

Theme

Innovation & Entrepreneurship Development

Title of the Paper

**Study of Incubation Centres & Its Role In Fostering
Entrepreneurship In India With Special Reference To
Centres Set Up In IIMs/IITs**



- : Submitted to :-

**National Conference on
Make in India – Emerging Trends in Trade & Innovations
for Effective Entrepreneurship – MI-ETTIEE 2015**

Organized by

**Rukmini Devi Institute of Advanced Studies, New Delhi
In association with Ministry of Micro, Small & Medium Enterprise,
Govt. of India**

April 17-18, 2015

- : Submitted by :-

**Kalpeshkumar L Gupta
Shivali Rathore**

Academic Associates, IIM-Ahmedabad
Wing 1 A, Indian Institute of Management, Ahmedabad
Mob. 99248 97691, Off. 079-66324810
E-mail :- advocatekgupta@gmail.com

Study of Incubation Centres and its role in fostering Entrepreneurship in India with special reference to centres set up in IIMs/IITs

Abstract

India is home to over 30 crore rural poor, aware of the criticality of the situation that has made to come with an innovative business idea. Entrepreneurship in India is on the verge of explosive growth and which is actually need of an hour for employment generation, poverty elevation at grass root through developmental intervention. India economic progress has started from the development of its small and medium scale enterprises to ensure that the sectors continues to stay competitive and achieve sustained growth in the era of global economy many incubators centers has been established with the mission to give the encouragement to many innovative ideas.

If we define an Incubator, It is simply an enclosed apparatus in which premature small babies are placed and which provides a controlled and protective environment for their care this gives them a chance to adjust to outside environment, and grow stronger before they face the outside world. In a similar way the startup entrepreneur's business idea is incubated in the incubation centers. Entrepreneurship has been conventionally rated as risky career, to break the myth and to augment the supply of new entrepreneurs through education; research training the incubation centers has been established, their goal is to help create and grow young businesses by providing them with necessary support and financial and technical services. The startup companies spend on an average two years in a business incubator during which numerous benefits like funding, office space, equipment's etc. is provided by the incubators to the startup business.

Present paper will study the background, role, objectives of different incubators set up in Indian Institute of Management (IIMs) and Indian Institute of Technology (IITs) for our study.

Study of Incubation Centres & Its Role In Fostering Entrepreneurship In India With Special Reference To Centres Set Up In IIMs/IITs

1. INTRODUCTION

“We aim to make incubatees ready for raising capital from market-oriented investors through mentoring and incubation support.”

-- G Sabarinathan, Chairperson, NSRCEL at IIM Bangalore

India is home to over 30 crore rural poor, aware of the criticality of the situation that has made to come with an innovative business idea. Entrepreneurship in India is on the verge of explosive growth and which is actually need of an hour for employment generation, poverty elevation at grass root through developmental intervention. India economic progress has started from the development of its small and medium scale enterprises to ensure that the sectors continues to stay competitive and achieve sustained growth in the era of global economy many incubators centers has been established with the mission to give the encouragement to many innovative ideas. Carrol R R (1986) describes incubator as a mother hen, which help the new ventures to hatch, grow and leave. In a similar way the startup entrepreneur’s business idea is incubated in the incubation centers. Entrepreneurship has been conventionally rated as risky career, to break the myth and to augment the supply of new entrepreneurs through education; research training the incubation centers has been established, their goal is to help create and grow young businesses by providing them with necessary support and financial and technical services. The startup companies spend on an average two years in a business incubator during which numerous benefits like

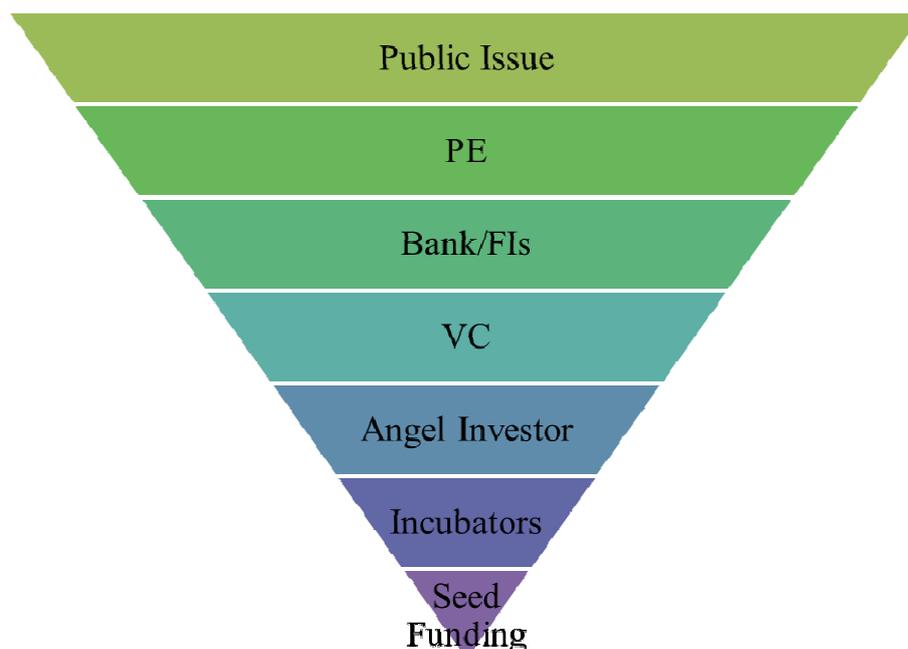
funding, office space, equipment's etc. is provided by the incubators to the startup business.

Present paper will discuss the various sources of funding options available for potential entrepreneurs, need of incubation support, incubation process followed by background, role, objectives of different incubators set up in the prominent Indian Institute of Management (IIMs) and Indian Institute of Technology (IITs).

2. SOURCES OF FUND FOR ENTREPRENEURS

There are different types of financing options which are available for the startups during the different stages of the firm life cycle. The financing types are based upon the level of growth of the startups from the first stage of the firm life cycle to the final stages along with their growth and production scale. Since the type of finance vary across different stages of the firm life cycle. (Leach & Melicher, 2012)

Figure 1 :- Stages of Business & Sources of Funds



Early Stage

The seed phase, also known as the pre-commercialization stage, at this stage, the basic research may have been completed, but the commercial capabilities are not yet proven. Generally, a formal business entity has not been formed because the decision of whether to move forward with creating a business has not been decided. During the seed stage, the entrepreneur generally requires relatively small amounts of financing to conduct business feasibility studies, develop prototypes, evaluate market potential, protect intellectual property, and investigate other aspects of the business idea.

Seed Funding

For the startup firm in the initial stage, owner's capital is seen as "Seed financing" when the options for external financing are limited. It is considered to be the primary option as a source of finance from the startups. Owner capital is a part of insider financing and is the largest sources of informal finance for the startup including owner's equity, loans and credit card. Insider finance channels mostly included finance from the family members, friends and affiliates of the firm (Robb & Robinson, 2012).

Incubators

Business incubators are organizations geared toward speeding up the growth and success of startup and early phase companies. They're frequently a safe route to capital from angel investors, state governments, economic growth alliances and other investors. Majority of the business incubation programs are sponsored by individual companies or municipal entities and public establishments, such as colleges and universities. Their goal is to help create and grow young businesses by offering them with necessary sustenance and financial and technological services. Incubators

provide numerous benefits to owners of startup businesses. Their office and manufacturing space is offered at below-market rates, and their staff supplies advice and much-needed expertise in developing business and marketing plans as well as helping to fund fledgling businesses. Companies typically spend an average of two years in a business incubator, during which time they often share telephone, secretarial office, and production equipment expenses with other startup companies, in an effort to reduce everyone's overhead and operational costs. Many have potential capital to invest, or links to potential funding sources. There's access to services such as accountants and lawyers not to mention invaluable coaching and networking connections through the staff and other entrepreneurs at the incubator.

Angel Investors

Business angels are high net-worth individuals who provide early-stage companies with financial and non-financial assets such as skills, professional networking, coaching and expertise. Angel investors often have a background as successful entrepreneurs / businessmen and accumulated sustainable amounts of capital. Generally, business angels hold unique insights within certain business areas and they tend to operate with a very committed, strong hands-on approach. Normally business angels invest smaller amounts compared to the institutionalized venture capital firms (Harrison & Mason, 2002; Vaekstfonden, 2002). The Angel investors are the individuals of high net worth and therefore the amount they wish to invest in the small size firms is mostly the same as it is required by the firm (Berger & Udell, 1998).

Venture Capital Investors

Classic venture capital also plays a significant role for fuelling entrepreneurship, although most venture capitalists invest in slightly later stages compared with business angels. Venture capitalists are often key actors in the division of labor between universities or other institutions breeding new technologies and commercial activities. VC investments are traditionally made for scaling up operations (i.e., developing, launching and expanding new products or services). VCs take lesser degrees of risk and invest more money than angel investors. However, a VC is about more than financial support alone. VCs provide entrepreneurial support and partnership.

Bank and Financial Institute funding:

It is observed that access to early stage finance from banks is perceived to be very difficult at the start-up stage but becomes comparatively easy at the growth stage (Knowledge commission report, 2009). Many entrepreneurs at growth stage prefer to finance their firm through banking and financial institution. They can acquire bank finance by different financial options provided by bank such as credit trade, low interest loans, interest free loans, reduction transaction cost, protection against credit crunches, and credit risk insurance (Boot, 1999). The firms with high levels of legitimacy would have better access to external financing (including bank loans).

Private Equity:

Equity capital is not quoted on a public exchange. Private equity consists of investors and funds that make investments directly into private companies or conduct buyouts of public companies that result in a delisting of public equity. Private Equity investments in relatively mature, primarily unlisted companies requiring growth

capital. An asset class that involves value enhancement and high returns generation by sharing business expertise of the Investor complementing the Entrepreneur.

Initial Public Offering:

Here the organizations complete its venture cycle by heading up completely to the developed organization. A first sale of stock, or IPO, is the first offer of stock by an organization to people in general. An organization can raise cash by issuing either debt or equity. In the event that the organization has never issued value to people in general, it's known as an IPO. It is a procedure by which a privately owned business can open up to the world by offer of its stocks to general public.

Table 1 :- Sources of Funding – Advantages & Disadvantages

Source of Fund	Stage	Advantages	Disadvantages
Seed Funding	Startup	Easy to get	Lesser funding then other sources
Incubators		Apart from funding all allied support for business	Lesser funding then VC, Bank, FIs, PE, Public Issue. Funding for 2-3 years
Angel Investor	Early Growth	More funding then Seed, Incubators, more informal then VC, Bank/FIs	Lack consistency in financing
Venture Capitalist		More funding then Seed, Incubators, Angel Investors	Percentage of return
Bank/FIs	Sustained growth	More funding then Seed, Incubators, Angel Investors, VC	Interest liability, Collateral security also required

Private Equity		More funding then Seed, Incubators, Angel Investors, VC, Banks/FIs	Profit sharing
Public Issues Equity/Debt		More funding then Seed, Incubators, Angel Investors, VC, Banks/FIs	Dividend/Interest liability

3. INUBATION CENTRES IN INDIA - AN OVERVIEW

The incubator movement in India took off in the late 1980's as a policy for promoting entrepreneurship and stimulating new venture creation. Which were set up under the initiative and support of the United Nations Fund for Science and Technology (UNF&ST) during (1987-1990). It was not until 2000 that India again started its Technology Business Incubator (TBI) programme with clear policy strategy. By 2004, only 15 TBI's were established in India by the initiative and support of The National Science & Technology Entrepreneurship Development Board (NSTEDB), mostly in the institutions of excellence like Indian Institute of Technology (IITs) and Indian Institute of Management (IIMs). By the end of 2009, there were approximately 120 TBI's in India. Of these, 40 were established in Software Technology Parks. About 30 TBIs were promoted by other government departments, banks and financial institutions. And 53 TBIs were promoted by NSTEDB of the Department of Science and Technology in collaboration with primer academic and research institute of India.

Following is the classification of incubators in India.

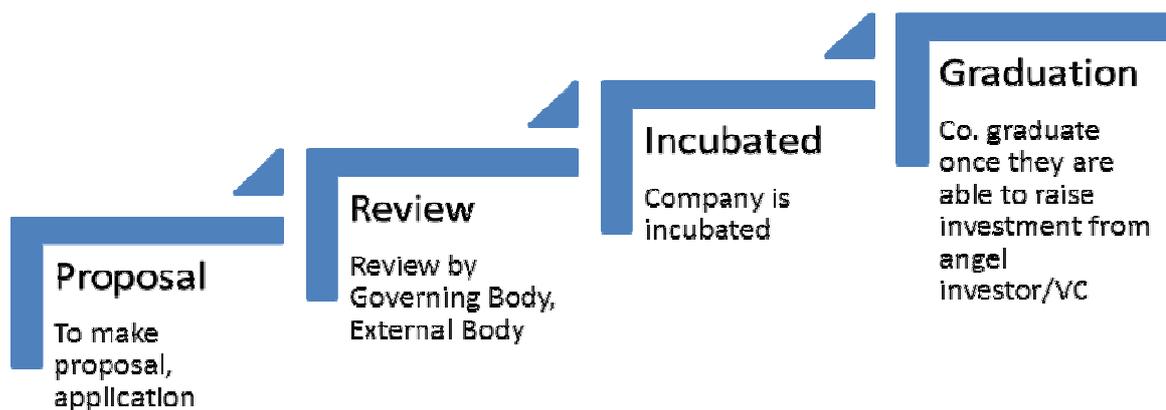
Table 1 :- Types of Incubators in India

<p style="text-align: center;">Business Incubators (BI)</p>	<p>BIs promote continuous regional and national industrial and economic growth including increasing employment through general business development or stimulating specific economic objectives such as industrial restructuring and wealth generation or utilization of resources. The incubator combines a variety of small enterprises support elements in one integrated affordable package. It has a special niche, i.e. nurturing early stage, growth-oriented ventures, through focused assistance within a supportive environment.</p>
<p style="text-align: center;">Technology Incubators (TI)</p>	<p>TIs are intended for bolstering the technology development stage. The primary goal of technology incubators is to promote the development of technology-based firms, and assist in completion of the technologies under development.</p>
<p style="text-align: center;">Technology Innovation Centres (TIC)</p>	<p>The TICs conduct research and development (R&D) and technology innovations required by the industrial field, which aims to jointly invest resources into university campuses or research institutions and achieve commercialization with support from business enterprises or public institutions.</p>
<p style="text-align: center;">Technology Business Incubators (TBI)</p>	<p>The TBI is a venture of universities, public research institutes, local government and private institutions to promote and bolster a new technology intensive enterprise.</p>

Source :- <http://www.nstedb.com/> accessed on September 2, 2014

Process of Incubation

BIA (National Business Incubation Association), define business incubation as a business support process that accelerates the successful development of startup and fledgling companies by providing entrepreneurs with an array of targeted resources and services. The main objective of business incubators is to produce successful firms that will leave the program financially viable and free standing. These incubator graduates have the potential to create jobs, revitalize neighborhoods, commercialize new technologies, and strengthen local and national economies, A business idea have to pass through many stages through incubation centers in order to be a full-fledged and independent firm. The following step through which incubation process take place is.



Source :- Bhattacharya Aritra (2006)

4. INCUBATION CENTRES / ENTREPRENEURSHIP CELL IN IIMs.

4.1 INCUBATION CENTRES

**Centre for Innovation, Incubation and Entrepreneurship (CIIE), IIM
Ahmedabad**

CIIE, Ahmedabad started incubation initiatives since 2007. The center was started by a group of IIM alumni and other members who bring to the startups the required mentoring and industry experience. CIIE works on the philosophy of Inspire, Incubate & Impact. Since the year of its inception it has incubated more than 100 companies having survival rate of more than 95%. CIIE has also provided mentoring support to more than 200 ventures. CIIE also guide and support newly set up Incubation Centres. For every rupee invested by CIIE, incubates have raised on an average Rs. 12 from other investors. The organization can house on its campus 15-16 startups at a time CIIE has been incubating businesses in the areas of internet and mobile technology, clean technology, social sector startups and healthcare. From mentoring clinics to art exhibitions from global warming initiatives to social enterprise funds, CIIE has evolved as a prestigious business incubation centre in India. IIMA running a very unique programme called IIMAvetric jointly initiated by IIM Ahmedabad, IIMA Alumni (Maverick Emeritus) and CIIE which supports IIMA graduating students who wish to start their entrepreneurial careers. Students get the fellowship of Rs. 30, 000 pm for a period of 2 years which is free of cost. Some of ventures incubated from CIIE are VMukti, BirdsEye, Alma Connect, Awaaz De, Travel Yaari etc.¹

Nadathur S Raghavan Centre for Entrepreneurial Learning (NSRCEL). IIM Bangalore

The N.S. Raghavan Centre for Entrepreneurial Learning (NSRCEL), which was set up in 1999 and started its operation in 2001. As per G Sabarinathan, Chairperson NSRCEL, so far more than 46 enterprises have graduated from NSRCEL and 11 are on board at present. Every month, the centre mentors over 25 enterprises/entrepreneurs (Pathak Maulik, 2013). NSRCEL has formatted Students

¹ Centre for Innovation, Incubation & Entrepreneurship, IIM Ahmedabad, <http://www.ciieindia.org/>

Run Venture (SRV) programme. This programme is meant for IIMB students who need hand-holding to test their business ideas before they convert this into a venture. NSRCEL also carry out research on different aspects of entrepreneurship. Some of ventures are Marketelligent, Brizz TV, Brain League, Onus, Actwitty etc.²

Centre for Entrepreneurship and Innovation (CEI), IIM- Calcutta

The Indian Institute of Management, Calcutta has set up CEI, it aims to incubate/accelerate innovative early-stage/established startups in India. CEI is currently involved in Entrepreneurial Research & Case Development, Venture Creation, Events, Management Consulting for Women Entrepreneurs, Sustainable Technology Venture Competition Mentorship. CEI provides consulting services in evaluating opportunities, identifying resource requirement, assisting in resource and managing new ventures. It also holds regular workshop/events to help entrepreneurs to convert their ideas to a feasible venture. It aims to host about 40 startups over five years. It will focus on five key sectors-healthcare; education, clean technology, lifestyle and analytics the incubator will focus on entrepreneurial ventures developing product as well as delivery of services. IIMCalcutta Innovation Park (IIP) which will provide seed funding of 5-50 lakh for an undisclosed stake in the ventures, will receive about 7 crore in funding from the Department of Science and Technology, which will be allocated over the same period. It also plans to raise the funds up to 20 Crore from its alumni. Energy solutions venture ONergy, Doctors For You and primary education-focused company Edwell will be among the first batch of incubated start-ups of the IIM Calcutta incubation center.³

² Nadathur S Raghavan Centre for Entrepreneurial Learning (NSRCEL). IIM Bangalore, <http://www.nsr cel.org/>

³ Centre for Entrepreneurship and Innovation, IIM- Calcutta, <https://facultylive.iimcal.ac.in/cei>

4.2 ENTREPRENEURSHIP CELL (E-Cell)

Entrepreneurship Cell is a student body which promotes entrepreneurship culture at the institute. Most of the IIMs/IITs are having E-Cell. Followings are the some E-Cells at IIMs.

Entre Club - IIM Ahmedabad

It conducts guest lectures, seminars, workshops, business plan competitions at regular interval to discuss various entrepreneurial aspects. Recently it concluded MASTERPLAN, IIMA's flagship B Plan competition with the help of CIIE at IIM Ahmedabad. It also organizes Entre Fair where start-up companies and students interact with one another and share ideas, experiences.

E-Cell, IIM Calcutta

It organizes business plan competitions alongwith *E-Summit* which has panel discussion, workshops and talk on entrepreneurship. It also launched Tata Social Enterprise Challenge with the support of Tata Group to find out most promising social enterprises.⁴

Abhiyan, Entrepreneurship Cell of IIM Lucknow

Abhiyan, the Entrepreneurship club at IIM Lucknow started in 1999, *Abhiyan* has developed a good network of valuable mentors around the world, including successful entrepreneurs, venture capitalists, & professionals. Until now, the committee was mainly responsible for providing background support for newborn ventures. But now it has gone beyond that by playing a proactive role not just in encouraging entrepreneurs, but also trying to building them. It also organizes annual

⁴ E-Cell, IIM Calcutta, <http://ecelliimc.com/>

entrepreneurship event called *Nirvaan*. Nirvaan goes beyond the B-Plans by offering incubation facility to the winners, which makes it unique.⁵

E-Cell IIM, Kozhikode

Currently, IIM-K has an entrepreneurship cell that offers virtual incubation services and consultation projects to students. Indian Institute of Management Kozhikode (IIMK), from its inception, has been promoting its Entrepreneurship Cell (E-Cell). E-Cell is primarily responsible for fostering entrepreneurship amongst students and assisting budding entrepreneurs by providing them with necessary resources.⁶

Entrepreneurship Cell (IIM Rohtak) started in July 2014. Aim of club is to promote entrepreneurial culture by way of various activities like guest lectures, seminars, workshops, business plan competitions.⁷ **Saksham - The E- Cell of IIM Udaipur** also been established to promote entrepreneurship at the institute. Recently it launched first edition of *Prarambh – The 32 Hour Challenge*. Idea of this event is to bring promising entrepreneurs to discuss ideas and convert them into reality.⁸ **E-Cell of IIM Indore** has collaborated with National Entrepreneurship Network to conduct competitions and workshops to inculcate leadership. It also working with ENACTUS India to social entrepreneurship project.⁹ **I-Cube, E-Cell of IIM Shillong** organized *Emerge*, first entrepreneurship summit in September 2012 to promote

⁵ TNN, “Abhiyan the E-Cell of IIM Lucknow presents Nirvaan”, *Economics Times*, December 24, 2006, http://articles.economictimes.indiatimes.com/2006-12-24/news/27445016_1_entrepreneurship-cell-incubation-sanjay-bhargava

⁶ E-Cell, IIM Kozhikode, <http://ecell.iimklive.com/>

⁷ Entrepreneurship Cell, IIM Rohtak, <http://www.iimrohtak.ac.in/iim-rohtak-%E2%80%93-entrepreneurship-cell-%E2%80%93-inaugural-program.html>

⁸ <http://www.mbaskool.com/pages/iim-udaipur/updates/saksham-the-e-cell-of-iimu-presents-prarambh>

⁹ Entrepreneurship Cell, IIM Indore, <http://www.iimidr.ac.in/iimi/index.php/students-corner/clubs/86-students-corner/clubs/activity-club/66-entrepreneurship-cell>

entrepreneurship in North-East. It works on the philosophy of Inspire, Innovate & Implement.¹⁰

5. INCUBATION CENTRES / ENTREPRENEURSHIP CELL IN IITs

5.1 INCUBATION CENTRES

Society for Innovation and Entrepreneurship (SINE), IIT Bombay

The TBI named as Society for Innovation and Entrepreneurs hip (SINE) came in to existence in 2004 to manage the business incubation and accelerate the growth of entrepreneurship with the support by Department of Science and Technology of the Government of India. . On behalf of IIT Bombay, SINE holds equity in the Incubatee companies, enters into revenue sharing arrangements and licenses technologies developed at IIT Bombay. As of March 2009, 20 companies are successfully incubated. At present 15 companies are there as the incubatees. At a time, they can accommodate 15-17companies as incubatees. Amongst its startups are one of its best known start up is that of Webaroo Technologies, better known as SMS Gupshup, ThinkLABS Technosolutions, an educational robotics venture. Companies graduating from SINE have gone on to raise VC investment to the tune of Rs.1.2 crore like elnfinitus, while Myzus Technologies rose over Rs.3 crore. SINE also helps startups with legal, human resources and accounting facilities.¹¹

¹⁰ <http://yourstory.com/2012/08/e-summit-by-iim-shillong-an-initiative-to-promote-entrepreneurship-in-north-eastern-india/>

¹¹ Society for Innovation and Entrepreneurship, IIT Bombay, <http://www.sineiitb.org/>

Science and Technology Entrepreneurship Park (STEP), Technology Business Incubator, IIT Kharagpur

The Science and Technology Entrepreneurs' Park (STEP) was established at IIT Kharagpur in December, 1986 with financial support from DST New Delhi, DST West Bengal, IDBI, IFCI, ICICI which started operating in march 1989. It can accommodate up to 50 companies and provides a number of advisory facilities for the startups like patenting solution, legal and accounting solutions amongst others. It has incubated more than 125 companies since its inception; the sectors in which startups have been incubated include education, healthcare, mobile and internet-based technologies. The center also helps students get funded through government grants that go up to Rs.45 lakh in loan on a low interest rate and up to Rs.1 crore from the Technopreneur Promotion Programme of the Department of Science and Technology of the Government of India. Some of its prominent startups so far have been web startup Intinno, Capillary Technologies and Canopus, a startup that has developed a technology to reduce the demand for chemical oxygen needed in sewage water treatment significantly.¹²

Technology Business Incubation Unit (TBIU), IIT Delhi

The Technology Business Incubator (TBI) has been in active operation in the Institute since the year 2000. The TBI is conceived, programmed and implemented by the Foundation for Innovative and Technology Transfer (FITT) - the Industry interface unit of the Institute. The incubator incubates businesses for a period of 1-2 years, extendable to 5 years only for scaling up activities. Product Development, Product Innovation, Software Testing, Simulation and prototyping, pilot experimenting,

¹² Science and Technology Entrepreneurship Park, Technology Business Incubator, IIT Kharagpur, <http://www.step-iit.org/>

training are activities covered in TBIU. Only under nursery programme, incubator gets seed funding if he/she is in shortage of funding and other have to manage fund themselves. Commercialization Support under the Technopreneur Promotion Programme is provided by the incubator in which a startup can receive a funding of Rs.15 lakh-Rs.45 lakh. Some of the startups that have come out of IIT Delhi's incubator include VirtualWire, which works with wireless technologies and Mechartes Researchers Private Limited, which provides engineering solutions.¹³

SIDBI Innovation and Incubation Center (SIIC), IIT Kanpur

IIT Kanpur has set up the SIDBI Innovation & Incubation Centre (SIIC) in year 2000 in collaboration with Small Industries development Bank of India (SIDBI) to foster innovation, research, and entrepreneurial activities in technology-based areas. SIIC incubates ventures in technology, engineering and other interdisciplinary areas. It also organizes talks, seminars, workshops on entrepreneurship at regular interval. Till date it has incubated and mentored 53 companies of which 26 have already graduated. Emphasis has been given to the commercialization of IIT Kanpur products techno innovations. They also work more on IPR related issues for techno innovations. It also helps faculty and students in filing patents and copyrights. So far, it has filed 242 patents. They provide various facilities like: Seed money, in campus accommodation, mentoring, Business plan development, Business promotion, Incubation space, Office support, Library and documentation, assistance in getting finance, advertising agencies, legal assistance, Electronic and animation cell and all other resources of IIT Kanpur to the incubation.¹⁴

¹³ Technology Business Incubator, IIT Delhi, <http://www.fitt-iitd.org/tbiu.aspx>

¹⁴ SIDBI Innovation and Incubation Center, IIT Kanpur, <http://www.iitk.ac.in/siic/d/about-siic>

IIT Madras Incubation Cell (IITM-IC), IIT Madras

IITM-IC looks to foster technology and knowledge based ventures. It helps entrepreneurs to grow, survive so that they can scale-up their ventures in future. IIT Madras's Rural Technology and Business Incubator (RTBI) incubates start-ups whose focus is to impact rural/underserved market, leveraging Information and Communication Technology. It also conducts, seminars, workshops, training programmes on various issues of entrepreneurship. So far more than 30 companies have been incubated. Some of the incubated companies are Ather, Airwood, Hyper Verge, Relagenct, Tharakan Web, Ecologin.¹⁵

Malaviya Centre for Innovation, Incubation and Entrepreneurship (MCIIE), IIT (BHU)

The main objective of the MCIIE is to produce successful firms that will leave the program financially viable and free-standing. It also holds seminars, lectures, workshops, business plan competitions at regular interval. So far 2 ventures have graduated and 8 have been incubated.¹⁶

5.2 ENTREPRENEURSHIP CELL

As we seen above that E-Cell is the student body which aims at building entrepreneurial culture at the institute level so that some of the students can take up the journey of entrepreneurship as a part of their career.

¹⁵ IIT Madras Incubation Cell, IIT Madras, <http://www.incubation.iitm.ac.in/>

¹⁶ Malaviya Centre for Innovation, Incubation and Entrepreneurship (MCIIE), IIT (BHU), <http://www.mciieiitbhu.org/>

E-Cell, IIT Bombay

It started in year 1998. E-Cell hosts various workshops, speaker sessions, innovation games, competitions for promising entrepreneurs and support them by providing necessary resources such as seed funding, mentoring, consultancy and networking. Every year it organizes *Eureka* – E-Cell’s B-Plan’s competition which helps many people to start their own ventures.¹⁷

E-Cell, IIT Kharagpur

It started under the aegis of Technology Incubation and Entrepreneurship Training Society (TIETS). The activities of society are parallel to STEP of IIT Kharagpur. E-Cell plans guest lectures, workshops to help the budding entrepreneurs.¹⁸

Entrepreneurship Development Cell (EDC), IIT Guwahati

EDCG works any other E-Cell in the other IITs. Recently IITG organized Entrepreneurship Summit called *Udgam*. Purpose of the summit was only to inspire people to know what it is like to pursue your dreams as an Entrepreneur, from people who know this perfectly well, and who want everyone else to do the same.¹⁹

Entrepreneurship Cell (IIT Hyderabad)²⁰, Entrepreneurship Development Cell (EDC-IIT Roorkee)²¹, Entrepreneurship Club (IIT Patna)²² organize workshops, talks, business plan competitions, business fest etc.

¹⁷ E-Cell, IIT Bombay, <http://www.ecell.in/2014/>

¹⁸ E-Cell, IIT Kharagpur, <http://www.ecell-iitkgp.org/>

¹⁹ Entrepreneurship Development Cell (EDC), IIT Guwahati, <http://edciitg.in/>

²⁰ E-Cell, IIT Hyderabad, <http://ecell.iith.ac.in/>

²¹ Entrepreneurship Development Cell (EDC), <http://www.edciitr.com/>

²² E-Club, IIT Patna, <http://www.iitp.ac.in/ecelliitp/>

6. CONCLUDING REMARKS

6.1 CONCLUSIONS

We can see that IITs are leading in providing incubation support compared to IIMs. One of the main reasons can be technical nature of IITs. Only few IIMs are having suitable incubation support system. It is pertinent to note that almost all IIMs/IITs are having Entrepreneurship Cell which is essential to build culture of entrepreneurship and innovation at the institute level. Many E-Cells also help in seed funding apart from other support.

6.2 RECOMMENDATIONS

Looking at the above discussion we have made following recommendations.

- All IIMs & IITs esp. older ones should plan for incubation centres to inculcate culture of entrepreneurship at the institute level itself. Older IIMs/IITs which are having incubation centres in their institutes can help newly established IIMs/IITs in setting up of incubation centres.
- For newly established IIMs/IITs, starting an Incubation Centre will be a herculean task, but nevertheless students of the institute can start an E-Cell to build the culture of entrepreneurship and fostering the same among the students and professionals.
- Carry out research activities on Entrepreneurship and Innovation like NSRCEL (IIMB) & CEI (IIMC) are doing. Comparative analysis of TBIs in other countries could usefully benchmark the good practices of the other, in

order to improve the process, management and the policies; it would help in examine the differences in management style of TBIs in other countries as well.

- Incubation Centres in IIMs/IITs should follow IIM Ahmedabad's IIMaverick programme which will boost the morale of students to take up entrepreneurial journey.
- Companies should come forward and provide funds to the incubation centres located within academic institutions which are approved by the Central Government. As per Section 135 of Companies Act, 2013, it will be considered as towards the fulfillment of Corporate Social Responsibility (CSR) obligation. (Schedule VII, Entry 1(x)).²³ They can also set up incubation centres in IIMs/IITs. IIMs/IITs should campaign for inviting financial support from big business houses for setting up and development of the incubation centres.
- Include programme on Social Impact, Rural Entrepreneurship (IIT Madras, Rural Technology & Business Incubator) which is need of the hour.
- After studying the Incubators across the country it is found that venture capital availability is a major challenge for business incubators. Generally, risk aversion and lack of interest among VC, poor communication channels and little follow-up activities are listed as the main obstacles in the collaboration between business incubators and venture investors. Therefore business

²³ Ministry of Corporate Affairs, Notification, February 27, 2014,
http://www.mca.gov.in/Ministry/pdf/CompaniesActNotification3_2014.pdf

incubators should collaborate with VC in order to improve their funding options.

- Incubators should ensure that they are providing sufficient training to the companies preparing them to meet venture Capital investors and they should engage in follow-up activities allowing them to join and influence the investment.
- VC/PE investments are largely driven by the private sector, whereas the public sector plays an important role in incubation support and financing. Given the fact that incubation centers are potential deal sources for VC/PE investments, there should be a reasonable degree of convergence between these different sources of funding.
- The Incubators can strengthen the linkages between stakeholders, which will help in fostering academia-research-industry partnerships and facilitating the "mobility of experts from academia to industry and vice versa.
- By method for different diverse activities and initiative organized by the NSTEDB more than a large number of individuals, researchers and students have received training in entrepreneurship since the beginning of the 1990s (Saravanan 2007). There are enormous numbers and an applauding accomplishment, tragically there is not a study, documentation to record or evaluates the accomplishments of such strategy instruments. Therefore efforts should be made in to conduct sound assessment of incubator performances which could be a valuable asset for practitioners and policymakers worldwide.

- Introduce elective course on Entrepreneurship and New Venture Planning in curriculum as elective course so that students can have strong theoretical background of entrepreneurship before taking up any venture. IIM Ahmedabad is offering this course for more than a decade. Interested students from Post Graduate Programme in Management, Post Graduate Programme in Agri-Business Management and One Year Post Graduate Programme for Executive can take this course. As a part of this course, students have to present a viable business plan before the panel/experts. Some students benefitted from this course and started their own venture alone or partnering with their batchmates.

- IIMs/IITs should collaborate with regional Technical University which will help regional students to grow and encourage them in proceeding with entrepreneurial idea as a part of their career.

References

- A. Thillairajan & Ankit Jain (2013), "New and Nascent Enterprises: Analysis of Incubation Support in India", *The Journal of Private Equity*, Summer 2013, p 69-85
- A. Thillairajan & Ashish Deshmukh (2009), "*India Venture Capital and Private Equity Report 2009*", Department of Management Studies, Indian Institute of Technology, Madras
- Akçomak, İ. S. (2009), "*Incubators as tools for Entrepreneurship Promotion in Developing countries*", (No. 2009.52), Research paper/UNU-WIDER.
- Bulsara, H. P., Gandhi, S., & Porey, P. D. (2009), "Techno-innovation to Techno-entrepreneurship through Technology Business Incubation in India: An Exploratory Study", *Asia Pacific Journal of Innovation and Entrepreneurship*,3(1), 55-67.
- Bhattacharya Aritra (2006), "Hatching For Success", *Siliconindia*, October 2006, p 20-23
- Callegati, E., Grandi, S., & Napier, G. (2005), Business Incubation and Venture Capital—An International Survey on Synergies and Challenges. *Joint IPI/IKED Working Paper*.
- Carrol, R.R. (1986), "The Small Business Incubator as a Regional Economic Development Tool: Concept and Practice" *Northeast Journal of Business and Economics*, Vol. 12, No. 2 (1986), pp. 24-43.
- Don Hofstrand (2013), "Financing Stages for Startup Businesses", *Ag Decision Maker* retrieved from <http://www.extension.iastate.edu/agdm/wholefarm/pdf/c5-91.pdf> on November 1, 2014
- Gregoriou, G. N. (2011). *Initial Public Offerings (IPO): An International Perspective of IPOs*. Butterworth-Heinemann.
- Kophli Gauri (2013), "A major boost for IIM students", *Hindustan Times*, December 18, 2013 retrieved from <http://www.hindustantimes.com/hteducation/greatcareers/a-major-boost-for-iim-students/article1-1163766.aspx> on November 1, 2014
- Le, N. T., Venkatesh, S., & Nguyen, T. V. (2006), "Getting bank financing: A study of Vietnamese private firms", *Asia Pacific Journal of Management*, 23(2), 209-227. http://unituscapital.com/wp-content/uploads/Unitus-Capital_India-Impact-Equity-Investment-Report-2013.pdf
- Cornwall Jeff (2008), "*Pros and Cons of self-financing*", retrieved from http://www.drjeffcornwall.com/2008/08/07/pros_and_cons_of_selffinancing/ on November 6, 2014
- Pathak Maulik (2013), "Incubation centres at IIMs help start-ups find their feet", May 5, 2013, *livemint* retrieved from

<http://www.livemint.com/Politics/PmqZfuv6XT8QT9pyFFRfbL/Incubation-centres-at-IIMs-help-startups-find-feet.html> on November 5, 2014

Rustam Lalkaka (2002), "Technology Business Incubators to help build an innovation based economy", *Journal of Change Management*, Vol. 3, 2, 167-176

Sarfaraz A. Milan & Suny Oswego (1996), "The University Business Incubators: A Strategy for Developing New Research/Technology-Based Firms", *The Journal of High Technology Management Research*, Vol. 7, No. 2, p 191-208

Saravanan, R. (2007). "Technology and Business Incubation in India: Challenges and Opportunities". In V. V. Ramani, and A. V. Bala Krishna (eds.), *Business Incubation: An Introduction*, Hyderabad: Icfai University Press.

Tang, M., Baskaran, A., Pancholi, J., & Lu, Y. (2010, November). Technology Business Incubators in China and in India: A comparative analysis. In *GLOBELICS, 8th International Conference Making Innovation Work for Society: Linking, Leveraging and Learning*. University of Malaya, Kuala Lumpur, Malaysia.

Tariq, T. (2013), "Start-up financing", retrieved from <http://www.utwente.nl/mb/ba/education/ba-thesis-2013/cf/tariq.pdf> on November 8, 2015

K.B. Chandrasekhar Report, SEBI Committee, retrieved from <http://www.sebi.gov.in/commreport/venture.pdf> on November 15, 2014

Other web links

National Science and Technology Entrepreneurship Development,
<http://www.nstedb.com/institutional/tbi.htm>

National Science and Technology Entrepreneurship Development,
<http://www.nstedb.com/fsr-tbi09/images/chapter1.pdf>

Department of Science and Technology, <http://www.dst.gov.in/scientific-programme/st-nstedb.htm>

Science and Technology Entrepreneurship Park, Technology Business Incubator, IIT Kharagpur, <http://www.step-iit.org/>

National Knowledge Commission,
http://www.knowledgecommission.gov.in/downloads/documents/NKC_Entrepreneurship.pdf

Centre for Innovation, Incubation & Entrepreneurship, IIM Ahmedabad,
<http://www.ciieindia.org/>

N S Raghavan Centre for Entrepreneurial Learning, IIM Bangalore,
<http://www.nsrcei.org/>

Centre for Entrepreneurship & Innovation, IIM Calcutta,
<https://www.iimcal.ac.in/about/campus-life/centre-for-entrepreneurship-and-innovation>

Entrepreneurship Cell, IIM. Kozhikode, <http://ecell.iimklive.com/>

Society for Innovation and Entrepreneurship (SINE), IIT Bombay,
<http://www.sineiitb.org/>

Malaviya Centre for Innovation, Incubation and Entrepreneurship, IIT-BHU,
<http://www.mciieitbhu.org/>

E-Cell, IIT Bombay, <http://ecell.in/>

Foundation for Innovation & Technology Transfer, Technology Business Incubation Unit, IIT Delhi, <http://www.fitt-iitd.org/tbiu.aspx>

SIDBI Innovation and Incubation Center, IIT Kanpur, <http://www.iitk.ac.in/siic/d/>

IIT Madras Incubation Cell, <http://www.incubation.iitm.ac.in/>

Entrepreneurship Development Cell, IIT Roorkee, <http://www.edciitr.com/>

Entrepreneurship Cell, IIT Hyderabad, <http://ecerll.iith.ac.in/>

E-Cell, IIM Indore, <http://www.iimidr.ac.in/iimi/index.php/students-corner/clubs/86-students-corner/clubs/activity-club/66-entrepreneurship-cell>

Entrepreneurship Cell, IIM Rohtak, <http://www.iimrohtak.ac.in/iim-rohtak-%E2%80%93-entrepreneurship-cell-%E2%80%93-inaugural-program.html>

<http://yourstory.com/2012/08/e-summit-by-iim-shillong-an-initiative-to-promote-entrepreneurship-in-north-eastern-india/>

Ministry of Corporate Affairs, Notification, February 27, 2014,
http://www.mca.gov.in/Ministry/pdf/CompaniesActNotification3_2014.pdf

<http://startupq8.com/2012/07/19/funding-rounds-in-startups/>

<https://www.iimcal.ac.in/indian-institute-management-calcutta-incubate-40-start-ups-over-5-years>

<http://www.careers-india.com/wp-content/uploads/2009/08/Abhiyan-IIM-Lucknow-Newsletter-Vol-3-Issue-1.pdf>

<http://yourstory.com/2012/06/ten-incubation-cells-look-out-india/>