

IDENTIFYING ENTREPRENEURSHIP TRAITS AND SKILLS IN SAUDI ARABIA: AN ATTITUDINAL APPROACH

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***Abstract:** This study aims to understand the elements of entrepreneurship in an undergraduate university environment. Interestingly, this study points out that young minds think that entrepreneurship as a career is not negatively affected by level of risk, prior knowledge, time to establish, social acceptability and managing resources. One possible reason for this is the level of unawareness among respondents regarding the challenges of entrepreneurship. Further using factor analysis, motivation, confidence, interest and knowledge were found to be the factors affecting intention towards entrepreneurship. A policy recommendation would be to motivate students through courses on entrepreneurship in their curriculum.*

***Keywords:** Entrepreneurship, Factor analysis, Saudi Arabia*

INTRODUCTION

Entrepreneurship is the contemporary engine of growth. Its essence is in innovation and it creates new business. An entrepreneur identifies, creates, and initiates new business opportunities. Richard Cantillon (1697-1734) defined it as self-employment plus risk takers. A significant step forward was the assimilation of the concept of innovation by Schumpeter (1930) and now entrepreneur is being seen as an innovator. This innovation could be anything like, new goods, new method, new market, new source of raw material, or new organization. Peter Drucker (1985) views entrepreneurship as a culmination of three elements: innovation, risk taking and proactiveness. Entrepreneur has been associated with features like leader, speculator, projector, coordinator and arbitrageur. In a crux, entrepreneurship could be seen as a culmination of four factors enterprising business activity, influencing innovation, operating in dynamic environment and creating value. In fact, a complete definition would be the one given by Commission of the European Communities (2003): "Entrepreneurship is the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organization"

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During the decade, we have seen some great entrepreneurs who not only succeeded but also changed the world economics. Some of the biggest success stories of the decade were Facebook, Whatsapp, Flipkart, Ebay etc. These companies are not only have a huge worth, but are employing thousands of employee. Success stories of entrepreneurs could be exemplified by the likes of Bill Gates (Microsoft) and Steve Jobs (Apple). The country of our interest Saudi Arabia, is trying sincerely to diversify itself from the government dominated oil sector. In this respect, entrepreneurship assumes further importance. Michael E Porter, one of the pioneers of competitive advantage in his presentation at The Global Competitiveness Forum, Riyadh, Saudi Arabia in 2008 included 'upgrade company sophistication and foster entrepreneurship and development of SMEs towards a competitiveness agenda for Saudi Arabia. Again in 2012, on the same platform he said, "Stimulating entrepreneurship is central to reap the benefits of competitiveness reform in Saudi Arabia". He was in further view that there was "opportunity for entrepreneurship as there was prudent financial structure, large youthful and growing population, no income taxes and emerging venture capital industry"

According to US-Arab Tradeline Vol XVIII No. 1 Spring 2010 'Small and medium sized enterprises (SMEs) constitute ninety two percent of the businesses in Saudi Arabia and more than eighty percent of the workforce is employed therein'. It also quoted SAGIA governor Amr Al Dabbash: "Saudi Arabia is creating a business climate that supports and rewards innovation in entrepreneurial initiative". Saudi Arabia has Business Incubators, which provide services of business incubation. It also has Common Facilities Centers, which aims at promoting access to technology, awareness, consumer protection and intellectual property rights'. These continued efforts have definitely favored the nurturing of the entrepreneurial climate. It can be supported by the fact that the number of job seekers has decreased from 114138 to 106603 between the period 2005-2010. In addition, the number of individual proprietorship new in the Kingdom has increased from 32008 in 2005 to 144332 in 2014. A probable indicator for innovation, Patents by Residents has also increased from 347 in 2001-2005 to 491 in 2011-15. Moreover, Saudi Arabia is performing on an average good in international indexes like ease of doing business, competitiveness index and others as is evident in the figure below.

But despite this, as per World Economic Forum report in collaboration with Booz & Company (October 2011) only 5% of Saudi Arabia's working population is engaged in entrepreneurial activity which is even less when compared to 13% for MENA region as a whole. The total labor force has increased from 5592854 in 1999 to 11262087 in 2014. The overall unemployment rate has increased from 4.35% to 5.70% over the same time. This picture further aggravates if we take unemployment status of Saudis only. For only Saudis unemployment rate has increased from 8.10% to 11.70% during 1999-2014.

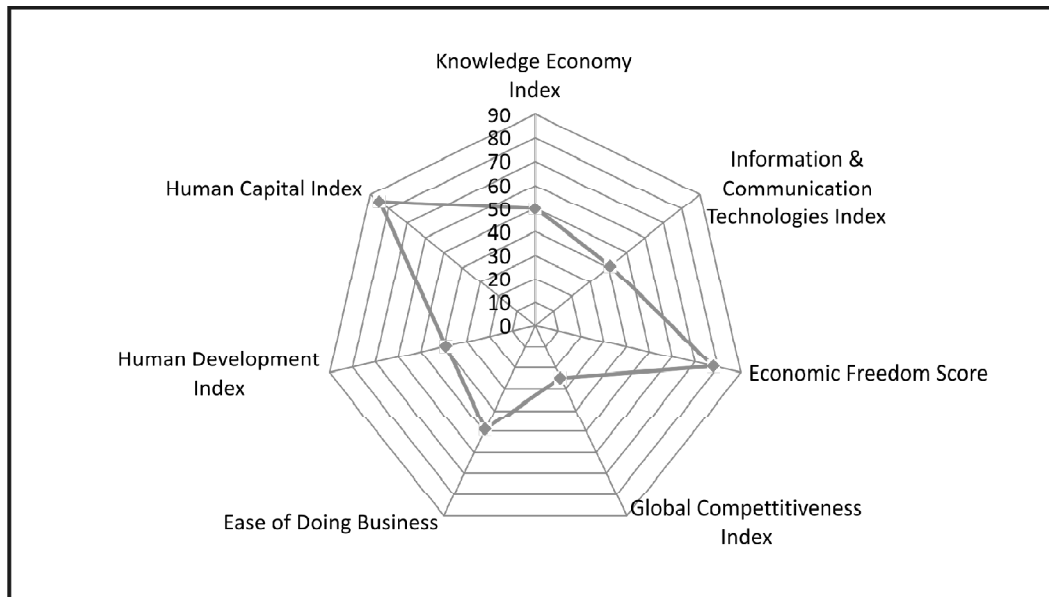


Figure 1: Saudi Arabia's Ranking in International Indexes

REVIEW OF LITERATURE

Previous studies like that of Gartner (1985) have identified dissimilarities between non-entrepreneurs and entrepreneurs in terms of education, polity, social, economy and cultural backgrounds. In addition, individually an entrepreneur had a distinctive talent, goal and motivation as per his background. Watson, Hogarth-Scott, and Wilson (1998) also identified three factors for entrepreneurial success namely: "personal background, motivation for start-up, and growth orientation". Morrison's (1999) identified the following four conditions for becoming effective entrepreneurs: intelligence, risk management, ethical, trader's instinct and lifetime learning. Lee and Peterson (2000) emphasized the need of a 'national culture', which supports entrepreneurial activity in persons having factors like personal gratification, profession, social, accomplishment and monetary remuneration.

In an study based on a private university students in Saudi Arabia Iqbal (et.al. 2005) reported that "Entrepreneurial Intentions (EI) was significantly predicted by the three independent variables, Personal Attitude (PA), Social Norms (SN) and Perceived Behavior Control (PBC)" (p.128). This study was in light of Theory of Planned Behavior (TPB) of Azjen (1991). Another study in the context of Saudi Arabia by Almobaireek (et. al., 2011) also used Azjen's model of TPB and found that the chance of expressing is significantly and positively affected by prior qualification and training. In addition, strife for independence is an important determinant of expressing entrepreneurial intensions. In another study on Saudi

Arabia by Al-Habib (2012), an attempt was made to identify the personality traits of probable entrepreneurs among college students. His results indicate that there were significant differences between entrepreneurs and non-entrepreneurs in terms of risk-taking propensity, innovativeness, internal locus of control and energy. In addition, as hypothesized all entrepreneurs had higher propensity for all the above mentioned traits than their non-entrepreneur counterparts.

According to Lee (*et al.*, 2005, p. 31) “college students who hope to work in established companies and non-profit organizations as well as those who plan to launch their own ventures may be categorized as potential entrepreneurs”. As per Scott and Twomey (1988) undergraduate students, could be motivated to take up a career in entrepreneurship with the help of an entrepreneurial education strategy. These students have been dubbed by Veciana (2002) as “sources of potential entrepreneurs”, due to the innovative ideas they have. It further assumes importance as it is important to ‘attract the young and educated to entrepreneurship’ in the present business environment (Postigo, *at.al*, 2006). A study on Saudi Arabia by Bokahri (*et al.* 2012) studied the relationship between entrepreneurship and unemployment on Saudi Arabia. This study asserted, “Higher educational institutions should take part of responsibility in developing entrepreneurial skills and initiatives as well as supporting researches in connecting with this topic”.

RESEARCH OBJECTIVE

In this study, we try to gauge the understanding of the young minds on the choice of career. For regular jobs apart from entrepreneurship, generally risk is lower as compared to when one is into entrepreneurship. Things like social acceptability, stability and job security are normally higher in regular jobs. In addition, the time to establish, level of effort required and job satisfaction would be more in entrepreneur ventures. Even things like those that prior knowledge, family support and leadership and negotiation skills are bound vary between the two. This study aims to study the importance of these very elements in making choice of career. A categorization of potential entrepreneurs and non-entrepreneurs would be made to see the differences between those who wish to become entrepreneurs in future and those who don't. Another attempt is being made to assess the behavioral/attitudinal dimensions of preference or choosing entrepreneurship.

The objective of this study are three, first, as to whether the respondents are aware of the elements/requirements of entrepreneurship second, what are significant differences between those who want be entrepreneurs in future and those who don't and third, what are the attitudinal/behavioral factors impacting the perception towards entrepreneurship.

METHODOLOGY

Based on review of the two studies on Saudi Arabia (Almobaireek et.al, 2011 and Iqbal et.al, 2012) it was proposed that the Theory of Planned Behavior (TPB) model of Azjen (1991) could be used to study the entrepreneurial intentions amongst students. TBP claims that there are three determinants for intention which are, first, attitude towards the behavior, that is, how favorable assessment of the behavior; second, subjective norms that is, how does the society perceive the behavior and third, perceived behavioral control that is, what is the perceived ease in performing the behavior. According to TPB, “behavioral intention along with perceived behavioral control can be used directly to predict behavioral achievement”.

The questionnaire has two sections. The first section constitutes of 10 statements related to choice of career where the respondents are to answer is yes or no. Here the questionnaire targets at differentiating the response between those who want to become entrepreneurs in future and those who don't. Chi square (χ^2), a non-parametric test is used to test for differences between proportions as the responses are categorical (yes/no/) in nature.

$$\text{Chi Square test statistic} = \sum \frac{(F_o - F_e)^2}{F_e}$$

Where, F_o = frequency observed; F_e = frequency expected. The frequency expected is calculated by multiplying the row total with the column total and finally dividing it by the grand total. The null hypothesis would be that there is no relationship between the variables and the alternate hypothesis is that there is a significant relationship between the variables and is accepted when the chi square test statistics is smaller than the critical value of chi square at 95% confidence level with $(\text{row}-1) * (\text{column}-1)$ degrees of freedom. The chi square test works on an assumption that the expected frequency of each is 5 or more. If this assumption is violated then we need to use Fisher's exact test, which can be used even with smaller frequencies. All these calculations would be done using SPSS.

The second section of the questionnaire constitutes of 20 statements on a 7 point Likert scale ranging from strongly agree to strongly disagree. An attempt has been made to keep simple statements related to inclination towards entrepreneurship in light of Azjen's (1991) model of Theory of Planned Behavior. The idea was to look into entrepreneurship through the eyes of business school students and get an idea as to how they perceive entrepreneurship. The questionnaire was administered to undergraduate students of Prince Sattam bin Abdulaziz University. First, these twenty statements are subjected to t-test to test for differences in their means between those who want to be an entrepreneur in future and those who don't. Since we are using a multi item scale, as a check to

ensure that dependable results are derived on repeated measurement Cronbach alpha is used to check for reliability. Next, the twenty statements that are treated as variables are reduced to a few factors using the Principal Component Analysis (PCA) method. Finally, the factors are rotated by using varimax rotation.

ANALYSIS

A total of 315 questionnaire were administered. Few of the questionnaires were ignored as it had incomplete responses. Out of the final 239 respondents, 182 respondents were from business discipline and the remaining 57 were from other streams, namely engineering and pharmacy. Amongst all 215 (89.95) wanted to be entrepreneurs and around an equal only 14 (5.85%) did not want to be an entrepreneur in future. Further, ten hypotheses were tested for significance. The results of which are as follows:

Hypothesis 1: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of level of risk being manageable. (Result: Not significant)

This is a surprising result. Both potential and non-potential entrepreneurs feel risk is manageable, from the above hypothesis, two things can be deduced number one, and respondents have a lot of confidence, and have really planned things well and have really taken care of all risk factors. The second point could be there is a complete lack of knowledge about the risks involved in an entrepreneurial venture. It seems that most of the respondents have not studied any course on entrepreneurship, may be due to this lack of any formal knowledge of entrepreneurship they are not aware of the risk involved, hence they feel risks are manageable.

Hypothesis 2: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of having prior knowledge being must for a career. (Result: Not significant)

This result is again in line with the first result. From the result it can be assessed that most respondents want be an entrepreneur, they do not want to do a job and work for someone else, rather they want to be independent and have a venture of their own. It may be due their confidence or their lack of knowledge of an entrepreneurial venture they feel that there is no need for any prior knowledge. In fact, the respondents are not aware of success rate of new venture and the risks involved in these kind of ventures.

Hypothesis 3: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of having family support. (Result: Significant)

For this statement, there is significant difference between those who want to be entrepreneurs and those who do not. Those who do not want to become entrepreneur feel that family support is must. This could be one of the reason why they do not want to be entrepreneur, because they feel family support is important. However, think they will not get the support they are expecting. Those who want

to become entrepreneur, feel family support is not very important, hence they are not giving importance to this aspect.

Hypothesis 4: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of taking least time to establish. (Result: Not significant)

The above results again show that there seems to be a complete lack of knowledge about this concept. Assuming that establishing a new venture will take least time, is very surprising. If it is a small-scale venture, than its true but for any decent size venture it require time establish. It seems almost all respondents are of the view that establishing an entrepreneurial venture is a very easy task, and can be completed in short span of time.

Hypothesis 5: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of level of effort being reasonable. (Result: Significant)

For this statement, again there is a significant difference between potential entrepreneurs and potential non-entrepreneurs. Some respondents feel entrepreneurship his requires a high level of efforts. Since, they feel they cannot put in those extra efforts they feel entrepreneurship is not for them; they do not want to be an entrepreneur. While potential entrepreneurs feel that level of efforts required are very reasonable and they would not have any problem in managing them. It seems respondents who want to be entrepreneur feel starting an entrepreneurial venture is something easy and require very less of efforts.

Hypothesis 6: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of importance of job satisfaction. (Result: Significant)

In response to this statement, it is evident that there is a significant difference between thinking of potential entrepreneurs and potential non-entrepreneurs. One reason why some respondents do not want to be an entrepreneur could be that they do not feel that they would get the Job satisfaction they are looking for. Because of the uncertainties involved in an entrepreneurial venture, it is difficult to visualize what exactly would be the working condition and how favorable and unfavorable they will be. Those who are potential entrepreneur they feel they would be doing something they love. They will work for something they have created and they will be managing, and will have control on everything. Hence, there is no question of not being satisfied with the Job.

Hypothesis 7: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of having social acceptability. (Result: Not significant)

The result for the above hypothesis show that social acceptability for entrepreneurs is very high, and this could be one of the reason why so many respondents are in favor of becoming an entrepreneur, even those who are not willing to be entrepreneur, still think highly about it. Somewhere social and cultural values of the society are playing a role in this high acceptability of entrepreneurship.

Hypothesis 8: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of leadership and negotiation skills being important. (Result: Significant)

The result suggest that potential non-entrepreneurs consider leadership negotiation skills as being an important factor for being a successful entrepreneur. Those aspiring to be entrepreneur are not considering leadership and negotiation skill as an important factor. This could be again due to two reason. First reason could be they are aware to these skills and consider themselves a good leader and negotiator. Second reason could be complete lack of knowledge about leadership and negotiation skill. They me be considering these skill can be learned as and when needed, there is no need to give them too much importance.

Hypothesis 9: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of difficulty in managing resources particularly financial resources. (Result: Not significant)

This again a very surprising result, almost all respondent from potential entrepreneurs to potential non-entrepreneur feel that managing resources is not a big task. From the above result two inferences can be drawn. First respondents have very good knowledge of all the sources and processes that are required to manage the resource, especially financial resources. Second could be complete negligence of what are processes and procedures of acquiring and resources.

Hypothesis 10: There is no significant difference between potential entrepreneurs and non-entrepreneurs in terms of the importance of stability and job security. (Result: Significant)

For this statement, again there is a significant difference between potential entrepreneurs and no potential entrepreneurs. One reason why some respondents do not want to be an entrepreneur could be that they feel in an entrepreneurial venture there is less stability and job security. If the venture fails then what. However, potential entrepreneurs are very confident that venture would be a success and would provide them long term stability and job security.

In the next section, an effort is being made to understand the factors leading to entrepreneurship. The twenty statements on Likert scale would be subjected to further analysis. The Cronbach Alpha score is 0.879, which is quite good, and it indicates at strong reliability. Before proceeding with factor analysis Kaiser-Meyer-Ohlin (KMO) measure for sampling adequacy and Bartlett's test of sphericity were conducted on the data. KMO was found to be high (0.869) indicating that sample is adequate and the sphericity test was significant which implies that population correlation matrix is not an identity matrix. This hinted at the adequacy of the sample and justified the use of factor analysis. Next, as commonly done Principle Component Analysis was done to extract the factors and factors with Eigen values more than 1 were extracted. In total 4 factors were extracted which together explained 55.81% of the total variance.

Factor 1 constituted of variable 8, 9, 13,14, 16, 17, 18 and 20 namely, Entrepreneurship must be definitely taught in graduation, I can plan my business

well, Managing my own business would give me more satisfaction; Entrepreneurship is an attractive career option; If I get opportunity and resources, definitely I would become an entrepreneur; I want to be an entrepreneur because I have a urge for achievement; I want to be an entrepreneur because I have aspirations for autonomy; and I want to be an entrepreneur because I am creative and an innovative person. This factor could be named as motivation

Factor 2 constitutes of variable 6, 7, 10, 11, 12, 15, 19 I have studied a course on entrepreneurship, If there is specialization/course on entrepreneurship , I will take it; I can organize all business activities on my own; I can lead any organization; I can control all the functions of business; There are more advantages than disadvantages in being an entrepreneur; I want to be an entrepreneur because I have desire for power. This factor could be named as confidence

Factor 3 constitutes of variable 1 and 2, namely I am more interested in own business than in doing job, I feel that own business is better for success in life. This factor could be named as interest

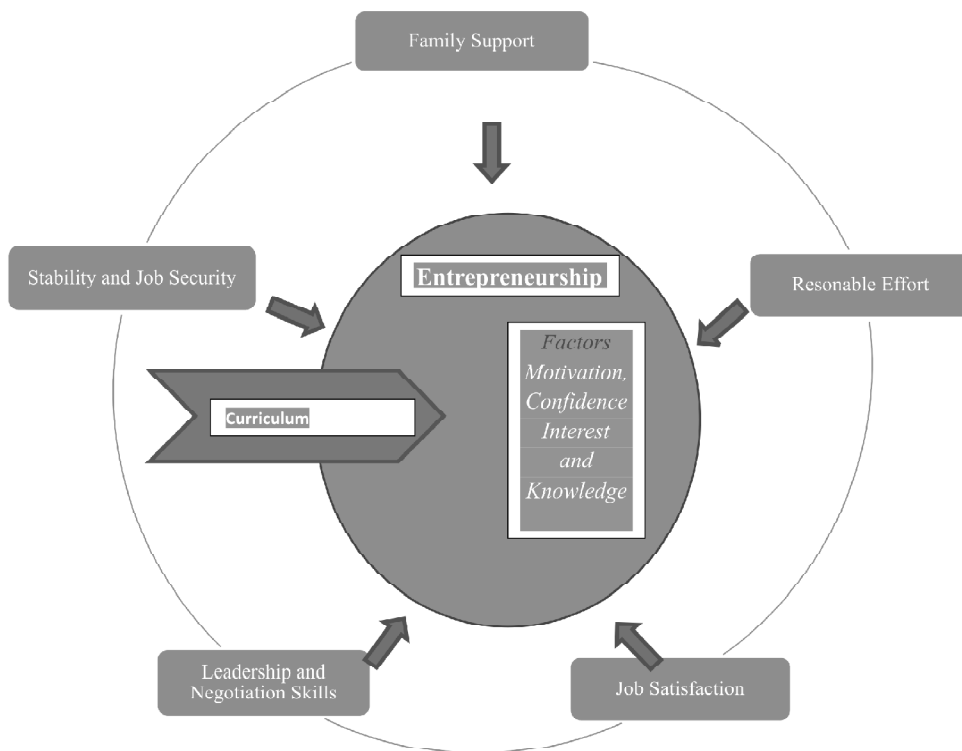
Factor 4 constitutes of variable 3, 4 and 5 I would go for own business even if my family is against it, I will try to become an entrepreneur as I have knowledge about it, I have studied a course on entrepreneurship. This factor could be named as knowledge

CONCLUSION

This result is quite surprising as it was expected that there would be some differences between these two groups of students. However, the results indicated that all the respondents had the same view for their desired career in future, irrespective of their like/dislike of entrepreneurship as a career. One aspect of this is that students who want to become entrepreneurs in future perceived entrepreneurship as compatible with things like stability and job security, socially acceptable, job satisfaction and manageable level of risk etc. Though this is something positive as the authors were previously of the opinion that the abovementioned factors would be something which would be detrimental to the choice of entrepreneur as the career but it from a different perspective implies that those who are interested in entrepreneurship are unaware of the possible difficulties and challenges which lie therein. Next the factors which were found to be important for entrepreneurship are motivation, confidence, interest and knowledge. These factors lead to the formation of a favorable attitude towards entrepreneurship.

It seems that the sample respondents are not very well aware of the challenges and other elements of entrepreneurs and take entrepreneurial and other career options having the same features. The second part of the analysis finds the factors, which are important for entrepreneurship. Therefore, a policy recommendation is that in order to increase the culture of entrepreneurship attempts has to be made

to increase the motivation, confidence, interest, aim, knowledge and determination pertaining to entrepreneurship among students. The respondents were more interested in doing a course/specialization on entrepreneurship. (Point no 7, mean value: 3.56) and were also of the opinion that entrepreneurship must be definitely taught in graduation (Point no 8, mean value : 2.65) All these factors could be stimulated through curriculum adaptations and other value additions through orientation programs, guest lectures and projects etc. It can be concluded that, if some efforts are made at university level, if students are provided with some basic knowledge and training many students will opt for entrepreneurial career options. Studies like that of Moro (et.al., 2004) are of the view that “entrepreneurship can be taught” and entrepreneurship traits and skills can be developed through training. Entrepreneurial education and training promotes entrepreneurship has been established by Looi and Khoo-Lattimore (2015) despite their view that “entrepreneurs are born”. Even Porter (2012) said, “What drives entrepreneurship among many things in entrepreneurship education”. Based on the discussion above, this study proposes a model for identifying the probable traits of would be entrepreneur, the factors leading to favorable attitude towards entrepreneurship and can bestrengthenedby curriculum adaptation.



Acknowledgement

The authors thank the Deanship of Scientific Research at Prince Sattam bin Abulaziz University for providing financial support to complete this research project (2014/02/808).

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Appendices

1. Hypothesis testing using Chi square test

Hypothesis 1

class * ent Crosstabulation

			ent		
			ent	nonent	Total
class	1	Count	205	14	219
		Expected Count	203.4	15.6	219
	2	Count	17	3	20
		Expected Count	18.6	1.4	20
Total	Count	222	17	239	
	Expected Count	222	17	239	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.055 ^a	1	0.152		
Continuity Correction ^b	0.959	1	0.328		
Likelihood Ratio	1.637	1	0.201		
Fisher's Exact Test				0.159	0.159
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.42.

b. Computed only for a 2x2 table

Hypothesis 2

class * entCross tabulation

		<i>ent</i>			
		<i>ent</i>	<i>nonent</i>	<i>Total</i>	
class	1	Count	201	18	219
		Expected Count	199.8	19.2	219
	2	Count	17	3	20
		Expected Count	18.2	1.8	20
Total		Count	218	21	239
		Expected Count	218	21	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	1.051 ^a	1	0.305		
Continuity Correction ^b	0.376	1	0.54		
Likelihood Ratio	0.9	1	0.343		
Fisher's Exact Test				0.397	0.25
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.76.

b. Computed only for a 2x2 table

Hypothesis 3

class * entCrosstabulation

		<i>ent</i>			
		<i>ent</i>	<i>nonent</i>	<i>Total</i>	
class	1	Count	193	26	219
		Expected Count	189.7	29.3	219
	2	Count	14	6	20
		Expected Count	17.3	2.7	20
Total		Count	207	32	239
		Expected Count	207	32	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	5.193 ^a	1	0.023		
Continuity Correction ^b	3.748	1	0.053		
Likelihood Ratio	4.168	1	0.041		
Fisher's Exact Test				0.035	0.035
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.68.

b. Computed only for a 2x2 table

Hypothesis 4

		class * entCrosstabulation			
		<i>ent</i>			
			<i>ent</i>	<i>nonent</i>	<i>Total</i>
class	1	Count	157	62	219
		Expected Count	154.9	64.1	219
	2	Count	12	8	20
		Expected Count	14.1	5.9	20
Total		Count	169	70	239
		Expected Count	169	70	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	1.209 ^a	1	0.272		
Continuity Correction ^b	0.711	1	0.399		
Likelihood Ratio	1.146	1	0.284		
Fisher's Exact Test				0.307	0.197
N of Valid Cases ^b	239				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.86.

b. Computed only for a 2x2 table

Hypothesis 5

		class * entCrosstabulation			
		<i>ent</i>			
			<i>ent</i>	<i>nonent</i>	<i>Total</i>
class	1	Count	204	15	219
		Expected Count	201.6	17.4	219
	2	Count	16	4	20
		Expected Count	18.4	1.6	20
Total		Count	220	19	239
		Expected Count	220	19	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	4.331 ^a	1	0.037		
Continuity Correction ^b	2.72	1	0.099		
Likelihood Ratio	3.27	1	0.071		
Fisher's Exact Test				0.061	0.061
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.59.

b. Computed only for a 2x2 table

Hypothesis 6

class * entCrosstabulation

		<i>ent</i>			
			<i>ent</i>	<i>nonent</i>	<i>Total</i>
class	1	Count	205	14	219
		Expected Count	201.6	17.4	219
	2	Count	15	5	20
		Expected Count	18.4	1.6	20
Total		Count	220	19	239
		Expected Count	220	19	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	8.671 ^a	1	0.003		
Continuity Correction ^b	6.315	1	0.012		
Likelihood Ratio	6.086	1	0.014		
Fisher's Exact Test				0.013	0.013
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.59.

b. Computed only for a 2x2 table

Hypothesis 7

class * entCrosstabulation

		<i>ent</i>			
			<i>ent</i>	<i>nonent</i>	<i>Total</i>
class	1	Count	199	20	219
		Expected Count	199.8	19.2	219
	2	Count	19	1	20
		Expected Count	18.2	1.8	20
Total		Count	218	21	239
		Expected Count	218	21	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	.390 ^a	1	0.532		
Continuity Correction ^b	0.045	1	0.832		
Likelihood Ratio	0.45	1	0.502		
Fisher's Exact Test				1	0.456
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.76.

b. Computed only for a 2x2 table

Hypothesis 8**class * entCrosstabulation**

		<i>ent</i>			
		<i>ent</i>	<i>nonent</i>	<i>Total</i>	
class	1	Count	203	16	219
		Expected Count	200.7	18.3	219
	2	Count	16	4	20
		Expected Count	18.3	1.7	20
Total		Count	219	20	239
		Expected Count	219	20	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	3.851 ^a	1	0.05		
Continuity Correction ^b	2.374	1	0.123		
Likelihood Ratio	2.962	1	0.085		
Fisher's Exact Test				0.072	0.072
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.67.

b. Computed only for a 2x2 table

Hypothesis 9

class * entCrosstabulation

		<i>ent</i>			
		<i>ent</i>	<i>nonent</i>	<i>Total</i>	
class	1	Count	169	50	219
		Expected Count	167.7	51.3	219
	2	Count	14	6	20
		Expected Count	15.3	4.7	20
Total		Count	183	56	239
		Expected Count	183	56	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	.525 ^a	1	0.469		
Continuity Correction ^b	0.201	1	0.654		
Likelihood Ratio	0.498	1	0.48		
Fisher's Exact Test				0.581	0.315
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.69.
 b. Computed only for a 2x2 table

Hypothesis 10

class * entCrosstabulation

		<i>ent</i>			
		<i>ent</i>	<i>nonent</i>	<i>Total</i>	
class	1	Count	209	10	219
		Expected Count	207.1	11.9	219
	2	Count	17	3	20
		Expected Count	18.9	1.1	20
Total		Count	226	13	239
		Expected Count	226	13	239

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	3.879 ^a	1	0.049		
Continuity Correction ^b	2.116	1	0.146		
Likelihood Ratio	2.805	1	0.094		
Fisher's Exact Test				0.083	0.083
N of Valid Cases ^b	239				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.09.
 b. Computed only for a 2x2 table

2. Reliability testing using Cronbach alpha**Reliability Statistics**

<i>Cronbach's Alpha</i>	<i>Cronbach's Alpha Based on Standardized Items</i>	<i>N of Items</i>
0.879	0.889	24

Item Statistics

	<i>Mean</i>	<i>Std. Deviation</i>	<i>Cronbach's Alpha if Item Deleted</i>
I am more interested in own business than in doing job.	2.06	1.20	0.855
I feel that own business is better for success in life.	2.03	1.15	0.859
I would go for own business even if my family is against it.	2.68	1.58	0.867
Even if I fail, still I would try several times.	2.18	1.12	0.858
I will try to become an entrepreneur as I have knowledge about it.	2.38	1.30	0.852
I have studied a course on entrepreneurship	3.58	1.98	0.859
If there is specialization/course on entrepreneurship, I will take it.	3.56	1.99	0.859
Entrepreneurship must be definitely taught in graduation.	2.65	1.66	0.858
I can plan my business well	2.70	1.39	0.849
I can organize all business activities on my own	3.07	1.42	0.854
I can lead any organization	3.31	1.63	0.859
I can control all the functions of business	3.06	1.60	0.849
Managing my own business would give me more satisfaction	2.39	1.29	0.849
Entrepreneurship is an attractive career option	2.44	1.30	0.852
There are more advantages than disadvantages in being an entrepreneur	3.21	1.71	0.856
If I get opportunity and resources, definitely I would become an entrepreneur	2.28	1.37	0.853
I want to be an entrepreneur because I have a urge for achievement	2.27	1.30	0.852
I want to be an entrepreneur because I have aspirations for autonomy	2.16	1.25	0.856
I want to be an entrepreneur because I have desire for power	3.62	1.96	0.865
I want to be an entrepreneur because I am creative and an innovative person	2.53	1.35	0.852

3. Factor Analysis**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.869
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	1.75E+03
	190
	0

Communalities		
	<i>Initial</i>	<i>Extraction</i>
VAR00001	1	0.81
VAR00002	1	0.743
VAR00003	1	0.503
VAR00004	1	0.595
VAR00005	1	0.581
VAR00006	1	0.367
VAR00007	1	0.492
VAR00008	1	0.355
VAR00009	1	0.494
VAR00010	1	0.378
VAR00011	1	0.545
VAR00012	1	0.512
VAR00013	1	0.634
VAR00014	1	0.675
VAR00015	1	0.492
VAR00016	1	0.654
VAR00017	1	0.756
VAR00018	1	0.513
VAR00019	1	0.474
VAR00020	1	0.589

Extraction Method: Principal Component Analysis.

Total Variance Explained

<i>Component</i>	<i>Initial Eigenvalues</i>			<i>Extraction Sums of Squared Loadings</i>			<i>Rotation Sums of Squared Loadings</i>		
	<i>Total</i>	<i>% of Variance</i>	<i>Cumulative %</i>	<i>Total</i>	<i>% of Variance</i>	<i>Cumulative %</i>	<i>Total</i>	<i>% of Variance</i>	<i>Cumulative %</i>
1	6.272	31.358	31.358	6.272	31.358	31.358	4.505	22.526	22.526
2	2.431	12.154	43.512	2.431	12.154	43.512	3.229	16.145	38.67
3	1.357	6.786	50.298	1.357	6.786	50.298	1.976	9.878	48.549
4	1.103	5.513	55.811	1.103	5.513	55.811	1.453	7.263	55.811
5	0.978	4.89	60.701						
6	0.868	4.338	65.039						
7	0.778	3.892	68.931						
8	0.756	3.779	72.71						
9	0.693	3.466	76.177						
10	0.656	3.278	79.455						
11	0.614	3.069	82.524						
12	0.583	2.913	85.437						
13	0.536	2.68	88.118						
14	0.468	2.342	90.46						
15	0.387	1.934	92.394						
16	0.371	1.854	94.248						
17	0.345	1.725	95.973						
18	0.327	1.636	97.609						
19	0.275	1.374	98.983						
20	0.203	1.017	100						

Extraction Method: Principal Component Analysis.

Rotated Component Matrixa

	<i>Component</i>			
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
VAR00001			0.836025	
VAR00002			0.832787	
VAR00003				0.667518
VAR00004				0.521316
VAR00005				0.574872
VAR00006		0.526217		
VAR00007		0.687115		
VAR00008	0.521789			
VAR00009	0.453265			
VAR00010		0.509916		
VAR00011		0.704886		
VAR00012		0.579114		
VAR00013	0.703689			
VAR00014	0.766545			
VAR00015		0.681018		
VAR00016	0.778506			
VAR00017	0.861209			
VAR00018	0.686162			
VAR00019		0.623646		
VAR00020	0.684967			

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

4. International indexes

<i>Index</i>	<i>Ranking</i>	<i>Total no. of countries</i>	<i>Year</i>	<i>Source</i>
Knowledge Economy Index	50	145	2012	http://siteresources.worldbank.org/INTUNIKAM/Resources/2012.pdf
Human Capital Index	85	125	2015	http://www3.weforum.org/docs/WEF_Human_Capital_Report_2015.pdf
Human Development Index	39	188	2015	http://hdr.undp.org/en/data
Ease of Doing Business	49	189	2015	http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB15-Chapters/DB15-Report-Overview.pdf
Global Competitiveness Index	25	140	2015	http://reports.weforum.org/global-competitiveness-report-2015-2016/
Economic Freedom Score	77	178	2015	http://irr.org.za/reports-and-publications/occasional-reports/files/index-of-economic-freedom-2015-highlights.pdf
Information & Communication Technologies Index	41	167	2015	http://www.itu.int/net4/ITU-D/idi/2015/

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