

Sustainable Innovative Policy in Technology Business Incubation: Key Factors for Successful Entrepreneurship Development in Nigeria

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Abstract

The purpose of this study is to identify the core and specific elements that are crucial to the performance of Technology Business Incubation (TBI) in Nigeria.

Technology Business Incubator is a facility-based technology infrastructure that assists the small new business start-ups to develop. TBIs are planned to present newly formed enterprises the technical assistance and facilities. Business incubation initiatives have been implemented in developing countries including Nigeria since the 1990s with uneven levels of success

There are so many factors that prevent a better operation of the Technology Business Incubation (TBI) in Nigeria which range from lack of adequate funding of the scheme to inconsistent government policies toward the Small and Medium Enterprises (SMEs) on one hand and the development of Science, Technology and Innovative Policy on the other hand. The Methodology involves structured interviews on some selected expert group who are knowledgeable on the subject matter of business incubation as it relates to the technology incubation policy as well as the STI.

Keywords: Business Incubation - “Nigerian Science, Technology and Innovation policy” - “Nigeria technology business incubation policy” - Success Factors - SMEs.

1. Introduction

In the world today, any reasonable innovation or development must be dynamically as a matter of principle sustainable. Sustainable development connotes a confluence of three major concepts; Society, Environment, and Economy. Sustainable development aims to create an equilibrium among our economic, environmental and social needs, allowing prosperity for now and future generations. This concept has not left Technology Business Incubation (TBI) out, and in fact, it is more appropriate to have it as part of the fundamental principles in the overall

TBI engagement. Sustainability doesn't leave a system of innovation especially at the national level out as well. Science, Technology and Innovation (STI) policy must be sustainable to be the right policy.

Science Technology and Innovation (STI) is the engine of growth without which no economy will have a sustainable development, this is because resources are depletive in nature and requires an enduring knowledge base (STI) to augment it. Lack of a robust STI is the main economic bane of several countries. In a country's National Innovation System, sustainable development makes it a desirable one, thereby giving room for a viable development of the system.

Technology Business Incubation is a built-in assistance program offered by governments, academia and the private sector with the aim of breeding and fostering of promising value-added and technology-related ventures. Its major intents are to improve the industrial base of the country through commercialization of Research and Development (R&D) outputs, advancing and improving the utilization of home-grown know-how. The Nigerian governments of different administrations since independence have shown interest and increasing appreciation of the role of S&T in national socio-economic development. The recognition of this fact motivated the Federal Government to restore the Federal Ministry of Science and Technology (FMST) as a separate organization in 1985. Since then, Nigeria has exhausted an immense arrangement of tasks on S&T strategy advancement through a blend of the determined efforts of its scientists, engineers and technologists, international cooperation and government support.

One remarkable attribute of Nigeria's latest (2011) strategy on science and technology is the prominence of 'Innovation', which refers to an improvement or a totally new product, process or organizational method in the design, production and distribution of goods and services has turn into a worldwide mechanism for speeding up steady advancement.

Thus, the objectives of this article are:

to identify the role of government policy implementation on the success of TBI.

to examine if STI/TI Policies are core factors that are critical to the success of TBI.

2. Literature Review

This section reviews the literature-related concepts which are imperative to the study under appraisal. Some of the key concepts are business incubator, Nigeria science, technology and innovation policy, Nigeria technology business incubation policy, business incubation success factors, SME among others.

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2.1 Entrepreneurship and Assistance Policy Framework

Ayodeji and Balcioglu, (2010) note that several governments' administrations have at different period of time put a number of strategies to support the advancement as well as development of the SME sub-segment. They classified these plans into levy, financial as well as infrastructure

The past regimes set up at different periods, infrastructure to tackle the collective fiscal challenges in the nation. This was evidenced by the actions of the Directorate of Foods, Roads and Rural Infrastructure (DFRRI), National Directorate of Employment (NDE), Petroleum (Special) Trust Fund (PTF) as well as various poverty alleviation programmes.

2.2 Historical perspective of Business Incubator and the Nigerian Experience

The Batavia Industrial Center, generally recognized as the foremost U.S. business incubator, opened in Batavia, N.Y., in 1959. In 1980, approximately 12 business incubators were operating in the United States – all of them in the industrial Northeast, which had been hard-hit by plant closures in the previous decade (NBIA, 2009).

Throughout the 1980s, business incubation industry growth was swift, as a few farsighted individuals saw the limitations of common economic development strategies that focused solely on industry attraction and large corporate expansions. NBIA, (2009) approximates that there exist 7,000 business incubators globally.

Nigeria's participation with the TBI path can be traced to the contacts made by a UNDP mission to four countries, namely; Gabon, Cote D'Ivoire, Nigeria and Zimbabwe which was held in Gabon in June, 1988. The UNDP along with the four countries built with enthusiastic concern which they had earlier indicated in an industrial development process based on the ideas of commercialization of R&D results as well as innovation for the advancement and submission of an importation swap policy; Job creation and capital formation through the useful utilization of the relationship between science and technology and the private enterprise development (Okon, 2003).

Bubou and Okrigwe, (2011) declare that at the last inventory there exist overall number of 21 TICs extended to all the regions of the country with the Federal Government aiming to set up at least one in each of the 36 states of the federation.

2.3 Various Science & Technology Policies in Nigeria

From the foregoing, it is needful to illustrate how Nigeria has managed the STI Policy in her quest for the advancement of science, technology and innovation.

The first National Science and Technology Policy in Nigeria came to being in 1986. Since then a total of four different science policies have evolved at different point in time which spanned within a period of twenty five years (Federal Republic of Nigeria, 2011). The policy was reviewed in 1997, 2003, 2005 and 2011.

2.4 National Policy on Technology Incubation in Nigeria

The policy thrust of the guideline is the utilization of Technology Incubation initiative as a mechanism for technological, industrial, social and economic attainment as well as to improve the quality of life of its populace

through the commercialization of know-how as swift advancement can only be achieved if it is attached to reliable science and technology platform.

The rationale is to institute best practices that will move the program at par with related schemes in other countries particularly USA and other OECD countries. The objective is to maximally utilize the reward of Technology Incubation which comprise economic advancement at all levels, employment creation, capital formation, technology acquisition as well as techno-entrepreneurship culture support by Nigerians (FMST, 2005).

As sustainability is a paramount factor in developmental activities in today's world, Technology Incubation is not an exception. In all the activities that an incubator will embark on, the business practices that would be supported, sustainability must be a hallmark. Most Technology Incubations are characterized by public-private partnership in the industrialized world as well as public sponsorship in the developing countries, in which the initial financial support is gotten from the government mostly. Therefore, the concept of sustainability in Technology Incubation implies the ability to continue to achieve results in a positive dimension, both in cash flows as the case may be and perpetuity.

2.4.1 Policy Objectives and Implementation Strategies

The importance of this guideline is to present the pedestal for the high scale development, industrially as well as innovativeness of the nation state called Nigeria. The policy will be achieved if the necessary objectives and their related strategies are implemented judiciously. Some of the objectives of the TBI and its attendant strategies are discussed below:

The provision of institutional infrastructure and methods for the improvement and commercialization of technologies is one of the objectives. The strategy to achieving this objective was the setting up of National Board for Technology Incubation for policy implementation. Another strategy for achieving the objective is setting up of TBI Centers all over the country. For the time being about twenty three centers are operational, leaving about fourteen State that are not yet have the presence of TBI. Others are the setting up of Network of professional services providers as well as developing procedures for the commercialization of technologies. Another objective of the policy is the funding of the implementation of the program. Sourcing of funds from government subventions and grants, sourcing of funds from public as well as private venture capital; and sourcing of funds from International Donor Agencies are some of the strategies to attain the objective (FMST, 2005).

The operational guideline is based on the role of the Board. The NBTI coordinate the Technology Incubation program in Nigeria while the actual incubation process takes place at Technology Incubation centers (TICs). The functions of NBTI inter alia are policy implementation and Coordination which involves development of operational guidelines. Other roles include supervision, monitoring and evaluation; Financial Management and Control; Sourcing of fund; National and International Liaison; Program Planning and Development as well as provision of legal services (FMST, 2005).

2.5 Success Factors for Technology Business Incubation

The Technology Business Incubators (TBIs) perform a very important role in supporting the early stage enterprises to surmount the obstacles associated with early phase of business enterprise as well as the finishing point of the project development till commercialization of product. Setting up and operating of a TBI has been influenced by different interest groups with diverse goals; consequently the incubator success rests on meeting the interest group's goal as well as producing thriving business enterprises (Kumar and Ravindran, 2012).

Lalkaka, (2001) argues that even though the numbers of incubators are on the rise, the irregular success and low ability to be continued in various locations are growing concerns to the governments as well as promoters who continue to give financial support to the majority of incubators. Akcomak (2009) notes that in emerging nations, majority of incubators are still supported financially by government, hence the commercial concept is still lacking. He however argues that the commercial or business-related concept of incubators is the rationale for market collapse dispute. Von Zedtwitz, (2003) earlier proposes that whether an incubator is business-related or not-for commercial should be run as a business.

In citing Aerts et al., (2007), Kumar and Ravindran, (2012) note that numerous incubator researches showed that the incubator tenant continued existence as well as development ought to be significant objective for an incubator as Somsuk et al., (2012) emphasize that Technology business incubators (TBIs) are seen as a tool that could make helpful and business setting for newly formed technology-related enterprises, assisting them to enhance their continued existence. There are a whole lot of studies relating to success factors for Business Incubation concept. For instance, Allen, (1985); Allen and Rahman, (1985); Campbell and Allen, (1987); Smilor, (1987); Rice and Matthews, (1995); Lalkaka, (1997); Verma, (2004); Mbewana, (2006); Sun et al., (2007); Somsuk et al., (2010); Kumar and Ravindran, (2012) and a whole lot of others. Their findings have been revolving around the traditional success factors which include among others such as Shared services; Business support services; Facilities and locations; Incubator governance; Tenant entry and exit; Mentoring and Networking; Tie to University; Funding and Support; Community Support.

Mbewana, (2006) declares that contemporary writers have also acknowledged several critical success factors, which are not at variance with those recognized by previous researchers. This study tries to find out the role government Policy implementation play in influencing the success of TBI as well as to identify what government needs to do in order to operate a more successful TBI Programme in Nigeria.

Proposed Study

From the literature review above, it is pertinent to say that aside from the traditional success factors, government policies as they relate to science, technology and innovation (STI), technology business incubation (TBI) as well as SMEs are very crucial to the successful operation of TBI on one hand and entrepreneurship development on the other. Consequently, this research proposition is based on the following research questions:

- i. What is needed for the Nigerian government to operate a more successful TBI Model?
- ii. What are the specific determinants for a successful TBI Policy implementation in Nigeria?
- iii.

3. Findings

The outcome of the structured interviews based on the research questions revealed that Government of various administrations have experimented with a lot of assistance policies geared towards helping the SMEs but the implementations of those policies at different times have been the shortcomings of the very nice policy documents which are very juicy on paper but to put in practice have been the bane of entrepreneurship development in Nigeria. Finally, the core factors for successful TBI has more to do with TBI policy than the STI as the TBI policy is expected to take up the output of the STI and commercialize them.

4. Conclusions

This Research presents a concise appraisal of the literature related to success factors for technology business incubation. It highlights the various traditional factors that are vital to successful incubation practice as well as the government policies as they relate to science, technology and innovation generally and technology incubation in Nigeria in particular. The full implementation of government policies are the much needed requirements needed to move the technology Incubation program in Nigeria forward as well as its sustainability. Also for a successful TBI Policy implementation, the program should engender technological SME development or focusing it to cause the transformation of the entire SME sector.

We are of the opinion that the result will fill a substantial amount of gap in the body of knowledge as well as contribute immensely to the policymakers and incubator managers.

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