India has emerged as one of the most entrepreneurially active nations in the world with an increased number of initiatives to set up new ventures. Entrepreneurship is a pragmatic path ahead for the country as these ventures continue to play a major role in driving the economic growth. In order to create a support system that promotes and sustains entrepreneurial development and give the desired impetus to the growth of new enterprises, the Government launched business incubation centres in India during the early 2000. Since inception, they are being established on a fast track across the length and breadth of the country with substantial commitment of resources. However, even with rapid increase in the number of incubators, no comprehensive study was carried out to explore their role in fostering entrepreneurship. This research project was, therefore, envisaged to fill the gaps in the availability of information on entrepreneurship role related aspects of business incubation.

Objectives of the study

Mainly the study has been conducted to examine the role of business incubation centres in promoting entrepreneurship in the Indian context and to uncover the gaps between the perceived and actual services rendered by them. An attempt has also been made to compare the practices followed by the business incubation centres to promote entrepreneurship in India and abroad.

Research Methodology

The research design employed in the present study is exploratory cum descriptive in its nature. The universe of the study is confined to 37 business incubation centres existing in India during the year 2009-2010. The survey population consists of 34 operational and physical business incubation centres, whereas the survey sample comprises of 10 business incubation centres and 42 incubatees. The primary data collection was carried out during 2009-2010 from individual business incubation centres and their incubatees using two separate self administered questionnaires. For the analysis of the collected primary data, we used both descriptive as well as standard statistical tools such as t-test, central tendency, standard deviation and ANOVA.
Key findings

*Business incubation services:*

The success of a business incubation centre depends largely on the portfolio of its services. In the present study, we observed that out of a total of 25 services, 13 are furnished, 11 are not imparted and one service has neutral effectiveness. The services that are rendered by the business incubation centres to their incubatees include: work space, communication facilities, networking support, human resource management services, assistance in obtaining statutory approval, help in securing capital, dissemination of information on business ideas, guidance in writing business plans, synergistic environment, reduced operational costs, accelerated development, enhanced credibility, and formal grievance handling. On the other hand, services such as library facilities, laboratory facilities, secretarial service, technical support, marketing assistance, legal services, help in conducting feasibility studies, business counseling, reduced time to develop marketable product/services, minimized chances of failure, and periodic feedback are not provided. The product development assistance service has neutral effectiveness.

*Gaps between the perceived and actual services rendered by the business incubation centres*

We observed statistically significant gaps between the perceived and actual services rendered by the business incubation centres across all categories. The incubatees perceived networking support, assistance in securing capital, business plan writing assistance, establishing credibility and grievance handling services to be rendered at a much lower level of efficiency as compared to their business incubators.

*A comparison of practices followed by business incubation centres to promote entrepreneurship in India and abroad*

We identified fifty seven practices which have been proved to be positively correlated with the role of business incubation centres in promoting entrepreneurship at the global level and discovered that out of these, 47 have been implemented by the Indian
business incubation centres, while 10 are yet to be implemented. The practices which have been employed by the Indian business incubators comprises of: conducting feasibility study, writing business plans, management by an advisory board, implementing management information system, making quick decisions, having sufficient autonomy, organizing entrepreneurship promotion programmes, maintaining website, carrying out advertising plan, providing and taking support of industry, sharing information with other incubators, providing after-exit assistance to entrepreneurs, finding appropriate incubatees, having formal incubatee admission policy, graduation policy, selection by a committee, periodic collection of information on key business parameters, assessment of incubatee progress, needs, ensuring availability of space for start up companies outside incubator, providing business related skills training to students, improving placements, hiring consultants, having well defined criteria for selection of staff, recruiting experienced incubator head and well trained staff, conducting periodic appraisal of staff performance and training needs, inculcating willingness to change and risk taking behavior in them, exploiting opportunities, transforming innovations, creating jobs, regenerating public confidence in entrepreneurship, assessing entrepreneurial market, adapting to change, conducting performance appraisal, defining criteria for measuring incubator success, integration of incubator objectives with host institution, ensuring provision of adequate land and building, sharing of facilities with host institution, promoting entrepreneurial culture, reviewing activities, leveraging resources, and having role clarity. However, practices such as organizing sufficient funds, creating awareness about incubator and its services, having understanding of industrial needs, ensuring harmony of expectations and priorities between incubation centre and its incubatees, holding equity stake in entrepreneurial companies, devising good compensation package for incubation centre head, ensuring availability and retention of skilled staff, and achieving self sustainability have not been put into action and are adversely affecting the role of business incubation centres in promoting entrepreneurship.

**Major Deficiencies**

The importance of having a portfolio of services consistent with the needs of the entrepreneur and their effective delivery cannot be undermined. However, the business incubation centres have been deficient in providing most of the services to
their incubatees for the reasons which include: lack of awareness about incubator and its services, inadequate funding, weak tie up’s with R&D/Technical institutions, insignificant industry relations, inconsequential networking, shortage of skilled staff, improper staff remuneration, unavailability of staff training institutions, absence of feedback mechanism, tendency to pull on with non-performing incubatees, differences in expectations and priorities between incubators and their incubatees, lack of enterprise development focus, and low motivation to achieve self sufficiency.

**Recommendations**

In order to obviate the identified shortcomings, we make the following recommendations.

- Inter incubation centre books loan facility should be promoted and possibility of getting complimentary copies of reports, books, journals etc should be explored.

- In order to enhance the technical assistance to incubatees, we propose improved liaison with industry and nearby research and technical institutions. Association with equipment and machinery suppliers can provide valuable insights into practical aspects of production/processes.

- To bring about improvement in business assistance to incubatees, consultants who are capable and willing to assist the start up companies should be invited on panel and services of retired professionals may be solicited. They should be actively engaged and suitably remunerated. Many Government and private agencies provide free business advice which can be availed. Option of getting online support may be explored.

- The incubatee companies should be provided opportunities to showcase their products and services through participation in trade fairs, exhibitions, online promotions, listing in trade directories etc. They should be trained and encouraged in using low cost innovative methods of marketing.
• A wide network of individuals and organizations consistent with the needs of the incubatees should be created and maintained. The network members should be actively engaged and suitably rewarded. A proactive approach in adding continuous value to the network is important.

• Before connecting the incubatees to the sources of funds, it should be ensured that they are investment ready. While choosing the funding agencies, expectations of the incubatees in terms of growth, future fund requirements and investment time horizon should match with the agency. Direct investment in promising incubatee companies may be considered.

• Regular and comprehensive counseling to all the incubatees is indispensable. Successful entrepreneurs, previous incubatees, domain area experts, industry professionals, senior executives and investors should be actively engaged and suitably rewarded for the same. With the explosive growth of the Internet, online counselling can be extremely helpful. A knowledge data base consisting of information on various aspects of business development drawn from the experiences of various incubatee companies may be built for reference.

• The business plans of the incubatee companies should be reviewed on a regular basis in the light of changes in the business environment.

• The business incubation centres should take a holistic view of the support system and direct all effort and resources to the success of the start ups. This requires that all links in the process of incubation are strengthened and regularly monitored. The enterprise development focus should be given highest priority and those entrepreneurs should be admitted to the incubator who will benefit most from the incubation services.

• Conscious efforts are required to receive specific feedback from all the incubatees through both formal and informal means on a regular and frequent basis. An action plan should be created on the basis of the feedback and
changes should be implemented as promptly as possible. Feedback should be reciprocal and the incubatees should also be provided feedback.

- Synergy is not created merely because of co-location and, therefore, a proactive approach towards encouraging networking and cooperation among the various incubatees and facilitating business relationship between them is essential.

- In order to enhance their credibility, incubatees should be made trustworthy by inculcating professionalism and expertise through continued effort.

- For bringing about a substantial improvement in business incubation centre funding, it is recommended that they make a realistic assessment of the fund requirement and ensure its availability before starting the business incubation centre. Stepped up rent and service fee, varied revenue sources, managing costs of developing and operating the business incubation centre and maintaining healthy management of finance can ensure continued availability of funds and improved credit worthiness of the business incubation centre. Business incubation is a resource intensive activity and, therefore, only those incubatees should be admitted who meet the objective of the incubator and will benefit the most from incubation. Consistently non performing incubatees should be offered incentives to exit the incubation centre. Participation in equity arrangements with the incubatee companies can prove beneficial in the long run.

- In order to enhance the awareness of the business incubation centres, support of trade and industry associations, local business community, use of internet and low cost innovative means of promotion such as signposts, free listings in directories, business support websites, yellow pages, articles and write up’s in newspapers, magazines, search engine optimization, SMS campaigns, local television channel advertising, business plan competitions, advertisements in newspaper supplement, and press and media releases should be exploited fully.
To obviate the differences in expectations and priorities between business incubation centres and their incubatees, we propose that the entrepreneurs should be apprised of the scope and limitations of the incubation process before joining the incubator. Roles of the Incubation centre and the incubatee must be discussed up front to avoid mismatch of expectations. Same holds true for priorities and both should have knowledge of each other’s priorities to align them in the most productive manner.

To improve the availability of skilled incubation staff, the incubators can recruit candidates with entrepreneurial skills and groom them to be effective incubation professionals. Staff exchange programmes, inviting industry representatives, ex-incubatees, successful entrepreneurs, consultants, and a well designed recruitment plan can be helpful. We strongly recommend that formal incubation staff training institutions should be established at the earliest to ensure smooth availability of competent and skilled incubation staff. Hiring part time staff or using host institution staff on ad hoc basis should be avoided. To lower the attrition rate, carefully structured remuneration and growth plan commensurate with the experience of staff in assisting start up companies should be in place. Salary structure at par with market rate and well laid down service conditions is indispensable.

The issue of sustainability should be considered right at the time of establishment of the incubator. A thorough assessment of the private sector environment and entrepreneurs’ needs should be made and the design of the incubator should be consistent with them. The business incubation centres should draw up a roadmap with clear milestones for achieving self sustainability and all aspects of strategy, goals, governance system, organization structure, and resources should be oriented towards enterprise development and self sufficiency.

Utility of research

The business incubation concept is relatively new to India and there was no formal study which could provide insight into their effectiveness in promoting
entrepreneurship. This study would immensely benefit all stakeholders and impart a deeper understanding of the role, responsibilities and expectations of business incubation programme. The data and findings will guide the government in making suitable changes in the incubation policy and lend a basis to view these programmes in the right perspective to continue commitment of resources in it. It will furnish a meaningful feedback to the incubator management on the perceptions of the incubatees regarding the various incubation services and enable them to shape their offerings accordingly. The results of the research will help entrepreneurs’ better understand, access and utilize the incubator facilities as also impress upon them that it is just a means to enterprise development and not a cure for all problems. They would be in a position to help their incubation centres in serving them better by providing constructive suggestions and feedback.

**Suggestions for future researchers**

The studies undertaken to date allow us to discern many interesting research options for the future which are as under:

- We think it would be meaningful if a comparison of incubated companies is made against control group to check whether they outperform non incubated firms in any manner.

- Secondly, it would be useful to make an impact assessment of the incubation centres in terms of three indicators: Impact and outreach, effectiveness, and sustainability.

- A research concerned with the returns on public investments in business incubation initiatives can be considered.

- A study of various characteristics of Indian business incubators such as size, number of incubatees, number of employees, funding pattern etc will be useful.
• A longitudinal study on various business incubation centre indicators can be conducted for comparison between incubators and against industry baseline.

• A comparison of business incubation centres with other entrepreneurial development programmes can provide insights into their effectiveness.