

The Efficacy of Governmental Business Incubation Programs on Entrepreneurial Capabilities

Kowo Solomon Akpoviroro

Department of Business and Entrepreneurship,
Kwara State University, Malete, Nigeria

Akinbola Olufemi Amos

Department of Business Administration
Federal University of Agriculture, Abeokuta

Akinrinola Olalekan Oladipo

Department of Accounting,
Babcock University Ogun State, Nigeria

Abstract: *The success and survival of every startup venture in the global world cannot be over-emphasized. Businesses all over the world go as far as possible to survive the challenges and the global market competition. This research work is an important study that helps to evaluate the effects of governmental incubation programs on entrepreneurial capabilities. The population of this study comprised of 60 incubatees in Ogun and Lagos State National Board of Technological Beneficiaries (NBTI). The sample size for this research was 60 respondents (30 incubatees in Ogun State and 30 incubatees in Lagos State). Yamane formula was employed to determine the sample size. The study made use of statistical tools which include: analysis of variance (ANOVA) and correlation efficient in testing hypotheses where applicable. The responses to the questionnaire were sorted, coded and the Statistical Packages for Social Sciences (SPSS) Version 17.0 was used for the analysis. The study revealed that government business Incubation programs significantly enhance entrepreneurial capabilities of Participants and incubation technical knowledge significantly assists entrepreneurship performance by enhancing its productivity level. The researcher applied the Sen Capability approach to entrepreneurship programmes (specifically technology incubators). This study broadens the understanding of the outcomes of incubation programmes in Nigeria. It recommends that there is a need to establish more technology incubators across different states in Nigeria, especially areas with high technology potentials. This will help to duplicate the positive results of incubation programmes in different parts of the country, thereby enhancing national entrepreneurship performance.*

Key words: *Governmental Incubation, Entrepreneurial Capabilities, Sen Capability Approach, Technical Knowledge, Productivity.*

JEL Classification: L26 , M53

I. Introduction

In many African countries the rate of population growth oversteps employment growth, necessitating the need to promote entrepreneurship as a means of creating employment and alleviating poverty (Okafor et al., 2015; Adegbite, 2001). According to Jamieson (2014) technology-based Small and Medium enterprises (SMEs) are central to efforts towards regional and world economic development. However, these enterprises are beset with enormous challenges, including lack of access to financial resources and relevant infrastructure (Lin et al., 2011). Hence, there is a

need for programmes targeted at providing these young entrepreneurs or start-up businesses with the relevant resources in order to help them survive and succeed. According to Lesakova (2012), entrepreneurship can be boosted through the incubation of start-up businesses. Like many other developing countries, Nigeria embraces entrepreneurship as a vehicle for employment creation and poverty alleviation (Agboola, 2010; Okafor et al., 2015). This quest is of crucial importance, considering the alarming rate of unemployment, especially among the youth. According to Ukpung (2013), millions of Nigerian grad-

uates are churned out by universities on a yearly basis with most of them having no hope of getting employment. Youth unemployment in Nigeria is said to have gone up to as high as 50% (Omoh, 2015). Furthermore, Nigeria's economic growth has failed to translate into effective development for its people. Firstly, for GDP growth to translate into development, it must be ensured that the proceeds from the growth (in the form of increased government tax and revenue), are adequately deployed to improving the standard of living of the people (National Bureau of Statistics, 2014). However, the pervasive corruption among public office holders has ensured that only the 'select few' are entitled to eating the national 'cake' (Oshewolo, 2010; Arogundade, 2011). Moreover, in order to ensure proper economic development, Nigeria needs to substantially improve its infrastructure and its business environment (Joseph & Olawepo, 2014). Considering Nigeria's abundant resources, it is surprising that the country continues to wallow in the mire of poverty, a situation which has been described as a 'bewildering paradox' (Oshewolo, 2010). As observed by Adejimiola and Olufunmilayo (2009), every year, about 80% of graduates of Nigerian universities experience extreme difficulty in finding employment. This is supported by Eze and Nwali (2012) who assert that every year Nigerian graduates are mass-produced, leaving them with neither job opportunities nor entrepreneurial skills. The socio-economic consequences of the high rate of unemployment in Nigeria are enormous. Emeh (2012) posit that the high rate of youth unemployment has led to numerous social and economic ills such as extreme poverty, prostitution, armed robbery and kidnapping. Moreover, high unemployment rate has led to increasing frustration among the Nigerian youth. Thus, the country needs to facilitate the creation of productive employment through improvement in education and private sector growth (GEM, 2012). In order to effectively deal with the scourge of unemployment and poverty, there is a need for the country to further diversify its economy while implementing relevant policies to boost job creation and

productivity. Therefore, the role of entrepreneurship in fostering economic growth and development has generated a strong interest among policymakers in recent years (Naude, 2011; Garrett, 2008). Even among scholars, there is a general consensus that entrepreneurship is pivotal to economic growth in both developing and developed countries (Arokiasamy, 2012; Bakar, Islam & Lee, 2015; Aja & Adali, 2013; Lee, Chang & Lim, 2005; Mitra, Abubakar & Sagagi, 2011). Therefore, for any country which is serious about boosting economic growth, reducing unemployment and alleviating poverty, adequate emphasis should be placed on enhancing its entrepreneurial activities and productive capacities through relevant policies and programmes.

II. Problem Statement

Unemployment is a major macro-economic challenge confronting Nigeria, considering its pervasive consequences such as poverty, prostitution, armed robbery, kidnapping and insecurity (Emeh, 2012; Nwekeaku, 2013). Entrepreneurship has been considered a viable approach that is capable of reducing unemployment (Salami, 2011). Although the internet has become a good launching pad for digital entrepreneurs, digital entrepreneurship activities are still crippled by multifaceted challenges. The start-ups ecosystem suffers severely from lack of infrastructure and other resources needed for ICT entrepreneurs though extensive research has been carried out on entrepreneurship programmes and youth employment programmes in various countries such as USA, Korea, Sweden, South Africa, Nigeria etc. (Isaacs et al., 2007; Lee, Chang & Lim, 2005; Okafor et al., 2015; Robertson et al., 2003). Other studies have focused specifically on business incubation programmes (Albort-Morant & Oghazi, 2015; Bøllingtoft, 2012; Hernández & Carrà, 2016). However, as Albort-Morant et al. (2015) noted, there is a paucity of studies regarding business incubators throughout the world. Moreover, the role of technology incubators in Nigeria remains under-investigated. More strikingly, there has not been any study

applying Sen's capability approach in understanding how business incubation facilitates and enables young entrepreneurs to thrive. None of these studies have engaged the capability approach by examining how these programmes have contributed to expanding participants' real opportunities. Consequently, the effects of various conversion factors on the outcome of these entrepreneurship programmes and incubators have been ignored. It is, therefore, certainly crucial to assess the extent to which entrepreneurship programmes (specifically incubators) are both effective and sustainable as a means of boosting the entrepreneurship capabilities of participants and reducing unemployment in Nigeria. Based on the problem statement and the aim of this study, the following research questions are posed: (i) How do government business incubation programs affect entrepreneurial capabilities of participants? (ii) What is the effect of technical knowledge acquired from the government business incubation and productivity level by firms?

Objectives of the Study

The main objective of the research is to investigate the effect of governmental business incubation programs on entrepreneurs' capabilities. To achieve the main objective, the research has the following specific objectives:

- (i) To examine the significant effect of government business incubation programs on entrepreneurial capabilities of participants.
- (ii) To determine the significant effect between technical knowledge acquired from the government business incubation and productivity level by firms.

Research Hypothesis

Ho: Government business incubation program does not significantly affect Entrepreneurial capabilities of participants.

Ho: Technical knowledge acquired from the government business incubation does not affect productivity level by firms.

III. Literature Review

Conceptual Framework

Boosting Entrepreneurship through Business Incubation

Various scholars assert that business incubators are viable instruments for enhancing innovation, accelerating creation of ventures, reducing business failures and boosting employment (Al-Mubarak & Bussler, 2010; Bergek & Norrman, 2008; Hackett & Dilts, 2004; Somsuk, Wonglimpiyarat & Laosirihongthong, 2012). The business incubators' primary vision is to increase the number of start-ups while at the same time preventing business failures (Hackett & Dilts, 2004; Matuluko, 2015). In recent years, they have gained popularity as major tools for increasing the number of successful local companies (O'Neal & Kulonda, 2005; Herrington et al, 2011). Thus, incubators are recognized by policymakers as tools for promoting economic development (Bergek & Norrman, 2008), national economic growth (Somsuk et al., 2012) and social development through job creation (European Commission, 2002). They serve as economic development tools in virtually all countries (Al-Mubarak & Bussler, 2010). Therefore, business incubation can be regarded as a panacea for the macroeconomic challenges of unemployment and poverty. Some definitions of incubator focus more on its physical dimension. Bergek and Norrman (2008), posit that incubators are support facilities for fledgling businesses. However, other definitions view incubators more in terms of process, services and people rather than physical structure. These include the management and staff of the incubator facility, tenant companies and their employees, external communities, industry contacts and professional service providers. The beneficiaries of business incubation can be referred to as the incubatee, portfolio, client or the tenant companies (Hackett & Dilts, 2004).

The Role of Business Incubators

The European Union (2012) opines that business incubators place a high premium on the development of quality business support services such as technology sup-

port, entrepreneurship training and business advice. Most start-ups are unable to make it through their formative years due to numerous liabilities resulting from their being new in the ecosystem as well as being small; all of which reduce their chances of breaking through various obstacles along their path (Bollintoft, 2012; Okpara et al, 2011). Start-ups are faced with lack of requisite knowledge, skills and competence, as well as lack of access to infrastructure, finance and other resources and commercialization capabilities, which are critical to developing an idea into a product and bringing a product to market (Lin et al., 2011; Somsuk et al., 2012). Despite the indispensability of these resources, new firms are often unable to gain access to them (Peters et al., 2004) and the role of incubators lies in bridging this lacuna. They fill the gap by providing young entrepreneurs with access to training, office space, networks, funding opportunities and other resources (Lesáková, 2012). According to Al-Mubarak and Busler (2010), business incubators provide a safe haven for new firms through a mixture of tangible and intangible services which are offered to them, and these include access to physical space and sharing, administrative assistance, coaching, consulting, training, networking and financing. By providing adequate support to firms at the early stage of development, incubators compensate for the deficiencies faced by these ventures, thereby helping to boost their survival rate and growth prospect (Lalkaka, 2003). This claim is supported by the European Commission (2002) which asserts that incubation assists start-ups to maximize growth potential in a manner that is difficult for other SMEs support structures to achieve. However, as noted by Lesáková (2012), the main aim of business incubation is not to provide office facilities to tenants, although most incubators do this. Rather, the primary role of business incubation is to provide certain services to newly founded companies. These services are as follows: marketing assistance; assistance with business basics, accounting and financial management; assistance with loan funds, guarantee programs, access to bank loans, access to angel in-

vestors and venture capitalists; providing links to higher education resources; help with presentation skills; links to mentors, advisory boards and strategic partners and technology commercialization assistance (Lesáková, 2012). Therefore, incubators provide a supportive or nurturing environment for start-ups by enhancing new firms' access to relevant needed human, material and other forms of resources in order to accelerate the development of start-ups into successful business ventures (Carree & Thurik, 2010).

Characteristics of Business Incubators

Lesáková (2012) outlines some of the operational characteristics of business incubators. Firstly, incubators have certain admission criteria which should be met by the potential incubatee. An entrepreneur who wishes to join a business incubation programme must not only apply for admission but must meet the requirement or acceptance criteria set by the management of the incubator (Dawson&Henley, 2012; Lesáková, 2012). Secondly, although tenants' acceptance criteria do vary from one incubator program to another, incubators generally admit start-ups with feasible business ideas, as well as a workable business plan (Lesáková, 2012). In the same vein, although the amount of time a tenant spends in an incubation program varies from one incubator to another, firms with a longer research and development cycle usually need more incubation time than service or manufacturing firms which can produce their products/service immediately. Nonetheless, rather than setting a specific time frame, many incubators set graduation requirements by developing benchmarks in the form of company revenue or staffing levels (GEM, 2012). Furthermore, incubation services are usually rendered at a cost to the tenants, although most incubators' charges are subsidized through grants from government and other stakeholders (Nwekeaku, 2013). However, some incubators provide the services/resources to the start-ups in exchange for equity ownership in the business.

Historical Development of Business Incubators

A number of views exist regarding the history of business incubators. According to Rouach, Louzoun and Deneux (2010), the first business incubator in the world, Batavia Industrial Center (BIC), was established in 1959 by Joseph Mancuso. Mr. Mancuso was passionate about putting people to work (James, 2002). He pioneered the idea of incubation as a solution to extremely high unemployment and difficulty in finding a tenant for an empty industrial building in the small city of Batavia, New York (Matuluko, 2015). On realizing that no large company was going to occupy the empty space, he decided to sublet subdivided partitions of the building to a variety of tenants (Agboola, 2010). However, Mr. Mancuso did not just offer empty office space to the tenants; he also offered them various kinds of services like shared office services, below-market rents, help with raising capital, maintenance of the building and business advice. Although Mr. Mancuso did not use the term incubator for the facility, he provided the tenants with services in a manner that very well characterizes incubation (James, 2002). Hackett and Dilts (2004) noted that incubation programs spread slowly in the 1960s and 1970s as government sponsored responses to the need for urban/Midwestern economic revitalization. The need for incubators stems from efforts targeted at enhancing entrepreneurship and innovation through innovation centres. The collapse of traditional industries and the concomitant rapid rise in unemployment necessitated the need for new strategies for dealing with crisis sectors, communities and regions in Europe and USA. It was during this period that the business incubator became a tool for supporting innovation and technology transfer (Al-Mubarak & Busler, 2010). According to Lalkaka (2001), the 'first generation' incubators in the 1980s basically provided affordable space and shared facilities to carefully selected groups. However, in the 1990s, it was realized that there was a need to supplement workspace with counseling, networking and skill enhancing services, as well as seed capital and profes-

sional support (Lalkaka, 2001). This gave rise to the 'second generation' incubator. Beginning from 1998, there was an emergence of a new incubation model intended to mobilize,

as well as provide a convergence of support, towards developing growth-potential, technology-based ventures (Lalkaka, 2001; Dawson & Henley, 2012).

Typology of Business Incubators

Lesáková (2012) postulates that incubators differ in the manner in which they deliver their services, in the types of clients they serve and in their organizational structure. This is supported by Grimaldi and Grandi (2005), who state that incubators provide a variety of distinct support services, thus giving rise to different incubation models. Different scholars have provided varied classifications of incubation. Nonetheless, this review will focus on only a few such classifications. Booth-Jones (2012) identified four different types of business incubators based on sponsorship. These include: university technology business incubators, government incubators, multiple sponsored incubators and privately funded incubators. While university incubators offer support for nurturing new technology-based businesses, as well as commercialization of university innovations, the government incubators are those sponsored by the government in order to foster job creation and socio-economic development (Booth-Jones, 2012). However, most incubation programs are funded by public-private partnership (multiple sponsored incubators) in which the initial financial support comes from the government while the private sector participates from the time when the program starts yielding positive results (Garett, 2008). On the other hand, privately funded incubators are for high-potential new ventures which attract the interest of business investors (Booth-Jones, 2012). Businesses incubated by such incubators need to demonstrate that they have viable products and a significant market for their product. However, as observed by Lesáková (2012), most business incubators serve high-tech, as well as knowledge-based enterprises. This

fact is supported by the European Commission (2002), which asserts that incubators usually cater for technology-based businesses.

Expanding Capabilities through Business Incubation

One of the objectives of this study is to conceptualize business incubation using the capability approach paradigm. As stated before, the capability approach focuses on the effective opportunities which people have to do and to become what they value. Through the lens of the capability approach, business incubation is deemed important only to the extent to which it contributes to increasing its tenants' entrepreneurial capabilities. This capability set includes certain entrepreneurial and managerial competencies (Morris, Webb & Singhal, 2013), as well as adequate access to relevant physical, information, financial and other resources needed for entrepreneurial success (Arogundade., 2011). Lalkaka (2003) noted that business incubation is a means of providing adequate support to newly founded firms, thereby helping to boost their survival rate and growth prospects. In this way, incubation expands the opportunities that the Nigerian youth have by providing them with requisite entrepreneurial skills, knowledge and resources which give them an alternative to job seeking. With this capability set in place, an aspiring entrepreneur can be said to have the effective freedom or opportunity to start and run a successful business venture (Eze and Nwali, 2012).

IV. Theoretical framework

Sen's Capability Approach

It focuses on the available opportunities or freedoms (capabilities) for a person to achieve various state and functions which he/she has reason to value (Sen, 2011). Thus, capability approach serves as a theoretical perspective for understanding relevant developmental concepts, and can be used as a practical tool for evaluating services, institutions and social arrangements. Sen criticized the welfare approach, thus, the welfare approach is susceptible

to the negative consequences of adaptive preference, which connotes choices made less from one's own reflection than from habituation/socialization or resignation. For example, a young woman living in a patriarchal society like Nigeria might have been socialized into thinking that entrepreneurship is only for men. She might have accepted the notion as an unchangeable reality, making her comfortable with just being a housewife or a subordinate worker. Furthermore, Sen (2001) identifies five main freedoms which are instrumental in policy issues. The five freedoms (namely political freedom, social opportunities, economic facilities, protective security and transparency guarantees), complement one another and all contribute to a person's general capability to live freely (Sen, 2001, p. 38-40). Nevertheless, in this study, while a preliminary list of capabilities were developed from the literature research, the researcher also engaged Sen's notion of democratic process in developing a list of relevant capabilities for digital entrepreneurship. This was achieved by giving the participants the opportunity to identify various factors and situations which influence success in digital entrepreneurship. According to Robertson et al, (2003), such critics argue that any good theory ought to regard the individual as a part of a larger social environment and not treated in isolation. Naude (2011), for example, have followed the line of this criticism, arguing that agents should be seen as socially embedded and interconnected to others, rather than as isolated humans. Using the previously mentioned example of women in Nigeria, ethical individualism will urge that the impact of lack of freedom to choose a career should be assessed based on how it affects the individual women and not just the community in general. The community might perceive any attempt to empower women, career wise, as a threat to social cohesion. They might argue that leaving wives with the full right to decide what career to choose will not only jeopardize their culture but will also affect the wellbeing of the husbands and children negatively. However, ethical individualism, considers of paramount importance, the wellbeing of the individ-

ual, in this case the individual women. In this way, the good of the individual takes precedence over that of the community. Furthermore, Sen's capability approach is considered the theoretical foundation of the human development approach which is an approach that aims at providing a policy framework for development based on human development dimensions and indicators (Conradie, 2013). Just like the capability approach, the human development approach acknowledges the importance of money, economic growth and the market, but also sees them as a means, not as ends in themselves. However, there are very few empirical and theoretical applications of the capability approach to entrepreneurship and ICT development. Jamieson (2014) drew upon the approach in providing theoretical reflections on ICT development. An extensive search has not revealed any application of the capability approach to business incubation programmes. Thus, as far as could be ascertained, Sen's capability approach is yet to be applied in the assessment of business incubation, thus necessitating the need for this study.

Empirical Studies on Business Incubators and Entrepreneurship

Numerous scholars have undertaken empirical studies on business incubators in various countries (Al-Mubarak & Busler, 2010; Chandra & Fealey, 2009; Elmansori, 2014; McAdam & McAdam, 2008; Som-suk et al., 2012; Herrington et al., 2011). Al-Mubarak and Busler (2010) undertook a case study in order to identify the strengths, weaknesses, opportunities and threats of business incubator models, as well as their potential use in the United Kingdom and the United States. In the explorative research, which was the first to analyze business incubation using the SWOT technique, two international cases were studied: the first was the Maryland Technology Development Corporation (USA), and the second was the Coventry University Enterprise (UK). The study translated the goals and objectives of the incubators into specific key success indicators while assessing internal strengths and weaknesses, as well as external op-

portunities and threats of the incubators (SWOT). Data was collected by means of structured interviews with the incubators' managing directors, as well as through examination of case studies. The results of the study highlight the similarities and differences between incubator models in the two countries. For both programmes, the strengths and opportunities of the incubators were much more than the weaknesses and threats. For the UK case, one of the weaknesses identified was: reduction in government's support due to the global economic crisis which affected the implementation of the incubator's annual plan. While lack of support and resources were some of the weaknesses identified in the UK case, the study further asserts that business incubator models help in the commercialization of new technologies, creation of employment, diversification of the economy, and wealth creation. In another comparative study, Chandra and Fealey (2009) describe the landscape of incubation in three countries (United States, China and Brazil), noting the differences and similarities of incubation approaches between them, while focusing on sources of incubator funding and the financial services offered to their tenant firms. A total of 30 incubators (six from USA, 12 from China and 12 from Brazil), were involved in the study. The researchers conducted semi-structured, in-depth interviews with incubator management, incubator clients, trade association representatives, government officials and academics. Among other things, the study revealed that while the United States' incubators focused on technology transfer / commercialization, the Chinese incubators focused on the social mission as mandated by the government. On the other hand, the Brazilian incubators aimed to foster entrepreneurship, technology commercialization and job creation. However, all the countries placed emphasis on economic development in their incubation programmes. In another development, Herrington et al. (2011) examined the success of Graduate Teleworking Initiative (GTi), a business incubation project in Wales, in order to determine its impact on the participants, and on developing and supporting entrepreneurial activity

within Wales. Using a single case study methodology, the research evaluated all aspects of the GTi project while engaging both qualitative and quantitative methods in capturing the aspiring entrepreneurs' views. Thirty two individuals representing 30 enterprises participated in the study by responding to the questionnaire. Moreover, the study compared the progress of the entrepreneurs with methodologies developed by other EU programmes, and further considers additional approaches for measuring the success of similar projects. According to the research findings, 33% of the respondents agreed that the GTi project helped their business to grow quickly; 33% agreed that it made them more competitive while 17% agreed it served as a conduit for information and intelligence. However, 10% of the respondents (representing three enterprises) were of the view that the business incubator had no significant impact on the development of their business. The study went further to assert that in order for incubation facilities to continue to receive support, there is a need for a measurement of success which is broader than a mere set of statistical outputs. Another study by Mas-Verdú, Ribeiro-Soriano and Roig- Tierno (2015) analyzed the impact of business incubators on the survival of firms. The study, which surveyed the CEOs and managing directors of 47 firms operating within the European Business and Innovation Centre of Elche in Spain, engaged fuzzy-set qualitative comparative analysis. The results show that a combination of incubators and other factors is needed for the firm's survival. Furthermore, Elmansori (2014) examined the impact of business incubation in fostering innovation and entrepreneurship in the Arab world. The exploratory study which engaged both questionnaire and interviews revealed that incubated businesses are far more likely to succeed in the long term than those who have not been through incubation. In a South African study, Booth- Jones (2012) revealed that very specific training is needed at the start-up's entrepreneurial phase so that there is a need to tailor the programme to the needs of the firms. However, in Nigeria, studies or reports on business in-

cubators are very few. However, there is a lack of empirical research on business incubators in Nigeria, especially IT based ones. Moreover, no study has applied Sen's capability approach to business incubation programmes. None of the studies engaged the approach in assessing the incubator's contribution to enhancing the entrepreneurial capabilities of the tenants. This study, therefore, intends to bridge the lacuna as it focuses on examining the contribution of government incubators in Nigeria to enhancing the capabilities of its participants.

Gap in Literature

Various entrepreneurship programmes have been rolled out in Nigeria as a means of reducing the high unemployment rate. While there are several studies examining the role of entrepreneurship education in enhancing the entrepreneurial intentions of students, very few studies have been devoted to assessing how entrepreneurship programmes enhance actual entrepreneurial activities of their participants (Okafor et al., 2015). Moreover, none of the existing studies on business incubation engaged Sen's capability approach, which has been considered a more holistic approach to evaluating development programmes. Thus very little is known about how these programmes expand the capabilities of the participants for successful entrepreneurship. Moreover, these studies do not take into account the multiplicity of factors which can affect the conversion of entrepreneurial programmes into functions. There is, therefore, the need for a comprehensive approach to assessing the contribution of entrepreneurship programmes, taking into account the multiplicity of external and internal factors. By applying the capability approach to entrepreneurship programmes (specifically technology incubators), this research broadens the understanding of the outcomes of incubation programmes in Nigeria. Being the first to make use of the capability approach in assessing business incubation, the study will provide a new lens for assessing the contribution of business incubators and other entrepreneurship programmes in the drive to enhance

entrepreneurial activities and socio-economic development.

Research Methods

In this research study, the survey method was adopted. It is a method that focuses on obtaining subjective opinions of respondents. Thus, the opinions of the study population concerning the research topic were gathered by administering questionnaires that ask questions concerning the effect of governmental incubation programs on entrepreneurial capabilities. The ex-post facto method which involved the use of secondary data from the internet, journals, articles, and so on was also used. The population of this study comprised of 60 incubatees in Ogun and Lagos State National Board of Technological Beneficiaries (NBTI). A total of 27 technology incubation centres are spread across the six geo-political zones of Nigeria, but for the purpose of this study, Ogun State National Board of Technological Beneficiaries (NBTI) will be selected. To determine the sample size for this research study, a complete enumeration survey would be adopted, where data would be collected for each and every unit as the case may be from the population or universe which is the complete set of items which are items of interest in any particular situation. Therefore, the sample size for this research study would be 60 respondents (30 incubatees in Ogun State and 30 incubatees in Lagos State). Yamane formula will be employed to determine the sample size. This formula is concerned with applying a normal approximation with a confidence level of 95% and a limit of tolerance level (error level) of 5%.

To this extent the sample size is determined by $n = \frac{N}{1 + Ne^2}$

Where: n = the sample size

N = population

e = the limit of tolerance

Therefore, $n = \frac{76}{1 + 76(0.05)^2} =$

$$= \frac{76}{1 + 76(0.0025)} = \frac{76}{1 + 0.19} =$$

$$= \frac{76}{1.19} = 60 \text{ respondents}$$

The questionnaire was administered to the relevant channel for filling. The sampling validity will be used to access the validity of the data. It is a measure of validity obtained, to ensure that the measure covers the broad range of areas within the concept through a sample size under the study in order to achieve the research objective (Kumar, 2010). The study made use of statistical tools which include: analysis of variance (ANOVA) and correlation efficient in testing hypotheses where applicable. The responses to the questionnaire were sorted, coded and the Statistical Packages for Social Sciences (SPSS) Version 17.0 was used for the analysis. The study will make use of face validity; to ensure face validity; the search instrument will be given to experts in the area of statistical measurement to judge the adequacy of the instrument. Their comments with observation from three professors of the faculty of Business and Entrepreneurship Kwara State University will be needed to modify the items on the research instrument. A pilot test will be carried out before actual data collection to ascertain the reliability of the survey instrument and test for vagueness and clarity of items for the pilot test.

Presentation of Data

This section is concerned with the presentation, analysis and interpretation of data gathered from the responses to administered questionnaires. It also includes an empirical testing of hypothesis made in regard with this study and all of their interpretations. It should be noted that Statistical Package for Social Science (SPSS) was used for analyzing frequencies and testing research hypothesis. Data from the structured questionnaire were translated into numerical codes by the researcher, and data capture was done by statistical analysis using the regression analysis.

Data analysis and Hypothesis Testing

Table 1. Distribution of respondents and response rate

Respondents Occupation	Questionnaire administered (sampled)	Percentage of total response (%)
Top Level	47	83.9
Middle Level	9	16.1
Lower Level	-	-
Total	56	100.0
Gender/Category	Questionnaire administered (sampled)	Percentage of total response (%)
Male	30	53.57
Female	26	46.43
No. of Returned	56	93.3%
No. of Not Returned	4	6.67%
Total No. of Questionnaires	60	100

Source: Field Survey 2018

The research questionnaire was administered to 60 respondents (entrepreneurs) which is the sample size representing the study population of Ogun and Lagos National Board for Technological Incubation.

Fifty six (56) questionnaires representing 93.3% were returned, and 4 questionnaires representing 6.67% were not returned. The table above shows the details at a glance.

Table 2. The Descriptive statistics of Governmental Business Incubation programs and Entrepreneurship Performance

Responses	Total (N)	Mean
Business Incubation Coaching and Firms' Performance In Terms of Human Capital Management		
Participants get the training required from the government business incubation program in order to enhance their capabilities	56	3.96
Government business incubation programs have an impact in your trainee performance and assessment.	56	3.91
The firm gets the necessary knowledge towards employee management	56	3.93
Government business incubation programs have been able to contribute to your firm's employee productivity.	56	3.95
Government business incubation programmes has a strong influence in the firm's performance	56	3.99
Technical Knowledge Acquired From the Business Incubation and Productivity Level	Total	Mean
Participants have been able to obtain a tremendous amount of technical knowledge (e.g. designing new products, manufacturing).	56	3.99
Participants get most of their valuable technical knowledge from being associated with this business incubator.	56	3.59
The business incubator has helped the firm to improve technically and acquire competent personnel to handle job tasks.	56	3.69
Firms get to make use of their machinery effectively from being associated with this business incubator.	56	3.80
Firms have been able to obtain a tremendous amount of technical knowledge to enhance productivity. (e.g. designing new products, manufacturing).	56	3.89
Do you think the business incubator has contributed to the firm's productivity level	56	3.99

Source: Field Survey 2018

Test of Hypotheses

Regression analysis was used to measure the effect of the independent variable to the dependent variable of hypotheses 1 and 2. Proper interpretation and analysis technique was used to explain the hypotheses testing.

Hypothesis 1

Ho: Government business incubation program does not significantly affect Entrepreneurial capabilities of participants.

Hi: Government business incubation program significantly affect Entrepreneurial capabilities of participants.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.752a	.566	.558	1.76257	2.206

a. Predictors: (Constant), Business Incubation Programs

b. Dependent Variable: Entrepreneurial Capabilities of Participants.

Table 4. ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	214.874	1	214.874	69.166	.000a
	Residual	164.653	53	3.107		
	Total	379.527	54			

a. Predictors: (Constant), Business Incubation Programs

b. Dependent Variable: Capabilities of Participants.

Interpretation of Results

The result from the model summary table revealed that the extent to which the variance in Entrepreneurial Capabilities of Participants can be explained by Government Business Incubation Programs is 56.6%

i.e. (R square = 0.566). The ANOVA table shows the Fcal 69.166 at 0.0001 significance level. The table shows that Government Business Incubation Programs significantly enhance Entrepreneurial Capabilities of Participants.

Table 5. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.109	.616		5.045	.000
Business Incubation Programs	.613	.074	.752	8.317	.000

a. Dependent Variable: Entrepreneurial Capabilities of Participants

The coefficient table above shows that the simple model that expresses how government business incubation programs enhance entrepreneurial capabilities of participants. The model is shown mathematically as follows:

The coefficient table above shows that the simple model that expresses how government business incubation programs

enhance entrepreneurial capabilities of participants. The model is shown mathematically as follows:

$Y = a + bx$ where y is Entrepreneurial Capabilities of Participants and x is government business incubation programme, a is a constant factor and b is the value of coefficient. From this table therefore, Entrepreneurial Capabilities of Participants

= 3.109 + 0.613 Government business incubation programme. This means that for every 100% Entrepreneurial Capabilities, Government business incubation programme contributed 61.3%.

The significance level below 0.01 implies that a statistical confidence of above 99%. This implies that Government Business incubation programme has a positive impact on human capital management towards entrepreneurship performance. Thus, the solution would be to reject null hypothesis

(Ho), and accept the alternative hypothesis (H1).

Hypothesis 2

Ho: Technical knowledge acquired from the government business incubation does not significantly affect productivity level by firms.

Hi: Technical knowledge acquired from the government business incubation significantly affects productivity level by firms.

Table 6. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.518a	.269	.255	2.87351	2.207

- a. Predictors: (Constant), Technical Knowledge
- b. Dependent Variable: Productivity Level

Table 7. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	163.673	1	163.673	19.822	.000a
	Residual	445.880	54	8.257		
	Total	609.554	55			

- a. Predictors: (Constant), Technical Knowledge
- b. Dependent Variable: Productivity Level

Interpretation of Results

The result from the model summary table revealed that the extent to which the variance in firm’s productivity level can be explained by the fact that business incubation technical knowledge is 26.9% i.e. (R

square = 0.269). The ANOVA table shows the Fcal 19.822 at 0.0001significance level. The table shows that incubation technical knowledge significantly assists entrepreneurship performance by enhancing its productivity level.

Table 8. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.848	1.307		2.179	.000
	Technical Knowledge	.736	.165	.518	4.452	.000

- a. Dependent Variable: Productivity level

The coefficient table above shows that the simple model that expresses how incubation technical knowledge acquisition assists firms to high productivity performance. The model is shown mathematically as follows:

Y = a+bx where y is the firm productivity level and x is incubation technical knowl-

edge acquisition, a is a constant factor and b is the value of coefficient. From this table therefore, firms productivity level = 2.848 + 0.736 Technical Knowledge. This means that for every 100% firm productivity performance, technical knowledge acquisition contributed 73.6%.

The significance level below 0.01 implies a

statistical confidence of above 99%. This implies that business incubation technical knowledge has a positive impact on the productivity level of entrepreneurship performance. Thus, the solution would be to reject null hypothesis (H_0), and accept the alternative hypothesis (H_1).

Empirical Findings

The empirical findings reveal that business incubation technical knowledge has a positive significant on the productivity level of entrepreneurship capabilities and also government business Incubation Programs significantly enhance Entrepreneurial Capabilities of Participants. Research tends to show that 70% of the all startup ventures that survive the first three years of operations passed through the incubation programs. Also many entrepreneurs agreed to the fact that with the aid of the incubation programs, startup businesses have been able to survive and cope with the challenges of the global market. The following area has to do with the facilities offered by the incubation programs namely: coaching, network mediation, technical skill acquisition, business knowledge acquisition and so on, which was well applauded by the entrepreneurs were discovered in the research. The study discovered that incubation programs has benefitted startup ventures to reduce the fear of failure in the global market and has also benefitted the incubators to build their customer relationship and enhance their training facilities, and to the government, it has been able to help the government to reduce the rate of unemployment in which at the end contribute to the Gross Domestic Product (GDP) of the country.

Conclusion

The study explored an area of research that was underexplored. This unfortunately prohibited the formulation of robust hypothesis. That being said, some interesting propositions were formulated based on the limited academic literature available. The results of the study, while they indicate that there is mostly moderate impact as perceived by the incubatees, lend support to previous research that claimed that

incubation had a positive impact on venture growth. Sen's capability approach in this study has revealed that great ideas do not guarantee great businesses. Neither does entrepreneurial knowledge alone guarantee success in entrepreneurship. In the same vein 'great' entrepreneurship programmes do not guarantee improved entrepreneurship performance of a country owing to a multiplicity of interacting factors. Beyond entrepreneurship education, incubators provide access to relevant resources which can serve as conversion factors along the journey towards entrepreneurial functions. This study is an important study that helps to evaluate the effects of governmental incubation programs on entrepreneurial capabilities. Finally, this study has clearly revealed that business incubators is aimed at promoting economic development of its community by supporting start-up enterprises and their business development and offers services to support the establishment and development of new as well as existing small and medium enterprises.

Recommendations

Based on the findings of the study, the following recommendations can be summarized:

- i. Entrepreneurs should enroll for incubation programs so as to get the necessary knowledge as regards business setting because it has been reflected from the findings of this study that business incubation programs assists entrepreneurs in the cost of running a startup venture towards its survival in the first three years of operation.
- ii. There is a need to put measures in place to tackle areas of minimal effect. Also, government incubation programmes should be working towards bridging such gaps so as to make their programmes comprehensive enough to enhance the needed capabilities.
- iii. There is a need to establish more technology incubators across different states in Nigeria, especially areas with high technology potentials. This will help to duplicate the positive results

of incubation programmes in different parts of the country, thereby enhancing national entrepreneurial capabilities.

Limitations of the study

It is important to note that this research engaged a very small sample population thus foreclosing the possibility of generalization. Furthermore, this study relied on self-report measures which can potentially lead to subjective bias among the respondents who were asked to assess their entrepreneurial capabilities

Future Research

Since business incubation aims to improve the survival and growth rate of fledgling businesses, it may be important for future research to look into how these capabilities interact in the process of achieving this aim, as well as which capabilities make the most difference. Moreover, the relationship between these capabilities, profit generation and employment creation deserves investigation.

Reference/Литература

- Adegbite, O. (2001).** Business incubators and small enterprise development: the Nigerian experience. *Small Business Economics*, 17(3), pp.157-166.
- Adejimola, A.S. and Olufunmilayo, T.O (2009).** Spinning off an entrepreneurship culture among Nigerian University Students: Prospects and challenges. *African Journal of Business Management*, 3(3), p.80.
- Agboola, B. M. (2010).** Entrepreneurial Education in Nigeria Tertiary Institutions and Sustainable Development. [online] Available at: < <http://files.eric.ed.gov/fulltext/ED512732.pdf>> [Accessed 11 March 2016].
- Albort-Morant, G. and Ribeiro-Soriano, D. (2016).** A bibliometric analysis of international impact of business incubators. *Journal of Business Research*. 69(5), pp.1775-1779. <http://etd.uwc.ac.za/> 108
- Al-Mubarak, H. and Busler, M., (2010).** Business incubators models of the USA and UK: A SWOT analysis. *World Journal of Entrepreneurship, Management and Sustainable Development*, 6(4), pp.335-354.
- Ardichvili, A., Cardozo, R. and Ray, S. (2003).** A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), pp.105-123.
- Arogundade, B.B (2011).** Entrepreneurship education: an imperative for sustainable development in Nigeria. *Journal of emerging trends in educational research and policy studies (JETERAPS)*, 2(1), pp.26-29.
- Arokiasamy, A. R. (2012).** The influence of globalization in promoting entrepreneurship in Malaysia. *South East European Journal of Economics and Business*, 7(2), pp.149-157.
- Bakar, R., Islam, M.A. and Lee, J. (2015).** Entrepreneurship Education: Experiences in Selected Countries. *International Education Studies*, 8(1), p.88.
- Bergek, A. and Norrman, C. (2008).** Incubator best practice: A framework. *Technovation*, 28(1), pp.20-28.
- Bøllingtoft, A. (2012).** The bottom-up business incubator: Leverage to networking and cooperation practices in a self-generated, entrepreneurial-enabled environment. *Technovation*, 32(5), pp.304-315.
- Booth-Jones, L., (2012).** Assessing small business training programme effectiveness in an incubator setting and beyond. Masters dissertation Nelson Mandela Metropolitan University. 1(1), pp.14-29.
- Carree, M.A. and Thurik, A.R. (2010).** The impact of entrepreneurship on economic growth. *International Handbook Series on Entrepreneurship*. 1(7) pp.437-471.<http://etd.uwc.ac.za/> 111
- Chandra, A. and Fealey, T. (2009).** Business incubation in the United States, China and Brazil: A comparison of role of government, incubator funding and financial services. *International Journal of Entrepreneurship*, 13, p.67.
- Conradie, I. (2013)** .Aspirations and Capabilities: The design and analysis of an action research project in Khayelisha, Cape Town. Doctoral dissertation. University of the Western Cape. <http://etd.uwc.ac.za/> 112
- Dawson, C. and Henley, A., (2012).** "Push" versus "pull" entrepreneurship: an ambiguous distinction. *International Journal of Entrepreneurial Behavior & Research*, 18(6), pp.697-719.
- Elmansori, E. (2014).** Fostering innovation and entrepreneurship in Small and Medium Enterprises (SMEs) through business incubators in the Arab world. Doctoral dissertation. Nottingham Trent University. <http://etd.uwc.ac.za/> 113
- Emeh, I.E.J. (2012).** Tackling Youth Unemployment in Nigeria; The Lagos State Development and Empowerment Programmes Initiatives. *Afro Asian Journal of Social Sciences*, 3(3.4).
- European Commission, (2002).** Final Report: Benchmarking of business incubators. [online] Available at: <<http://www.cses.co.uk/upl/File/Benchmarking-Business-Incubators-main-report-Part-1.pdf>> [Accessed 06 March 2016].
- Eze, J.F. & Nwali, A.C. (2012).** Capacity building for entrepreneurship education: The challenge for the developing nations. *American Journal of Business Education (AJBE)*.5(4), pp. 401-408.
- Garrett, J. (2008).** Martha Nussbaum on capabilities and human rights. [online] Available at: www.wku.edu/~jan.garrett/ethics/nussbaum.htm [Accessed 28 January 2016].

-
- Global Entrepreneurship Monitor (2012).** Country Profile: Nigeria. [online] Available at: <<http://www.gem-consortium.org/country-profile/93>> [Accessed 28 January 2016].
- Grimaldi, R. and Grandi, A. (2005).** Business incubators and new venture creation: an assessment of incubating models. *Technovation*, 25(2), pp.111-121.
- Hackett, S.M. and Dilts, D.M. (2004).** A systematic review of business incubation research. *The Journal of Technology Transfer*, 29(1), pp.55-82.
- Hernández, R. and Carrà, G. (2016).** A Conceptual Approach for Business Incubator Interdependencies and Sustainable Development. *Agriculture and Agricultural Science Procedia*, 8, pp.718-724.
- Herrington, M., Simrie, M., Kew, J. and Turton, N. (2011).** Global Entrepreneurship Monitor South Africa. [online] Available: <<http://www.gsb.uct.ac.za/files/GEM2011Report.pdf>> [Accessed 1 May 2016].
- Isaacs, E., Visser, K., Friedrich, C. and Brijlal, P (2007).** Entrepreneurship education and training at the Further Education and Training (FET) level in South Africa. *South African Journal of Education*, 27(4), pp.613-630.
- Jamieson, S. (2014).** Likert scales: how to (ab)use them. [online] Available at: <<http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2929.2004.02012.x/abstract>> [Accessed 25 May 2016].
- James, C., (2002).** Which came first, the incubator or the concept?. [online] Available at: <http://www2.nbia.org/resource_library/review_archive/0202_03.php> [Accessed 25 March 2016].
- Joseph, A.I. and Olawepo, G.T., (2014).** The Impact of Information Communication Technology (ICT) on Economic Growth: Evidence from Nigeria. 53(17)
- Kumar, R., (2010).** Research Methodology: A Step by Step Guide for Beginners (3rd ed.). London: SAGE. <http://etd.uwc.ac.za/116>
- Lalkaka, R., (2003).** Business incubators in developing countries: characteristics and performance. *International Journal of Entrepreneurship and Innovation Management*, 3(1-2), pp.31-55.
- Lee, S.M., Chang, D. and Lim, S.B., (2005).** Impact of entrepreneurship education: A comparative study of the US and Korea. *The International Entrepreneurship and Management Journal*, 1(1), pp.27-43.
- Lesákova, L. (2012).** The role of business incubators in supporting the SME start-up. *Acta Polytechnica Hungarica*, 9(3), pp.85-95.
- Lin, C., Jiang, J., Wu, Y.J. and Chang, C., (2011).** Assessment of commercialization strategy using R&D capability. *Industrial Management & Data Systems*, 111(3), pp.341-369.
- Mas-Verdú, F., Ribeiro-Soriano, D. and Roig-Tierno, N., (2015).** Firm survival: The role of incubators and business characteristics. *Journal of Business Research*, 68(4), pp.793-796.
- Matuluko, M., (2015).** Nigeria's Communications Minister to release new ICT Blueprint in January. [online] Available at: <<https://techpoint.ng/2015/12/28/nigerias-communications-minister-to-release-new-ict-blueprint-in-january/>> [Accessed 11 April 2016].
- McAdam, M. and McAdam, R. (2008).** High tech start-ups in University Science Park incubators: The relationship between the start-up's lifecycle progression and use of the incubator's resources. *Technovation*, 28(5), pp.277-290.
- Mitra, J., Abubakar, Y.A. and Sagagi, M., (2011).** Knowledge creation and human capital for development: the role of graduate entrepreneurship. *Education+ Training*, 53(5), pp.462-479.
- Morris, M.H., Webb, J.W., Fu, J. and Singhal, S. (2013).** A Competency-Based Perspective on Entrepreneurship Education: Conceptual and Empirical Insights. *Journal of Small Business Management*, 51(3), pp.352-369.
- National Bureau of Statistics, (2014).** Measuring Better: Presentation of Preliminary Results of the Rebased Nominal Gross Domestic Product (GDP) Estimates for Nigeria 2010 to 2013. Abuja: National Bureau of Statistics. [online] Available at: <<http://www.nigerianstat.gov.ng>>
- Naudé, W. (2011).** Entrepreneurship and Economic Development: An Introduction. In *Entrepreneurship and Economic Development* pp. 3-17. United Kingdom: Palgrave Macmillan.
- Nwabueze, A.U. and Ozioko, R.E. (2011).** Information and communication technology for sustainable development in Nigeria. *Library Philosophy and Practice*, (1), p.92.
- Nwekeaku, C. (2013).** Entrepreneurship education and challenges to Nigerian universities. *Journal of Education and Practice*, 4(3), pp.51-56.
- Okafor, C., Ola-David, O., Oluwatobi, S., Oludayo, O.O., Akinbode, M. and Achugamonu, B. (2015).** Entrepreneurship Education and Poverty Alleviation: Impact Analysis of Covenant University Graduates
- Okpara, J.O., Halkias, D., Nwajiuba, C., Harkiolakis, N. and Caracatsanis, S.M., (2011).** Challenges Facing women entrepreneurs in Nigeria. *Management Research Review*, 34(2), pp.221-235. <http://etd.uwc.ac.za/120>
- Omoh, G., (2015).** Youth unemployment in Nigeria up to 50%- McKinsey & Co. Vanguard, [Online] Available at: <<http://www.vanguardngr.com/2015/01/youth-unemployment-nigeria-50-mckinsey-co/>> [Accessed 28 January 2016].
- O'Neal, T. and Kulonda, D., (2005).** The Role of Technology Incubators in Engineering Education. [online] Available at: <<http://se.asee.org/proceedings/ASEE2005/RP2005230ONE.pdf>> [Accessed 28 April 2016].
- Oshewolo, S., (2010).** Galloping poverty in Nigeria: an appraisal of government interventionist policies. *Journal of Sustainable Development in Africa*, 12(6), pp.264-274.
- Oviawe, M.J.I. (2010).** Repositioning Nigerian youths for economic empowerment through entrepreneurship education. *European Journal of Educational Studies*, 2(2).
-

- Peters, L., Rice, M., Sundararajan, M. (2004).** The role of incubators in the entrepreneurial process. *Journal of Technology Transfer* 29, pp.83–91.
- Rouach, D., Louzoun, S. and Deneux, F., (2010).** *Incubators of the World, Best Practises from Top Leaders: USA, Israël, France, Switzerland, China and Japan.* France: Pearson Education.
- Salami, C.G.E., (2011).** Entrepreneurial interventionism and challenges of youth unemployment in Nigeria *Global Journal of Management and Business Research*, 11(7).Khayelitsha. Masters dissertation. University of the Western Cape.
- Sen, A., (1984).** *Resources, Values and Development.* Oxford: Basil Blackwell.
- Sen, A. K. (1985a).** Well-being, Agency and Freedom: the Dewey Lectures. *Journal of Philosophy*, 82(4), 169–221.
- Sen, A. (1985b).** *Commodities and Capabilities.* Oxford: Elsevier Science Publishers.
- Sen, A. (1987).** *The standard of living (Vol. LXXXII).* Cambridge: Cambridge University Press.
- Sen, A., (1990).** Development as Capability Expansion. In: K. Griffin and J. Knight, eds. *Human Development and the International Development Strategy for the 1990s.* London: Macmillan, pp. 41-58.
- Sen, A.K., (1992).** Inequality re-examined. Oxford: Clarendon Press. Sen, A., 1993. Capability and well-being. Nussbaum and Sen (eds.), pp.31-53.
- Sen, A., (2001).** *Development as freedom.* New York: Oxford University Press.
- Sen, A., (2011).** *The idea of justice.* Harvard University Press.
- Somsuk, N., Wonglimpiyarat, J. and Laosirihongthong, T., (2012).** Technology business incubators and industrial development: resource-based view. *Industrial Management & Data Systems*, 112(2), pp.245-267.
- Ukpong, J.S. (2013).** Curriculum Redesign and Entrepreneurship Skills Acquisition at Tertiary Education Level, *Journal of Education and Leadership Development*, 5(2).