

## Chapter 28

# Coordination, Monitoring, and Impact Evaluation of Technology Incubators in Nigeria

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### **ABSTRACT**

*Technology business incubation is a programme mostly deployed by the nations of the world to promote the development of prototype technology, nurturing them until they can compete successfully with the existing technology. The programme of incubation need be monitored, controlled, and evaluated to ensure that the objectives are achieved. This chapter discusses development of incubation in Nigeria, looking critically at the performances of the existing ones in terms of efficiency, effectiveness, relevance, utility, and sustainability in order for them to really serve as agent of growth and development in this innovation disruptive world. This chapter concludes by giving various policy suggestions like that efficient management of the resources made available to the tenants, and that government should provide more facilities in order to accommodate more tenants among others.*

## **1. INTRODUCTION**

Technology incubators are incubators, which are established to nurture technology-based start-ups or spin-off firms. They are mostly located close to knowledge sources such as Universities, Polytechnics, Research Institutes, etc and Science and Technology (S&T) Parks (OECD, 1997). The concept of incubators was introduced to Nigeria in 1988 by the United Nations System through the United Nations Development Programme and the United Nations Fund for Science and Technology Development to create tech-based business (Ahmed, 2003). The incubators were established in three phases. Those of Agege, Kano and Aba were the first generation, which were established in 1993, 1994 and 1996 respectively (Akande, 2001; FMST, 2002). The second generation comprise of Calabar and Nnewi incubators, which were established between 1996 and 1998, while the remaining 10, which were established in 1999 belong to the third generation.

In general terms, tenant firms of technology incubators are start-ups or spin-off firms, which are established specifically to exploit technologies that are develop in the nearby tertiary institutions/ research institutes or private laboratories. The proximity of the incubators to the knowledge sources enables the firms to have adequate interactions required to sustain the exploitation of the emerging technologies. The effectiveness of the incubation process could be measured by the rate of graduation of the tenant firms. However, the performance of the graduated firms needs monitoring to enable the incubators follow their progress in the business world. For this and other reasons, coordination, monitoring and impact evaluation of technology incubator outputs are essential.

This paper therefore discusses the indices for evaluation of incubated firms that have graduated. A limitation of this study, however, is the dearth of information on such firms, as very few of the incubation tenants had graduated.

## **2. OPERATION OF TECHNOLOGY INCUBATORS**

Job creation is usually one of the main underlying purposes of incubator support for new business formation, especially of Technology-based firms. Incubators can also play an important role in strengthening co-operation between public and private actors in regional economic development. Technology incubators usually have the following main objectives:

1. Economic development;
2. Technology commercialization;
3. Property venture/real estate development; and
4. Entrepreneurship.

Like other types of incubators, they provide their tenants with some services including physical infrastructure (office space, laboratories), management support (business planning, training, marketing), technical support (researchers, data bases), and access to financing (venture capital funds, business angel networks), legal assistance (licensing, intellectual property) and networking (with other incubators and government services).

## **3. EVALUATION BENCHMARKING FOR INCUBATOR OPERATION AND PERFORMANCE**

In their paper present at the 16<sup>th</sup> International Conference on Business Incubation, Costa-David *et al* (2002) listed efficiency, effectiveness, relevance, utility and sustainability as Key Best Practice Issues, which each incubator should strive to address in their operations. A number of factors, which would influence the extent to which the best practices could be achieved, were also identified. These were those factors relating to the setting up and operating incubators; key

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