

Review and Development of Innopreneurship Model to Enhance the University Ecosystem

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Abstract:

This paper aims to study the initiatives taken by the private Universities through business Incubation centers for the development and promotion of Innovation and entrepreneurship. It also studies the linkages among University Incubation centers, young innovators, Industry and investors for ecosystem development. Traditional universities role has gradually evolved and changed now to redirect the new knowledge system for nation's economic development through University Incubation centers. A model has been developed that illustrates how University Incubation center is functioning for the wellbeing of Society, Nation's economy and youth employment. Current research paper is dealing various elements in understanding and analyzing the changing dynamics of University system in nurturing business Incubation and innovations through various initiatives and platform of developments. The Result shows that university provides a sound platform for young entrepreneurs for start-up's with their innovative ideas and to help in startups at various levels. The model based innopreneurship framework will help to enhance university ecosystem and its functioning through Innovation and Entrepreneurial goals.

Key words: Innovation, Incubation center, Entrepreneurship, Qualitative research. etc.

1. Introduction

Entrepreneurship and Innovation plays a substantial role in the progression and development of any country. Promoting and developing new start-ups, exploring various entrepreneurial opportunities available in the market will result in ample amount of job creation across various sectors of the businesses. Innovation and entrepreneurship are all about to come up with new ways and new solutions to solve the demanding challenges through looking out at the problems with different prospective. These challenges can be observed at various levels like local to regional, urban to rural and national to international etc. Many individuals' as well as organizations take initiative to solve these problems through innovative ways and we call them as innovators or entrepreneurs. Today business scenario changing rapidly and becoming very dynamic. Research and Innovation becomes the inseparable part of the businesses. In this situation Universities playing very important and crucial role for the socio-economic business Innovation and development.

Innovation is the inevitable part of any business and it decides the sustainability of the organization. There are two patterns of the innovations. Those are closed Innovation and open Innovation pattern. Closed Innovation was the part of many business firms which was consisting of research conducted in their own laboratories through their in-house professional and resources. However looking towards the changing business scenario in last 5-10 years it has been observed that open Innovation pattern emerged intensively and proved as a new model. Here in open Innovation companies can the benefit of the Innovation and creativity developed by various stakeholders, customers, suppliers, research institutes and Universities. Business firms are doing partnership or MOUs with these stakeholders or Universities that help them to getting Innovation faster with less use of resources and cost. Looking towards various tools of open Innovation model Universities playing a very important role as young, dynamic and productive resources can generate many innovative alternatives. Hence there is a need of capitalization of knowledge through building a threshold between Universities and business firms. Hence Innovation ecosystem is the requirement of the time that enables Universities, students and business firms to come together to create and commercialize new products and services. Current research paper is focusing on the role of Universities in India in developing and nurturing Innovation and entrepreneurial ecosystem. It also addresses initiatives taken by universities and various challenges facing by University Incubation centers for research, development and innovation.

Purpose of paper:

- a. To understand the concept of University Incubation and its role in promotion of innovation.
- b. To outline the changing role of Universities from traditional education to entrepreneurial education.
- c. To analyze various initiatives taken by Indian Universities in their Incubation centers.
- d. To determine the problems and challenges faced by University Incubation in India.

Geographical scope of the study is limited to the University Incubation centers in India. Functional scope is related with reviewing the existing literature on University Incubation centers, their initiatives, various activities implemented and challenges faced by these University Incubation centers.

2. Research Methodology

Research methodology adopted in the current research is a qualitative research method. Current research paper is purely based on secondary research approach where majorly data is collected from the secondary sources. Hence research is consisted with explorative research design where exploring the existing situation is the main objective. Various research papers, reports, ARIIA reports of various Universities etc. are reviewed and appropriate findings are drawn.

3. Review of Literature**3.1 Concept of Business Incubation**

Business Incubation concept was emerged in the 1950's in the business organizations. It has been evolved gradually along with the technology changes, socio-economic development etc. Initially business Incubation was consisted with nonprofit organizations aimed to develop through business ventures and create opportunities of employment. "Incubator means a container in which a weak or a premature baby can be kept alive through the controlled air and temperature conditions". From the definition it can be derived that incubators are the entrepreneurial minds that needs a special environment and guidance to become a mature entrepreneur (1). So it

can be inferred that incubators are the organization that helps the entrepreneurial ideas to develop, to start a new business.

Business Incubation can be defined as most effective way to assisting the young entrepreneurs and their ideas in creating a business model. Even business Incubations can be considered as the drivers of job creation, wealth creation and result in to overall development of economic activities. Business Incubation motivates the entrepreneurs for research and innovations. Business Incubation drives the Innovation system (2) and it becomes an important part of modern entrepreneurial ecosystem. Success of any business Incubation centers is depend on nurturing the innovative business brains, attracting best ventures, developing their ability to produce new products and firms having high potential to grow and developing Innovation education based Universities and research institutes.

The lack of practical opportunities, such as simulation or internships, to supplement cognitive learning, as well as the limited accessibility of programs developed by universities and organizations in the fields of entrepreneurship for those potential entrepreneurs between the ages of 18 and 30, are highlighted (11), and they are recognized by the literature as important knowledge development processes of the entrepreneurial capacities. The difficulty lies in enabling young people to take advantage of these opportunities in order to develop their entrepreneurial knowledge and capacities.

3.2 Academic Incubators

Until year 2000 there were only 20 incubators in India. Gradually it took speed and growth curve becomes steeper. In the year 2020 there were 326 incubators in India. Most of them are found in academic institutions like IIT's, IIM's and universities. Academic based incubators growth was unprecedented and it's because of support from central government between the periods of 2015-2020. Academic incubators always play an important role for inspiring young graduates to start-up. An academic incubator provides an opportunity to young entrepreneurship through apprenticeship that trains them basics of entrepreneurship (3). An academic incubator focuses on propelling students entrepreneurs through alumni support. Academic incubators are the primary stage of economic and social creation labs. Institute produces two important components of value creations i.e. talent development and technological innovations.

Key features of Academic incubators:

- 1) It provides access to pool of domain experts, research mentors and research funding.
- 2) Academic incubators provides physical space mobility for engagement and digital support
- 3) It provides a valuable network that interlinks the entrepreneurs with banks, venture capitalist and various government agencies that provide funding.
- 4) Along with above stated characteristics it also provides incubation programs and disseminations of programmers.
- 5) Helping start-up achieves the product fit by identifying target customer, their unserved needs and value proposition.

3.3 Role of Incubators in the Entrepreneurial process

Today promoting entrepreneurship through University Incubation centers become vital as these activities will create start-up, ample opportunities of jobs and reduce the problems of unemployment. Here the role of incubator should not be limited to provide an infrastructure or office facilities (4). They should offer training, networking and consulting to start-ups. Incubators should give a technological support, financial support and legal support too.

Current incubators challenges:

- 1) How to scale up throughput of our incubators
- 2) How do we increase the research translation from our labs and convert them to real high end companies.
- 3) To stay relevant and offer meaningful value propositions as the larger ecosystem evolves.

Most of the Universities have initiated Innovation and Incubation center at university campus (5). Still the goal is yet to achieve because of many of obstacles and challenges.

Few of the challenges faced are discussed as follows.

- a. Lack of Training and Industrial Support
- b. Lack of entrepreneurial mind set
- c. There is no standard metrics that can measure University performance concerning incubators
- d. Active Industry-University tie-ups and actual participation of Industry mentors.
- e. Building interdisciplinary trends, generating start-up groups by collaborating students from varied backgrounds, existing curriculum having less scope on entrepreneurial education are the key challenges observed in University Incubation center.

4. Findings and Suggestion

Considering various Universities incubators and their initiatives for promoting young minds towards innovations and entrepreneurship it can be inferred that Universities, entrepreneurs and business incubators have a reciprocal relationships. This depicts that innovations and ideas developed through Incubation centres could be the result of these relationship. Indian Universities have started taking a stepping stone towards creating strong start-up environment.

It has developed a roadmap for incubators that are related with four factors i.e. entrepreneurial climate, commercialisation of technologies, generating employment and innovation. University-entrepreneurship relationship become strong as many universities have started courses, diplomas and degrees based on entrepreneurial education (7). Though University-Industry tie-ups are not fully functional still its provision would be the motivating factors for many young entrepreneurs.

From the literature review it can be recommended to universities that they should be more entrepreneurial and innovative (8) while promoting entrepreneurship among the graduates. Universities should monitor their entrepreneurial activities, support and actual output of these efforts time to time. Industry-University should be more active and functional. Awareness of entrepreneurship should be done at mass level. The processes to develop knowledge to promote entrepreneurial capacities (12, 13) and Innovations led to innopreneurship and it includes the following components:

Table-01 Elements of Innopreneurship

1] Mentoring and Idea generation	2] business Counseling	3]Networking and Funding opportunities	4] follow up management support
5]Cooperative Learning and Interactions	6]Education and training	7]Success case study	8)Startups and Incubations

5. Model based university Innopreneurship

Figure -01 shows the model based frame work of Innopreneurship in private universities. This consists of various inputs and facilities to enhance University ecosystem in form of Innovative with inputs required to develop innovation led entrepreneurship, ideas, rise in startups, involvement of staff and student in incubation activities to raise the employment and economic growth in society.

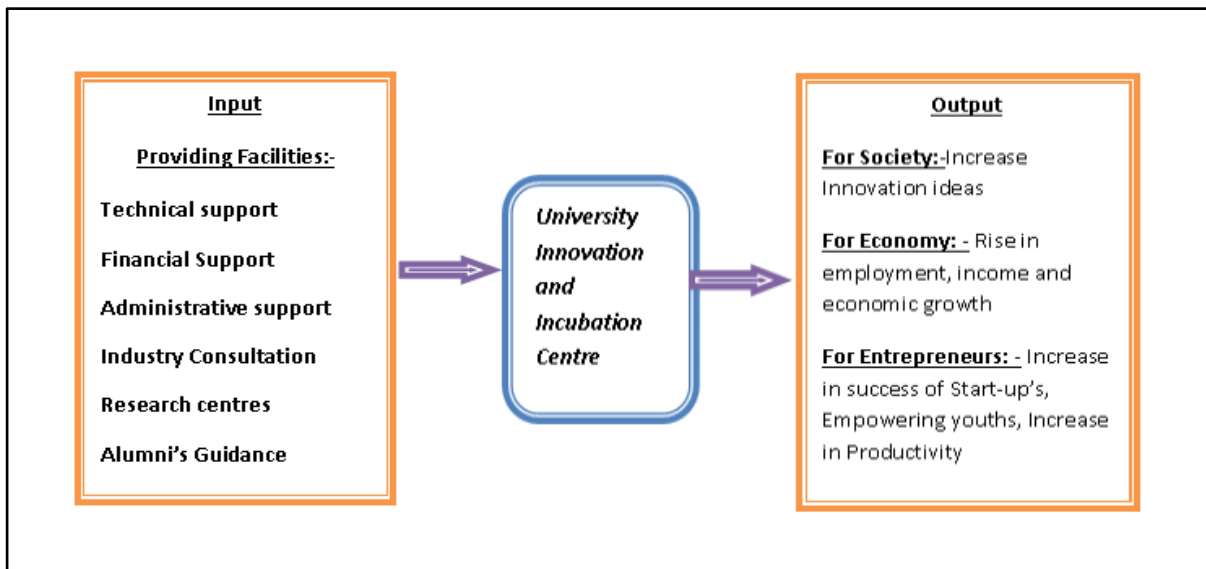


Figure -01 shows the model based frame work of Innopreneurship

Figure -02 shows the closed loop model of Innopreneurship in private universities. This consists of various innovation and entrepreneurship inputs to develop the co-related Innopreneurship model to enhance University ecosystem

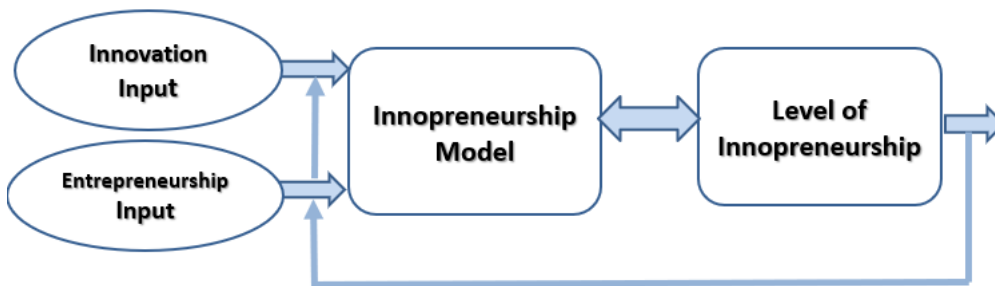


Figure -02 closed loop model of Innopreneurship

Innopreneurship model

A mathematical model for the Innovation Index can be represented as a formula or a set of equations that describe the various factors that contribute to the level of innovation in a country, region, or company. The model typically considers factors such as research and development expenditure, patent filings, human capital, infrastructure, and other factors that impact innovation. For instance, one mathematical model for the Innovation Index can be formulated as:

$$\text{Innovation Index} = a\text{R\&D expenditure} + b\text{Patent filings} + c\text{Human capital} + d\text{Infrastructure} + e\text{Other factors.}$$

where a, b, c, d, and e are coefficients that determine the relative importance of each factor, and R&D expenditure, patent filings, human capital, infrastructure, and other factors are quantifiable metrics that can be measured and compared across countries, regions, or companies.

Similarly Entrepreneurship model and Innopreneurship model are developed to know Innopreneurship Spirit of the University.

These models can be used to rank and compare the innovation performance of different entities and identify areas of improvement to enhance innovation capabilities. However, the model's effectiveness depends on the accuracy and relevance of the input data and the appropriateness of the weights assigned to different factors.

By evaluating and enhancing these parameters, universities can cultivate an environment that not only encourages innovation but also integrates entrepreneurial principles to effectively bring innovative ideas to fruition. This holistic approach can contribute to the development of a dynamic and forward-thinking institution.

6. Conclusion

This paper explains the need of Innopreneurship and multi-concept education to enhance the goals of university by strengthening Innovation and entrepreneurship. Universities are found imparting traditional knowledge, skills and education towards the future of the nation. Time demanding from universities is to create job creator rather than job seeker. Slowly and steadily universities have taken a new mission to fulfil the demand of society and nation by focussing on entrepreneurial education and Innovation based curriculum. Entrepreneurial and Innovation based education and Incubation canters will be the way to succeed for new business creation. Innovation concept in the University Incubation centre is observed beyond the technology. This paper explains various innovative parameters and the mathematical model to enhance Innovation and entrepreneurship. From this work the University will identify their strengths and effect on innopreneurship. It can be concluded that this work will help in creating competitiveness among Universities, University departments. It also make competitive environment, quality of education, Research and Development, Industry linkages, nurturing future entrepreneurs that enables Universities to create entrepreneurs rather than job seekers and thus increased ecosystem at all levels of university.

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