



Entrepreneurial Intention Among Male and Female Students From Different Domains of Specialty

R. Ponmani^a, P. Pretheeba^b, and R. Annapoorani^c

^a*Avinashilingam University, India*

^b*Eastern University, Sri Lanka. p.pretheeba@gmail.com*

^c*Avinashilingam University, India*

Abstract

Huge numbers of young graduates have flooded into the job market every year. They prefer secured jobs either in multinational corporations or government sectors, but the existing sectors are inadequate to absorb all fresh graduates. Entrepreneurship has been recognized as one of the tools that generate employment and drives economic growth of a country. Hence motivating entrepreneurial activity among this generation paves way for employment generation and may become as a solution for unemployment dilemma. An individual's behaviour towards government job or self-employment depends on intention. This paper sets out to present a detailed empirical investigation of the entrepreneurial intentions of youth in Tamilnadu, India. The study employs the theory of planned behaviour (TPB), in which intentions are regarded as resulting from attitudes, perceived behavioural control, and subjective norms. Data were gathered through questionnaire survey from 188 post-graduate students from science and non-science degree from a recognized university in Tamilnadu, India. 2x2 ANOVA analyses performed to examine the differences between male and female from science and non-science on entrepreneurial intention and the antecedents of entrepreneurial intention. The result indicated that there is a difference in the level entrepreneurial intention, attitude towards behaviour, and perceived behaviour control between male and female. Female students are less interested in entrepreneurship compared to their male counterpart due to the influence of the traditional social role. Both male and female have the same perception regarding the pressure place by the society to perform certain actions. Further the study reveals domain of specialty does not have a significant effect on students' entrepreneurial intention

Keywords: *entrepreneurship; entrepreneurial intentions; gender; theory of planned behaviour; youth*

1. Introduction

Entrepreneurs play an imperative role in bringing economic changes and advancements to a country's economy. They contribute to economic performance by introducing innovations, creating competition and enhancing rivalry (Carree & Thurik, 2003; Wennekers & Thurik, 1999; Wong, Ho & Autio, 2005). Specifically, job creation has been regarded as one of the major contributions of entrepreneurs. The Government of India recognizes the importance of entrepreneurship to the economy and its central role in generating jobs, developing human potential, because in recent years the unemployment is high among the young generation in India. According to the NASSCOM-McKinsey report (2011), only 10% of generalist graduates and 25% of Engineers and MBAs are employable in India. These facts make it very clear that employment among youth is going to be a major challenge for India. The only way to provide solution to this dilemma is to encourage youngsters in entrepreneurial activity.

However, youth are apathetic in getting involved in entrepreneurial activities. The Indian society, by

and large, has a distinct preference for work either in Multinational Corporations or Government job or in banking sectors, which provides economic security and access to power (Goel et al., 2007). A study by the National Sample Survey Office also found that students preferred to be employed elsewhere rather than become entrepreneurs.

Although several efforts and schemes are introduced by the government, many youths do not prefer to get involved in entrepreneurial activities. In other words, a gap exists between what is expected from youth by the government, and the actual level of involvement in entrepreneurial activity. Further investigation is required for explaining youths' behaviour towards entrepreneurship. Therefore, this preliminary study is carried out to determine the level of intention among young male and female from different domain of specialty in India to become entrepreneurs in the future. Further it is indispensable to look at the factors that make someone into an entrepreneur. Krueger et al., (2000) proves that entrepreneurship activities are intentional based, in which people will not become as an entrepreneur in all of the sudden without certain triggers and most importantly, intention. To this end, this study will apply the theory of planned behaviour (TPB) (Ajzen, 1991) in looking at the relationship of the three determinants of intentions, namely attitude, subjective norm and perceived behavioural control on youth's intention to become an entrepreneur. The findings from this study will provide valuable input to the university, government and the various respective agencies in promoting and enhancing entrepreneurship as a career choice among the young generation in India.

2. Theory and Hypothesis

The inclination to become as an entrepreneur may be a voluntary and deliberate one. It is reasonable to analyse how that decision is taken. Henley (2007) points out that entrepreneurship are intentional activity. The intention is formed at least a year in advance of new venture creation, suggesting a link between entrepreneurship and intention. Wong and Choo (2009) add that that intention is the single best predictor of entrepreneurial behaviour. Mazzarol, Volery, Doss and Thein (1999) note that starting a business is not an event, but a process which may take many years to evolve and come to an execution. Entrepreneurial intentions might be viewed as the first step in an evolving process. The intention is defined by Bird (1989) as a conscious state of mind that directs attention toward a specific goal. Individuals with the intention to start a business not only have a propensity to start, but in addition, adopt a rational behaviour to reach their goal. Intentionality is, thus, grounded in cognitive psychology that attempts to explain or predict human behaviour.

A number of studies have examined the antecedents of entrepreneurial intentions. Among the several entrepreneurial intention models, Ajzen's (1991) theory of planned behaviour (TPB) is widely recognized, well tested and validated model (Brannback. et al., 2007). TPB focuses on attitudes as the best predictors of intention. The three factors TPB uses to predict entrepreneurial intent are attitude toward the act, social norms and perceived behavioural control.

Shapero and Sokol's (1982) Entrepreneurial Event (SEE) is another model that supports the formation of entrepreneurial intention. SEE suggests entrepreneurial intention will depend on perceived feasibility and perceived desirability of the prospect of starting a business along with the propensity to act. Attitude towards the act of TPB aligned with perceived desirability, and perceived behavioural control approximates perceived feasibility (Autio et al., 2001).

Krueger's intention model was drawn based on the TPB with some modifications to adapt to an entrepreneurial environment. Accordingly, intentions toward pursuing an opportunity are best predicted by three critical perceptions as (a) personally desirable, (b) supported by social norms, and (c) feasible (feasibility presumably impacted by perceived self-efficacy).

Another model of intentions was suggested by Bird (1989) which considers that entrepreneurial intentions are based on a combination of both personal and contextual factors. Further development of the Bird's model was made by Boyd and Vozikis (1994) to include the concept of self-efficacy taken from the social learning theory.

The models discussed above imply that perceived desirability, feasibility, subjective (social) norms,

attitude, perceived self-efficacy and perceived behavioural control are key factors affecting entrepreneurial intention. Led by Ajzen's model this study relies on three major factors - attitudes, perceived behavioural control and subjective norms.

Attitude toward behaviour refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question (Ajzen, 1991). If an individual has high insight with regard to start a business, the more favourable their attitude towards that behaviour should be and, consequently, the stronger the individual's intention to go ahead and start a business should be.

Subjective norm refers the social pressures exists either to perform or not the related behaviour (Ajzen, 1991); i.e. an individual reverence other people's opinions in performing certain proposed actions. It is based on normative beliefs and less relevance for individuals with a strong internal locus of control (Ajzen, 1991) than for those with a strong action orientation.

Perceived behavioural control refers to the perceived ease or difficulty of performing behaviour (Ajzen, 1991). It is based on beliefs regarding the availability or absence of essential resources and opportunities to accomplish certain activities. In general there is a perception that the greater the perceived behavioural control there should stronger the individual's intention to start a business.

Kolvereid and Moen, (1997), Galloway et al., (2006) and Wu S. and Wu L., (2008) reveal that there is a disparity in entrepreneurial intention between students of different disciplines. Further they illustrate that the time anticipated to start a firm is longer for those studying science and/or technical disciplines than humanities. The empirical studies took place in a western setting. The adaptability of the same in Indian context is questionable. Hence on the basis of above given literature following hypothesis can be formulated:

H₀: Male and female students would remain to be homogeneous in an entrepreneurial intention scores across different streams of study.

Further it is anticipated that entrepreneurial intentions of Indian students' may vary according to their majors will be caused by differences in the antecedents of students' entrepreneurial intentions. Hence,

Ha₀: Male and female students would remain to be homogeneous in attitudes towards entrepreneurship scores across different streams of study.

Hb₀: Male and female students would remain to be homogeneous in subjective norm scores across different streams of study.

Hc₀: Male and female students would remain to be homogeneous in perceived behavioural control scores across different streams of study.

3. Methodology

The empirical analysis has been carried out on a sample of final-year university full-time post-graduate students from science and non-science degrees, during academic year 2012 – 2013. The sample includes 188 university students. Questionnaires were administered to final-year students during a class session, with previous authorization from the lecturer/professor. Fieldwork was carried out in September 2012.

Convenience sampling method was used to select the respondents in order to administer the Entrepreneurial Intention Questionnaire. The Entrepreneurial Intention Questionnaire (EIQ) adopted for this study is a modified version of the one used by Linan and Chen (2009). In this scale items measuring the key constructs were randomly ordered. Some reversed items were also included. Items 17 to 38 measure the four central constructs of the theory of planned behaviour: Entrepreneurial Intention (20, 22, 25-reversed-, 29, 33 and 35-rev-), Attitude towards Entrepreneurship (18-rev-, 26, 28- rev-, 31 and 34), Perceived Behavioural

Control (17, 21-rev-, 23, 30, 32-rev-, 36), and Subjective Norms (19, 24, 27). On the other hand, social values regarding entrepreneurship were measured through eight items (39 – 46). Three of these items measure the value of entrepreneurship in the closer environment of the respondent (39, 42, and 45); the construct has been called as closer valuation. The remaining items measure perceptions regarding general social valuation of entrepreneurship (40, 41-rev, C43-rev, 44, 46- rev). Finally, Entrepreneurial Skills were measured through a thirteen-item scale (items 47 – 59), partially based on Denoble et al., (1999). Items were measured by responses on a four point Likert scale in agreement with statements, ranging from 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree.

4. Results and Discussion

A basic descriptive analysis was performed to determine the average scores and the dispersion of scores for the constructs attitude, subjective norms, perceived behavioural control and entrepreneurial intention. The results are shown in Table 1. It is clear from the figures that the mean score on entrepreneurial intention for male students from science and non-science degree are significantly higher than female students. It is thus inferred that potential male entrepreneurs would have higher levels of intention to have a business venture compared to potential female entrepreneurs. Further the figures indicate the attitude mean score is at an average, which consecutively imply that the respondents have a positive attitude towards entrepreneurship. Meanwhile, the mean scores for subjective norms and perceived behavioural control were moderately high.

Table 1: Mean and SD Scores of the Respondents on Study Variables

Variables		Science		Non-Science	
		Male	Female	Male	Female
		N = 40	N = 44	N = 47	N = 57
Intention toward Venture Creation	Mean	16.3	15.45	17.36	15.7
	SD	4.25	3.19	3.15	2.85
Attitude toward Entrepreneurship	Mean	14.52	13.86	15.06	13.68
	SD	2.86	2.96	3.23	2.4
Perceived Behavioural Control	Mean	16.37	15.77	17.6	16.12
	SD	2.97	2.71	3.19	2.03
Subjective Norms	Mean	21.45	20.61	20.55	20.94
	SD	3.94	2.88	3.46	2.34

2 x 2 (unequal) Analysis of Variance (ANOVA) was employed to examine the differences among respondent's intention towards entrepreneurial activity according to their gender and domain of specialty variation.

Table 2: Respondents' Majors and Variance in Entrepreneurial Intention

Source	Sum of Squares	df	Mean Square	F	Sig
Gender	48.131	1	48.131	5.903	0.016
Stream	1.492	1	1.492	0.183	0.669
Gender * Stream	5.961	1	5.961	0.731	0.394
Error	1500.281	184	8.154		
Total	39735	188			

R² = .047 (Adjusted R² = .032)

Table 2 reveals that the *F* value between male and female post-graduate students is greater than the

critical value. Hence *F* ratio pertaining to the respondents shows a statistically significant result at 0.05 level of significance for their scores on “Entrepreneurial Intention” Scale. Hence the null hypothesis “Male and female students would remain to be homogeneous in an entrepreneurial intention scores across different streams of study” is rejected. The alternate hypothesis “male and female students would differ on their scores on Entrepreneurial Intention is sustained. The analysis shows that the male (16.85) respondents’ shows significantly higher mean score than female (15.57) respondents.

The *F* value between science and non-science post-graduate students is lesser than the critical value. Hence *F* ratio pertaining to the respondents failed to achieve a statistically significant result at 0.05 level of significance for their scores on Entrepreneurial Intention Scale. The analysis shows that there is no significant difference between science (15.87) and non-science (16.53) students.

The calculated *F* value for male and female from different domain of specialty are lesser than the critical value. Hence the interaction between male and female and domain of specialty failed to achieve a statistical significance for their scores on Entrepreneurial Intention Scale. The analysis shows that there is no significant difference among male and female from science and non-science domain.

Table 3: Respondents’ Majors and Variance in Attitude toward Entrepreneurship

Source	Sum of Squares	df	Mean Square	F	Sig
Gender	48.131	1	48.131	5.903	0.046
Stream	1.492	1	1.492	0.183	0.269
Gender * Stream	5.961	1	5.961	0.731	0.394
Error	1500.281	184	8.154		
Total	39735	188			

R² = .038 (Adjusted R² = .022)

Table 3 shows that the *F* value between male and female post-graduate students is greater than the critical value. Hence *F* ratio pertaining to the respondents shows a statistically significant result at 0.05 level of significance for their scores on “Attitude towards Entrepreneurship” subscale of the Entrepreneurial Intention Scale. Hence the null hypothesis “male and female students would remain to be homogeneous in attitudes towards entrepreneurship scores across different streams of study” is rejected. The alternate hypothesis “male and female students would differ on their scores on attitudes towards entrepreneurship subscale of Entrepreneurial Intention is sustained. The analysis shows that the male (14.79) respondents’ shows significantly higher mean score than female (13.77) respondents.

Table 4: Respondents’ Majors and Variance in Perceived Behavioural Control

Source	Sum of Squares	df	Mean Square	F	Sig
Gender	49.759	1	49.759	6.71	0.01
Stream	28.51	1	28.51	3.844	0.05
Gender * Stream	8.759	1	8.759	1.181	0.279
Error	1364.562	184	7.416		
Total	52405	188			

R² = .063 (Adjusted R² = .045)

The *F* value between post-graduate students from science and business domain is lesser than the critical value. Hence *F* ratio pertaining to the respondents failed to achieve a statistically significant result at 0.05

level of significance for their scores on “Attitude towards Entrepreneurship” subscale of the Entrepreneurial Intention Scale. The analysis shows that there is no significant difference between science (14.09) and non-science (14.37) students.

The calculated F value for male and female from different domain of specialty are lesser than the critical value. Hence the interaction between male and female and domain of specialty failed to achieve a statistical significance for their scores on “Attitude towards Entrepreneurship” sub-scale of the Entrepreneurial Intention Scale. The analysis shows that there is no significant difference among male and female from science and non-science

The F value between male and female post-graduate students is greater than the critical value in table 4. Hence F ratio pertaining to the respondents shows a statistically significant result at 0.05 level of significance for their scores on “Perceived Behavioural Control” sub-scale of the Entrepreneurial Intention Scale. Hence the null hypothesis “male and female students would remain to be homogeneous in perceived behavioural control scores across different streams of study” is rejected. The alternate hypothesis, male and female students would differ on their scores on perceived behavioural control sub-scale of Entrepreneurial Intention, is sustained. The analysis shows that the male (16.98) respondents’ shows significantly higher mean score than female (15.44) respondents.

The F value between science and non-science post-graduate students is greater than the critical value. Hence F ratio pertaining to the respondents shows a statistically significant result at 0.05 level of significance for their scores on “perceived Behavioural Control” sub-scale of the Entrepreneurial Intention Scale. The analysis shows that the non-science (16.87) respondents’ shows significantly higher mean score than science (16.07) respondents.

The calculated F value for male and female from different domain of specialty are lesser than the critical value. Hence the interaction between male and female and domain of specialty failed to achieve a statistical significance for their scores on “perceived behavioural control” sub-scale of the Entrepreneurial Intention Scale. The analysis shows that there is no significant difference among male and female from science and non-science

Table 5: Respondents’ Majors and Variance in Subjective Norm

Source	Sum of Squares	df	Mean Square	F	Sig
Gender	2.259	1	2.259	0.228	0.633
Stream	3.663	1	3.663	0.37	0.544
Gender * Stream	17.496	1	17.496	1.768	0.185
Error	1820.791	184	9.896		
Total	53787	188			

$R^2 = .022$ (Adjusted $R^2 = .005$)

The F value between male and female post-graduate students (table 5) is lesser than the critical value. Hence F ratio pertaining to the respondents failed to achieve a statistical significant result at 0.05 level of significance for their scores on “Social Norms” subscale of the Entrepreneurial Intention Scale. Hence the null hypothesis “male and female students would remain to be homogeneous in social norm scores across different streams of study” is accepted. The analysis shows there is no much difference in perception between male (21.00) and female (20.89) respondents.

The F value between science and non-science post-graduate students is lesser than the critical value. Hence F ratio pertaining to the respondents failed to achieve a statistically significant result at 0.05 level of significance for their scores on “subjective norms” subscale of the Entrepreneurial Intention Scale. The analysis shows that there is no significant difference between science (21.03) and non-science (20.75) students.

The calculated F value for male and female from different domain of specialty are lesser than the critical value. Hence the interaction between male and female and domain of specialty failed to achieve a statistical significance for their scores on “social norms” subscale of the Entrepreneurial Intention Scale. The analysis shows that there is no significant difference among male and female from science and non-science.

5. Conclusions and Implications

The decision to become as an entrepreneur may be voluntary and conscious. Therefore, it seems reasonable to analyse how that decision is taken by individuals especially by the young generation. This study was performed to explore the entrepreneurial inclination of the youth in Tamilnadu, India.

2x2 (unequal) ANOVA analyses was executed to examine the differences between male and female from science and non-science on entrepreneurial intention and the antecedents of entrepreneurial intention. The result indicated that there is a difference in the level entrepreneurial intention, attitude towards behaviour, and perceived behaviour control between male and female. Male students showed significantly higher entrepreneurial intention, attitude towards behaviour, and perceived behaviour control as compared to the female students. There is no difference between male and female with regard to social norms. Both groups have the same perception about the societal value. There is no difference between students from science and non-science with regard to entrepreneurial intention, attitude towards behaviour, and perceived behaviour control. Students from both streams more or less have the same level of behavioural characteristics regarding venture start-up.

This study has its own limitation, that its data are from one university in Tamilnadu, India and it is also limited to university science and non-science post-graduate students only, therefore the same results may not necessarily be the same for other groups of people in Indian society.

Since the finding showed there were no significant differences in terms of entrepreneurial intention between science and non-science students, the educational institutions should take steps to disseminate entrepreneurial curricular and knowledge to all streams. The female population is equal in size to male in higher learning institutions. However, their inclination towards venture is less motivated. The university should have programs to encourage the female students to think about their entrepreneurial career as an alternative.

References

- Ajzen, I. (1991). Theory of Planned Behaviour. *Organizational Behaviour and Human Decision Process*, 50 (2), 179 – 211.
- Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., & Hay, M. (2001). Entrepreneurial intention among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2 (2), 145 – 160.
- Bird, B. J. (1989). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13, 442 – 453.
- Boyd, N. G., and Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18, 64 – 77.
- Brannback, M., Kickul, J., Elfving, J., and Carsrud, A. (2007). Trying to be an Entrepreneur? A ‘Goal-Specific’ Challenge to the Intentions Model, Abo Akademi University.
- Carree A. Martin and Thurik. The impact of entrepreneurship on economic growth, <http://people.few.eur.nl/thurik/Research/Articles/The%20impact%20of%20entrepreneurship%20on%20economic%20growth%20-%20thurik%20chapter.pdf>, Retrived on June, 2012.
- Denoble, A. F., Jung, K., & Ehrlich, S. B. (1999). Entrepreneurial self-efficacy: The development of a measure and its relation to entrepreneurial action. In P. Reynolds, W. Bygrave, S. Manigart, C. Mason, G. D. Meyer, H. J. Sapienza, & K. G. Shaver (Eds.) *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College.

- Galloway, L. & Keogh, W. (2006). *Developing the entrepreneurial spirit in student education to meet professional needs*. Paper presented at Conference on Fostering Entrepreneurship: The role of higher education, Trento, Italy.
- Goel, A., Vohra, N, Zhang, L, Arora,B (2007). Attitudes of the Youth towards Entrepreneurs and Entrepreneurship: A Cross-Cultural Comparison of India and China. http://www.iimahd.ernet.in/publications/data/2007-01-06_nvohra.pdf. Retrieved on September, 2012.
- Henley, A. (2007). From entrepreneurial aspiration and transition to business start up: evidence from British longitudinal data. *Entrepreneurship and Regional Development*, 19(3), 253-280.
- Ismail. M., Khalid. S. A., Othman. M., Jusoff. Hj. K., Rahman. N. A., Kassim. K. M., & Zain. R.S. (2009). Entrepreneurial intention among Malaysian undergraduates. *International Journal of Business and Management*, 4 (10), 54-60.
- Kolvereid, L. & Moen, A. (1997). Entrepreneurship Among Business Graduates: Does a Major in Entrepreneurship Make a Difference? *Journal of European Industrial Training*, 21(4), 154-160.
- Krueger, N. F., Reilly, M. D., and Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411-432.
- Linan, F., & Chen, Y. -W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3)
- Mazzarol, T., Volery, T., Doss, N., & Thein, V. (1999). Factors influencing small business start-ups. *International Journal of Entrepreneurial Behaviour and Research*, 5(2) 48-63.
- Shapiro, A., & Sokol, L. (1982). The social dimension of entrepreneurship. In: Kent, C. A., Sexton, D. L., & Vesper, K.H. (eds.), *The Encyclopedia of Entrepreneurship*, Englewood Cliffs, NJ., Prentice-Hall.
- Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13(1), 27-55.
- Wong, M Choo, S. (2009). Entrepreneurial intention: Triggers and barriers to new venture creation in Singapore. *Singapore Management Review*, 28(2), 47-64.
- Wong, P. K., Ho, Y. P., & Autio, E. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small Business Economics*, 24(3), 335-350.
- Wu, S. and Wu, L. (2008). The impact of higher education on entrepreneurial intentions of university students in China, *Journal of Small Business and Enterprise Development*, 15(4), 752 – 774.