

Role of Technology Business Incubators to Nurture Entrepreneurship: A Study on Pakistani Universities

Sammer Mumtaz¹, Farheen Shafi^{1*} and Fareeha Zafar²

¹National College of Business Administration and Economics, DHA, Lahore, Pakistan

²Government College University, Lahore, Pakistan

Abstract

The purpose of this study is to explore how technology business incubation centers established in different universities of Pakistan playing their role to cultivate the entrepreneurial culture and providing support to startups. These incubation centers are also facilitating those who have some new innovative ideas to get them converted in successful business by providing professional support, business advices and exposure to entrepreneurial networks. One of the objectives of these incubators is to promote the entrepreneurial culture among students from the start of their study programs to change their mindset from job seeker to job provider. Based on observation this study identifies that technology business incubation centres provide the wide scope of resources and facilities to assist the startups ranging from prototype development to learning how to commercialize technological ideas, bridging the gap between academia and industry to providing the platform to industry as well in resolving their issues by providing the effective solutions. Tenants firms provided with opportunity to learn from multipurpose experiences of big industry icons by arranging informative workshops and seminars..

Keywords: Business incubators; University-industry linkage; Technology transfer; Entrepreneurship

Introduction

Entrepreneurship is a dynamic capability to innovatively act in order to create incremental gain. The company must master the ability to market its new product to obtain high commercial gains and achieve success. The purpose of Business Incubation Center (BIC) is to provide a conducive environment to nurture small businesses. Pakistani Universities are emphasizing on establishment of Technical Business Incubation Centres thus supporting researchers/young entrepreneur / startups, to develop promising early-stage business ventures.

A business incubator's prime goal is to create and grow small businesses, duly supporting them with required technical and financial assistance. Young graduates are enabled to commercialize new technologies, thereby strengthening local and national economies. The well-knit coordination among the entrepreneurs, universities and industry greatly influence the economy by facilitating networking with stakeholders.

The history of business Incubation Centres in Pakistan dates back to 2005 at National University of Science and Technology, Islamabad. Over the years we have Plan9 – PITB's Tech Incubator, SMEDA, IBA, NUST TIC, Lahore University of Management Sciences (Lums), COMSATS and many more Business Incubation Centres working successfully in Pakistan. "Young, fresh and inventive entrepreneurs fall back in developing the right connections, industrial know-how and gaining attention. At Plan9, we provide an environment conducive to the success of a startup that resolves all afore-mentioned predicaments." (Punjab Information Technology board-PLAN9 TECH INCUBATORS). In 2016, there has been a noteworthy rise in the trend of entrepreneurship. Many micro-companies were started from scratch by student entrepreneurs and also there were grown professionals who started their IT ventures. Many supporters provided mentorships and keen investors who supported the startups financially.

According to Zeenia Faraz, who runs the British Council's social enterprise programme in Pakistan, "**Social enterprise presents an ideal mechanism to enlist young people in Pakistan in developing their**

innovative ideas into businesses that deliver social and economic impact, address key development issues and contribute positively to society."

The British Council, along with SEED (Social Education Environmental Development) Pakistan, will work towards **building the capacity of the university incubation centres** to develop start-up ideas evolving from the social enterprise trainings. The British Council has planned to launch the programme in **50 universities of Pakistan by 2018**.

"In partnership with the universities, we expect to provide support and training to over 250 social enterprises start-ups through the incubation centres, and expect that 50 of these will become sustainable and successful businesses," said the British Council's Zeenia Faraz.

Literature Review

In order to build human capital for the forthcoming society, Entrepreneurship education is inevitable. Entrepreneurship flourishes in ecosystems in which various stakeholders, such as Governments at International, National, Regional, and Local level, Individuals and intermediaries such as NGOs and entrepreneurs, Entrepreneurial academic institutes and businesses, play key roles. Academic Institutions play a vital role in shaping attitudes, skills and behavior of the youth. On the other hand, critical role is played by stakeholders working outside the academia, thus influencing formal and informal educational programmes and simultaneously reaching out to underserved target groups. Here collaboration and multi-stakeholder partnerships become indispensable [1].

***Corresponding author:** Farheen Shafi, National College of Business Administration and Economics, DHA, Lahore, Pakistan, Tel: +92 423575271619; E-mail: farheenshfi@gmail.com

Received March 20, 2017; **Accepted** April 04, 2017; **Published** April 11, 2017

Citation: Mumtaz S, Shafi F, Zafar F (2017) Role of Technology Business Incubators to Nurture Entrepreneurship: A Study on Pakistani Universities. J Account Mark 6: 226. doi:10.4172/2168-9601.1000226

Copyright: © 2017 Mumtaz S, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Business Incubation is a process which supports the progress and development of enterprises in their early phase. The Business Incubators offers entrepreneurs a conducive environment for development of their new enterprise, providing assistance in launching the enterprise at minimal costs and boost the confidence and enhance the capacity of the entrepreneur. It also provides the entrepreneur with the necessary networking with the resources essential in starting and scaling a viable initiative. The business incubators accept entrepreneurs for a certain specified time period till the target profit or sales revenue is obtained [2]. It is difficult to identify an enterprise in its early phase that will grow meaningfully, if nurturing environment is provided.

The Business Incubation functions as a venture capitalist by investing in management, instead of just ideas. The Business Incubator calculates the ability of the entrepreneur as well as the market potential of the venture to determine the business potential. Various tools and methods are used to assess the entrepreneur and business potential. This requires the involvement of financiers, industry and business development experts. Highly successful entrepreneurs have high internal locus of control and a profound need for achievement. They are less risk averse and have high level of education [2]. Pakistan to become a part of the emerging economies requires channelizing its entrepreneurial efforts towards having export-focused start-ups; in order to contribute significantly in economic growth [3]. There is a U-shaped relationship between the entrepreneurial activity and economic development. The entrepreneurship is higher in countries which are at extreme ends of the GDP per capita. For example the GDP per capita of Philippines and Indonesia is less than \$5000 whereas the rates of early stage entrepreneurship are amongst the highest in the world. On the other hand, Australia, having a GDP per capita of \$32000 with entrepreneurial activity only 11.9% [3] (Figure1).

University-industry collaboration is a critical constituent of efficient nationwide innovation systems. Experience of developed countries can be studied in order to learn and benefit from various types of university industry collaborations [4-10]. The high intensity university industry collaboration in found in research partnerships, and shared infrastructure for development and commercial exploitation of technologies pursued by academic inventors through a company they partly own. In Pakistan, "TechHub Connect is a project of Punjab Information Technology Board. We are Pakistan's first co-working space for freelancers. We also act as the bridge between industry, academia and the government by assisting the formation of fruitful partnerships and collaborations among and within these organisations. "(Punjab Information Technology board-PLAN9 TECH INCUBATORS) Connect is an online portal which shapes a community where well-known IT companies can brand themselves as employers. Students can realize the latest industry trends to refine their talent for present-day and future industry requirements. Through connect; Professors can build their profiles to cater to the research need of the industry. Virtual recommendations can be received by the students thus facilitating them to apply for jobs (Figure 2).

Case study of university incubators in Taiwan

Taiwan is also working a lot for the incubation centers. We have analyzed the three national university incubation centers in Taiwan to check their policy. National Cheng Kung University (NCKU), National Taiwan University (NTU) and National Chiao Tung University (NCTU). "According to The Times (British) World University Ranking 2012-2013, National Cheng Kung University ranking is 321, National Taiwan University ranking is 134 and National Chiao Tung University

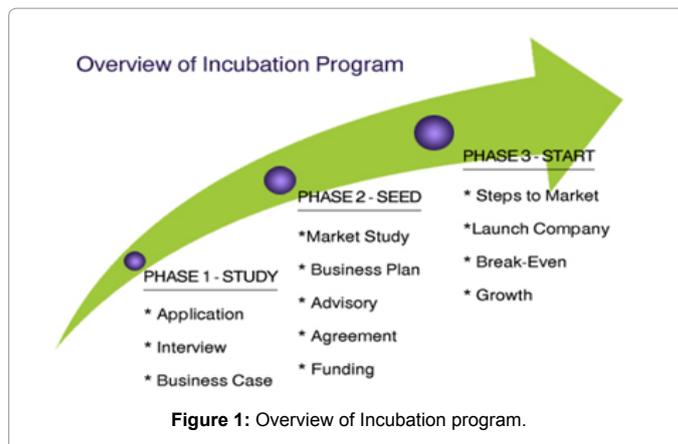


Figure 1: Overview of Incubation program.

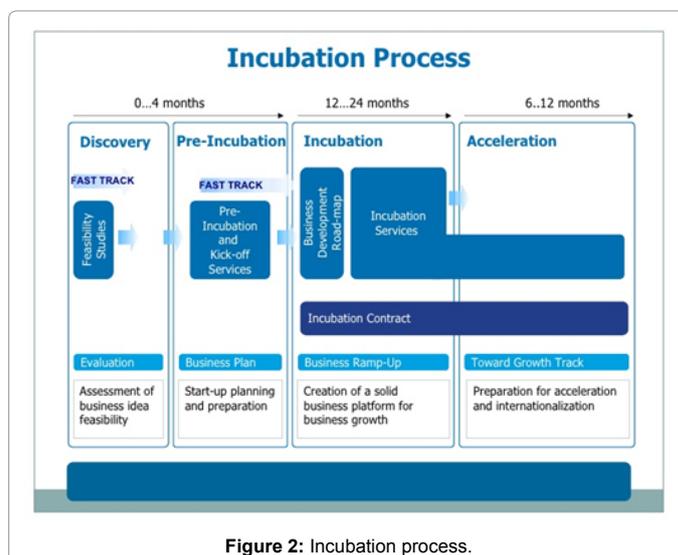


Figure 2: Incubation process.

ranking is 252 they are all well-known for science & technology in Taiwan and working efficiently and showing very good results in order to make incubation policy in Taiwan [11-16].

Methodology

We have used the survey method to carries out our study. We selected the five best universities who are running the business incubation centers in their universities. LUMS Center of Entrepreneurship, COMSATS Incubation Center, University of Engineering and technology- Peshawar, TIC-NUST University and Punjab University Incubation Center. The tools which have been used to conduct the survey are self-administered questioner. The questionnaire has been designed and that measured the importance and effectiveness of five incubation centers services incorporated in this study.

The sample for Survey Questions for business Incubation Centers are:

1. How long has your company been located at the Business Incubation Centre?
2. Are you participating in an Enterprise Platform Program?
3. What level of support are you receiving from the staff of the Incubation Centre?

4. Do you collaborate with the academic staff of the host Institute?
5. Do you have links with other companies located in other Business Incubation Centre's across Ireland?

We also measure the number of incubated companies in each incubation center of different universities mentioned above. Following is the performance of each incubation center (Figure 3).

LUMS Center of entrepreneurship has high percentage among all studied universities they have 72 incubated companies that has been successfully converted in the small enterprises [17-24].

Conclusions and Recommendations

Conclusion

In Pakistan ten public and private universities are successfully running the business incubation centers in their premises, assisting the startup companies to excellently establish their businesses, creating jobs, helping to earn revenues, transforming students innovative business ideas in to full fledge businesses, bridging the gap between academia and industry by arranging informative lectures, workshops for the learning of students, entrepreneurs. These incubation centers are playing their vital role to nurture and inculcating the entrepreneurial culture among students and promoting them to be a job provider and instead of job seeker. The 1st business incubation center was established in National University of Science and Technology, Islamabad in 2005 and slowly and steadily this culture starts prevailing in other universities as well. LUMS center of Entrepreneurship has reported 72 incubated companies that have been converted in successful business now. They have raised the investment of 180 Million and revenue generated by these incubates are Rs. 300 Million. Thousand plus job has also been created by these centers. It is also reported that in last two years 65% of investment was made by startups companies there were supported by different entrepreneurship program running in academic institutions as well as local entrepreneurial centers in Pakistan. Like in other developing countries, the entrepreneurs in Pakistan have lack of many resources that prove big hurdle in their way to success. They have lack of managerial skills, financial resources, technology, and marketing channels. But now these incubation centers are facilitating the startups and entrepreneurs by helping to overcome the different barriers they are facing to run their business smoothly and making them competitive enterprises form incubated companies.

Recommendations

In order to promote entrepreneurial culture the Higher education commission should start these incubation centers in other universities as well where this facility is not being provided yet to university students. It will help to inculcate the concept of entrepreneurship in

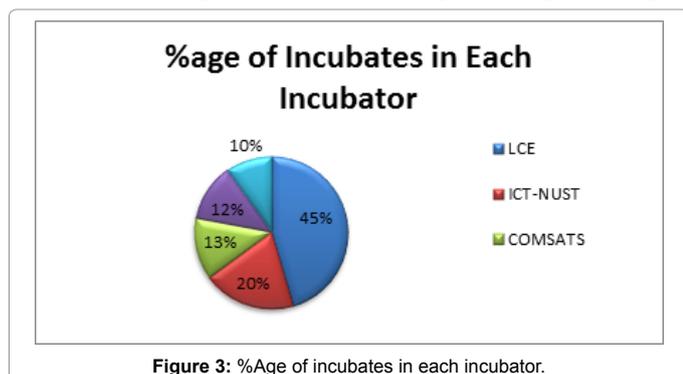


Figure 3: %Age of incubates in each incubator.

the mind of students rather they put their efforts to find the jobs after completing their study. We should also put in the efforts to build strong academia industry linkages and networking through these incubation centers so that when they bring their problems to these centers for the solutions, students do research on it and give their innovative ideas to resolve the industry issues. These incubators help them in research and development as well. The government should also play its role by making some policy to fund these incubation centers in order to help the small & medium enterprises in Pakistan, to relief the entrepreneurs from taxes for the 1st five years and should also announce the interest free loans for the startups and new entrepreneurs.

References

1. Volkmann C, Wuppertal BU, Wilson KE, Partners GV (2009) Educating the next wave of entrepreneurs. World Economic Forum, Switzerland.
2. Khalil M, Olafsen E (2010) Enabling Innovative Entrepreneurship through Business Incubation. The Innovation for Development Report.
3. Terjesen S, Hessels J (2009) Varieties of export-oriented entrepreneurship in Asia.
4. Wang W, Hung Y, Wang C (2013) University-Industry business incubators in Taiwan. Open Journal Of Business And Management.
5. Lee S, Osteryoung J (2004) A comparison of critical success factors for effective operations of University business incubators in the United States and Korea. Journal of Small Business Management 42: 418-426.
6. Almeida P, Dokko G, Rosenkopf L (2002) Start-up Size and the Mechanisms of External Learning: Increasing Opportunity and Decreasing Ability. Working paper, Washington, DC, USA: Georgetown University.
7. Oh DS (2002) Technology-Based Regional Development Policy: Case Study of Taedok Science Town, Pajeon Metropolitan City, Korea. Habitat International 26: 213-228.
8. Colombo MG, Delmastro M (2002) How Effective are Technology Incubators? Evidence from Italy. Research Policy 31: 1103-1122.
9. Finer B, Holberton P (2002) Incubators: There and Back. Journal of Business Strategy 23: 21-24.
10. Hickman C, Raia C (2002) Incubating Innovation. Journal of Business Strategy May/June 23: 14.
11. Wiggins J, Gibson DV (2003) Overview of US incubators and the case of the Austin technology Incubator. International Journal of Entrepreneurship and Innovation Management 3: 56.
12. Yunos MGM (2002) Building an innovation-based economy: The Malaysian technology business incubator experience. Journal of Change Management 3: 177-188.
13. Lalkaka (2010) Technology business incubators to help build an innovation-based economy. Journal of Change Management 3: 2.
14. Begley TM, Tan WL, Schoch H (2005) Politico-economic factors associated with interests in starting a business: a multi-country study. Entrepreneurship Theory and Practice 29: 35-55.
15. Bhabra-Remedios RK, Cornelius B (2003) Cracks in the egg: improving performance measures in business incubator research. In: Small Enterprise Association of Australia and New Zealand 16th Annual Conference, Ballarat.
16. Bollingtoft A, Ulhoi JP (2005) The networked business incubator — leveraging entrepreneurial agency? Journal of Business Venturing 20: 265-290.
17. Chan KF, Lau T (2005) Assessing technology incubator programs in the science park: the good, the bad and the ugly. Technovation 25: 1215-1228.
18. Clarysse B, Wright M, Lockett A, Velde EVD, Vohora A (2005) Spinning out new ventures: a typology of incubation strategies from European research institutions. Journal of Business Venturing 20: 183-216.
19. Collinson S, Gregson G (2003) Knowledge networks for new technology-based firms: an international comparison of local entrepreneurship promotion. R&D Management 33: 189-208.
20. CSES (2002) Benchmarking of business incubators. Enterprise Directorate General. European Commission, Brussels.

21. Grimaldi R, Grandi A (2005) Business incubators and new venture creation: an assessment of incubating models. *Technovation* 25: 111-121.
22. Hackett SM, Dilts DM (2004a) A real options-driven theory of business incubation. *Journal of Technology Transfer* 29: 41-54.
23. Hackett SM, Dilts DM (2004b) A systematic review of business incubation research. *Journal of Technology Transfer* 29: 55-82.
24. Hannon PD (2003) A conceptual development framework for management and leadership learning in the UK incubator sector. *Journal of Education and Training* 45: 449-460.

Citation: Mumtaz S, Shafi F, Zafar F (2017) Role of Technology Business Incubators to Nurture Entrepreneurship: A Study on Pakistani Universities. J Account Mark 6: 226. doi:[10.4172/2168-9601.1000226](https://doi.org/10.4172/2168-9601.1000226)

OMICS International: Open Access Publication Benefits & Features

Unique features:

- Increased global visibility of articles through worldwide distribution and indexing
- Showcasing recent research output in a timely and updated manner
- Special issues on the current trends of scientific research

Special features:

- 700+ Open Access Journals
- 50,000+ editorial team
- Rapid review process
- Quality and quick editorial, review and publication processing
- Indexing at major indexing services
- Sharing Option: Social Networking Enabled
- Authors, Reviewers and Editors rewarded with online Scientific Credits
- Better discount for your subsequent articles

Submit your manuscript at: <http://www.omicsonline.org/submission>