

A Study on Attitude of Undergraduate Engineering Students in Kerala towards Startups

Aravind D¹, Pradeep M², Dr. Satish K P³

¹M.Tech Student, Dept. of Production Engineering, GEC Thrissur, Thrissur, Kerala, India

²PhD Research Scholar, Dept. of Mechanical Engineering, GEC Thrissur, Thrissur, Kerala, India

³Professor, Dept. of Production Engineering, GEC Thrissur, Thrissur, Kerala, India

Abstract - In today's competitive world entrepreneurship is gaining much importance as it can cope up the current crisis of unemployment rates. Entrepreneurship is an important source of innovative activities and job opportunities and thus has an important impact on economic development. Govt policies has changed, they are withdrawing their role from an employer and they promote educated people to become an employer or entrepreneur. As technology giants engineering students have more ability to think innovatively. KSUM is the nodal agency of government of Kerala in supporting Entrepreneurship. IEDC's functioning in colleges serve as a platform for idea development. Entrepreneurship, based on innovations has immense growth potential for the regional economy of Kerala. The government and other service organizations conduct special programs namely Entrepreneurship Development Program (EDP) mainly for the purpose of identifying and developing potential entrepreneurs.. Entrepreneurship education programs create self-employment, reduction of unemployment, high job satisfaction and enhance life status. Various policies and schemes are offered by government organizations in order to promote entrepreneurship among youth. But, the number of students get involved in startups seems less. Here, a study is conducted to analyze the attitude of engineering students to involve in campus startups. Study focused on IEDC student members from various engineering colleges in Kerala.

Key Words: Entrepreneurship, Campus Startup, Entrepreneur, Engineering students, Regression

1. INTRODUCTION

Entrepreneurs are the driving forces behind any economy. They create large corporations out of backyard enterprises. To be a successful Entrepreneur it requires practicing as a manager by acquiring various skills and efforts in learning to understand a business. Entrepreneurship is the future of the modern society. It reflects a ray of hope for the unemployed to earn a living and maintain a dignified life and also for the economic development of the country.

Students who are able to identify opportunities, understand market forces, commercialize new products, communicate, and lead teams, in addition to having strong science and technical skills, are likely to have more value in the marketplace for jobs.. They can also contribute to a

country's competitiveness if they introduce new products or services. To meet this need, colleges of engineering are increasingly developing entrepreneurship courses (Nathalie Duval-Couetil, Teri Reed-Rhoads, and Shiva Haghghi.2011).

Kerala, a 100% literate state, has the highest rate of educated unemployed in the country with over 40 lakh unemployed youth on the live register of Employment exchanges. This comprises about 20 lakh graduates and otherwise technically qualified (Chandrasekar et al). The educated and technically qualified youth are migrating for want of jobs and sufficient employment opportunities. The abundance of capital and manpower are not being tapped adequately. Keralites are reluctant to invest in economically productive activities even though there is a surfeit of techno-economic talent. The factors contributing to this state of affairs may range from labor market rigidities to the absence of a favorable investment climate and has to lead to a generation of entrepreneurship been lost. Kerala's GDP per capita is about average for India, but its economic rate has been considerably slower. Unemployment rate in Kerala is the one with problem and this forced many Keralites to leave and look greener pastures in India or abroad.

The crisis of unemployment can be downsized by entrepreneurship promotion as they provide employment for themselves as well as create job for others. Campus startups are the starting phase towards entrepreneurship. To a greater extent entrepreneurs are made through education and training. The right type of entrepreneurial training helps to identify and develop the natural, inherent and potential virtues of the human beings which are lying dormant. Hence it was widely accepted that entrepreneurship could be developed through well conceived and well integrated entrepreneurial training programs.

Our Government policies has changed, they are withdrawing their role from an employer and they promote educated people to become an employer or entrepreneur. Kerala Startup Mission (KSUM) is the nodal agency of Government of Kerala for promoting entrepreneurship development and incubation activities in Kerala. KSUM offer support to startup entrepreneurs to implement their innovative ideas from ideation stage. KSUM will also provide mentoring, infrastructure facilities, entrepreneurship

development programmes, seed fund assistance and exposure programmes.

Still when comparing with other states, Kerala has less progress in the field of entrepreneurship. The attitude of students to be an entrepreneur is being important, this paper aims to study the influence of relevant factors upon attitude of undergraduate engineering students in Kerala towards startups.

2. LITERATURE REVIEW

Past literatures on Entrepreneurship development was reviewed in order to get an idea on the factors influencing Entrepreneurship growth.

Turker and Selcuk (2008) pointed out that entrepreneurial intention was taken as a function of educational, relational, and structural supports.

Kerala, a 100% literate state, has the highest rate of educated unemployed in the country with over 40 lakh unemployed youth on the live register of Employment exchanges. Kerala has a high per capita rate of consumption, but it imports a major share of its requirements including food (Chandrasekar et al).

N.K. Nikhil, Varghese Joy and Dr. Santha S (2015) in their research revealed that, in Kerala, majority of the start-ups were incorporated by male dominance showing high gender disparity, incorporations were done in corporate form of which majority were registered to female. It took nearly one year for companies to come up with a feasible product market fit, though modern source of favourable funding schemes were available. Major problem faced by the start-ups are lack of Return Over Time and Fund Deployed, Poor Mentoring, Poor Product Market Fit with least problems with funding and Infrastructure.

Engineering students students have positive way of thinking to become entrepreneurs as their career choice. The factors that contribute most to entrepreneurship as a career choice are Locus of Control Need for Achievement, Instrumental Readiness and Subjective Norms (Salwah Che Mat, Siti Mistima Maat and Norhatta Mohd 2015).

Some of the reasons for lack of entrepreneurship in Kerala are due to: Preoccupation with redistribution, aversion for taking risks and preference for secure employment, lack of confidence to innovate, poor self-esteem of entrepreneurs, lack of business culture built on mutual trust, unsympathetic and unsupportive bureaucracy and the labour laws and institutions that are heavily biased against the entrepreneur.

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. Entrepreneurial education may concentrate on modification of attitudes and development of basic skills to encourage entrepreneurship for creating an economically strong country (Nurdan Çolakoğlu and İzlem Gözükara 2016). Entrepreneurial skills and activities can be spurred through entrepreneurship education and training (Badariah Hj Din, Abdul Rahim Anuar and Mariana Usman, 2015; Mohd Sufian Abdul Karim 2016)

The best way to success is to have more sharing session with successful entrepreneurs especially alumni because with their knowledge sharing and challenges, this will pave way and give much ideas on when, what and how to overcome challenges (Seun Azeez Olugbola, 2017).

The studies by Laura Brancu et al., 2012; Lutfiah Natrah Abbas, 2013; Pratheesh Pretheeba, 2014; Ezekiel Obembe, Oluyinka Otesile and Idy Ukpong, 2014; Salwah Che Mat et al., 2015; gave an idea on the intention of engineering students towards entrepreneurship.

3. PROPOSED HYPOTHESIS

The following hypothesis will be tested in this research:

H1: There is a significant and positive relationship between support from IEDC's and attitude of students towards startups

H2: There is a significant relationship between support from Govt. organizations and attitude of students towards startups

H3: There is a significant effect between the effect of barrier factors and attitude of students to involve in startups

4. RESEARCH METHODOLOGY

A questionnaire survey methodology was adopted for this research and was carried out at engineering colleges in Kerala.

4.1 Research Instrument

A self-administered structured instrument was developed based on the literature review carried out. The constructs were included from the past studies on entrepreneurship development and also by consulting with academicians, IEDC Nodal officers and startup persons. A pilot survey was conducted at the initial stage and the instrument was validated. Survey instrument consists of 4 categories (which includes Attitude of students, Support from IEDC, Support from Government and Barriers towards entrepreneurship) with 25 items. A five-point Likert scale, with 1 (Strongly disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), 5 (Strongly agree) was used in the instrument for collecting responses. Data collection was done by means of

direct approach, google forms and through electronic mail which were used in similar kind of researches.

4.2 Study sample

The study was conducted at selected engineering colleges under KTU. Engineering colleges with a good IEDC cell have been selected for study. The targeted respondents were 350 students from which valid responses obtained were 156.

4.3 Instrument analysis

4.3.1 Reliability analysis

Table -1: Cronbach's Alpha (α) for constructs in the survey instrument

Sl. No.	Survey Constructs	No. of items	Cronbach's Alpha (α)
1	Attitude of engineering students to start campus startups	7	0.602
2	Supports from the IEDC	6	0.631
3	Supports from Government organizations	5	0.694
4	Barriers from startup to entrepreneurship	7	0.718

Cronbach's coefficient α is considered as the most popular test within the internal consistency method (Nunnally, 1978; Cronbach, 1951). Cronbach's α computes internal consistency reliability among a group of items combined to form a single scale. Nunnally (1978) advocates that new developed measures can be accepted with Cronbach's α of more than 0.60, otherwise 0.70 should be the threshold. The measure with Cronbach's α 0.80 or more is significant and reliable.

The Cronbach's α for the 4 factors ranged from 0.602 to 0.718 which implies the instrument is reliable.

4.3.2 Factor Analysis

Factor analysis is a multivariate data reduction technique. It helps reduce data that do not correlate with any of the underlying dimensions. Here in this study, principal component analysis method of factor analysis was adopted for 4 Entrepreneurial factors comprised of total 25 items by using SPSS software. In order to assess the construct validity, factor loadings were obtained for each item. More the loading higher the representation the item has on the factor. Here a loading 0.4 and higher on factor (Hair et al., 1998) was considered. 4 items out of 25 were eliminated due to low factor loading.

Intercorrelations between the constructs was checked on the basis of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. For sufficient intercorrelations the value should have to be above 0.6 (Kaiser, 1974). Here, it was 0.641 ($\chi^2=258.565, p=0.000 < 0.01$) for attitude of students, 0.669 ($\chi^2=177.175, p=0.000 < 0.01$) for supports from IEDC, 0.743 ($\chi^2=131.108, p=0.000 < 0.01$) for supports from Government and 0.779 ($\chi^2=260.948, p=0.000 < 0.01$) for barrier factors which indicates sufficient intercorrelations while the Bartlett's test of sphericity was significant (Bartlett, 1950).

Table -2: Reliability after factor analysis

Sl. No	Survey Constructs	No. of items	Cronbach's Alpha (α)
1	Attitude of engineering students to start campus startups	6	0.724
2	Supports from the IEDC	5	0.705
3	Supports from Government organizations	5	0.743
4	Barriers from startup to entrepreneurship	5	0.788

4.4 Data Analysis

Multiple regression analysis was done on the collected data to find the relation of Attitude of students with the constructs; Support from IEDC, Support from Government, Barrier factors and Support from Entrepreneurs.

Durbin-Watson index was 2.232 for the variable 'Attitude' which reveals that there was no autocorrelation problem in the data (Durbin and Watson, 1951). Coefficient of determination (R^2) was 0.306 for Attitude, representing that 30.6 percent of Attitude can be explained by the 3 independent variables. Coefficient of determination (R^2) between 1.0 and 5.9 percent is considered as small, between 5.9 and 13.8 percent is medium, and above 13.8 percent is large (Cohen, 1988). Thus, the effect size for this study is large and the hypotheses H1, H2, and H3 were partially supported. The results indicate that in the selected entrepreneurial constructs; Supports from IEDC's, Supports from Government organizations and Barrier factors towards Entrepreneurship having $p < 0.05$ are directly involved in influencing the Attitude of students to involve in campus startups. Therefore, hypotheses H1, H2 and H3 were accepted.

3. CONCLUSIONS

Study revealed that engineering students have a positive attitude to get involved in startups. IEDC activities and support from family helps students to think about having a startup. Providing entrepreneurial courses can enlighten students mindset towards startups. IED Cells are now

functioning in almost all engineering colleges under KTU and they encourage students by providing orientation classes, conducting various activity oriented programs etc. IEDC nodal officers are giving maximum support for students approaching with creative ideas. Officers encourage students to buildup their creative ability. Our government is promoting young individuals to get self-employed by withdrawing their role of as a job provider. Several schemes and policies are introduced by KSUM for the growth of startups from its ideation stage itself. Eventhough, the number of students choosing entrepreneurship as a career seems less. One of the reason is that students are not well aware about the processes. Also, they have limited awareness with the current government policies. So it is must to conduct more informative awareness programs in order to make students know in detail about the policies and resources available for the progress of startups. Main barrier factors facing while leading towards entrepreneurship are financial stringency, misconceptions regarding startup incubation, lack of self-confidence etc..

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