DBN Development Bank of Nigeria
...Financing Sustainable Growth

DBN JOURNAL OF ECONOMICS & SUSTAINABLE GROWTH

VOLUME 4, ISSUE 1, 2021

INNOVATIVE INFORMAL SECTOR FINANCING: EMPIRICAL EVIDENCE FROM THE CAPITAL SHARING MODEL OF IGBO APPRENTICESHIP SYSTEM IN NIGERIA

ADESOJI O. FARAYIBI
DEPARTMENT OF ECONOMICS,
UNIVERSITY OF IBADAN, IBADAN,
NIGERIA
E-mail: afarayibi2000@gmail.com

Abstract

This article investigated the impact of Igbo Apprenticeship System (IAS) on informal sector businesses in Nigeria. IAS is an innovative indigenous informal sector financing approach among the Igbo people in Nigeria. The study conceptualized the capital sharing model of IAS in comparison with venture capital and modern incubation system. Using a household survey data collected from about 400 informal sector businesses randomly selected from Onitsha (Anambra state) and Aba (Abia states) in South-Eastern Nigeria, the study examined the effect of capital sharing model on small firm growth in Nigeria. The estimation technique was based on ordinary least square (OLS) method while the Probit regression was used as a robust check on the OLS estimates. Findings revealed that the businesses of apprentice-graduates, i.e. those who underwent IAS grew significantly in any of the three measures of growth used; unlike the businesses whose owners did not undergo IAS. Therefore, this study provided an empirical validation to the use of the capital sharing model of the Igbo Apprenticeship System as an innovative informal sector financing model in Nigeria. The study thus recommends a policy framework that supports this innovative informal sector financing in Nigeria. Also, the venture capital and modern incubation system can be extended to incorporate features of the capital sharing model of IAS. This would however require strengthening the informal sector business environment.

JEL Classification Codes: G24, G29, G32, L26, L29, O17

Keywords: Financial Innovation, Venture Capital, Igbo Apprenticeship System, Informal Sector.

1. Introduction

Access to adequate financing has been the bane of the informal sector economy. Most informal sector businesses are characterized by inadequate collateral, lack of official status, low level of literacy, inconsistent cashflows etc. These features limit their access to the required finance to increase productivity and expand production activities. Given their heterogeneity, informal sector businesses differ in their degree of elasticity, disposition to change, level of technology and risk attitude (Sanderson, 2019). Thus, a specific funding option that accommodates these diversified characteristics is still lacking.

Several financing options have been identified in the extant literature to fund informal businesses and sometimes, start-ups. Some of these include loans from commercial banks, government institutions, family/friends, money lenders or other informal sources; retained earnings; trade credit from suppliers; trade credit from customers; leasing arrangement; non-bank financial institutions; non-governmental organisations among others. (Farayibi, 2015; Folawewo, 2004, 2013). The potential of these financial sources is limited by information asymmetries between small businesses and lenders, or outside investors; the intrinsic higher risk associated with small-scale activities and the existence of sizeable transactions costs in handling informal sector financing[1].

The informal sector business therefore requires an innovative financing option that guarantees sustainable entrepreneurship and drives job creation. Such financing mechanism should be predicated on equity capital which has the potential to drive innovation and growth in such informal businesses with uncertain results and probable information asymmetries. This need had necessitated the development of several innovative and country specific financing approaches which could handle the subsistence nature of the informal sector; reduce the higher intrinsic risks associated with small scale informal activities and subsequently stimulate the growth of the sector. One of

[1] As argued by Sanderson (2019), creditors- whether financial institutions or individual obligors, have a comparative advantage in credit information processing and intermediation than informal sector players which might be a disadvantage to innovative business financing.

such innovative financing approaches is the capital sharing model of Igbo apprenticeship system in Nigeria.

The Igbo Apprenticeship system (IAS) is essentially different from venture capital and modern incubation system. Unlike venture capital, which is a tenured investment, IAS is based on capital sharing model which bequeaths operating and investing experience as well as social and physical capital to the recipient. While venture capital funds innovation, the apprenticeship system is an innovative funding approach in the informal sector.

Igbo apprenticeship system is also different from the modern incubation spaces. In the latter, business owners participate and pay rent while in the former, apprentices are employees with higher responsibilities and practical platform for real time training and nurturing. The apprenticeship system does not have equity shareholding or return on investment [ROI] as fundamental principle to apprentices and their businesses. Thus, in the end, it is more gratuitous than the strict business of modern incubation (Farayibi, 2015).

It is therefore pertinent to ask whether the capital sharing approach of Igbo apprenticeship system has affected informal sector businesses in Nigeria. Examining this question is essential at least for two main reasons. First, it would guide the empirical investigation of the effect of this funding approach on the informal sector growth. Second, it would provide understanding on whether this capital sharing model is a new pathway in innovative informal sector financing.

Hence, this article contributes to the ongoing debate on financial innovation by investigating the role of capital sharing model on small firm growth with evidence from the Igbo apprenticeship system in Nigeria. A standard procedure in financing framework is to present financial information from the purview of the creditor. This practice often jeopardises the viability of business deals since it doesn't always satisfy the financial needs of the borrower. While debt financing and other dominant sources will remain vital for financing economic activities, long-term investments are better financed by equity capital as exemplified by the capital sharing model of the Igbo apprenticeship system in Nigeria.

The rest of the paper is as follows: the contextual analysis is presented in section two, section three presents the literature review while section four discusses the methodology and model specification. The fifth section presents the empirical results and the guiding discussions while the sixth section presents the conclusion and policy recommendations.

2. The Context of Nigeria

This section provides the contextual analysis of the Nigerian informal sector and the overview of the capital sharing model of the Igbo apprenticeship system as being practiced in Nigeria. This offers the background to predicate the innovative informal sector financing model in comparison to existing funding options in Nigeria.

2.1 Stylized facts about the Nigerian Informal Sector

Like other developing countries, the informal sector in Nigeria is large and dynamic. However, the actual size is often moderated by the level of economic development and quality of existing institution in the country (Folawewo, 2013). Essentially, the informal sector in Nigeria can be categorized into the economic and financial component as well as administrative and political components[2]. The first category comprises large number of cottage industries and small-scale business operators as well as various financial institutions that serve as sources of fund for business; while the second category comprises the institutional approach to fund and regulate the sector.

The Nigerian informal sector also covers many groups such as production, distribution, and service sub-sector. The production activities cover services, small-scale manufacturing, and construction. Though, bulk of the goods and services produced are often for domestic consumption. Since the sector

[2] This was further elucidated by Folawewo (2013).

employs small capital, it has little dependence on intermediate inputs. Nearly all the economic activities carried out by large firms (or formal sector) are also performed in the informal sector, though at a small scale determined by endogenous factors. Although majority of informal sector activities are not registered, they are neither concealed nor illegal (Farayibi, 2015; Folawewo, 2013; Adamu, 1998)[3]. Since their existence are known and recognised by the government, informal sector activities in Nigeria mutually coexist with those of the formal sector. But, the two also complements each other.

However, unlike the formal sector, the Nigerian informal sector has no access to official protection, though government influence on the sector's activities is not completely absent. In addition, the informal sector has little or no access to credit facilities from formal financial institutions. Usually, operators in the sector approach their trade associations for financial assistance but this has always been inadequate for financing their businesses. Thus, most of the informal sector businesses are often poorly capitalized. This capital inadequacy had necessitated the need for innovative sources of funds that could incorporate the informal sector characteristics.

Given the Nigerian heterogenous population, several innovative approaches and funding mechanisms have been developed in the Nigerian informal sector. However, the application of these funding initiatives takes into account the multi-ethnic nature of the country. That is, the application of these funding approaches is mostly dotted by this diversity. In retrospect, to address the capital inadequacy in the informal sector, many innovative funding approaches were used by the dominant ethnic groups in Nigeria[4]. Prominent among the indigenous innovative informal sector financing approaches are the *Adashi* (a unique contributory scheme) which is being used by the Hausa

---

[3] Sometimes the activities of this sector are regarded as underground economy since most of them are not captured in national income accounting. This could be due to the sundry characteristics of the sector.

[4] Nigeria has more than 250 ethnic groups and about 450 languages. Each of these ethnic groups has its own indigenous funding approach for supporting their informal sector businesses. However, for brevity and concise analysis, this study identifies the prominent indigenous funding approaches of the three major ethnic groups in Nigeria, i.e. Hausas in the North, Igbos in the East, and Yorubas in the West.

tribe; the *Igba-boyi* (Igbo apprenticeship system) which is practiced among the Igbo tribe; the *Esusu* (a credit institution) and *Isofa* (socially guaranteed loan approach) which are common funding innovations among the Yoruba tribe.

However, the focus of this paper is on *Igba-boyi*, that is, the Igbo apprenticeship system. Two reasons can be adduced for this. First, the level of success recorded in the indigenous informal sector business of the Igbo people in the country is high compared to the other tribes. Thus, there is a need to identify the factors driving this success. Second, it is important to identify the core principles of this innovative funding approach in order to ascertain the possibility of its adaptability to different business and economic environments.

2.2 Capital Sharing Framework of Igbo Apprenticeship System in Nigeria

Although the real history of Igbo apprenticeship system is now shrouded in antiquity, research from oral interview showed that the practice dates back to the pre-colonial era whereby the Igbo tribes in Nigeria participated in informal trades to augment the agrarian economy in the country. However, the apprenticeship system became prominent after the Nigerian civil war[5] that took place between 1967 and 1970, where many Igbo businesses were displaced. The 20 pounds compensation policy of government in the post-civil war era (irrespective of the amount lost to the war) could not fully compensate for the damages suffered during the war.

Hence, the post-civil war placed an agony of survival on the Igbo people, which forced the rich and prominent ones among them to conceive investment of their little money for returns. Also, many parents were compelled to send their kids (between 8-20 years of age) to serve as apprentices under successful businessmen. The *Oga* [6] and *Nwaboyi* [7] are usually in agreement in

[5] The Nigerian civil war was mainly Nigerian-Biafran War. It was orchestrated by an Igbo General and War Lord, Chukwuemeka Odumegwu Ojukwu, who wanted a cessation of some Southern states (which were predominantly Igbo-speaking) from Nigeria in order to form an independent country called Biafra.

[6] *Oga* means the Nurturer

[7] *Nwaboyi* is the apprentice

the apprenticeship system, with the *Nwaboyi* serving and learning from the *Oga* for an average period of four to seven years. The settlement method is generally included in the contract. This was how Igbo businessmen developed big market systems in towns like Onitsha, Nnewi and Aba after the war.

This apprenticeship system has paid off as a good informal sector financing option, as evidenced in the success and expansion that the Igbo people have achieved in their diverse undertakings within and outside Nigeria. The strong level of solidarity among them is also central to achieving the recorded business success. Table 1 shows the coverage of Igbo business enterprises in Nigeria within the informal sector's framework.

Table 1: Coverage of Igbo Business Enterprise in Nigeria

Informal Sector Categorization	Sub-Sector/Informal Business
Transport	Interstate. Intercity. International
Construction	Welding, Furniture making, Others.
Industry	Chemical industry Pharmaceutical industry Petrochemical industry Printing and Publishing
Commerce	Importation Business Exportation Business
Trading	Specialty shops: Grocery, Cosmetics, etc Appliances: electronics, building materials, Clothing and materials (new or fairly used), Automobile Spare parts Footwears. Others
Service	Dry cleaning, Salon, Fashion design,

	Bar and Hotels, Repairs etc.

Source: Author's Compilation (2019)

In its conceptualization, *Igba-boyi* is the Igbo name for the apprenticeship system. The Igbo apprenticeship system (IAS, henceforth) is the largest business incubator platform in the world because when an apprentice serves, his master is expected to set him up in business[8]. Essentially, the Igbo culture frowns at children roaming the streets doing nothing. If a child is unable to go to school, his relatives are expected to ensure that he learns a trade. Thus, boys who have completed their primary or secondary school education would intern with a shop owner, who runs any of the business categories in Table 1 for a specific period of time, (usually 4-10 years or more) to learn the trade. When the years are over and the apprentice is as good as his master, the master sets him up with some cash and goods to start his own business[9].

The core principle of IAS is based on a capital sharing model whereby not just physical capital is bequeathed at the end of the internship, but also social and intellectual capital with operating and investing experience acquired during the process. It is also based on mentor-mentee model whereby the former trains the latter in the practical skill of business ideation and management; and also provides the capital to jump start the mentee's business at the end of the training.

The IAS is conceptualized into four stages to ensure that no part of the scheme is skipped. These stages include Recruitment, Ingratiation, Incubation/Training and Funding. These stages are essential, as any apprentice who is unable to complete the process may not be entitled to settlement at the end of the scheme.

The recruitment stage covers the period when the decision to enrol the intending apprentice is made. At this stage, established businessmen [the

[8] Robert Neuwirth, did a comparative analysis of IAS with other similar funding practices most especially in other African countries and asserted that these indigenous funding approaches had transverse through the years and had become a vital tool of business innovation and funding of informal sector activities.

[9] This capital sharing approach ensures that the business science is learnt as this tenacity is needed to guarantee the survival of the mentee's business after graduation.

nurturer] in a town pick up teenagers or young adults [the apprentice] from their homes to give them opportunity to learn and be empowered. The idea centres around taking children in precarious situations and the perilous tendencies of an idle mind off the streets to give them a purpose worthy of emulation, so they can also continue the trend when they are established. Sometimes despondent youths are recruited into IAS with the aim of giving them a future. Thus, IAS is mostly about giving chances without core evaluation, although some apprentices get rejected for character issues.

The initiation or ingratiation stage covers the entire orientation process. This stage focuses on building social capital. This stage commences with agreement signing in order to give a legal status to the whole process. This would be followed by proper orientation into how the whole apprenticeship system works. The ingratiation process basically is targeted at introducing apprentices to the system, their duties, roles, and overall workings of the system. Some of the duties that could be assigned to the apprentice include: house cleaning, running errands, washing cars, doing school runs for the masters' children and other chores. The apprentices are not paid for the services rendered; rather, it is their way of paying for the trainings being received. The masters, on the other hand, provide accommodation, feeding, clothing and every other necessity that would make the learning process worthwhile. Also, some of the business specific roles that could be assigned include: shop attendance, accompanying the boss to market trips, banking duties, managing a separate shop, personal business trips and other delegated duties.

The third stage is the incubation/training phase. This is the fulcrum of the apprenticeship system. Here the nurturer gives the apprentice informally formal, but raw, hands-on, ruthless and real-life business education. Table 2 presents the summary of the basic business skill sets and intellectual capital expected to be acquired in this stage. As Table 2 depicts, the basic business skill sets and intellectual capital provided during the incubation/training stage can be categorized into business science, technical skills, management skills, relational skills and personal entrepreneurship skills. This stage of the IAS exposes the apprentices to the practical skills needed to groom their businesses from business ideation to management, interpersonal relation, delegation, and handling change and crises management. They would also be exposed to real life risk taking by making different business and investment decisions while the training lasts. It exposes them to the real world of business competition and survival.

The last stage of the IAS is funding. This stage completes the whole process and serves as the threshold into the practical application of the skills acquired during the previous stages. It is the settlement[10] stage, i.e., the transition from being an apprentice to a master in order to consolidate the process. Here, the boss sets up the apprentices in their own business so that they can become independent and on the long run recruit other apprentices too. Thus, the cycle can continue.

Table 2: Basic Skill Sets and Intellectual Capital Provided by Igbo Apprenticeship

Training Category	Skill Sets
Business Science	Generating business ideas
	Identifying new business opportunities in new environment
	Identifying new business opportunities in existing environment
	Coping mechanisms during business downturn
	Managing harsh business environment
	Launching a business enterprise
	Turning opportunities and challenges into business
Technical Training	Monitoring/ scanning the environment
	Technical business management
	Use of technology
	Network building
	Team playing
	Dealing with business competition
	Learning market language
	Bargaining strategy

[10] Settlement here is a jargon used by Igbo people to capture the process of setting up the apprentice-graduate in his own business by providing him the necessary capital (physical and/or social) that he needs to start up.

Management Training	Planning and goal setting Decision making Human relation Marketing Different business financing approaches Book keeping skills Control of business premises Managing growth and business expansion
Relational Training	Cut throat business negotiation skills How to work as a team How to build business network Customer relations skills How to handle customer feedbacks
Personal Entrepreneurship Training	Inner control and discipline Risk taking Innovative decision-making skills How to be change oriented. Skills to manage change.

Source: Author's Compilation (2019)

The total settlement sum depends on several factors such as type of business, length of service, ability of the boss, legal agreement etc.; and payment could be made in cash, cheque, electronic transfer or any other means convenient to the parties involved. Settlement could also be paid in full at once or given in tranches to prevent squandering. Sometimes, the Master would inform the apprentice-graduate that a certain proportion of the total settlement should be returned at the end of certain period in order to prevent him from wasting the lump sum given to him.

Finally, the settlement could be funding alone or accompanied with physical assets. Sometimes, a well-stocked shop could be bequeathed to the apprentice-graduate in addition to cash. This type of settlement is determined by the sundry character, general enterprise and industry of the apprentice-graduate while undergoing the IAS; and the largesse of the nurturer. The degree of default in settlement or funding the business of the apprentice-graduate is very minimal because the IAS is a socially guaranteed scheme. In all, the IAS is more gratuitous than other apprenticeship systems in Nigeria.

2.3 Policy Supports for Igbo Apprenticeship System in Nigeria

To underscore the importance of the IAS, this section reviews some policies by government to enhance innovative informal sector financing in Nigeria. This provides the framework for the feasibility of IAS in the country and reiterates the commitment of government to the informal sector. To do this effectively, the review is divided into two groups, namely, the direct and indirect policy supports.

The direct policy supports for IAS in Nigeria are the schemes and programmes targeted at providing financial supports for the informal sector players. Some of these include saving schemes and credit schemes, e.g., the Anchor Borrower's Programme (ABP) by the Central Bank of Nigeria (CBN). Other are schemes and programmes by the Bank of Industry (BOI) such as Government Economic Empowerment Programmes (GEEP), the Artisanal and Small-Scale Miner (ASM) fund etc. (BOI, 2018; Farayibi, 2015; Folawewo, 2004). Being a socially guaranteed scheme, these direct policy supports become relevant to the IAS, particularly, at the settlement stage.

The indirect policies for informal sector which support IAS include policies targeting (i) productivity improvement, (ii) legal and institutional framework and (iii) the business environment (Onyemaechi, 2013). These policies are aimed at improving the ease of doing business in the country and allowing SMEs and informal sector players operate in a virile business environment. For instance, the ease of doing business policy in Nigeria recently recorded success as shown by the World Bank Report (2020) which ranked Nigeria as 132nd position with a *DB*[11] Score of 56.9 percent. These policies enhanced the practice of this innovative informal sector financing by increasing the possibility of business growth and reducing business failures. This is paramount to the

[11] Doing Business

success of IAS in Nigeria and indeed the adaption of the scheme in other business financing programmes.

3. Literature Review

The conceptualization of informal sector covers 'a group of units comprised of unincorporated enterprise owned by households including informal own-account enterprises and enterprises of informal employers- typically small and non-registered enterprises' (ILO, 1991). This definition of informality in terms of enterprises provides the conceptual characterization of informality as used in this study.

Although informal sector business financing defies a specific theoretical construct, however it can be predicated upon the frameworks of existing small and medium scale enterprises (SMEs) financing models such as modern incubation system and venture capital models[12]. These models were developed to address the problems of inadequate access to finance and technical know-how reputed to hinder the success of SMEs.

For instance, the problem of finance is argued in the literature to be exacerbated by banks' reluctance to fund smaller, private companies when they have inadequate track record, collateral or loan rating. The skill inadequacy of SMEs relates to lack of adequate experience and managerial competence to surf business environment and drive the firm's growth. This is often reflected in apparent absence of functional specialists in finance, accounting, marketing and promotion. Such firms also rarely prepare business plans or formal budgets and are not prepared to manage change or commit to long term development. Therefore, the two financing approaches documented in the literature to address these problems are venture capital and business incubation (Al-Mubaraki and Busler. 2017; Ayatse et al, 2017).

[12] Klonowski (2010) documented the differences and similarities between Business incubation activity and venture capital investing.

Conceptually, venture capital is a tenured investment which provides equity capital to SMEs at a return. Venture capitalists fund business growth at a price and exit the involvement in the business after this objective is achieved. According to Tyebjee and Bruno (1985), venture capital investing follows a five-stage model which includes deal generation, screening, evaluation, deal structuring and post investment activities. Fried and Hisrich (1994) proposed a six-stage model which includes origination, venture capitalist firm's specific screen, generic screen, first-phase evaluation, second-phase evaluation, and closing. The interest of the venture capitalists is to see measurable business success at the end of their relationship with the entrepreneurial firm. Such success is defined in terms of finance and measured in cash-on-cash or an internal rate of return. Empirical evidence of the effect of venture capital on business growth had been documented by Klonowski, (2010); Peneder, (2010); Bollingtoft, et al (2005); Callegati, et al (2005).

Venture capital is not without its limitations most especially as it relates to SMEs and informal sector business financing. First, since venture capitalists seek access to attractive deal flow, the attention is usually to employ capital in larger increments in order to improve deal economics. Thus, they are increasingly uninterested in pursuing smaller transactions. Second, the process for entrepreneurial firms to receive financing from venture capital is multistage, and sometimes regarded as more comprehensive and exhaustive. These limitations show that this funding approach excludes informal sector business financing since it cannot accommodate its characteristics.

The second financing approach identified in the literature is business incubation. Business incubators are viewed as those who assist firms in the SME sector. They offer funding, technical support, and networking capabilities to enhance the development of early-stage firms thereby resolving the problems of inadequate know-how and access to finance. Essentially, the tenants of business incubators need capital for business survival and growth [13].

---

[13] Modern business incubation system offers veritable assistance to SMEs, however, it is not sector specific.

Business incubation, as identified by Klonowski, (2010), is predicated on a five-stage model which include initial consultation, tenancy application, screening and decision, business development and exit. Incubators are interested in quantifiable business success at the end of their relationship with an entrepreneurial firm which is defined as the transformation of a tenant firm from the business incubator to a viable, long-term business. Empirical evidence of the effect of business incubation on firms' growth had been documented by Al-Mubaraki and Busler (2017); Ayatse et al (2017); Pompa, C. (2013) Wilber and Dixon (2003). Von Zedtwitz (2003).

Again, modern incubation system is limited in the sense that it has specific criteria to enlist prospective tenant firms. Such criteria cannot accommodate the informal sector characteristics since many of them may not surf through the screening stages.

This gap in finding a requisite funding model for informal sector businesses requires innovative problem-solving approaches. As opined by Clauss (2016), business innovation- in this case process innovation - is one of the viable options for business growth. This could come in form of finance, method or research and development. However, the financing innovation in informal sector had been undertaken on a country specific level in order to reflect the context of the informal sector. This has generated sundry innovative informal sector financing models such as the capital sharing models of the Igbo apprenticeship system in Nigeria. The basic feature of this financing model in comparison with the two existing models previously discussed is presented in Table 3.

Empirical studies on the Igbo apprenticeship system in Nigeria is still evolving in literature. Onyima et al (2013) investigated the effects of apprenticeship and social capital on new business creation process of Igbo entrepreneurs in Nigeria and found that apprenticeship had significant effects on pre-founding activities- when the business is taking off, while social capital became important when the business had been established. The study emphasised the social capital framework by positing that apprenticeship had significant effects on business idea generation, idea modification, business location and financing while social capital served as source of insurance services and access to information.

The nexus of Igbo entrepreneurial activities on economic growth on Nigeria was the focus of Orugun and Nafiu (2014). Using descriptive analysis, the study found that Igbo entrepreneurial activities were strong drivers of economic growth in Nigeria. The study recommended the need to adapt this business model to many other sectors to enhance economic development.

Iwara et al (2019) descriptively analysed the impact of *igba-boi* apprenticeship approach on the success of Igbo entrepreneurs in Nigeria. The study found that the apprenticeship approach has enhanced business success in the region selected for the study. The study identified inadequate legal framework as the barrier limiting the potentiality of the scheme. They recommended that the approach should be institutionalized in order to spur entrepreneurship spirit amongst the youths in the country.

Despite these studies, there is still gaps in the empirical literature about studies that examined the Igbo apprentice system in Nigeria from the innovative informal sector financing perspective. Also, there is a need for a study that conceptualizes the capital sharing model of IAS in comparison with the existing SME financing models such as venture capital and modern incubation system. Finally, there is a need for a study that empirically examines the impact of this indigenous apprenticeship system on SME growth in Nigeria using different measures of growth and hybrid of framework and integrated approaches. These are the gaps that this study intends to fill.

4. Methodology:

4.1 Model Specification

The empirical modelling of financial innovation and informal sector business growth is somewhat rigorous due to the characteristics of informal sector variables. However, this challenge has been addressed in the extant literature using combination of frameworks and heterogeneous approaches. In line with Abd El-Fattah (2014), model is stated:

$$Y = F(\,CSM, X_i, Z_j) \qquad (1)$$

Thus, the estimable model for the study is specified as:

$$Y_t = \alpha_0 + \alpha_1 CSM_t + \alpha_2 X_{it} + \alpha_3\, Z_{jt} + \varepsilon_t \qquad (2)$$

Where *Y* represents a vector of small firm growth covering three measures; turnover, employment growth and total assets; *CSM* is capital sharing approach; X_i is set of individual business' characteristics, and Z_j is vector of informal sector characteristics, ε is the error term and *t* is the time dimension. Each of the variables enters into the model based on its importance and has been established in the literature.

Small firm growth (i.e. growth of informal sector business) is measured using three different proxy in line with the literature reviewed. The first measure of small firm growth used in the study is turnover. Turnover describes the number of times an asset (such as cash, inventory, raw materials) is replaced or revolved during a financial year. An increase in the turnover leads to the growth of the firm which is congruent on consistent sales volume. This measure has been used by OECD (2015). The second measure of small firm growth used is employment growth. This is defined as the changes in the level of employment during a given period. An employment growth shows the increases in labour demand and labour utilization capacity of the firm due to expansion. The third measure of small firm growth is total assets, which refers to the total amount of assets (that is items of economic value) of the firm and it increases as the firm grows. The use of these three measures of small firm growth is expected to generate robust estimates in the empirical modelling of the capital sharing model of the IAS.

Capital sharing model is captured by the informal sector businesses whose owners have undergone Igbo apprenticeship system. This is compared with the businesses of other owners who did not undergo IAS. The stock of capital (funding, social capital, business science) acquired by the apprentice-graduates has the potentiality to enhance the success of the firm. Thus, the firms of apprentice-graduates are expected to grow more than the firms of those who did not undergo IAS.

In estimating this relation, the study employed the Heckman's two-stage estimation technique in order to check the effect of endogeneity. More importantly, the ordinary least square (OLS) is used to estimate the effect of capital sharing model on small firm growth in Nigeria while the Probit regression is used as a robust check on the OLS estimates.

4.2 Data

The areas for the study are Onitsha (Anambra state) and Aba (Abia states) in South-Eastern Nigeria. The two cities are predominantly Igbo metropolis with big market structures where the apprenticeship system thrives. There are lots of successful businesses which the capital sharing model have produced, some of which are now big national and international businesses. A random sampling technique is adopted to select about 400 informal sector businesses. In order to gather the required data for the study, a combination of research instruments was used. Using an exploratory research design, the study employed the use of questionnaire which was administered to respondents who were informal sector business owners. The instrument consisted of two main sections; the demographic and sector specific questions. The first section covered the demographic features of the respondents which included their age, sex, level of education, marital status, state of origin, and sector of business. The second section described the informal sector business specific questions covering registration, years of business, level of employment, turnover, total asset, profitability, business coverage and whether business owners were apprentice-graduate of IAS or not. This instrument was augmented by one-on-one interview of respondents in order to underscore the unique characteristics of the informal sector.

5. Empirical Findings

This section starts with the descriptive analysis of the variables used in the model which is presented in Appendix 2. As the table depicts, the average age of business owners falls within 30-50 years while the mean gender of informal sector business owners is male due to the mean value of 1.01. The mean level of education of the SME owners is primary education showing the low level of education among this set of informal sector business operators. The table further shows that the average business owner underwent IAS while trading was the dominant sector of the households surveyed. This implies that most of the SME owners in selected area of study were apprentice graduates. This showed the level of acceptance of the practice among the Igbo people in Nigeria. The descriptive statistics further showed that the average ethnic group was Igbo while the average business was not registered with corporate affairs commission (CAC) but belong to social groups and registered trade unions who arbitrate on any issue relating to their business activities. The average SME owners have been in business for above 10 years while their business coverage has spread to the national level. The average total asset value of the businesses was above 15 million with the average turnover of 10 million and employment level of above 10 staffs.

Essentially, the descriptive statistics showed that majority of the business owners that participated in the survey were male between 30-50 years who had primary school education and operated business in the trade and service categories. Most of the respondents underwent the IAS and have businesses that are not registered with government bodies, but rather belong to various social groups and registered trade associations who protect members' interests. Due to the IAS training, their businesses have higher employment growth, level of turnover and total assets above the businesses of those that did not undergo the training. Also, their businesses had existed for more than 10 years on the average with a national coverage and are geared towards an established going concern.

This section also presents the empirical results of the effects of capital sharing model of IAS on small firm growth as shown in Table 4 and 5. This involves estimating equation (1) based on the three different measures of small firm growth. Specifically, the results of the OLS estimates are presented in Table 4. In order to verify the robustness of the OLS estimates, the results of the Probit estimates generated are presented in Table 5.

Turnover

In Table 4, the focus was on the effect of IAS on SME growth using turnover as the first measure. The results from column (1) indicates that turnover has a positive and significant relationship with IAS, implying that being an apprentice-graduate increases the capacity of the SMEs to generate high turnover. This result implies that due to the sundry trainings received and the capital sharing approach of the IAS, the apprentice-graduates are better equipped to ideate, start and growth their businesses. This is reflected by the high turnover recorded above the businesses of those without IAS training. Thus, IAS increases the potentiality of business success and growth.

Table 4: Regression Results of Capital Sharing Model and SME Growth

Variable	Turnover [1]	Emp_Growth [2]	Total A [3]
Constant	0.366 [0.006]	0.394 [0.086]	0.387 [
Age	0.066 [0.005] ***	0.032 [0.007] ***	0.025 [0.001]
Sex	0.018 [0.000]***	0.275 [0.000]***	0.269 [0.000]*
Education	0.120 [0.009]	0.130 [0.003]	0.127 [0.001]
Sector	0.159 [0.000] ***	0.220 [0.000]***	([0.000]*
Union	0.077 [0.004] ***	0.163 [0.000]***	0.162 [0.005]***
IAS	0.834	0.132	0.130

	[0.000]***	[0.000]***	[0.000]***
Bus_reg	0.180 [0.000] ***	0.073 [0.000]***	0.076 [0.000]***
Bus_cov	0.254 [0.000] ***	0.039 [0.000]***	0.024 [0.001]***
Bus_age	0.3600 [0.000] ***	0.046 [0.000]***	0.045 [0.000]***
Adj. R-squared	0.831	0.809	0.821
F-statistics	177.700	148.123	156.036
Root MSE	0.212	0.247	0.235
No. of obs.	400	398	399

Note: standard error in parenthesis; *, **, and *** represent 10%, 5% and 1% significant levels respectively

In terms of business specific characteristics, findings revealed that the coefficient of business registration shows a positive and significant relationship with turnover, implying that business registration positively influences business growth in the informal sector. This is however surprising because most informal sector businesses are not registered with government bodies, but rather with trade associations and social groups. This social registration gives them the needed legitimacy to operate; and any business that is not registered with appropriate business associations and trade unions, may not be allowed to operate within certain market environment, even if they are registered with government bodies. This finding is buttressed by a positive relationship between SME growth and trade unions. Due to a high level of social interaction, a business owner in a particular line of business would always make sales as other business owners in other lines of business would direct customers to his store for patronage. With this social link, patronage is enhanced.

Findings further revealed that the coefficient of business age and business coverage have positive and significant relationship with turnover, implying that the years of business existence and coverage affect the level of business growth. This is tenable because, the more the business stays, the more its capacity to survive turbulent business environment.

In terms of socioeconomic characteristics of business owners, we found that age had a positive and significant relationship with turnover. This finding underscores the importance of age categorizations in driving the level of business growth. Business success in the informal sector requires some levels of vigour, agility and vibrancy to surf the harsh business environment. This explains why the age of SME owners plays a significant role in business growth.

We also found that the coefficient of level of education shows a positive but insignificant relationship with turnover. This implies that the level of education is not so important for the apprentice-graduates to grow their businesses. The IAS training had already impacted the necessary skills, with practical and real-life business education which makes the possession of post-primary school certificate just an added advantage and not a core requirement for informal sector business growth.

The coefficient of the sex of informal sector business operators is positive and significant in determining business growth in the sector. Findings revealed that IAS is gender sensitive as the practice is male dominated because of the demands of the training. The corresponding female apprenticeship is known as ***Imu ahia*** (learning a trade); a subset of IAS which excludes some of its features such as settlement and living with the boss. It is mainly a form of paid apprenticeship which does not oblige the boss beyond offering training to the intern. This type of apprenticeship is mostly for females but of course not restricted to them. Males who for one reason or the other could not or do not want to undergo IAS (and could source for the capital needed to start a business) may decide to go for *Imu ahia*.

The corresponding Probit estimates of the equation estimated with OLS are presented in column 1 (Table 5). The results are similar to the OLS estimated, with the magnitude and direction as the difference among the estimates. The Probit results provides a robust check on the OLS estimates presented in Table 4.

Employment Growth

The results obtained when SME growth is measured by employment growth is presented in column 2 (Table 4). As established in the literature, this measure complements the use of turnover as a measure of SME growth. Employment growth shows the capacity of the business to absorb additional labour given the percentage increase in the number of employees over a period of time. This measure is important for SME growth as labour input is an essential part of the production function and the level of labour utilization of a firm determines the level of employment generation. The results obtained stablished our initial findings of the significant effect of IAS on SME growth in Nigeria.

The results presented in column 2 shows that IAS has a significant impact on employment growth. One of the goals of IAS is to continue the cycle of training by the apprentice-graduates, such that they are expected to recruit other apprentices, train and set them up too just as they have been settled. Hence, this result affirms the employment generation potentials of IAS. Apart from the apprentices, there are also paid employees and other interns with different apprenticeship structure, such as receptionists, sales girls, cooks, waiters, accountants etc.; who are needed as the business grows. All the employment or apprenticeship structure are within the informal sector structure which does not necessarily conform to regular labour laws.

In terms of business specific characteristics, we found that SME growth is positively correlated with business coverage and business age. This finding suggests that business age and coverage determines the level of employment growth in a business. Most importantly, informal sector being labour intensive, business growth in such sector can only be achieved with additional work force either as employees, interns or IAS to manage the additional branches or outfit of the business. Consequently, the more the business coverage, the higher the number of employees needed. Thus, employment growth is highly correlated with business coverage.

Table 5: Probit Estimation Results of Capital Sharing Model and SME Growth

Variable	Turnover [1]	Emp_Growth [2]	Total A [3]
Constant	0.211	0.535	0.514
	[0.027]	[0.016]	[
Age	0.256	0.315	0.514
	[0.011] ***	[0.052] ***	[0.043]
Sex:	0.071	0.365	0.036
	[0.017]**	[0.002]***	[0.018]*
Education:	0.732	1.124*	0.835
	[0.012]	[0.031]	[0.063]
Sector	0.317	1.201	(
	[0.027] ***	[0.028]***	[0.034]*
Union	0.254	0.623	0.235
	[0.015] ***	[0.014]***	[0.012]***
IAS	1.614	0.532	0.219
	[0.019]***	[0.058]***	[0.059]***
Bus_reg	0.225	0.321	0.078
	[0.037]	[0.026]*	[0.029]
Bus_Age	1.572	1.474	0.125
	[0.028] ***	[0.019]***	[0.031]***
Bus_cov	0.853	1.232	0.417
	[0.034] ***	[0.125]***	[0.075]***
Pseudo R-squared	0.362	0.523	0.127
LR Chi-squared	15480.46	20724.08	1556.17
Log Likelihood	-20574.55	-9843.51	-25828.49
No. of obs.	400	398	399

Note: standard error in parenthesis; *, **, and *** represent 10%, 5% and 1% significant levels respectively

Findings also revealed that, in terms of demographic characteristics, the age and sex of business owners have positive and significant relationship with employment growth. While the age of the business owners determines the number of apprentices, intern or staff that the business owners can manage, the sex of the business owners determines that gender structure of the employees. Although the human resource management of business owners in the informal sector improves with age and experience in the business, but because IAS is gender sensitive, only males are recruited as apprentices while the females are either employed as attendants or *imu ahia* trainee- the corresponding female apprenticeship which neither allows cohabiting with the boss nor doing household chores. It is strictly a training relationship with no social contracts attached.

Additionally, findings showed that the coefficient of education is positive but insignificant in determining the level of employment growth. This implies that employment growth does not depend on the level of education of business owners. Recruitment skill is a critical component the IAS training. Business growth thus leads to additional labour demand since it may require developing new organizational structure that could accommodate the new status.

The Probit estimates (column 2, Table 5) offer similar results to OLS estimates except for education and business coverage estimates which show higher magnitude effect on employment growth. Consequently, the level of education of business owners and the spread of business branches affect the level of employment growth. This is plausible as more hands are needed to manage the growth of business network.

Total Assets

Column 3 (Table 4) also gives the estimate of the total assets' regression. The results show that IAS is positively correlated with total assets, implying that IAS training has a significant influence on the total assets of the business. Although, some of the SMEs may summarily strive to break even, the incremental level of profitability and business growth is often reflected in the volume of the total assets of the business. Since the IAS training incorporates business management skills, the results show that the total assets of apprentice-graduates are higher than those without the IAS training. This finding suggests that the aggregate skills acquired during IAS training boost business growth and success.

The results further show that business age and coverage have significant relationship with total assets. This is so because business expansion and coverage require the acquisition of more assets. All things being equal, SME growth therefore increases the propensity to acquire more assets and this could be a function of age and coverage of the business. Once the growth is incremental, business age leads to acquisition of more assets.

Also, from the perspective of demographic characteristics, findings show that the coefficients of the sex and age of business owners have significant and positive impact on total assets. This implies that, since the SME is dominated by young, vibrant male business owners, they tend to have the capacity to take greater risks and drive for business success since they are not confined by domestic obligations. The orientation acquired from IAS training provides the necessary skills to continue the cycle. This involves acquiring more assets- in this case opening more business branches for apprentices to manage. This practice culminates in the increase of the total assets of the business, hence its growth.

Finding also revealed that the level of education does not have significant impact on total assets, implying that the acquisition of additional assets is not a function of the level of education of the informal sector business owners. Rather, it is a function of the tenacity, drive and management skills acquired during the IAS training.

The Probit estimates however shows that business registration does not have significant effect on the total assets while union (i.e. trade unions or associations) has positive impact on total assets. The growth of total assets of the business is thus tied to the social structure in the market. The apprentice graduates tend to have a better grasp of the social structure in the informal sector than business owners without IAS training. These results corroborate with the findings of Iwara et al (2019) who found that IAS strongly affects business growth as reflected in all the measures of SME growth used in this study.

6. Conclusion and Policy Recommendation

This article examined the impact of Igbo apprenticeship system- an innovative informal sector financing approach- on small firm growth in Nigeria. The study conceptualized the capital sharing model of IAS in comparison with venture capital and modern incubation system. Small firm growth is measured using three indicators- turnover, employment growth and total assets. A simple model is developed whereby each measure of SME growth is regressed against household characteristics and informal sector business specific characteristics. The study made use of a household survey data collected from about 400 informal sector businesses randomly selected from Onitsha (Anambra state) and Aba (Abia states) in South-Eastern Nigeria. The two cities were chosen for the study because they are predominantly Igbo metropolis with big market structures, where the apprenticeship system thrives.

Results indicate that when small firm growth is measured by turnover, the capital sharing model of the IAS brought about the growth of turnover of the informal sector businesses. When employment growth was used as a proxy for small firm growth, it was found that IAS led to the growth in the level of employment of the informal sector businesses. Also, those business owners who underwent IAS had higher employment growth than those who did not.

Finally, the study also showed that when total asset is used as a measure of small firm growth, IAS greatly led to the increase in the level of total assets. In other words, the total assets of informal sector businesses whose owners undergone IAS is higher, in comparison to the business of their contemporaries who did not. Thus, this study has provided an empirical validation of the use of the capital sharing model of the Igbo Apprenticeship system as an innovative informal sector financing model in Nigeria.

Based on the findings of this study, we therefore recommend a policy framework that supports this innovative informal sector financing in Nigeria. Also, the venture capital and modern incubation system can be extended to incorporate features sharing model of the Igbo apprenticeship system. This would however require strengthening the informal sector business environment.

6.1 Suggestions for Further Research

The objective of the study was to project the advantages of IAS as an innovative informal sector financing in Nigeria and advocate its adoption as alternative financial scheme to venture capital and business incubation models. However, this does not project the IAS model of informal sector financing as near perfect, where no problem exists. Admittedly, there are some limitations that could hinder the success of this innovative financing approach in the informal sector. Thus, further research on the IAS model could focus on these limitations. For instance, does the frictions that sometimes occur between "oga" and "boyi" lead to termination of the contract? What is the success rate of the IAS in the country? Are there any sector specific characteristics that may hinder the adoption of the IAS model in some sectors? etc. Such studies would provide a holistic view of this innovative financing scheme as the informal sector continues to be a formidable driver of economic growth in the sub-Sahara African Region.

Appendices

Appendix 1: Definition and Measurement of Variables

Variable	Definition and Measurement
Age	The age of informal sector business owners measured in ye grouped into four: 20-30; 31-40; 41-50; 51 years and abov enrolment age into IAS is usually below 20years wl settlement age is often below 30 years.
Education	This is highest level of education of business owners. Educat qualification is classified into three: primary educatio primary; and secondary education. IAS does not require high level c educational qualification.
Sex	Gender of informal sector business owner head, male = 1 a female = 2
IAS	This is defined as the Igbo Apprenticeship System (IAS) or *ig* which is based on a capital sharing model. It is an innova informal sector financing among the Igbo tribe in Nigeria captured by the responses to the question whether or r undergo IAS. Thus, 1 **=** if business owner underwent IAS and 0 **=** if bu owner didn't undergo IAS.
Turnover	This is defined as the number of times an asset (such as cas inventory, raw materials) is replaced or revolved d financial year. This is classified into four Less than 1m; between 2-5m between 6-10m; and above 10m.
Employment Growth	This shows the increases in labour demand and labour u capacity of the firm due to expansion. This captured by r to the question on the number of staff or apprentice classified into three: below 5; between 6-10 and above 10.
Total Assets	This measured in terms of total amount of assets (that is iten economic value) of the firm and it increases as the firm gr ease of analysis, total assets are classified into five: Less th between 6-10m; between 11-15m; between 16-20m anc 20m.

Appendix 2: The Result of the Descriptive Statistics

Variable	Mean	Std. Dev.	Skewness	Kurtosis	Obs.
age	1.910	0.793	0.153	1.395	400
educ	1.041	0.643	4.553	8.823	400
sex	1.010	0.100	3.861	5.724	398
sector	1.008	0.582	1.521	3.790	400
IAS	1.001	0.343	1.433	5.491	400
totalassets	3.233	1.131	1.154	3.270	390
turnover	3.250	1.122	1.188	2.184	400
empgrowth	3.250	1.132	1.288	2.384	398
buscov	1.795	0.397	0.218	3.150	400
busage	3.263	1.013	-1.068	2.219	400

Note:

Age: 1 = 20-30 years, 2 = 31-40years, 3 = 41-50years, 4 = 51 years and above.

Education: 1= primary; 2= secondary; 3 = post-secondary; 4 = tertiary.

Sex: 1 = male; 2 = female.

Sector: 1= trading; 2 = service; 3 = transport; 4 = industry; and 5 = construction

IAS: 1 = underwent IAS; 0 = did not undergo IAS.

totalasset: 1 = Less than 5m, 2 = Between 6-10m, 3 = Between 11-15m, 4 = Between 16-20m, 5 = Above 20m

Turnover: 1 = Less than 1, 2 = Between 2-5m, 3 = Between 6-10m, 4 = Above 10m.

emplgrowth: Below 5, 2 = Between 6-10, 3 = Above 10.

busage: 1 = Less than 2 years, 2 = 3-5years, 3 = 5-10 years, 4 = Above 10years.

References

Abd El-Fattah, A. (2012). A Survey-Based Exploration of Satisfaction and Profitability in Egypt's Informal Sector. Egyptian Centre for Economic Studies (ECES) Working Paper No.169, Cairo: ECES

Al-Mubaraki, H. M. and Busler, M. (2017). Challenges and opportunities of innovation and incubators as a tool for knowledge-based economy. *Journal of Innovation and Entrepreneurship*, 6(15),1-18.

Ayatse, F. A., Kwahar, N. and Iyortsuun, A. S. (2017). Business incubation process and firm performance: an empirical review. Journal of Global Entrepreneurship Research (2017) 7:2, pp 1-17. DOI 10.1186/s40497-016-0059-6

Bank of Industry (BOI, 2018). Economic Development through the Nigerian Informal Sector: A BOI perspective, *Working Paper Series*: No. 2,17th May 2018.

Bollingtoft, A. and Ulhoi, J. (2005). The networked business incubator - Leveraging entrepreneurial agency. *Journal of Business Venturing* 20(2):265–290.

Callegati, E., Grandi, S. and Napier, G. (2005). Business incubation and venture capital: An international survey of synergies and challenges. *Joint IPI/KED Working Paper*, Malmo, Sweden.

Chinweuba, G. E. and Ezeugwu, E. C. (2017). The Ontological Foundation of Igbo Entrepreneurship: An Analytical Investigation. *Journal of Philosophy, Culture and Religion*, Vol.33, 2017

Clauss, T. (2016). Measuring business model innovation: conceptualization, scale development, and proof of performance. *R and D Management*, (47) 3, pp 285- 403.

Farayibi, A. O. (2015). Employment Creation Potentials of the Informal Sector in Nigeria. *Research on Humanities and Social Sciences.*5(23), 12-19.

Folawewo, O. A. (2004). "Urban Informal Sector Labour Employment: A Case Study of South-Western Nigeria", Unpublished PhD Dissertation, University of Ibadan, Ibadan.

Folawewo, O. A. (2013). *The Informal Labour Market in Developing Countries*. Hope Publications, Ibadan, Nigeria.

Fried, V. and Hisrich. R. (1994). Towards a model of venture capital investment decision making. *Financial Management* 23(3):28–37.

Hamid, T. H. and Jabbari, M. (2012). Providing a Framework for Measuring Innovation within Companies. *Procedia Technology* 1 (2012) 583 – 585.

ILO, (1991). *The Dilemma of the Informal Sector*. Reports of the Director General, Part 1, the 78th Session of the International Labour Conference, Geneva.

Iwara, I. O., Amaechi, K. E. and Netshandama, V. (2019). The *Igba-Boi* Apprenticeship Approach: Arsenal Behind Growing Success of Igbo Entrepreneurs in Nigeria. *Journal of Conflict and Social Transformation,* Special Issue, Pp 227-250.

Julius, E., Lating, P. and Trojer, L. (2014). Innovation characteristics of formal manufacturing firms in Uganda. *African Journal of Science, Technology, Innovation and Development,* 6:5, 415-423, DOI: 10.1080/20421338.2014.970434

Klonowski, D. (2010). Business Incubation and Its Connection to Venture Capital. *Venture Capital: Investment Strategies, Structures, and Policies*, John Wiley & Sons, Inc, pp 111-130.

Neuwirth, R. (2017). *The Age-Old Sharing Economies of Africa – and Why we Should Scale them*. TED Talk Global, 2017. https://www.ted.com/talks/robert_neuwirth_the_age_old_sharing_economies_of_africa_and_why_we_should_scale_them?language=en

OECD, (2015). *The Innovation Imperative: Contributing to Productivity, Growth and Well- Being*. OECD Publishing, Paris.

Onyemaechi J., O. (2013). Role of the Informal Sector in Development of the Nigerian Economy: Output and Employment Approach. *Journal of Economics and Development Studies,* 1(1); 60-74

Onyima, K.C., Nzewi, H.N. and Chiekezie, O. M. (2013). Effects of Apprenticeship and Social Capital on New Business Creation Process of 'Immigrant' Entrepreneurs. *Review of Public Administration and Management* 2(3), 1-11

Orugun, J. J. and Nafiu, A. T. (2014). An Exploratory Study of Igbo Entrepreneurial Activity and Business Success in Nigeria as the Panacea for Economic Growth and Development. *International Journal of Scientific & Technology Research,* 3(9), pp 158-166.

Peneder, M. (2010). The impact of venture capital on innovation behaviour and firm growth, Venture Capital: *An International Journal of Entrepreneurial Finance*, 12:2, 83-107.

Pompa, C. (2013). Literature Review on The Impact of Business Incubation, Mentoring, Investment and Training on Start-Up Companies. Overseas Development Institute, EPS-PEAKS Working Paper, 1-17

Sampsa, S. and Olav, S. (2009). Venture capital, entrepreneurship and economic growth. Yale University seminar series held on June 7, 2009. pp 1-40.

Sanderson, A. (2019). Diversifying financing sources for informal sector. https://www.herald.co.zw/diversifying-financing-sources-for-informal-sector/ Accessed 10th August, 2019.

Schneider, S. and Spieth, P. (2014). Business model innovation and strategic flexibility: insights from an experimental research design. *International Journal of Innovation Management*, 18, 1440009

Tyebjee, T.T. and Bruno, A.T. (1985). The entrepreneurs search for capital. *Journal of Business Venturing*, 1(1):61–64.

Von Zedtwitz, M. (2003). Classification and management of incubators: aligning strategic objectives and competitive scope for new business facilitation. *International Journal of Entrepreneurship and Innovation Management*, 3(1), 176-196.

Wilber, P. L. and Dixon, L. (2003). The Impact of Business Incubators on Small Business Survivability. Paper presented at the Business incubation conference held at North-western Oklahoma State University, U.S.A. March, 2003, pp 1-13.

World Bank (2020). Doing Business: Comparing Business Regulations in 190 Economies, *World Bank Report*, Washington DC 20433.