

**HIGHER EDUCATION INSTITUTIONS AND ENTREPRENEURSHIP  
— A CASE OF MANIPAL UNIVERSITY**

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**Abstract**

*Higher Education Institutions are facing increasing market and financial pressures to be competitive in the global village. The aim of this paper is to assess the entrepreneurial support extended by institutions of higher education in the university set up. The study is an attempt to identify a comprehensive framework involving different stakeholders with their varied interests. A case is developed and is confined to a private university which has taken initiatives in nurturing entrepreneurship. The paper concludes that the higher education institutions have successfully diversified in to developing entrepreneurial ventures of tomorrow, compared to their traditional role of dissemination of knowledge.*

**Keywords:** Higher Education Institutions, University, Entrepreneurship, Incubation, Graduation.

**Introduction**

The entrepreneurial process in India has gone through a sea change over the last few decades. Entrepreneurial process is shaped by major constituents and entrepreneurial initiatives. The factors influencing entrepreneurial process are socio-cultural values, religious influences, political structure, infrastructure, national goals, and demonstration effect of reference groups (Tripathi, 1985). These factors can also act as an impediment to the process of entrepreneurship. Individuals with high entrepreneurial intent have demonstrated the ability to overcome these hurdles.

The strategic boundaries set by the organizations are dramatically changing (Simons, R., 2010). This has motivated higher education institutions to take calculated risks. Following general trends in R& D, except for government research, higher education research has gained ground during the past twenty years. Between 1990 and 2010, the share of R& D performed by the higher education sector has increased from 17.5% to 21.4% of the total R& D effort within the Organisation for Economic Co-operation and Development area while higher education's share of R& D remains much smaller than within the business sector, the former has increased more quickly (OECD, 2010). Ex-

penditures on R& D in the higher education sector amounted to 0.39% of GDP in 2010 in the OECD area, against 0.18% in 1990. This increase represents almost a three-fold increase in R& D expenditures in real terms during this time period (while R& D expenditures in businesses "only" doubled).

Even though India is a latecomer in the IT and ITES field it did not lock itself in to old generation technologies. India has moved from building competitiveness to competitiveness building from low end to high end software to other knowledge based services. India has done well in software because that industry makes intensive use of resources in which India enjoys international competitive advantage, while making less intensive use of resources in which India is at comparative disadvantage (Kapoor, R. Ravi, 2001). Most of the competitiveness can be attributable to entrepreneurial spirits of incumbents from IT and ITES sector. However the role of business incubation centers cannot be undermined.

**Business Incubation**

The history of technology and business incubation (TBI) can be traced back to 1990's in United States. The Batavia Industrial Centre opened in New York in

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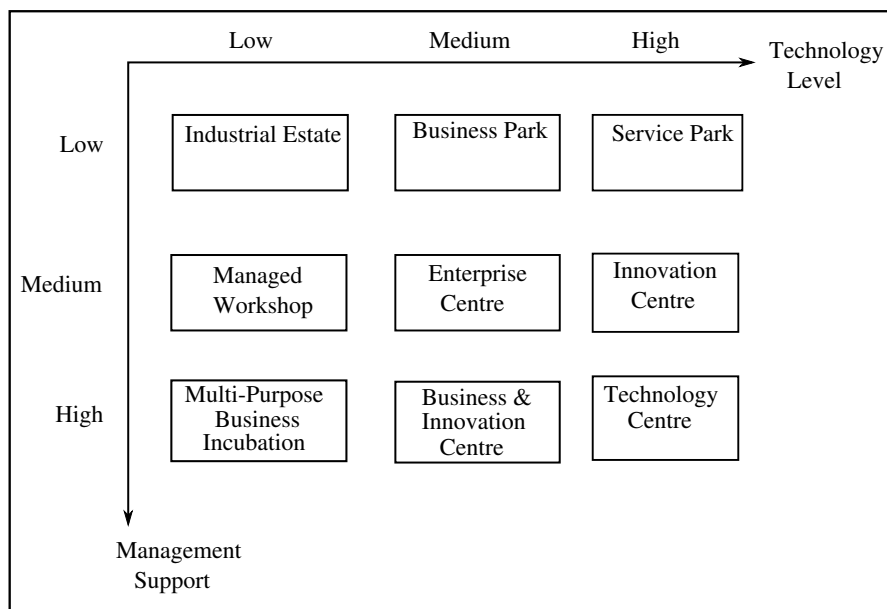
1959 is the first incubation center of its kind. Business incubation is the process wherein the incubators nurture the development of entrepreneurial companies by providing them with required assistance to grow and survive during their startup stage (Gayathri R., 2008). During the early period incubation programs focused on technology based firms in diverse field. However in the recent past the focus shifted to wide variety of industries including food processing, medical, art, craft and software.

**Evolution of Manipal University**

Manipal is a lead player in today’s of higher education landscape. Dr. TMA. Pai a visionary was responsible for setting up of Manipal Group of Educational Institutions. Manipal Group of Educational Institutions has become popular world over. Students from 52 countries are studying here is a testimony to this fame. In 1993, MAHE was accorded a deemed university status under Section 3 of the UGC Act 1956, by the Ministry of Human Resource Development, Government of India. It was the University of its kind to get much coveted status. Today, it has 20 constituent institutions comprising medical, dental, en-

gineering, architecture, nursing, allied health, pharmacy, management, communication, information science, hotel management, biotechnology, regenerative medicine etc. The Iniversity offers Bachelors’, Masters’ and Doctoral degrees in various specialties.

Manipal University has branch campuses in Bangalore, Malaysia, Dubai and Antigua in the Caribbean Island. There is also a campus in Mangalore with a medical college, a dental college and a nursing college with attached teaching hospitals. MU has an international academic collaboration for twinning programmes in engineering with universities in the US, UK, Australia and other countries. In fact some of the facilities, like the Innovation Centre, have served as a valuable ‘incubation centre’ for industry and research. The state-of-the art innovation centre bridges the gap between university and industries for industrial academic research. Besides being an ISO 9001:2008 and ISO 14001: 2004 certified University, it is home to many top 10 ranked institutions of India. Manipal University has won the prestigious IMC Ramakrishna Bajaj National Quality Award and International Asia Pacific Quality Award during 2007- 2008.



**Model Developed by the author based on literature review**

## MUTBI

Manipal University Technology business incubator (hereafter referred to as MUTBI) is a new initiative of Manipal University for nurturing and developing innovation and entrepreneurial skills among its faculty and students. MUTBI wanted to become one of the top three incubators in the country by providing quality support system to translate knowledge and innovation into successful enterprises.

The operations of MUTBI were accelerated after the year 2010. The objectives were to nurture entrepreneurial skills of students, faculty and the people of the region. It is one among the 54 TBI's funded by NSTEDB, DST and Government of India to promote innovation driven startups in the Udupi district. It also provides need funding for feasible ideas, helps in market survey, product marketing, financial, legal and patenting services. It arranges funding from external agencies and venture capitalists. Apart from this it also provides services to its alumni to start their own venture. It is found with the objective of nurturing entrepreneurial skills, creating self-employment, new product development, which is in consistent with the social objectives of government of India.

## Thrust Areas

MUTBI concentrates on Information technology in the application oriented fields of healthcare and agriculture. It also focuses on startups on renewable energy and energy conservation system and nanotechnology. MUTBI will offer much needed infrastructure support and critical mentoring during the first three years of their venture. MUTBI has a synergic fit with the vision of the University by providing an ecosystem for knowledge and wealth creation for personal and social benefits. It will also boost much needed networking among Academic R & D institutions, industries and financial institutions.

## Patrons and Partners

Manipal University, Department of Science and Technology (DST) and Technology Development Board (TDB) and The Ministry of Micro Small and Medium Enterprises has extended a financial assistance to

MUTBI to provide seed support to incubatee companies at MUTBI. The seed support can be extended in the form of grants, interest free loans, soft loans or equity participation over a period of five years. Ministry of Micro Small and Medium Enterprises (MSME) extend free fund upto 4 to 8 lakhs. Technology Development Board (TDB) provides Soft loan or equity participation upto 25 lakhs.

## Incubation Program

The incubation program was initiated to start the technology and knowledge based start-ups by the student, faculty and people of the region. Some of the key features of the program are as follows:

- MUTBI encourages start-ups by the Manipal Group community
- The applicants must have business proposals for technology based products and solutions

## Admission

- Admission to MUTBI is based on the evaluation process carried out by the committee members.
- Admission to a company will be up to 3 years.
- The start-up should be a company preferably incorporated.

## Pre-incubation Process

- Potential entrepreneurs will be assisted in the preparation of the business plans, workshops, guest lectures will be conducted.

## Facilities

**Physical Infrastructure** in MUTBI includes developed office space with furniture and air conditioning machines, personal computers, internet connectivity, etc.

**Common Infrastructures**

Incubator will provide following facilities to the company (promoters) which will be shared by all companies located in BI which includes teleconferencing facilities, meeting/conference room, etc. In addition to physical and common infrastructure the company will avail other services like Network of mentors and experts. Incubatee will facilitate liaison with mentors, professionals and experts in technology, legal, financial and related matters. Incubator will organize the events to facilitate the companies located in the BI in networking and to showcase their technologies. Incubator will also facilitate meetings with visitors of MIT such as alumni, venture capitalists, industry professionals. Incubator will also facilitate access to departmental laboratories of MIT by the company (promoters) for their product development purposes with approval of the concerned department and as per the existing policy of MIT for consultancy/sponsored projects.

**Incubatees at MUTBI****TransInn Technologies Pvt. Ltd.**

([www.transinntech.com](http://www.transinntech.com)) [Graduated]

TransInn Technologies develops websites, web based applications for intranet, internet & the cloud. It primarily work on the Microsoft Technologies, including SharePoint, ASP.Net, C# or VB, it also works on the open source technologies such as php and also with the Java. Transinn Technologies is not just into the technology space, it has some of the best designers in the industry.

**ISA Technologies Pvt. Ltd.**

ISA Technologies Pvt. Ltd. provides application oriented services like internet based remote plant control system, PLC based control system modeling and development and mathematical modeling of industrial process.

**Add- On - Gyan, Educational Services Pvt. Ltd.**

Add- On - Gyan, Educational Services Pvt. Ltd. has centers of excellence in schools called GYAN LABS

to inculcate practice-based learning, venture to improve human resource value of India by empowering school students and hands-on exposure, practical training and career counseling for students.

**Manipal Printronics Pvt. Ltd.**

Manipal Printronics Pvt. Ltd. focuses on cost effective, light weight and flexible printed organic solar cells, the proposed project is aiming at the development of OPV technology, building integrated photovoltaic and off-grid energy generation for disposable applications and organic photovoltaic are relatively cheap to fabricate using inexpensive and readily available coating and printing processes on flexible substrates like plastic and paper.

**The Smart Techies Pvt. Ltd.**

The Smart Techies Pvt. Ltd is a project which aiming at the development of OPV technology, R& D consultants of various industries in and around Rajasthan, development and production of various electronic modules viz. RFID readers and several RF modules and development of wheel chair for quadplegics and software development.

**Product Accelerator Pvt. Ltd.**

Product Accelerator Pvt. Ltd. is one stop provider of Solution accelerators, it enables manufacturers to quickly link the isolated entities of applications and technologies within the PLM work frame and it is involved in creation of national youth network.

**Project Parivartan Pvt. Ltd.**

Project Parivartan Pvt. Ltd. is in the process of creation of an integrated market for memorabilia and merchandise at a genuine price and durable quality, it provide corporate brochures at lower prices and customized templates and provides technical and web support.

**New Venture Strategy**

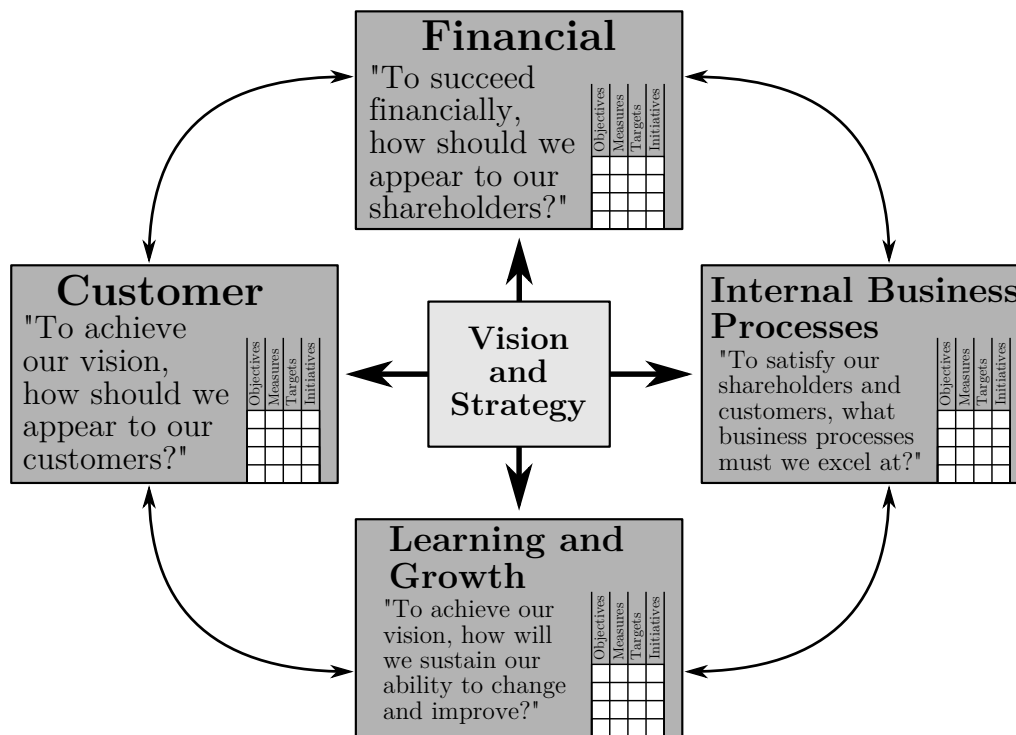
Entrepreneurship is a way to charter own career paths & thus helps in creating employment. The eminent entrepreneurs of India have made great strides in creating millions of jobs. Manipal University having

credible experience in the field of Innovation & Entrepreneurship, intends to start a new course on Innovation & Entrepreneurship titled “New Venture Strategy” in association with T.A Pai Management Institute (TAPMI) & Manipal University Technology Business Incubator (MUTBI) as a facilitator. The prospective entrepreneurs will undergo a 12 week course, wherein they will be equipped with the basic knowledge of business, the skills to spot opportunities, to generate ideas of product/service & to convert them into actual deliverables.

**Analysis**

An attempt is made to evaluate the performance of a graduated company using the balanced scorecard. Kaplan and Norton has developed balance score card in 1990s (see the chart). It identifies key performance indicators for all the four areas namely, financial, customer, learning and growth and internal business process. These indicators help the companies in identi-

fying deviations from the targets. Companies have been using balance score card as a tool for the continued monitoring of strategic management activities. All four performance measures are directly aligned with vision, mission and organisational strategy. Financial perspective of balance score card monitors the way in which financial objective measures, targets are achieved. Transainn Technologies Pvt. Ltd. is first company to graduate from MUTBI. It has successfully formulated and implemented its organisational strategy using balance score card. It was observed that the outcomes were more valuable compared to financial inputs. The graduating company earned returns which are higher than its cost of capital. Customer perspective is the second most important measure of the business performance. The company helped the customers to streamline business processes, improve operational efficiency, by providing value-added services and to meet new challenges. This enabled client organisation to scale newer heights.



Source: Robert S Kaplan and David P Norton, the strategy focused organisation

It accurately identified customer needs and worked on innovative methods of fulfilling them. Internal business process perspective aimed at excelling in productivity, employee skills, cycle time, yield rates, quality and cost measures. A team of highly qualified professionals shape-in & integrate dynamic technologies with effective business logic to deliver value proposition, we also leverage the cost advantage of the Indian market to help global corporations achieve business objectives and realize organizational goals.

Learning and growth perspective promoted innovation and learning related to new product development cycle time. Transinn Technologies implemented its organisational strategy successfully by integrating four different perspectives meaningfully. It continued to provide cutting-edge technology solutions and unparalleled services at competitive pricing (Porter, M., 1980)

Alignment between different perspectives and organizational strategy has resulted in development of newer capabilities. The graduated company was able to develop both tangible and intangible resources for developing capabilities (Peteraf, M. A. 1993, Wernerfelt, B.1984).

Overall performance of the MUTBI can be evaluated based on the products and services developed by incubatee companies. The product includes customised mouth guards, SMS controlled mobile applications, practice based learning model for secondary schools, GPS, GSM tracking device, low cost water generator, low cost telescope, dietician software, LED based low cost home lighting system for rural areas, ICD compliant knowledge based patient information system, sensor network based agriculture application (in-progress), decision support system for oncology, low-cost dental implants and control energy saver. Recently, MUTBI has admitted 23 companies. MUTBI filed for twelve invention/ ideas for patenting in India and USA. The graduated company demonstrated its ability to grow, develop and sustain its business model under the entrepreneurial leadership of the MUTBI and Manipal University.

## Conclusion

MUTBI model may be considered as a role model among the initiatives developed by higher education institutions in the private sector. There is a need to promote MUTBI Model as it serves social and economic needs of variety of stakeholders who are associated with it. The proven ability to develop low cost IT and ITES services for the benefit of clients involved development of technological capabilities which are sustainable. The ability to have right combination of resources and capabilities has led to a position of advantage. MUTBI's mission was to create an ecosystem that fosters and supports innovation and knowledge based entrepreneurship amongst the Manipal community. It has successfully achieved its mission by identifying a need for nurturing entrepreneurial ventures and there by legitimizing its existence by creating social value. All stakeholders will be benefited by this newly created economic and social wealth.

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