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Incubator Based Activities and Technology Entrepreneurship Growth in North Western Nigeria

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Abstract. Business Basics, Technology Transfer, Mentoring and Technology Commercialization are a segment of the mandate given to Technology Incubation Centers by the Federal Government of Nigeria through the National Board for Technology Incubation (NBTI) in order to assist technology startups to overcome the challenges of newness. This paper attempted to empirically assess the contributions of these activities, which are incubator based, to Technology Entrepreneurship Growth in North Western Nigeria. Positivist epistemology with objective ontology together with interpretive epistemology with subjective ontology was employed. The study used cross-sectional, descriptive and correlational designs, employing quantitative and qualitative approaches. The data were collected using non standardized instruments (Questionnaires and Interview Guide), with items on Technology Incubator Based Activities and Technology Entrepreneurship Growth, with a sample size of 86. The instruments were tested for their validity and reliability. The data were analyzed at univariate, bivariate and multivariate levels using frequency, percentages, mean, correlation and regression. The results showed that incubator based activities correlates and contribute to growth at 5% level of significance with $P<0.007$ and $R^2 =0.162$ implying that the variable explains 16.2% of the variation growth. The study found out that total absence of succession planning and exit strategy, apathy towards partnership were some of the major causes of technology incubated enterprises failure in North Western Nigeria. Incubation centers should therefore enrich their curriculum to include modules on succession planning and exit strategies. Incubatees should also be exposed to the benefits of partnership and be encouraged to partner.

Keywords: Technology Incubation, Incubator, Incubatees, Technology Entrepreneurship Growth.

1. Introduction

The survival and ensuing growth of new technology enterprises is largely contingent on their capacity to overcome three forms of novelty: Market, Production and Management. Newness to market, to production processes and to management can thwart a firm's survival and growth until it establishes legitimacy, efficiencies and organizational systems that empowers it to sustain a flow of diverse resources precarious for production and exchange. Technology Incubation began in the 1960s as support for these start-up enterprises that needed advice and venture capital to get their ideas off the ground. Incubation has been viewed as a tool for urban renewal, a community development program, a means of technology transfer, a commercialization mechanism and an enabler for technology entrepreneurship. It is an economic platform designed to help technology startup enterprises by providing them with the necessary resources and support that they need to evolve and grow

into more mature businesses. Incubators nurture young firms during their formative years when they are most vulnerable, helping them to survive and grow into viable commercial enterprises.

2. Statement of the Problem

Literature abounds on the belief amongst scholars that the new possibilities for growth, innovation and job creation will come from Small and Medium Enterprises (Thurik & Weneker, 1999). They are key players in achieving economic growth of developing countries like Nigeria (Mohammed et al., 2013). However, in the early days of their growth period, these firms face difficulties that may lead to their failure (Mutambi et al., 2010). This disturbing trend necessitated the Nigerian government to initiate deliberate policies targeted at reducing this high mortality. Few among include provision of Small and Medium Enterprises financing (at single digit interest rates), engaging business development consultants to help in developing bankable business plans, simplifying business registration procedures, providing tax breaks or holidays, establishing incubation centers etc. (Ayodeji & Balcioglu, 2010).

Despite these efforts however, there is evidence that a significant number of incubated businesses in Nigeria fail within the first three years of leaving incubation, while some could not even make it through the first year (Evelyn & Eno, 2014). In addition, Innocent et al. (2014) observed that the Technology Incubation Centers in Nigeria have very weak socio-economic impact on job creation, wealth creation and industrial development. The situation was even gloomier in North Western Nigeria, where a preliminary enquiry by the researcher revealed that post incubation mortality was over fifty percent. This study assessed the contributions of incubator based activities, comprising services delivered within the incubators, to the growth of technology entrepreneurship in North Western Nigeria. The aim was to find the causes of high post-incubation failure rate in North Western Nigeria.

3. Objectives of the Study

(i) To establish the effect of business basics on technology entrepreneurship growth in north western Nigeria.
(ii) To assess the contribution of technology transfer on technology entrepreneurship growth in north western Nigeria.
(iii) To determine the relationship between mentoring and technology entrepreneurship growth in north western Nigeria.
(iv) To establish the relationship between technology commercialization and technology entrepreneurship growth in north western Nigeria.
(v) To assess the contributions of incubator based activities to technology entrepreneurship growth in north western Nigeria.

4. Hypothesis

There is no significant relationship between incubators based activities and technology entrepreneurship growth in north western Nigeria.

5. Review of Related Literature

5.1 Theoretical Review

Organizational Evolutionary Theory (Aldrich, 1999).

Aldrich's evolutionary model asserts that organizations flourish or fail because they are more or less fit for the particular selection environment in which they operate. Schumpeter was the most prominent advocate of the position that economic change needed to be conceptualized as an evolutionary process. The theory describes four processes—variation, selection, retention, and struggle—to describe how populations of organizations emerge and vanish (Aldrich, 1999). The longitudinal perspective of the theory makes its application to assessing the emergence, survival, and growth of new ventures relevant. Variation occurs when individuals and organizations change their routines,

competencies, or structural form. The utility of a variation to an organization depends highly on selection processes that grant certain variations legitimacy and resources for adoption. Hence, selection in the context of incubation occurs in three sequential stages. First, incubators and prospective tenants must select one another; second, incubators offer advice and help tenants select routines, competencies, and structures to improve their performance and odds of survival; third, selection outside the safe confines of the incubator when the process of organizational retention determines its outcome. According to evolutionary theory, retention occurs when organizations are allowed to capture value from their selected variations (Aldrich, 1999). When environments retain organizations and allow them to secure resources and enact transactions with other individuals and organizations, the process of evolution has effectively made a choice in preserving, duplicating, and reproducing a specific set of routines, competencies, and organizational structures. Thus, evolutionary theory says, tenants will fail if there is a strong misalignment between the routines, competencies, and processes they develop in the incubator and those that un-incubated ventures develop on their own.

5.2 Incubator Based Activities

Several studies are indeed convincing about the role of Managerial skills on new venture performance (Lumpkin & Ireland, 1988; Delmar & Shane, 2003; Haber & Reichel, 2007). Technology incubators enhance the survival and subsequent growth of technology entrepreneurship by providing trainings on these skills to incubatees. Similarly, Pakrad et al. (2012) in their study of Iranian Nano technology SME found that not only technical skill (nanotechnology expertise) but also entrepreneurial and business skills are required to achieve the goals of Technology Incubation. Dew et al., (2004); and Fang et al., (2010), posited in their studies that incubators that have effective technology transfer program with more skillful business developers, with different backgrounds, specializations and experiences, dedicated to the graduation process have a greater propensity to create new ventures. Inanga, Azih (2014) however found that, Technology transfer program measured by the quality of human resource and expertise does not seem to impact much on the effectiveness of incubation. Garvey and Garrett-Harris (2008) carried out a systematic review of over 100 studies and evaluations of mentoring schemes across a range of industry sectors; they concluded that both the mentors and mentees benefits immensely from the mentoring sessions. Noe (1998) however, argue for caution in assessing the impact of mentoring. He found that mentors tend to overestimate the value and impact of their support and attributed a greater proportion of the business success to the mentoring, than protégés did. Numerous scholars have alluded to the fact that commercialization is accelerated and influenced by incubators (Al-Mubaraki & Busler, 2010; Chandra et al., 2012; Tamásy, 2007) in the shape of spinoffs (Lee & Osteryoung, 2004; Mian, 1996; Palumbo & Dominici, 2013). However, Phillips (2002) did not find a strong relationship between commercialization and incubation.

5.3 Technology Entrepreneurship Growth

A study conducted by Vernet Lasrado et al., (2015) amongst university incubators revealed that incubators have a significant effect on job and sales growth. The study by DiGiovanna, S., and Lewis, D.A. (1998) at New Brunswick, New Jersey found that the direct jobs created by incubator clients cost significantly less than those created through other types of economic development capital projects. In a study on the impact of incubation on firm performance during post-graduation period in Turkey, Yasin Sehitoglu and Omer C.O. (2013) found out that incubated firms outperform the non-incubated firms both in employment and sales growth, showing a positive impact. Similarly, Allen, D., and Bazan, E. (1990) while comparing incubated and non-incubated firms in Pennsylvania found that incubator clients had

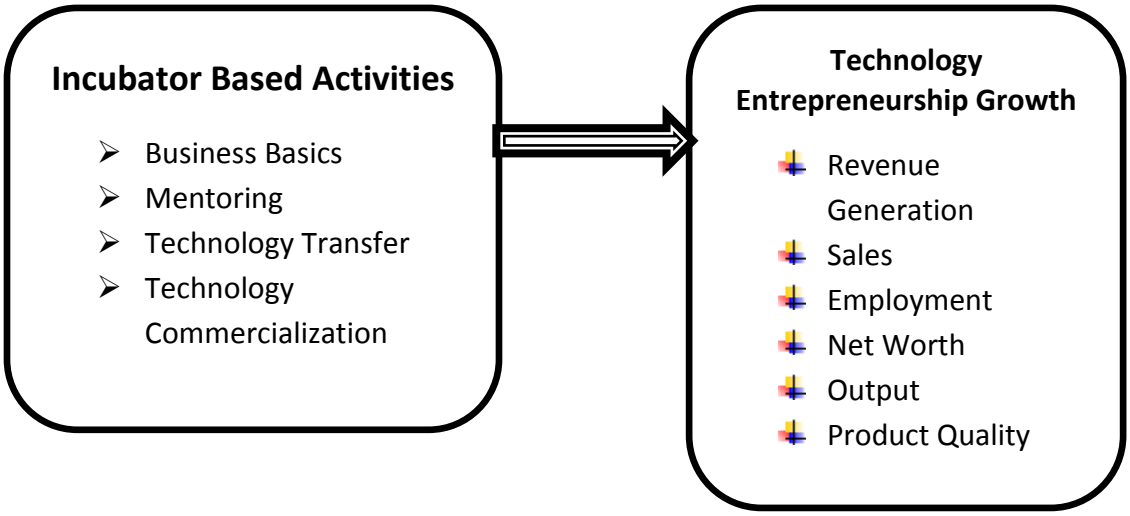
statistically better performance in sales and employment.

5.4 Incubator Based Activities and Technology Entrepreneurship Growth

Inanga EL, Azih E (2014), while measuring the performance effectiveness of entrepreneurs with some performance indicators from the demographics- Number of Employees, Sales Turn Over, Output and Net Worth suggest that Technology Incubation has a positive effect on the development of Small and Medium Scale Enterprises. National Technology Incubator's Network of Australia (2009) noted that incubators supported the development of technology based companies in the country, thereby acting as catalyst for the refocusing of Australia's economy towards knowledge-based industrialization. However, Chen's (2009) study of Taiwanese incubators found no direct effect on new venture performance as a result of incubation. Rothaermel and Thursby (2005) on the other hand showed that incubated firms were significantly less likely to experience outright failure. Allen, D., and Bazan, E. (1990) while comparing incubated and non-incubated firms in Pennsylvania found that the failure rate for incubator graduates was lower than that of non-incubator firms. Massimo G. Colombo and Marco Delmastro in 2002 conducted a study composed of a sample of 45 Italian technology startups which at the beginning of 2000 were located in an incubator within a park. Their findings indicate that on-incubator firms show higher growth rates than their off-incubator counterparts. They also perform better in terms of adoption of advanced technologies, aptitude to participating in international R&D programs, and establishment of collaborative arrangements, especially with universities. However despite the popularity of incubators as a means of improving the fates of new business ventures, some scholars asserts that there is limited evidence that they improve firms' performance or viability (Aernoudt 2004; Amezcua et al. 2011; Amezcua 2010; Peters et al. 2004; Rothaermel and Thursby 2005; Scillitoe and Chakrabarti 2010). Some researchers are even of the view that the incubation process can weaken a firm's ability to compete and survive after graduation (Amezcua, 2010a).

6. Conceptual Framework

Figure 1: Conceptual Framework Relating Incubator Based Activities and Technology Entrepreneurship Growth.



Source: (Adopted by researcher using ideas of Barret (2004), Schumpeter (1934), Kruger (2004), Churchill and Lewis (1983) and Casson (1982).

7. Methodology

Based on the mixed nature of the study, the study used positivist epistemology with objective ontology together with interpretive epistemology and subjective ontology. Non-experimental, descriptive, correlative and cross-sectional designs were adopted for this study.

Response Rate

Table 1 Response Rate

Categories	Number of Enterprises	Percentage (%)
Population	86	100
Total responses	84	97.7

Source: *Results of data analysis (2016)*

8. Testing for Statistical Assumptions

In order to conduct further parametric statistical tests, the appropriateness of the data has to be ascertained, this study therefore subjected the data to normality test, linearity test, no multicollinearity test and homogeneity test. The result showed that the data was normally distributed. Similarly, the components under the study variables were highly correlated and there was no multicollinearity among the components under incubator based activities and the Levene's test statistic reveals that the data was homogeneous and therefore appropriate for the conduct of parametric analysis.

Descriptive Statistics of the Respondents (Table 2)

Variable	Category	frequency	Percentage
Gender	Male	66	78.6
	Female	18	21.4
	Total	84	100.0
Age	Below 30 years	3	3.6
	30 – 39 years	43	51.2
	40 – 49 years	31	36.9
	50 – 59 years	6	7.1
	60 and above	1	1.2
	Total	84	100.0
Service	6 – 7 years	67	79.8
	8 – 9 years	10	11.9
	10 – 11 years	6	7.1
	12 years & above	1	1.2
	Total	84	100.0
Educational qualification	Elementary	2	2.4
	Secondary	4	4.8
	Tertiary	19	22.6
	Graduate	48	57.1
	Post Graduate	11	13.1
	Total	84	100.0
Marital	Single	10	11.9
	Married	74	88.1
	Total	84	100.0
Location	Kebbi	13	15.5
	Kano	29	34.5
	Sokoto	25	29.8
	Gusau	17	20.2
	Total	84	100.0
Position/Status	Owner/entrepreneur	45	53.6
	Management staff	38	45.2
	Intermediate	1	1.2
	Total	84	100.0

Source: Results of data analysis (2016)

The findings in table 2 above shows that majority of the entrepreneurs were male (78.6%). The female constitute 21.4%. The findings also revealed that the majority of the entrepreneurs fall between the ages of 30-39 (43%) and 40-49 (31%) years respectively. Entrepreneurs with ages below 30 were only 3, while those between 50-59 years, and 60 and above years were 6 (7.1%) and 1 (1.2%), respectively. Furthermore, the findings depicted that majority of the enterprises have existed for 6 to 7 years (67), followed by those that existed for 8 – 9 years (10). Six (6) enterprises existed for between 10 to 11 years, while only one (1) existed for over 12 years. From the results depicted above also, majority of the entrepreneurs have bachelor's degree (57.1%), followed by those with tertiary education (19.0%). Those with Post Graduate qualifications constituted 13.1% while those with secondary and elementary education were 4.8% and 2.4% respectively. As indicated in table 4.2 also, majority of the entrepreneurs were married (88.1%), followed by those that were single (11.9%). None of the entrepreneurs was either a widow or a widower. The findings also indicated that Kano Technology Incubation Center had the highest number of entrepreneurs that participated in the survey (34.5%), followed by Sokoto (29.8%), Zamfara (20.2%) and Kebbi (15.5%). The findings ascribed that 53.1% of the respondents were the owners themselves, 45.1% were management staff of the enterprises, while 1.2% were intermediate/junior staff.

9. Summary of the Results from Interview

With the mixed method adopted by the study, the obtained quantitative result was supported with qualitative responses. To achieve this, the study interviewed selected entrepreneurs that went through the incubation process from the four locations covered. The locations were Kano, Sokoto, Kebbi and Zamfara (Gusau). Their views on the contributions of the incubator based activities towards the growth of technology entrepreneurship in North Western Nigeria were recorded. These views provided, in more details, information about the study variables.

10. Findings based on the objective of the Study

10.1 Hypothesis Testing

Objective: To assess the contribution of Incubator Based Activities to Technology Entrepreneurships Growth in North Western Nigeria.

The null hypothesis that incubator based activities have no significant contribution to technology entrepreneurship growth in North Western Nigeria was tested using regression analysis at 5% level of significance.

Relationship between Incubator Based Activities and Technology Entrepreneurship Growth (Table 3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.347	.603		3.890	.000
	Incubator Based Activities	.295	.185	.174	0.599	.007
R = .403 R Square = .162 Adjusted R Square = .120 Dependent Variable: Growth						

Source: Results of data analysis (2016)

Table 3 above presents the analysis of variance on the regression model, the p-value of the analysis (<0.007) is less than 0.05, we therefore reject the null hypothesis and conclude that the contribution of incubator based activities to technology entrepreneurship growth in North Western Nigeria is significant. Furthermore, correlation between the incubator

based activities and technology entrepreneurship growth is 0.403, implying that there is 40.3% relationship between Incubator Based Activities (Business Basics, Technology Transfer, Mentoring and Technology Commercialization) and technology entrepreneurship growth in North Western Nigeria. The value of the R-square (coefficient of determination) is 0.162 indicating that 16.2% of the variation growth is explained by the Incubator Based Activities.

Relationship between Incubator Based Activities components and Technology Entrepreneurship Growth (Table 4)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.094	.586		3.575	.001
	Business Basics (IBB)	.170	.278	.121	.610	.543
	Technology Transfer (ITT)	1.010	.366	.672	2.764	.007
	Mentoring (IME)	-1.085	.382	-.745	-2.838	.006
	Technology Comm. (ITC)	.275	.166	.193	1.660	.101
R Square = .167 Adjusted R Square = .152 Sig F Change = 0.000 Dependent Variable: Growth						

Source: Results of data analysis (2016)

Table 4 depicted that the model was significant (Sig F Change < 0.05).The table also shows that components of Incubator Based Activities explain about 16.7% of variations in Technology Entrepreneurship Growth in North Western Nigeria. Furthermore, only mentoring and technology transfer have significant contribution to technology entrepreneurship growth at 5% level of significance among the incubator based activities, while other activities do not have significant effect on the growth. The results of the linear regression shown in table 4 were associated with the following equation for the significant model:

$Y_{IBA} = 2.094 + 0.170X_{IBB} + 1.070X_{ITT} - 1.085X_{IME} + 0.275X_{ITC}$

Additionally, from the 13 informants interviewed in this study, 11 agreed that technology incubation centers provide adequate trainings on managerial skills. Similarly, the quality of their business development teams was high, resulting to effective technology transfer and effective mentoring. Only six out of the 13 however agreed that incubation centers provide the synergy required towards commercialization of incubatees products. They concur on the need for the technology incubation centers in North Western Nigeria to put additional efforts in ensuring that innovations are speedily commercialized in order to encourage the new firms to do more.

10.2 Background information

The results ascribed that majority of the respondents were male. This shows that male were more willing to undertake entrepreneurial activities than their female counterpart. This finding concurs with Bosma, Acs, Autio&Levie (2009); Coven, Green &Slevin (2007); Kimuli (2011) and Shehu(2014). The observed male dominant entrepreneurial landscape may probably be due to the nature of the environment (culture, beliefs system etc.). The culture in North Western Nigeria is largely Islamic, and in an Islamic culture, males are considered the sole providers of provisions required for sustenance. Females therefore do not largely engage in activities outside the home. Their primary responsibility is proper upbringing and other domestic activities. This finding is in tandem with Cliff (1998), Nathaly Riverin (2005). The results also found that majority of the respondents were between the ages of 30 and 49. This may be as a result of the demanding nature of nurturing a business start-up. The physical and mental capacity of the undertaker is a major success factor.

Moreover, empirical research highlights this as the "peak age" for entrepreneurship. This finding is consistent with Dane Stangler et al., (2013), G. Tamizharati et al., (2010), and Julian Lange et al., (2014). Furthermore, the study depicted that the businesses that formed the sample of the survey were largely between 6 to 7 years in operation. This may probably be due to the ability of the incubators to graduate more incubatees of recent due to gained experiences and increased capacity; and their increase in number in the region. This is consistent with the findings of Ratinho, (2011). Similarly, the results found out that majority of the respondents had attained a bachelor degree or a higher national diploma (HND). This is probably due to the high rate of unemployment. Graduates do not easily get the much desired white collar jobs, and therefore resort to entrepreneurial undertakings. The requirements for admission into the incubation centers may equally give the graduates an edge over the less educated. This finding concurs with Kimuli (2011) and Shehu (2014). The results however contradict the findings of Ekpenyong, and Nyong (1992). Furthermore, the results showed that majority of the respondents were from Kano followed by Sokoto. This may probably be because Kano and Sokoto incubators were established much earlier (1994 & 1999) than the others. This gives the two centers the opportunity to graduate more incubatees being more experienced in the incubation process. This is in tandem with the findings of Sherman and Chappel (1998), Sean M Hackett and David M Dilts (2004a).The results also depicted that majority of the responses were given by the entrepreneurs/owners themselves. This may probably be connected with the fact that majority of the enterprises were one-man-biz. The owners keep all the records and take all the decisions; as such the owner was the only person in a better position to give the required information.

10.3 Relationship between Incubator Based Activities and Technology Entrepreneurship Growth

Table 4 indicated the existence of a positive correlation between Incubator Based Activities and Technology Entrepreneurship Growth in North Western Nigeria. Business Basics, Technology Transfer, Mentoring and Technology Commercialization are the components of Incubator Based Activities. This means that technology incubation centers should give additional attention to imparting these skills to incubatees. This will greatly enhance their chances of survival and subsequent growth after graduation. This finding is in line with the findings of Smilor and Gill (1986), Lumpkin and Ireland (1988), Lyons (2000), Delmar and Shane (2003), Haber and Reichel (2007) and Pakrad et al. (2012), who also found positive association between the components of Incubator Based Activities and Technology Entrepreneurship Growth in their studies. This adds to the growing empirical literature that suggests the existence of a positive association between Incubators Based Activities and Technology Entrepreneurship Growth. By assisting incubatees to acquire adequate managerial skills, a lot of the difficulties they face in their efforts to access finance, network, meet regulatory requirements, marketing, planning and organizing etc. will be remedied. An analysis of the effect of individual dimensions of Incubator Based Activities from the results showed that mentoring and technology transfer were found to predict Technology Entrepreneurship Growth significantly. This significant association found between mentoring and technology transfer with Technology Entrepreneurship Growth allude to the earlier findings of Hofer and Sandberg (1987), Ibrahim and Godwin (1986), Surbauer and Baker (1989), Al-Mubaraki and Busler (2010), Chandra et al. (2012) and Palumbo and Dominici (2013). However it was found that business basics and technology commercialization were not significant predictors of Technology Entrepreneurship Growth in North Western Nigeria. This result concurs with the findings of Chan and Lau (2005), Tamasy (2007), Inanga EL and Azih E (2014). It implies that all dimensions of Incubator Based Activities do not necessarily contribute to Technology Entrepreneurship Growth in every situation and setting. By and large however, the result of this study indicates

that Incubator Based Activities is a precursor of Technology Entrepreneurship Growth in North Western Nigeria. Technology Incubation Centers should therefore intensify their efforts in giving incubatees adequate trainings on business basics which will lead to the acquisition of excellent managerial skills that would certainly give them a competitive advantage, enabling them to strategically position themselves to exploit opportunities in turbulent situations. Collaboration with relevant government agencies, the academia and the private sector should be given top priority to facilitate speedy commercialization of incubatees' products.

11. Study Hypothesis and Decision

Hypothesis

There is no significant relationship between Incubators Based Activities and Technology Entrepreneurship Growth in North Western Nigeria.

Therefore the null hypothesis was rejected.

12. Conclusions

The main objective of this study was to explore the relationship between Incubator Based Activities and Technology Entrepreneurship Growth in North Western Nigeria. Based on the findings and discussions from the study, a number of conclusions were drawn.

The study concluded that Incubator Based Activities is a significant predictor of Technology Entrepreneurship Growth. This means that incubated enterprises stand a better chance of survival and experiencing higher growth than the un-incubated enterprises. The study also concluded that the training courses offered to incubatees under incubation are somewhat deficient. These are likely to affect survival rate, project management in terms of time to market, national and international market penetration and sales. Incubation centers that have a holistic approach to management skills training may have more prospects in producing firms that will stand the test of time. Incubatees have strong apathy to partnership, this hampers their efforts in having access to finance.

13. Summary of the Major Findings

The study found linear, positive and significant relationship between Incubator Based Activities and Technology Entrepreneurship Growth in North Western Nigeria.

14. Recommendations

A succession planning and exit strategy ensures continuity and subsequent survival of businesses. In business basics trainings therefore, incubation centers should ensure that incubatees are tutored adequately on succession planning and exit strategies. This is because the study found out that almost all the graduated enterprises that the owner/manager died did not survive after their demise. This is an ugly trend as businesses are supposed to outlive their founders/owners. According to Scholes, Westhead and Burrows (2008) transfer of ownership is very important to the continuity and success of small business. The inability of small business owners to transfer the business successfully to another person may lead to closure. It is therefore paramount for the incubation centers to include, amongst others, extensive trainings on succession planning and exit strategies. This will ensure successful successions or exits that may not result in the dissolution of the businesses.

The study also discovered that because North Western Nigeria is largely Muslim, Islamic Jurisprudence and Law is always applied in sharing the assets of a deceased, including his businesses. Properties belonging to businesses are therefore sold prematurely and the businesses wound-up to allow for the sharing of the proceeds to the beneficiaries. The staunch apathy towards partnership by most business owners in North Western Nigeria has contributed greatly to the prevalence of this predicament. Joint businesses in most cases survive the demise of a partner. This is because there are clear guidelines for either withdrawing from the partnership or liquidation of the business concern. The one-man-biz mentality is equally responsible for the preference to debt financing instead of equity financing. This has also made access to finance more difficult as most small businesses

cannot satisfy the stringent conditions attached to the financing. Technology Incubation Centers should therefore sensitize incubatees on the advantages of partnerships in their business skills trainings. The government should also encourage entrepreneurs to partner by giving some incentives. This will hopefully bring to an end these failures due to the demise of the owner/manager in North Western Nigeria.

Literature has shown that the Nigerian model was adapted from the USA in 1993; however, the success story as a consequence of the implementation strategy has fallen short of expectation. The challenges Nigerian policy makers encountered in the implementation of the incubation model could largely be traced to concerns and issues encompassing the adaptation of the incubation policy to a non-Western local environment. Policy makers should therefore endeavor to largely localize the adaptation strategy to suit the local environment. An incubation program which value-add most effectively will be one that adopt a pro-active business development stance based on a sound appreciation of the business needs of its local clients

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