Entrepreneurial inclination of undergraduate students at selected south Indian region.

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Abstract

This study is mainly focused on observing entrepreneurial inclination of graduate students and its relation with gender, courses, and other influencing factors. The influence of family friends, teachers and university on students' inclination towards entrepreneurship was examined. An empirical test carried out on the data gathered from questionnaires demonstrates the influence of six factors on the inclination of graduate students towards entrepreneurship. Our results show that there are no statistically significant differences of gender, age and course (commerce and business and non-commerce and non-business courses) on entrepreneurial inclination. The results also tell that entrepreneurial inclination is statistically significantly related to the perception on entrepreneurship, government support, university support, knowledge of risk and influence of family and friends.

***Keywords**: Entrepreneurial inclination, early stage entrepreneurs, Global Entrepreneurship Monitor, Ministry of Skill Development and Entrepreneurship.*

1. INTRODUCTION

Innovative ideas come through the entrepreneurial inclination and these ideas will bring new products and/or services to the society. Today the word entrepreneurship has become a slogan as economists, policy makers, academics and even the students at university level are discussing about it. An idea generation seminars, workshops and conferences are being organized across the world every year emphasizing the importance of entrepreneurship to the nation, society as well as individual development. (Schaper and Volery, 2004; Matlay ad Westhead 2005). Entrepreneurship is incontrovertibly the engine of economic growth. The

development of entrepreneurship education can be dated back to 1938. Shigeru Fijii, professor in Kobe University in Japan has pioneered the entrepreneurial education through his teaching appointments **(Keat et.al, 2011)**. In India, every year, lakhs of students graduate from universities, but a very few of them have an inclination to establish their business. The inclination for a paid job also is one of the reasons of unemployment rate among graduates which has increased to 7.4% (CMIE) in India till March, 2020.Entrepreneurship needs to be fostered among the university students. Previous scholars agree that entrepreneurial education is an effective system to equip the students with essential knowledge about entrepreneurship (Mumtaz et al., 2012).

It is an undeniable fact that entrepreneurship education is essential for undergraduate students and youth to incline towards business (**Gorman et.al, 1997; Kourilsky and Walstad, 1998; Wang and wong, 2004**). This will help reduce unemployment in the country. Graduate students should be taught to think entrepreneurship also as one of the options available upon graduating from the university. Students should be sufficiently motivated through guest lectures from successful entrepreneurs, state-of-the art incubation facilities, round the clock support for ideas incubation and experimentation etc. India is abundant with youth power, especially at undergraduate level. According to All India Survey on higher education (**AISHE, 2015-16**) the gross enrollment ration (GER) is about 25% in higher education. Of all the enrolments in higher education, nearly 80% enrolled for under graduation. There are nearly 11 million students enrolled in arts and humanities at undergraduate level followed by science (4.4 million) and Engineering and technology (4.3 million). This vast student base is the future of India and they should be taught basic economics and business knowledge.

The vast undergraduate youth should be turned early-stage entrepreneurs based on their entrepreneurial interests. Their interests have to be identified and shaped to attain self-esteem level in their career hierarchy. It is also important that there should be sufficient number of professionals such as doctors, lawyers and engineers etc. However, the innate abilities and inclination towards entrepreneurship should not be dissuaded. These people have to be persuaded to sharpen their abilities to turn into early-stage entrepreneurs. GEM (Global Entrepreneurship Monitor) global report 2020 shows that the early-stage entrepreneurs of college going age are below 20% of total adult population of entrepreneurs in India (**GEM global report 2020**). The report also shows that there is gender gap in TEAs (The Early-stage Entrepreneur Adults) as there are more male TEAs in India. While Italy, Pakistan, Japan, Belarus and Poland are low in TEA, India has to improve in this metric as this is clearly below the global average. The good news as per GEM report is that India stands at sixth position in NECI (National Entrepreneurship Context Index) calculated by GEM for 50 participating economies. On the other hand, Indian government through Ministry of Skill Development and Entrepreneurship (**MSDE policy, 2015**) is also encouraging entrepreneurship through various schemes. Integrating entrepreneurial education in the curriculum of 3,000 colleges is one of the measures by MSDE to encourage early-stage entrepreneurship. The awareness of government support is naturally expected to have a positive association with entrepreneurial inclination. The educational institutions, government

agencies and society at large should play their role in encouraging the entrepreneurial interests and abilities among the youth.

This paper focuses on entrepreneurial inclination and factors that affect the entrepreneurial inclination among the undergraduate students in Andhrapradesh state of India. This paper also looks into the gender and educational background significance in entrepreneurial inclination and risk perceptions.

2. LITERATURE REVIEW

Several studies have been conducted to measure the association of psychological and demographic factors with the student's entrepreneurial inclination. However, the final decision to become an entrepreneur has to be made by oneself (**Krueger et al., 2000**), i.e., consciously and voluntarily made decisions to become an entrepreneur are more likely to result in eventual success. The reason is obvious as such voluntary decisions force us to toil and thrive in the field of our interest. **Zaidatol Akmaliah (2009)** finds that the male university students are more entrepreneurially inclined than their female counterparts. Whereas, **Wilson et.al (2007)** and **Rahman et.al (2012)** found that female students are more entrepreneurially inclined. It is also found that technical knowledge was more statistically developed among male students (**Louw and Ventor, 2003**). Entrepreneurially inclined students are more likely to be innovative and more likely to take high risk (**Koh, 1995; Gurol and Atsan, 2006)**. Innovativeness and propensity to take risks are of paramount importance for the success of an entrepreneur. Increased inclination is expected to create greater propensity to be innovative and high risk taking in entrepreneurial activity.

Other important factor that propels towards entrepreneurship is the desire to be self-employed or to be the one's own boss **(Luthje and Franke, 2003)**. However, the stifling factors that dampen the inclination are the lack of proper knowledge about the business and risk (**Wang and Wong, 2004**) and the lack of proper motivating syllabus on entrepreneurship that imparts various skills, knowledge and traits to become an entrepreneur **(Mohd Zahari, 2010)**. Several studies have been focused on the students' traits and entrepreneurial inclination. Suppose, **Koh (1995); Gurol and Atsan (2006);** Nurdan Colakoglu, etc., (2016); **Anwar and Saleem (2019)**; all have tested the relationship of entrepreneurial inclination with six traits namely need for achievement, locus of control, risk taking propensity, tolerance for ambiguity, innovativeness and self-confidence, are used to define the entrepreneurial profile of students. All these studies have found that students who have entrepreneurial intention are more innovative have higher need for achievement, greater locus of control and they are more alert compared to the students who do not have such intention. Students are highly influenced by family when showing entrepreneurial intentions and consider family the best source of financing future business (Anna Olszewska, 2014**).** Family and peers also have significant relationship with entrepreneurial inclination (**Mustapha and Selvaraj, 2015**). The importance of role models on the inclination towards entrepreneurship is widely discussed in the literature (Karimi et al., 2013). The reason for this is role models provide necessary information, guidance and support. Zapkau et al., (2015) found that the parental role models

positively influence entrepreneurial intention. Entrepreneurial intentions have a strong positive correlation between initiatives, incentives and other supports from government and non-government agencies (Denanyoh et al., 2015).

Hypothesis

Based on extant literature we have hypothesized the following:

H_0^1**:** There is no statistically significant relation between each of the demographic variables, such as gender, age and course, and the following factor variables:

a) Entrepreneurial Inclination
b) Perception on Entrepreneurship
c) Perception on university support
d) Perception on Government support
e) Knowledge of risk
f) Influence of Acquaintances

H_0^2**:** Entrepreneurial Inclination doesn't have a statistically significant relation with:

a) Perception on Entrepreneurship
b) Perception on university support
c) Perception on Government support
d) Knowledge of risk
e) Influence of Acquaintances

3. METHODOLOGY

3.1 Data collection

Several researchers have adopted convenience sampling for studies of similar nature. Suppose, **Louw and Ventor (2003)** used convenience sampling. Indeed, the sampling technique was not purely convenience sampling. The technique is convenience sampling coupled with random sampling. We first chose the universities and institutes where we can go and get our data. We have also restricted the sample to consist the students from 4 courses only. Those 4 courses are Bpharm, Btech, Bcom, and BBA. Thus, we have collected data from 400 students from 4 university affiliated colleges and 4 university campuses from 4 states of India, namely Andhra Pradesh, Odisha, Telangana and Karnataka states. These 400 questionnaires were also equally divided among 4 courses of our choice. This is meticulously done to avoid any bias in sample collection. The data is collected from 50 students of each of these institutions. But, the due care has been taken to cover all 4 courses equally from all 8 institutions of choice. However, there were 60 semi-filled questionnaires from all institutions put together. We discarded these semi-filled questionnaires from our study. The questionnaire consists of two parts. Part-I consists of basic data collection of demographic variables such as course of study, gender, and age. Part-II consists of questions related to six factors namely

entrepreneurial inclination, perception on entrepreneurship, perception on university support for entrepreneurship, perception on government support for entrepreneurship, knowledge of risk, and influence of acquaintances on entrepreneurial inclination.

3.2 Statistical analysis

The statistical analysis has been done in three phases.

Phase-I is the analysis of reliability of questionnaire. This reliability has been checked with a pilot study conducted in our own university (GITAM deemed to be university, India). After we are satisfied with the reliability of the instrument, we have then started collecting the data. After the data has been collected and discarded the semi-filled questionnaires, we have then tabulated the data and conducted descriptive statistics to see if the data has widely biased towards gender or course. Though the data is not exactly split between these variables, the differences are not so obvious. This is our phase-II of study where we have done descriptive analysis. In our phase-III of analysis we have calculated few inferential statistics such as ANOVA and Pearson product moment correlation to test the hypotheses formed in the previous section.

4. RESULTS AND ANALYSIS

4.1 Reliability of the Questionnaire

In the present study, Cronbach's alpha scale is used as a measure of reliability. The factor-wise reliability value of the scale is presented in the table-1. The following equation is applied to analyze the reliability of questionnaire for the study.

$$A = (N^2M(Cov))/(\Sigma s^2 + \Sigma cov)$$

Assumption behind this equation is that the unique variance within variables (s^2) should be rather small in comparison with the covariance between scale items (Cov) in order to have an internal consistent measure (Cortina, 1993).

Table:1 Reliability of the questionnaire

	Cronbach's Alpha	No of Items
Entrepreneurial Inclination	0.652	4
Perception on entrepreneurship	0.624	6
Perception on Govt support	0.687	4
Perception on University support	0.801	3
Knowledge of Risk	0.631	4
Influence of acquaintances	0.732	4

Table-1 shows factor wise cronbach alpha. We have taken the alpha level 0.6 to accept the reliability. Items of our choice have just passed our acceptance. Hence, the questionnaire has been adopted and used for the study.

4.2 Descriptive statistics analysis

Table-2: Cross Tabulation of Inclination with Course, gender and age variables

Category			Non-Inclined	Inclined	Total
course	Btech	Count	41	53	94
		% of Total 340	12.1%	15.6%	27.6%
	Bpharm	Count	15	42	57
		% of Total 340	4.4%	12.4%	16.8%
	Bcom	Count	34	39	73
		% of Total 340	10.0%	11.5%	21.5%
	BBA	Count	47	69	116
		% of Total 340	13.8%	20.3%	34.1%
	Total	Count	**137**	**203**	340
		% of Total 340	**40.3%**	**59.7%**	100%
gender	Female	Count	54	99	153
		% of Total 340	15.9%	29.1%	45.0%
	Male	Count	83	104	187
		% of Total 340	24.4%	30.6%	55.0%
Age	17-19	Count	66	78	144
		% of Total 340	19.4%	22.9%	42.4%
	>=20	Count	71	125	196
		% of Total 340	20.9%	36.8%	57.6%

Table-2 shows the frequencies of demographic variables cross tabulated for entrepreneurial inclination. Nearly 60% of the respondents showed inclination towards entrepreneurship upon completion of their graduation. If course-wise inclination is observed, BBA students are more inclined (nearly 34% of total inclined) than any other courses in study. Probably it is because entrepreneurship is a major subject in BBA course in south India. This is a clear indication that the especially devoted curriculum on entrepreneurship will have positive impact on entrepreneurial inclination. If gender-wise inclination is observed, male and female are equally inclined (nearly 50%-50% division of all inclined) towards entrepreneurship. Age-wise inclination shows huge gap. Respondents with age more or equal to 20 years and who are inclined are nearly 14 percentage points higher (36.8% vs 22.9%) than the respondents with age group of 17-19 years and who are also inclined. This is may be due to the maturity of students after going into their final year of studies. Because, respondents of age group 17-19 years are in their first or second year of graduation. At this stage of their studies, they may not be able to think of entrepreneurship. However, we are going to test whether age has any significant relation with entrepreneurial inclination.

Table-3: Descriptive Statistics of factors

	N	Min	Max	Sum	Mean	Std. Dev
Entrepreneurial Inclination	340	4	16	3,760	11.06	2.365
Perception on Entrepreneurship	340	6	17	3412	10.04	2.709
Perception on Government Support	340	4	16	2940	8.65	2.125
Perception on University Support	340	3	15	4091	12.03	3.528
Knowledge of Risk	340	9	20	5557	16.34	2.205
Influence of Acquaintances	340	4	15	3660	10.76	1.874

Table-3 shows the basic descriptive statistics of various factors under the consideration in our study. Since the questions are unidirectional (except knowledge of risk) and respondents were asked to mark on a likert scale of 1-5 where 1 indicates strongly disagree and 5 indicates strongly agree, the higher the mean the better the response in favor of entrepreneurship. However, knowledge of risk has been reverse coded because we have flipped the questions to avoid respondents overlook and bias of all unidirectionality of questions. Except perception on government support all other factors cross the mean value of 10. Based on number of items in the each factor, the ideal values if (a) everybody is completely inclined towards entrepreneurship (20), (b) good opinion on entrepreneurship (30), (c) good opinion on government support (20), (d) good opinion on university support (15), (e) good knowledge of risk (20) and (f) strongly agree that acquaintances can influence them (20). Comparing the means with these ideal values, almost all factors are almost half-way to the ideal values. This intuition is coinciding with the number of respondents inclined towards entrepreneurship (nearly 60% of 340 respondents, see table-1).

4.3 Hypotheses testing and inferential statistics

Table-4: ANOVA

Demographic variables as independent variables and factors as dependent variables

Factors	GENDER		AGE		COURSE	
	F-value	P-value	F-value	P-value	F-value	P-value
Entrepreneurial Inclination	2.898	0.089	3.197	0.075	2.101	0.100
Perception on Entrepreneurship	2.059	0.152	0.478	0.490	0.297	0.827
Perception on Government support	5.645	0.018*	0.619	0.432	6.939	0.000*
Perception on University support	0.060	0.806	0.067	0.796	4.232	0.005*
Knowledge of Risk	0.013	0.908	0.000	0.982	0.240	0.868
Influence of Acquaintances	1.431	0.232	0.705	0.402	1.260	0.288

Table-4 shows ANOVA results of model with gender, age and course as independent variables and factors as dependent variables. This table partially accepts the **H_0^1**. Demographic factors such as gender, age and course are not significantly associated with (i) entrepreneurial inclination (ii) Perception on entrepreneurship (iii) Knowledge of Risk and (iv) Influence of acquaintances. It is evident that there is difference of opinion between male and female students about government support to entrepreneurship between, because F-value is significant at 5% level. Also, there is difference of opinion between commerce and non-commerce students about government and university support to be inclined towards entrepreneurship.

Table-5: ANOVA

Entrepreneurially Inclined as dependent variable and other factors as independent variables

Source	Partial SS	df	MS	F	Prob>F
Model	41.13744	46	0.894292	6.44	0.000*
Perception on Entrepreneurship	6.165329	11	0.560484	4.04	0.000*
Perception on Govt Sup	8.478214	9	0.942024	6.79	0.000*
Perception on University Sup	2.885447	8	0.360681	2.6	0.009*
Knowledge of Risk	7.99022	10	0.799022	5.76	0.000*
Influence of Acquaintances	5.312526	8	0.664066	4.79	0.000*
Residual	40.65962	293	0.13877		
Total	81.79706	339	0.241289		

Number of observations = 340 R-squared = 0.5029
Root MSE =0 .372518 Adj R-squared = 0.4249
***significant at 5%**

Table-6: Pearson product moment correlation

		1	2	3	4	5	6
1	Entrepreneurially Inclined	1					
2	Perception on Entrepreneurship	**0.2634***	1				
3	Perception on Govt Support	**0.1626***	**0.5046***	1			
4	Perception on University Support	**0.0603***	-0.0223	**0.1472***	1		
5	Knowledge of Risk	**0.1420***	**-0.1131***	-0.034	-0.0795	1	
6	Influence of Acquaintances	**0.1248***	**0.4757***	**0.2342***	0.0193	-0.0816	1

Table-5 and table-6 help to test the $\mathbf{H_0^2}$. The hypothesis is accepted as all other factors show a significant association with entrepreneurial inclination. The additional revelation from table-6 is that the correlation between entrepreneurial perception and government support and influence of acquaintances are positive and significant. This means that the greater the understanding of government support and friends and family encouragement, the better the positive perception on entrepreneurship. University support and government support are also positively significantly associated. It means, the chances of having a positive opinion on either of the factors will lead to the positive opinion on the other factor. This is in line with the MSDE policy to integrate entrepreneurship in the curriculum of undergraduates. Government's imitation to integrate entrepreneurship into university education system will help turning the students into potential entrepreneurs.

5. CONCLUSION

Undergraduate students are the future entrepreneurs, engineers, scientists and invaluable human resources of a country. They should be given proper training on the things of their talents and interests. They should be sufficiently motivated to turn into early-stage entrepreneurs upon completing the graduation. In this study we have focused on the entrepreneurial inclination of undergraduate students. We have also studied other factors responsible for developing such an inclination towards entrepreneurship. The study unfolds the facts that on average the undergraduate students are positively inclined towards entrepreneurship. People around them such as friends, young entrepreneurs, teachers and family have a significant influence on their entrepreneurial inclination. These students show a reasonable understanding of risk and return. There are no significant difference of age and gender in such knowledge of risk. To our surprise, commerce and business students (Bcom and BBA) and non-commerce and non-business students (Bpharm and Btech) are not significantly different in knowledge of risk and entrepreneurial inclination. Perception on government support and university support, knowledge of risk, influence of family and friends, all these factors have positive and significant association with entrepreneurial inclination. This study can further be extended to include post-graduate and medical students. Medical students are also the potential successful entrepreneurs of the future India.

REFERENCES

1. *AISHE (2015-2016), Ministry of Human Resource Development, Government of India, https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/AISHE2015-16.pdf.*
2. *Anna Olszewska, 2014. "Students' perceptions and attitudes towards entrepreneurship, a cross- program and cross- cultural comparison," Journal of Business & Management (COES&RJ-JBM), , vol. 2(3), 257-268.*

3. *Cortina, J. M. (1993). "What is Coefficient Alpha? An Examination of Theory and Applications," Journal of Applied Psychology, 78, 98-104.*
4. *CMIE (Centre for Monitoring Indian Economy Private Limited, Mumbai, India).*
5. *Denanyoh, R., Adjei, K., & Nyemekye, G.E. 2015.Factors That Impact on Entrepreneurial Intention of Tertiary Students in Ghana, International Journal of Business and Social Research, 5 (3): 19-29.*
6. *Gorman, G., Hanlon, D., & King, W. (1997). Some research perspectives on entrepreneurship education, enterprise education and education for small business management: a ten-year literature review. International small business journal, 15(3), 56-77.*
7. *Karimi, S., Biemans, H.J.A., Lans, T., Chizari, M., Mulder, M. & Mahdei, K.N. 2013. Understanding role models and gender influences on entrepreneurial intentions among college students, Procedia - Social and Behavioral Sciences, 93: 204-214.*
8. *Keat, O. Y., Selvarajah, C., & Meyer, D. (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. International Journal of Business and Social Science, 2(4).*
9. *Koh, H. C. (1995). Factors associated with entrepreneurial inclination: An empirical study of business undergraduates in Hong Kong. Journal of Small Business & Entrepreneurship, 12(2), 29-41.*
10. *Kourilsky, M. L., & Walstad, W. B. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences, and educational practices. Journal of Business venturing, 13(1), 77-88.*
11. *Krueger Jr, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. Journal of business venturing, 15(5-6), 411-432.*
12. *L. Louw S.M. van Eeden J.K. Bosch D.J.L. Venter, (2003),"Entrepreneurial traits of undergraduate students at selected South African tertiary institutions", International Journal of Entrepreneurial Behavior &Research, Vol. 9 Iss 1 pp. 5 - 26*
13. *Lüthje, C., & Franke, N. (2003). The 'making'of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. R&d Management, 33(2), 135-147.*
14. *Matlay, H and P. Westhead (2005). Virtual teams and the rise of e-entrepreneurship in Europe, International Small Business Journal 12(3): 353-365.*

15. *Mohd Zahari, I. (2010). Developing Entrepreneurship Education: Empirical Findings from Malaysian Polytechnics. (Doctoral dissertation, The University of Hull, United Kingdom).*
16. *Mustapha, M., & Selvaraju, M. (2015). Personal attributes, family influences, entrepreneurship education and entrepreneurship inclination among university students. Kajian Malaysia: Journal of Malaysian Studies, 33.*
17. *Mumtaz, B.A.K, Munirah, S., & Halimahton, K. 2012.The Relationship between educational support and entrepreneurial intentions in Malaysian Higher Learning Institution, Procedia - Social and Behavioral Sciences,69, 24: 2164-2173.*
18. *MSDE policy (2015), National Policy for Skill Development and Entrepreneurship, Ministry of Skill Development and Entrepreneurship, Government of India. https://www.msde.gov.in/assets/images/Skill%20India/National%20Policy%20on%20Skill%20Development%20and%20Entreprenurship%20Final.pdf.*
19. *Nurdan, C., &Izlem, G.A. 2016. A Comparison study on personality traits based on the attitudes of university students toward entrepreneurship, Procedia Social and Behavioral Sciences, Elsevier, 229 (2016) 133-140.*
20. *Rahman, M. N. A., Ghani, J. A., Ismail, A. R., & Zain, R. M. (2012). Engineering Students towards entrepreneurship awareness. International Journal of Academic Research in Accounting, Finance and Management Sciences, 2(4), 273-284.*
21. *Schaper, M. and T. Volery (2004). Entrepreneurship and small business: A Pacific Rim perspective. Milton, Queensland, John Wiley and Sons Australia Ltd.*
22. *Wang, C. K., & Wong, P. K. (2004). Entrepreneurial interest of university students in Singapore. Technovation, 24(2), 163-172.*
23. *Wilson, F., D. Marlino and J. Kickul. 2007. Our entrepreneurial future: Examining the diverse attitudes and motivations of teens across gender and ethnic identity. Journal of Developmental Entrepreneurship 9(3): 177–198.*
24. *Zaidatol Akmaliah, L.P. (2009). Entrepreneurial as a Career Choice: An Analysis of Entrepreneurial Self-Efficacy and Intention of University Students. European Journal of Social Sciences, 9(2), 338–349.*
25. *Zapkau, F.B., Schwens, C., Steinmetz, H., & Kabst, R. 2015. Disentangling the effect of prior entrepreneurial exposure on entrepreneurial intention, Journal of Business Research,68,(3): 639-653.*