



University Incubators: A Pathway to Entrepreneurial Society

**¹Udoh Iboro Paul, Olaoye Aderonke, Oloruntoba Anuoluwapo
& Sunday Dorcas Kolo**

Department of Business Management,
Covenant University, Ota, Ogun State. Nigeria.
iboroudoh09@gmail.com
anu.olaoye@gmail.com
anuoloruntoba@yahoo.com
modupemi@yahoo.com

Abstract: This paper argues that universities would improve their involvement through an active and well-integrated incubation system for the advancement of viable entrepreneurial society. Based on a conceptual analysis the study examines the moving trend of universities in society from teaching to research and development, innovation, entrepreneurship and currently to enable an entrepreneurial society by enhancing entrepreneurial norms and institutional improvement. It is positively believed by researchers that the 21st century will depend on knowledge, innovation, entrepreneurship and business incubators. Nevertheless, universities are failing to contribute with full strength in research commercialization, entrepreneurship and economic growth. University incubators afford a facilitative environment for income generation by ensuring a covering with financial and legal support for a smooth collaboration between universities, business persons, government and society. In an entrepreneurial society, universities go one step ahead by configuring the instruments to enhance entrepreneurial norms and build leaders. This study also highlights the strengths and weaknesses of university incubators to promote better economic productivity. Finally the study offers some future directions for university incubators with policy recommendations.

Keywords: University incubator, Entrepreneurial society, Entrepreneurship, Institutional development, University industry linkages.

1. Introduction

The role of universities have changed over time. One feature of this change is the social oriented angle in which; teaching for all, education as a public good has become a social right for everyone to have access (Vryonides & Lamprianou, 2013). Later on a second aspect emerged; the promotion of research culture becomes the path of education pivot by concentrating on research oriented institutes for improving research and development (Casu & Thanassoulis, 2006).

However, in present times universities have also progressed from basic research as a public good to a profit making organizations having directed customers with the sales price of products (Audretsch, 2014). The idea to walk from a non-profit based organization to an income generating mechanism has prompted the competitiveness among universities. The competitive setting, profit maximization, quality education and research, links with industries and making entrepreneurs instead of job hunters have transformed the meaning of the universities entirely (Gul & Ahmad, 2012). Industries and business groups are now the goal of universities to aid them in solving their hitches by providing possible solutions.

Universities have taken numerous steps including establishing university incubators to transfer knowledge to industries, foster innovation and entrepreneurship. The aim of this reviewed research is to examine the moving trend of universities, to understand the entrepreneurial university and university incubators in enhancing an entrepreneurial society for socio economic development (Audretsch, 2014).

2. Literature Review

2.1 The Concept of University Incubators

National Business Incubation Association, (2014) defines incubation as a machinery to assist entrepreneurs by providing funds and facilities that aids in producing new projects. Incubators also assist new entrepreneurs in addressing their crucial problems. Shahzad, Ali, Bajwa, and Zia, (2012) also considered incubators as important for viable entrepreneurial growth.

According to UKSPA (2015), business incubation is a means of support to both small and emerging businesses within their environment by providing a secured platform for the development and growth of businesses.

Incubators act as assistance to new entrepreneurs in different ways. Al-mubarak and Busler (2010) describe the services and functions of incubators such as shared space with technical equipments, managerial support, networking, access to knowledge and financial capital, encouraging entrepreneurs through first funding. Incubators also helps in screening and selecting programs of incubates (Dee, Livesey, Gill & Minshall, 2011), risk forbearance during the early stages of entrepreneurs (Ozdemir & Sehitoglu, 2013) and acts as a middleman to rationalize transaction cost (Tang, Baskaran, Pancholi & Lu, 2013).

The first incubator in the world according to history is known as Batavia Industrial Center, New York, USA and started operating in 1959. In 1980, 12 incubators were in existence but by 2012 the number increased to 1250 in USA and over time the total number according to (National Business Incubation Association, 2014) increased

to 7000. Therefore incubators are becoming a growing phenomenon worldwide. There are diverse kinds of incubators to be specific: University-based or connected incubators, Government incubators, private incubators and corporate incubators (Al-Mubarak & Busler, 2012)

Universities are vital actors of economic team to win the game of progress through their active involvement in handling incubators, research and development, innovation, commercialization and formation of entrepreneurs in both developed and developing countries. Likewise, Palumbo and Dominici (2013) define university incubators as a university supported incubation system with space provision within the university and acts to promote the growth of university offshoots.

In another study, Somsuk, Laosirihongthong and McLean (2012) categorised the resources for university incubators to uphold entrepreneurs in four main areas which includes human, financial, organizational and technological resources. Equally, Salem (2014) recommended university incubators as the most prominent type of incubators among others and student entrepreneurs are utilizing the opportunity from university incubators to establish links with industry for launching their own businesses. Some dimensions identified as effective factors of university incubators by researchers includes; infrastructure, networking, human and technical support, faculty and staff, and institutional reputation (Somsuk, et al., 2012).

2.2 Role of Universities in Building Knowledge, Economic Growth and Research and Development

Knowledge will always remain a striking area to explore for academics with an all-embracing background. Knowledge enhances productivity. However knowledge produced does not automatically become valid for economic growth until it has been moved to firms with substantial effort and cost (Arrow, 1962). Besides previous studies, development of endogenous growth theory (EGT) arrests the researchers' thoughts towards knowledge as economic growth. EGT support knowledge and human capital as a vital production component due to its reflection of endogenous actions.

Universities' status initially was to produce knowledge. Nonetheless, scholars decided to support the communication and alliance of universities with industry to share knowledge for workable goals (Hashmi & Shah, 2013). A good number of researchers have studied the connection between knowledge and economic development which turns out to be a positive one in order to make policy makers see the need of opening a budget towards this important sector (Mercan & Sezer, 2014).

Research and development (R&D) functions are also executed in higher education institutes. R&D culture is the core of higher education to get the fruits of economic and social trees. Developed countries are the leading recipients of R&D events, developing countries are also in the process all the same but in a slow speed. The magnitude of R&D standing depends on publications, patents and licensing (Ahmad, 2012), citation and R&D expenses (Akhmat, Zaman, Shukui, Javed, & Khan, 2014).

The transition from basic research to innovative research is becoming increasingly famous. In order to be an

active part of economic growth, the higher education sector requires innovation (Kowang, Yee, Long, Rasli & Bakar, 2013).

2.3 University and Entrepreneurial Development

The dispute that firms have to strive for existence has confronted the endogenous growth theory (EGT) postulation of knowledge as the non-depreciable critique (Acs & Plummer, 2005). Another postulation that knowledge transfer bears no cost and produces by itself has also been well argued by researchers and evidence that geographical, financial and legislation are restraints one have to face while transferring knowledge (Singh & Marx, 2013). Acs and Plummer, (2005) likewise challenged the EGT postulation that knowledge is a cooperative distribution to all by suggesting entrepreneur's sections.

Bayh Dole Act brought notable changes by contributing in supporting the commercialization activities and minimizing the knowledge gap or filter (Audretsch, 2014). Knowledge filter is used by researchers to distinguish the gap between knowledge and economic knowledge being faced due to various limitations (Audretsch, 2014). However another EGT deduction that R&D will itself change without any further activities is counter down by the reality of knowledge filter (Audretsch, 2014). Universities are encouraged to be more entrepreneurial by creating long term relationships with industries for the success of university commercialization.

EGT though supports knowledge as an economic activator, fails to explain and recognize the knowledge transfer machines. Entrepreneurship has been able to reduce the knowledge filter by establishing a connection between

knowledge and economic knowledge (Qian & Acs, 2013).

The role of universities has changed drastically from just teaching and research to another mission which is the transfer of knowledge to society by connections with industry. Entrepreneurial development although contributes greatly in the development of the economy acts as a channel of income generation for universities through university partnerships and also strengthens the university (Gul & Ahmad, 2012).

Thune and Gulbrandsen (2014) evaluated the dynamics of university industry incorporation and clarified how the relationship developed over the period. While concentrating on university industry partnership, universities become an entrepreneurial development machine by instigating innovative idea, supporting and facilitating that idea to become a certainty and finally introducing the new projects into the market. In a conceptual study, Audretsch, (2014) explicated the idea of entrepreneurial university as to establish new businesses, commercialize it to new markets and increase knowledge transfer from university to income generation organizations.

2.4 Role of University Incubators in promoting an Entrepreneurial Society

A good number of incubators around the world are supported by universities. The rest are taking advantages to merge with universities and higher institutions to achieve the benefits from their research and knowledge. Culkin, (2013) discovered that university incubators are more supportive for entrepreneurs than any other type of incubator.

Incubators have been recognised as a positive instrument for an economic lift (Somsuk, et al, 2012), creation of jobs (Al-mubarak & Busler, 2010), instituting new entrepreneurs (Tang, et al, 2013), improving the entrepreneur’s productivity (Dee, et al, 2011) and commercialization (Al-mubarak & Busler, 2010) in developed and developing nations.

Additionally, university incubators have also been discovered as a tool to improve commercialization by instituting spinoffs (Palumbo & Dominici, 2013). Somsuk et al. (2012) defined incubators as a mechanism to support entrepreneurial culture for establishing spinoffs to elevate the survival ratio. OECD (2010) steered the incubator owners to work with universities to help the commercialization for the best advantage of the society. Recently university incubators have become a

growing trend in the development of other incubators (Culkin, 2013).

The role of university incubators is not limited to just providing assistance to newly established ventures but to facilitate an attitude geared towards leadership and institutional development by ensuring entrepreneurial thinking and culture (Al-mubarak, Busler & Aruna 2013).

In an entrepreneurial society, universities would not only rely on teaching students, enhancing research or even passing knowledge through patents, research contracts, licenses and spinoffs but rather they will build the structures to promote creativity, entrepreneurial cultures and entrepreneurial leaders ensuring that the standard of living of people is lifted (Audretsch, 2014). An entrepreneurial society with the aid of university incubators can be actualized when it is backed up with a strong sense of leadership commitment.

Existing University Incubators

| No | Incubator title | University | Country |
|----|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------|
| 1. | SETsquared | University of Bath University of Bristol University of Exeter University of Southampton University of Surrey | United Kingdom |
| 2. | Innovation Incubation Center Chaoyang University of Technology | Chaoyang University of Technology | Taiwan |
| 3. | The DMZ at Ryerson University | Ryerson University | Canada |
| 4. | Hebron Startup Labs | Covenant University | Nigeria |
| 5. | Roar Nigeria Hub | University of Nigeria, Nsukka | Nigeria |

Conclusion

A good number of economies are going through a lot in terms of financial and human limitations but at the same time

notwithstanding are attempting to divert towards promoting economic development and becoming a knowledge based economy through

entrepreneurial universities. It has been completely acknowledged that the 21st century will depend on learning, development, entrepreneurship, and incubators.

The creation of strong, trustworthy and dependable association of university, industry, government and community becomes necessary for the economic, social as well as financial improvement of a country. The advertisement and advancement of quadratic helix approach is essential for inspiring the entrepreneurial condition through the station of university incubators.

Consequently, the general advanced education framework requests extension and dependability particularly in the improvement and expansion of incubators to advance the key designs of development, creativity, globalization, commercialization and entrepreneurship.

Recommendation

The quantity of university based incubators is little with just few colleges having dynamic business incubator. Therefore, university administrations and the Ministry of Education should set aside assets and institute strategies for more universities to begin incubators.

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The economies of both developed and developing nations while making approach structures, planning yearly improvement designs and budgetary spending plans ought to consider building up and redesigning the university incubators for a prosperous, steady and persisting entrepreneurial society.

The current university based incubators likewise should be extended and upgraded given the appeal from potential incubatees. This will empower them to accommodate more incubatees and perhaps make an expanded number of effective new companies.

University incubators should disconnect incubator administration from the normal university administration. University incubators' leaders require not to be academicians but rather proficient administrators who understand and presumably have encountered the difficulties of starting new businesses.

University incubators need to connect more to industry players and fruitful business tycoons in order to attract the benefits that come from partnership and to enhance the performance level.

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