prentice Hall, Inc. London.
- Sejwacs, Dorothy, Icek Ajzen, and Martin Fishbein (1980), "predicting and Understanding Weight Loss Intentions, Behaviors, and Outcomes," dalam Icek Azjen dan Martin Fishbein (Eds), *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Inc., Englewood Cliffs, New Jersey
- Singh, Arun Kumar (1986), "Tests Measurements and Research Methods in Behavioral Sciences," *Tata McGraw-Hill Publishing Company Limited*, New Delhi.
- Sperber, Brenda M., Martin Fishbein, and Icek Ajzen (1980), "Predicting and Understanding Women's Occupational Orientations: Factors Underlying Choice Intention," dalam Icek Azjen dan Martin Fishbein (Eds), *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Inc., Englewood Cliffs, New Jersey
- Spreng, R.A., J. Chiou (2002), "A cross-cultural assessment of the satisfaction formation process," *European Journal of Marketing*, Vol.36, No.7/8, 829-839.
- Suparno, E. (Opinion and Editorial [www.thejakartapost.com](http://www.thejakartapost.com), September 25, 2006)
- Thurstone, L. L. (1967), "The Measurement of Social Attitudes," in Martin Fishbein (editor), *Readings in Attitude Theory and Measurement*, John Wiley & Sons, Inc., New York.
- Tiessen, J.H. (1997), "Individualism, Collectivism, And Entrepreneurships: a Framework for International Comparative Research," *Journal of Business Venturing*, 12, 367-384
- Xu, H. and M. Ruef (2004), "The Myth of the Risk-Tolerant Entrepreneur," *Strategic Organization*, 2, 331.
- Zikmund, William G. (1997), "Exploring Marketing Research," *The Dryden Press*, sixth edition, Fort Worth
- Zulganef and Muzakar, M.K. (2008), *Eksplorasi Profil Demografik Dan Psikografik Kewirausahaan (Entrepreneurship) Mahasiswa Bandung*, unpublished, Fakultas Bisnis Dan Manajemen, Universitas Widyatama, Bandung

## Appendix 1

Table 5.6: Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
M26 <--- MASCULINITY	.494
M25 <--- MASCULINITY	.483
M24 <--- MASCULINITY	.639
M23 <--- MASCULINITY	.574
UA32 <--- UNCERTAINTY_AVOIDANCE	-.331
UA31 <--- UNCERTAINTY_AVOIDANCE	.143
UA30 <--- UNCERTAINTY_AVOIDANCE	.672
kk15 <--- ENTREPRENEURSHIP_COMPTECE	.695
kk16 <--- ENTREPRENEURSHIP_COMPTECE	.564
kk17 <--- ENTREPRENEURSHIP_COMPTECE	.617
kk18 <--- ENTREPRENEURSHIP_COMPTECE	.263
kk19 <--- ENTREPRENEURSHIP_COMPTECE	.512

	Estimate
kp8 <--- PERSONALITY CHARACTERISTICS	.543
kp9 <--- PERSONALITY CHARACTERISTICS	.656
kp10 <--- PERSONALITY CHARACTERISTICS	-.228
kp11 <--- PERSONALITY CHARACTERISTICS	.174
kp12 <--- PERSONALITY CHARACTERISTICS	.437
fph1 <--- LIFE PHILOSOPHY	.481
fph2 <--- LIFE PHILOSOPHY	.404
fph3 <--- LIFE PHILOSOPHY	.445
fph4 <--- LIFE PHILOSOPHY	.059
M27 <--- MASCULINITY	.445
M28 <--- MASCULINITY	.385
M29 <--- MASCULINITY	.585
UA33 <--- UNCERTAINTY_AVOIDANCE	-.354
UA34 <--- UNCERTAINTY_AVOIDANCE	.741
UA35 <--- UNCERTAINTY_AVOIDANCE	.780
UA36 <--- UNCERTAINTY_AVOIDANCE	.091
fph5 <--- LIFE PHILOSOPHY	.239
fph6 <--- LIFE PHILOSOPHY	.603
fph7 <--- LIFE PHILOSOPHY	.448
kp13 <--- PERSONALITY CHARACTERISTICS	-.212
kp14 <--- PERSONALITY CHARACTERISTICS	.364
kk20 <--- ENTREPRENEURSHIP_COMPTECE	.402
kk21 <--- ENTREPRENEURSHIP_COMPTECE	.401
kk22 <--- ENTREPRENEURSHIP_COMPTECE	.463

Appendix 2

Tabel 5.7: Standardized Regression Weights: (Congeneric Model 2)

	Estimate
M26 <--- MASCULINITY	.502
M25 <--- MASCULINITY	.490
M24 <--- MASCULINITY	.625
UA31 <--- UNCERTAINTY_AVOIDANCE	.220
UA30 <--- UNCERTAINTY_AVOIDANCE	.696
kk15 <--- ENTREPRENEURSHIP_COMPTECE	.694
kk16 <--- ENTREPRENEURSHIP_COMPTECE	.572
kk17 <--- ENTREPRENEURSHIP_COMPTECE	.621
kk18 <--- ENTREPRENEURSHIP_COMPTECE	.277
kk19 <--- ENTREPRENEURSHIP_COMPTECE	.512
kp8 <--- PERSONALITY CHARACTERISTICS	.542
kp9 <--- PERSONALITY CHARACTERISTICS	.641
kp12 <--- PERSONALITY CHARACTERISTICS	.428
fph1 <--- LIFE PHILOSOPHY	.471
fph2 <--- LIFE PHILOSOPHY	.438
M27 <--- MASCULINITY	.454
M28 <--- MASCULINITY	.394
M29 <--- MASCULINITY	.593
UA34 <--- UNCERTAINTY_AVOIDANCE	.728
UA35 <--- UNCERTAINTY_AVOIDANCE	.754
fph6 <--- LIFE PHILOSOPHY	.602
fph7 <--- LIFE PHILOSOPHY	.501
kp14 <--- PERSONALITY CHARACTERISTICS	.351

	Estimate
kk20 <--- ENTREPRENEURSHIP_COMPTECE	.400
kk21 <--- ENTREPRENEURSHIP_COMPTECE	.397
kk22 <--- ENTREPRENEURSHIP_COMPTECE	.450
M23 <--- MASCULINITY	.565

Appendix 3

Table 5.8: Standardized Regression Weights: (Congeneric Model 3)

	Estimate
M24 <--- MASCULINITY	.727
UA30 <--- UNCERTAINTY_AVOIDANCE	.693
kk15 <--- ENTREPRENEURSHIP_COMPTECE	.734
kk16 <--- ENTREPRENEURSHIP_COMPTECE	.518
kk17 <--- ENTREPRENEURSHIP_COMPTECE	.571
kp8 <--- PERSONALITY_CHARACTERISTICS	.491
kp9 <--- PERSONALITY_CHARACTERISTICS	.670
fph2 <--- LIFE PHILOSOPHY	.380
M29 <--- MASCULINITY	.535
UA34 <--- UNCERTAINTY_AVOIDANCE	.716
UA35 <--- UNCERTAINTY_AVOIDANCE	.773
fph6 <--- LIFE PHILOSOPHY	.678
fph7 <--- LIFE PHILOSOPHY	.564
kp14 <--- PERSONALITY_CHARACTERISTICS	.327
M23 <--- MASCULINITY	.632

Appendix 4

Table 5.1: Correlations: (Group number 1 - Default model)

**Correlations: (Group number 1 - Default model)**

		Estimate
MASCULINITY	<--> UNCERTAINTY_AVOIDANCE	0.903
LIFE PHILOSOPHY	<--> MASCULINITY	0.265
MASCULINITY	<--> ENTREPRENEURSHIP_COMPTECE	0.288
LIFE PHILOSOPHY	<--> PERSONALITY_CHARACTERISTICS	0.701
ENTREPRENEURSHIP_COMPTECE	<--> PERSONALITY_CHARACTERISTICS	1.113
UNCERTAINTY_AVOIDANCE	<--> ENTREPRENEURSHIP_COMPTECE	0.158
LIFE PHILOSOPHY	<--> UNCERTAINTY_AVOIDANCE	0.089
MASCULINITY	<--> PERSONALITY_CHARACTERISTICS	0.308
UNCERTAINTY_AVOIDANCE	<--> PERSONALITY_CHARACTERISTICS	0.122
LIFE PHILOSOPHY	<--> ENTREPRENEURSHIP_COMPTECE	0.545

Appendix 5

Table 5.13: Model Fit Summary

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	52	144.334	83	.000	1.739
Saturated model	135	.000	0		
Independence model	15	1298.155	120	.000	10.818

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.889	.839	.950	.925	.948
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.692	.615	.656
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**NCP**

Model	NCP	LO 90	HI 90
Default model	61.334	31.843	98.688
Saturated model	.000	.000	.000
Independence model	1178.155	1066.067	1297.664

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.427	.181	.094	.292
Saturated model	.000	.000	.000	.000
Independence model	3.841	3.486	3.154	3.839

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.047	.034	.059	.649
Independence model	.170	.162	.179	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	248.334	253.502		
Saturated model	270.000	285.416		
Independence model	1328.155	1329.645		

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	.735	.647	.845	.750
Saturated model	.799	.799	.799	.839
Independence model	3.929	3.598	4.283	3.934

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	247	272
Independence model	39	42