

Entrepreneurship as a viable tool for poverty reduction in Nigeria

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Abstract

This paper investigated entrepreneurship as a viable tool for poverty reduction in Nigeria. The paper adopted a quantitative research design, and the data was collected using a self-administered questionnaire. Data were gathered through a survey using a structured questionnaire with a sample of size of 335 entrepreneurs. The respondents were selected using a systematic random sampling method from the sampling frame of 2,600 entrepreneurs. SmartPLS 3.0 (M3) with path modeling and bootstrapping was used to examine the standard error of the estimate and t-values. The findings suggest that only entrepreneurship education and attraction dimension of entrepreneurship was significantly related to poverty reduction. Whereas intention and Knowledge were not related to poverty reduction in the country. Potential limitations of the study, practical implications of the findings, and directions for future research are highlighted.

Keywords: practical, highlighted, systematic, random, entrepreneurship

Introduction

One of the major challenges facing emerging, underdeveloped, and developing nations of the world is poverty. Poverty is considered to be among the world's most intractable global challenges (Alvarez, Moreno, & Mataix, 2013) ^[7]. Both practitioners, professionals, and scholars define poverty by the level of real per capita annual income in a country. It is widely understood as the condition of living on an income below a certain minimum threshold. The most common poverty level is the daily income of \$1.25. According to the World Bank (2014), there were about 2.47 billion people in the world living in poverty with an income of \$1.25 or less per day most of them from under developing or developing nations located in the African and Asian continent (Bruton, Ketchen, & Ireland, 2013) ^[13]. Though, the World Bank reports that the numbers of poor at this level of income have been dropping in recent years.

Unfortunately, the number of these individuals declined only from 2.59 billion to 2.47 billion between 1981 and 2013 (Bruton *et al.*, 2013) ^[13]. This population has been recognized by professionals, practitioners, business organizations, and scholars as a large potential market for selling a diversity of goods and services. Despite three decades of development efforts by agencies and governments, abject poverty still dominates many parts of the globe (Alvarez & Barney, 2014) ^[8]. After decades of large-scale governmental-planning failures (Easterly, 2006) ^[18] it now appears that entrepreneurship and small-scale individual innovation have appeared as essential factors in poverty reduction (Ahlstrom & Ding, 2014). Alleviating abject poverty is a difficult problem. Stimulating entrepreneurship is a favored approach used by both governmental and non-governmental organizations (NGOs) with their funders to alleviating/reduce abject poverty (Kistruck, Beamish, Qureshi, & Sutter, 2013) ^[37].

The understanding of poverty and business/entrepreneurship offers the potential to not only improve profitability and business actions in the markets but also to offer a means to continue to move substantial numbers of people out of

poverty (Bruton *et al.*, 2013) ^[13]. According to Singer (2006) ^[50] encouraging more on entrepreneurship by any region of the world is the best cure for poverty alleviation/reduction, this lies in starts up of new ventures through entrepreneurship development (Singer, 2006) ^[50]. Although, entrepreneurship provides a foundation for economic change through creation and application of new knowledge (Singer, 2006) ^[50], another way of poverty reduction has developed around the idea of entrepreneurial activities in the form of high-growth firms, innovation, and new venture formation (Mitra, Abubakar, & Sagagi, 2011) ^[41].

Poverty reduction represents an important challenge for scholars and policymakers everywhere. Scholars, policymakers, and practitioners increasingly argue that entrepreneurship is an important means for alleviating extreme poverty and research on this topic are growing (Bruton *et al.*, 2013; Sutter, Bruton, & Chen, 2018) ^[13]. Though there has been much research to date, management scholars have not examined poverty reduction extensively, particularly in Africa. Research in financial economics (Yunus, Moingeon, & Lehmann-Ortega, 2010) ^[60] entrepreneurship and applied economics (Yu, Hao, Ahlstrom, Si, & Liang, 2014) ^[59] has recently acknowledged the importance of entrepreneurship and poverty reduction.

Poverty reduction is a major topic of discussion on entrepreneurship studies, but how and whether entrepreneurship reduces poverty remains under-explored in the entrepreneurship literature. This paper will examine the effects of entrepreneurship on poverty reduction. This study is divided into five sections. The first section is the introductory part of the study, which provides a concise overview of poverty and entrepreneurship and provides insight into the concepts of poverty alleviation through entrepreneurship development. Section two review related literature. Section three explained the methodology used for the study. Section four discussed the findings of the study. Section five presents the conclusion and advice for future research.

2. Literature Review

2.1 Concept of Poverty

The World Bank for the last couple of decades has encouraged all nations to carry out poverty assessments, in other hand researchers have paid more attention to income vulnerability (volatility) and the political voice (rights) of the poor (Wu & Si, 2018). Poverty means that poor people lack the capability to create and maintain “normal” lives (Bruton *et al.*, 2013) ^[13]. Therefore, addressing poverty, it is imperative to address not only the material deficiencies of the poor but also to help them build a capability to maintain and create a normal lives. Furthermore, scholars in 1980s, had come to include and literacy, life expectancy, and health in their definitions of poverty (Kijima & Lanjouw, 2005) ^[36]. For instance, poverty is been defined as the absence of basic needs of a human such as a shelter and sanitation, food, education, health facilities, clean drinking water, etc. (Sultan, Ahmad, Khan, & Rahman, 2018) ^[51].

In another version, poverty consists of a lack of basic securities, which not only include financial resources, but also health care, housing, employment, education, and other related aspects leading to deprivation (Misango & Ongiti, 2013) ^[40]. World Bank categorized poverty as both relative and absolute (Misango & Ongiti, 2013) ^[40]. When poverty is said to be relative can be characterized in relation to the economic status of particular, groups. On the other hand, absolute poverty is described as a lack of basic security, lack of resources to meet the physical needs for subsistence, the absence of one or more factors that enable families and individuals to enjoy fundamental rights and undertake basic responsibilities (Misango & Ongiti, 2013) ^[40] (Misango & Ongiti, 2013) ^[40]. However, recently it is further classified into three groups (absolute, relative, and subjective poverty): first, relative poverty, this refers to when one has less than others in the same society; secondly, absolute poverty, where one has less than thresholds; and; thirdly, subjective poverty, where one feels deficient because of a sense of not having enough to *get along* (Manaf & Ibrahim, 2017) ^[39].

previously, poverty studies attention were on the ways in which organizations and government might reduce the number of people living in poverty through top-down initiatives. For instance, The World Bank also believes that lack of investment, the inadequacy of national policy and structural adjustment, lack of improvement in infrastructure, and political instability are among the main causes of poverty (Misango & Ongiti, 2013) ^[40]. However, on the other hand, Rogerson in 1999 identified four broad categories of assets for measuring poverty in the South African context thus; i. human-made assets, such as social infrastructure productive infrastructure, and housing ii. natural resources, such as common property, water, land, iii. social and institutional assets, such as access to decision-making, trust, household relations, iv. human capital, such as health, education, labor (Rogerson, 1999) ^[46].

Poverty in Nigeria could be as a result of so many factors such as poor value orientation, low productivity in agricultural and industrial sectors, and poor provision of infrastructural and social amenities especially in rural areas, poor economic policies, (Ifeanyichukwu, Eze, & Okoli, 2018) ^[32]. Federal Government of Nigeria at different times has introduced poverty alleviation programmes to improve the citizenry standard of living. Such programmes introduced to fight poverty in Nigeria include Entrepreneurship development programmes, National Economic

Empowerment Development Strategies (NEEDS) 1 & 2, and the National Poverty Eradication Programme (NAPEP) to mention few. Even with these efforts by the government, poverty has remained endemic and pervasive in the country, recording an insignificant change in human development index after a period of five years.

The human development index of Nigeria in 2010 is 0.500 and 0.527 in 2015 (UNDP Human Development Report, 2016). This statistics indicated improvement but insignificant when compared to government efforts in this direction. This is not encouraging and calls for greater measures. The fact remains that a greater proportion of Nigerians still live below the poverty line (\$1.25), having poor access to safe water, primary health care and poor diets due to the prevalent low productivity and purchasing power. At present, poverty in Nigeria manifests itself in various ways which include hunger, high maternal and child labor and death, prostitution, underemployment, armed robbery, kidnapping and generally low quality of life.

Furthermore, Ajegi (2002) ^[4] observed that the poverty situation in Nigeria has indeed assumed a crisis dimension. It is further revealed that about 70% of Nigerians consume less than 1/3 of the minimum vitamin and protein intake due to low poverty. The author further revealed that records from the Bureau of Statistics show that about 67% of Nigerians live below the poverty line. The data further reveal that only 38% cannot avail themselves of primary health care, while 50% of the populace has access to safe drinking water.

2.2 Concept of entrepreneurship

Entrepreneurship contributes to poverty reduction when it creates employment through the expansion of existing ones or the startup of new entrepreneurship and they increase social wealth by increases income which culminates in higher standards of living for the population, new institutional forms, new jobs, new technology, new industries, creating new markets, and net increases in real productivity (Ali & Ali, 2013) ^[6]. From the perspective of current businesses and entrepreneurs, the world's population living in poverty appears to be a great potential market for selling different goods and services. Entrepreneurship is defined as the mobilization of economic resources to initiate new business and the identification of new business opportunities and or renew an existing business, under the conditions of uncertainties and risks, for the purpose of making profits under private ownership (Adenutsi, 2009) ^[1]. In addition, entrepreneurship is a process which may develop a single enterprise or entrepreneur with the main aim of making a profit by using of scarce resources most likely under private ownership (Hussain, Bhuiyan, & Bakar, 2014) ^[31]. On another perspective, entrepreneurship is concerned with creating regular cash flow on a group of individuals or an individual for the future through the process of initiative, innovation, and imagination with the aim of minimizing risk and maximizing profits with the view of long-term expansion (Adenutsi, 2009; Hussain *et al.*, 2014) ^[1, 31].

Previous researches have defined entrepreneur from different angles in different perspectives. For instance, Envick and Langford (2000) ^[19] define an entrepreneur as someone who owns and operates his/her own business. Parboteeah (2000) ^[45] defines entrepreneurs as individuals who pursue opportunities without regard to the resources they currently control. In addition, Fukugawa (2013) ^[21] supported this by defining entrepreneurship as the creation or exploitation of

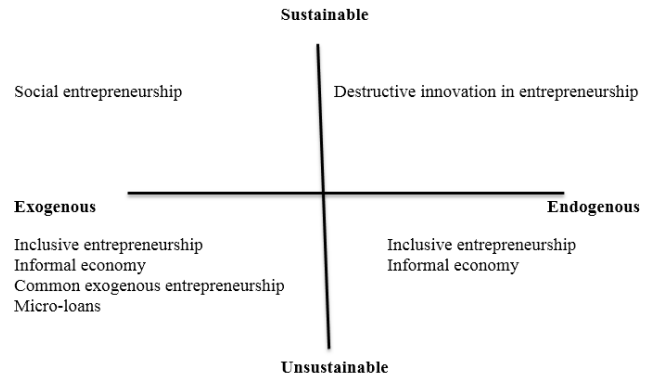
opportunities and or the recognition of these business opportunities through the exploration of new venture creation. Furthermore, Friedman (2011) [20] defines entrepreneurship as a viable ingredient for poverty alleviation as well as for unemployment reduction, economic development, and job creation. However, Ayogu and Agu (2015) [10] states that an entrepreneur is a creative person, middleman; a special person; a risk taker; an imaginative person; a person who is alert to opportunities; a resourceful, an innovator; and original person; a reward seeker and a coordinator of resources.

2.3 Poverty alleviation through entrepreneurship

There has been growing literature interested in entrepreneurship as a mechanism for poverty alleviation in the last decade across international boundaries (Murphy, Trailer, & Hill, 1996) [42]. Entrepreneurship help in alleviating poverty is not new and reveals the assumption that entrepreneurial activity leads to poverty alleviation and to economic growth (Hirschman, 1949) [30]. However, the economic rationale for the eradication of poverty is not universally compelling to all organizations. Poverty reduction through entrepreneurship is classified into unsustainable versus sustainable initiatives. Sustainability may be difficult to allocate in advance, but some survival-oriented start-ups evidently have no growth potential.

Previous studies have confirmed a positive association between entrepreneurship and a rise in the standard of living and quality of life (Usman & Adam, 2017) [53], and this is in consonance with our a priori expectation of a positive relationship between entrepreneurship and poverty reduction. In a study, cited by Wujun and Mbella (2014) [57], of microfinance institutions, (Haughton & Khandker, 2015) [27] demonstrates that “indirectly, entrepreneurship is an important factor to poverty reduction that is not just for beneficiaries but also to the rest of the society through positive externalities.” In her empirical study, In another empirical study, Gebremariam, Gebremedhin, and Jackson (2004) [22], using the ordinary least square regression analysis, examines the role of small entrepreneurial businesses in economic growth and poverty alleviation in West Virginia, USA. A strong inverse relationship was found to exist between the incidence of poverty and small business and economic growth. In another empirical research, Olayinka, Olusegun, and Babatunde (2015) [43] examined the impact of entrepreneurship training and education on poverty reduction in Nigeria. The researchers adopted a stratified random sampling technique. The result of their findings suggests that there exists a positive and significant relationship between entrepreneurship and poverty Also, Kareem (2015) [34] in his empirical study of the relation between entrepreneurship and poverty alleviation also concludes that there is a significant relationship between entrepreneurship and poverty alleviation at 1% probability level.

The four entrepreneurship dimensions (sustainable, unsustainable, exogenous, endogenous) shown in Fig. 1 (Xiao-fu, Xiao-tong; Hui-Ying; & Hui, 2017) [58]. Each quadrant of the figure describes poverty reduction initiatives types relying on entrepreneurship.



Sources: (Xiao-fu et al., 2017) [58]

Fig 1: Different approaches to poverty reduction through entrepreneurship

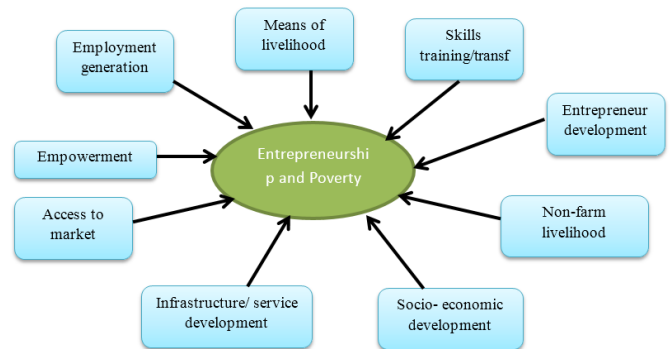


Fig 2: Entrepreneurship and poverty alleviation: Modified after Pro-poor Tourism Agupusi (2007); and Rogerson (2006).

2.4 Exogenous entrepreneurship and poverty reduction

The fig.1 top left quadrant shows the exogenous entrepreneurship model. Exogenous way of poverty alleviating. Its instrument is that entrepreneurs use poverty-stricken areas as sources of raw materials to increase employment, or commodity markets, alleviate poverty and promote regional economic development (Wu & Si, 2018) [56]. The exogenous approach discusses to the process of getting out of poverty by the poor with the help of outside forces such as the private enterprises, business alliances, social organizations, micro-loans, and government financial support (Haughton & Khandker, 2015; Weidner, Rosa, & Viswanathan, 2010) [27, 55]. Bruton, Ahlstrom, and Si, (2015) [14] believe that entrepreneurship can play an important role in developing new products or services, creating job opportunities, and even integrating capital. Previous research has established positive significant impact of exogenous entrepreneurship on poverty reduction (Bruton et al., 2013; Si et al., 2015), but under this mechanism, the poor are passive objects of the poverty alleviation efforts. However, exogenous activities have achieved the objective of promoting social development and reducing poverty in many cases. Though, from the poor perspective, getting out of poverty through exogenous activities is just a stroke of luck (Wu & Si, 2018) [56].

The fig.1 bottom left quadrant shows micro-credit loans which have been a popular research topic. Micro-credit loans

are now common and at least temporarily effective way to promote entrepreneurship in underdeveloped areas Jie Wu & Steven Si, 2018 (Bruton, Khavul, & Chavez, 2015; Khavul, 2010) ^[13, 35]. The source of funds is one of the most crucial aspects of entrepreneurs. Scholars previously established a relationship between poverty reduction and micro-loans has mainly focused on their mechanism of action, and the impact of specific loans (i.e., success stories). In terms of their instrument of action, micro-loans alleviate poverty by improving the social and economic environment. The economic environment here includes household income and channels for doing business, the social environment includes the methods of securing the loan through social relationships (Hamanou *et al.*, 2005) ^[25].

2.5 Endogenous entrepreneurship and poverty reduction

In the fig.1 lower right quadrant is the endogenous entrepreneurship model. The endogenous approach refers to activities initiated by entrepreneurs with little external help (Wu & Si, 2018) ^[56]. Endogenous entrepreneurship comprises of inclusive entrepreneurship and Informal economy; inclusive entrepreneurship is one of the endogenous models classified in fig 1 lower right quadrant. It aims at equal participation, equal opportunity and providing equal opportunities by reducing the difficulties and social exclusion of BOP groups long neglected by the mainstream market (Weidner *et al.*, 2010) ^[55]. The authors further defined inclusive entrepreneurship as, “an entrepreneurial philosophy that gives equal opportunities to all people to support its development and start a business, regardless of their contextual differences and individual characteristics.” Its target group includes the immigrants, elderly, women, and vulnerable groups including youth, ethnic minorities, marginalized, disabled, and other groups (Yu *et al.*, 2014) ^[59].

2.6 Social entrepreneurship and poverty reduction

According to the World Bank, poverty is now the most serious social problem in Africa, and reducing poverty is also one of the main objectives of social entrepreneurship (Narayan 2000). Social entrepreneurship tends to increase economic output, create social capital and increase employment. But Fig. 1's top left quadrant, present social entrepreneurship has emerged in recent years proposing to mix social and commercial activities to promote entrepreneurship. Scholars have offered numerous definitions of social entrepreneurship (Wu & Si, 2018) ^[56]. Some emphasize non-profitability as the main descriptor (Austin, Stevenson, & Wei-Skillern, 2012) ^[9]. Others include any business activity aimed primarily in providing market access to those in needs or serving the community (Austin *et al.*, 2012) ^[9]. However, others are willing to include any activity of entrepreneurship needed to solve social problems with or without obtaining commercial benefits (Austin *et al.* 2012) ^[9]. Social entrepreneurs intend to pursue collective interests often set up by the government, welfare agencies, NGOs, and other organizations (Ven, Sapienza, & Villanueva, 2007) ^[54] to support this, Shaheen (2016) ^[48] has described how poverty can be reduced through social entrepreneurship by helping in solving difficult and pressing social problems including crime, illiteracy, unemployment, mental illness, HIV/AIDS, and drug abuse. Social problems are mostly at the roots of poverty, the reduction of the number of poor people depend on the extent to which they can be alleviated,

2.7 Sustainable entrepreneurship for poverty reduction

Sustainability may be difficult to assign in advance, but some survival-oriented start-ups clearly have no growth potential (Wu & Si, 2018) ^[56]. Approaches more likely to be sustainable long-term might be based on initiatives which promise, for example, to be disruptive innovations (Si *et al.* 2015). Fig 1 other sustainable alternative is the disruptive entrepreneurship of the fig's top right quadrant. It disrupts the market by enabling the poor to become both consumers and suppliers. Its most important effect is shifting people's attitudes toward proactive from passive and economic behavior.

The poor themselves set out to discover new business opportunities and potential customers and (Si *et al.* 2015). As the poor themselves are the main, the consumers and body of entrepreneurs, the consumer orientation in this entrepreneurial process are particularly prominent. This is reflected in the observation that such initiatives tend to target low-end consumer groups and provide them with cheaper products (Wu & Si, 2018) ^[56]. Fig 1 top right quadrant in the sustainable alternative is the disruptive entrepreneurship. It disrupts the market by allowing the poor to become both suppliers and consumers. Its most important effect is shifting people's attitudes and economic behavior from passive to proactive. The poor set out to discover potential business opportunities and new customers (Si *et al.* 2015).

2.8 Entrepreneurship education

Entrepreneurship education seeks to provide apprentices with the knowledge, skills, and motivation to encourage entrepreneurial success in a variety of settings (Hussain *et al.*, 2014) ^[31]. Entrepreneurship education is known as a specialized knowledge that inculcates in learners the traits of risk-taking, innovation, arbitrage and coordination of factors of production for the purpose of creating new products or services for new and existing users within human communities (Akhueomonkhan, Raimi, & Sofoluwe, 2013) ^[5]. It is considered central to the economic development of nations (Kabongo & Okpara, 2010) ^[33]. However, it has to increase entrepreneurial self-efficacy, self-employment, and risk-taking attitude of the entrepreneur (Cheng, Chan, & Mahmood, 2009) ^[16]. Furthermore, Oluseye, (2017) entrepreneurship education is “the individual ability to turn ideas into action.” It includes creativity, innovation, and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives and to master one's own life.

3. Methodology

The study nature is cross-sectional. In cross-sectional studies, the data from defendants is gathered just on a single point in time, and that is used for further investigation (Creswell, 2014) ^[17]. To attain the objectives of this research, a structured questionnaire was developed. The questionnaire items were adapted from the study of (Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011) ^[38] and some of the questions were also derived from the General Measure for Enterprising Tendency Test (GET2 Test) developed by Caird (2013) ^[15]. Entrepreneurship was measured with education, intention, attraction, and knowledge. The questionnaire consists of 3 sections; the first section is about demographics of the respondents, the second section is about the poverty, the third.

Section is about the entrepreneurship. The questionnaire relies on a five-point Likert scale, from the range 1- strongly disagrees to 5- strongly agree, and will be analyzed through software PLS-SEM.

3.1 Sample and data collection

The study was carried out in Kebbi State, one of the 36 states of Nigeria. The State is located in the North Western zone of Nigeria with 21 Local Government Area. The state is divided into three senatorial districts (strata), West, Central, and North. The population of the study was gotten from the list of the registered entrepreneurs with the state corporate affairs commission and Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) in the state which is 2,600 entrepreneurs. By referring to the sample size recommended by Krejcie and Morgan (1970), for a given population of 2,600, a sample size of 335 would be required to represent the population of this study.

Prior to data collection, a pilot study was conducted with 18 (six each senatorial district) randomly selected respondents among the entrepreneurs in the state to ensure the clarity and reliability of the questionnaires. Therefore, this study by using a systematic sampling method considered the sampling interval to be population/sample (2,600/335 = 7.7). The researcher selected the number through systematic random sampling technique between 1 to 7 at a starting point, and then the sampling elements number would be 6, 12, 18, 24,

30 and so on up to the last sample to be selected, that is sampled element number 335. A stratified random sampling technique was adopted by the researchers, 335 entrepreneurs and apprenticeships were chosen from nine recognized Local Government in the State three from each senatorial zone. Questionnaire survey approach was employed to collect data, and all items required five-point Likert-style responses ranged from 1 =“strongly disagree,” through 3 =“neutral,” to 5 =“strongly agree.” To test the hypothesized relationships in our path-analytic framework, we employed PLS_SEM.

4. Analysis and Results

As discussed earlier, this study aims to examine the effects of entrepreneurship and poverty reduction in Nigeria. To be able to obtain reliable and valid results, this study followed the two steps approach as suggested by (Chin, 1998).

4.1 Descriptive Statistics

The total numbers of 335 copies of the questionnaire were directly distributed while 292 (87%) responses were received and five of them were incomplete, 11 cases of outliers (167,173,174,188,190,196,198, 168, 169, 176, and 286). The remaining 281 valid and complete questionnaires were used for the quantitative analysis. It represented a usable response rate of 83.9%. Preliminary analyses were conducted to provide information about the characteristics of the respondents in Table 1.

Table 1: Demographics

	Frequency	Percentage %
Gender		
Male	264	87.5
Female	35	12.5
Highest Educational Qualification		
ND/NCE	14	5
HND/B.SC	34	12.1
Post Graduate	233	82.9
Family Status		
Head Household	224	79.7
Family Member	57	20.3
Age		
60-69	25	8.9
30-39	28	10.0
40-49	163	58.0
50-59	65	23.1

4.2 Reliability and validity

Reliability is an evaluation of the extent of consistency between multiple measurements of a variable (Hair, Black, Babin, & Anderson, 2010) [23]. Reliability of the multi-item scale for each dimension was measured using Cronbach’s alphas and composite reliability (CR). To begin with, internal consistency usually measures the consistency of result between items of the same test. It measures whether the proposed items measuring the construct are producing similar scores (Hair *et al.*, 2013). The Cronbach’s alphas coefficient of 0.70 or greater was considered acceptable (Pallant, 2007). and Composite Reliability (CR) coefficient of 0.60 or greater was considered acceptable (Henseler, Ringle, & Sarstedt, 2016). For all variables, both measures of reliability are above 0.70 which is above the recommended minimum standard of 0.60 (Bagozzi & Yi, 1988). Table 2 summarizes

All measurement items’ reliability and validity

Table 2: Construct Reliability and Validity

Construct	No. of Items	Cronbach Alpha	CR
Attraction	5	0.774	0.863
Education	6	0.810	0.871
Intention	7	0.785	0.857
Knowledge	6	0.719	0.808
Poverty Reduction	11	0.852	0.885

To measure convergent validity AVE is used with a threshold value of 0.50 and above (Hair *et al.*, 2010) [22]. An AVE of 0.50 means that the constructs account for 50% of the variance in its indicators, which is considered adequate (Hair *et al.*, 2014) [23]. Table 3 below shows the convergent validity.

Table 3: convergent validity

Construct	AVE
Attraction	0.624
Education	0.556
Intention	0.533
Knowledge	0.535
Poverty Reduction	0.500

The result in Table 3 shows AVE values range from 0.500 to

0.624. Thus, the AVE values of all the constructs of this study exceed the minimum threshold value of 0.50 (Henseler, Ringle, & Sinkovics, 2009) [29]. These results indicate the establishment of enough convergent validity among the measures of this study.

Results

Analysis and results Table 3 and figure 2 below presented the Standardized path estimates of the variables.

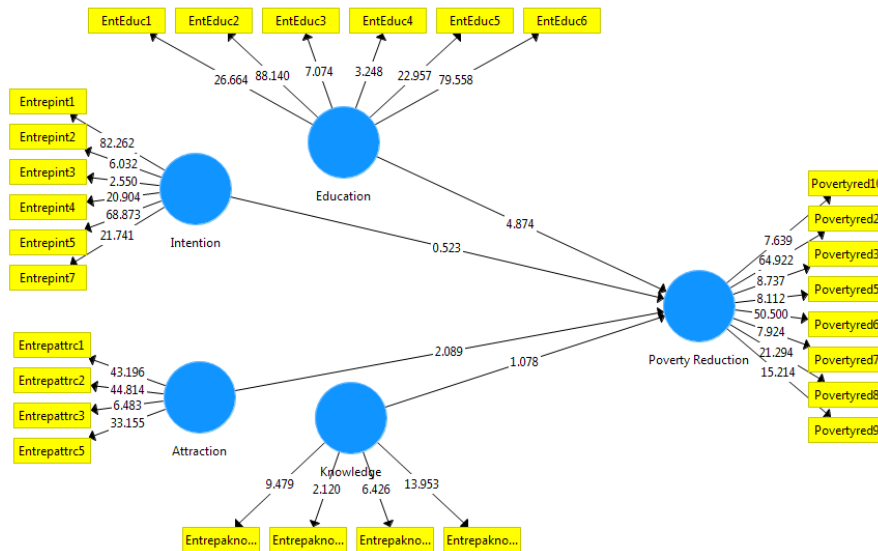


Fig 2: Structural model

Table 3: Standardized path estimates

Hypothesis	Std Beta	Std error	T-value	P-value	BCILL	BCI UL	F ²
H1 Attraction -> Poverty Reduction	0.216	0.103	2.089	0.037	-0.466	-0.049	0.028
H2 Education -> Poverty Reduction	1.066	0.219	4.874	0.000	0.701	1.548	0.248
H3 Intention -> Poverty Reduction	0.106	0.203	0.523	0.601	-0.330	0.455	0.003
H4 Knowledge -> Poverty Reduction	0.019	0.017	1.078	0.282	-0.019	0.051	0.005

After analyzing the measuring model and verifying its reliability and validity (see Table2), the proposed structural model was examined. Similarly, the bootstrapping method was used to verify the significance of the estimated structural coefficients (see Fig2). To analyze the significance of the structural relationships, the path coefficients and their corresponding significance levels are calculated (see Table 3). To do this, it is necessary to verify significance through the t-values and the strength of the relationships. Overall entrepreneurship attraction appears to be positive and significant, at 5 percent in poverty reduction ($\beta = 0.216, t = 2.089$). Thus, H₁ is supported, as the more people are attracted to entrepreneurship the less likely the become poor as such attraction is considered to be among the factors that alleviate poverty. Entrepreneurship education appears to be positive and significant, at 1 percent in poverty reduction ($\beta = 1.066, t = 4.874$). Thus, H₂ is supported, as entrepreneur education is among the strongest factors that alleviate poverty. As proposed in H₃, entrepreneurship Intention is positively associated with poverty reduction ($\beta = 0.106/t = 0.523$) this indicated insignificance results. Therefore, H₃ is hereby rejected. In addition, a positive relationship exists between entrepreneurship knowledge and poverty reduction but insignificant results were recorded ($\beta = 0.019/t = 1.078$). Therefore, H₄ also is not supported. Therefore, hypotheses H₁ and H₂ are accepted while H₃ and H₄ were not accepted.

5 Conclusion

5.1 Discussion and conclusions

The objective of this study was to analyze how entrepreneurship will reduce poverty. An important contribution of this research is that entrepreneurship education and attractions are among the critical elements poverty alleviation. The empirical findings of this study confirm the existence of significant relationships between entrepreneurship education, attraction and poverty reduction. The results of this study provide researchers with a broader understanding of the entrepreneurship dimensions that may influence poverty. It emphasizes the role of entrepreneurs in aiding to poverty reduction and makes recommendations from the perspectives of both policymakers and entrepreneurs. This study also contributes to the PLS-SEM approach, providing knowledge regarding the use of PLS and consistent PLS. additionally, the study presents a number of practical implications for decision makers. Future studies should involve a moderating variable to test the effects of entrepreneurship on poverty reduction. This study is limited to only one state out of 36 states in Nigeria. Future studies should consider widening the scope to involve more than one state.

6. References

1. Adenutsi DE. Entrepreneurship, job creation, income

- empowerment and poverty reduction in low-income economies. MPRA Paper, 2009, 29569.
2. Agupusi P. Small business development and poverty alleviation in Alexandra, South Africa. *Second Meeting of the Society for the Study of*, 2007, 1–18. <https://doi.org/10.1556/AEthn.52.2007.1.5>
 3. Ahlstrom D, Ding Z. Entrepreneurship in China: An overview. *International Small Business Journal: Researching Entrepreneurship*. 2014; 32(6):610-618.
 4. Ajegi SO. The Affluence of Poverty: A Critical Evaluation of Nigeria Poverty Reduction Programmes. *Journal of Economic and Social Research*, 2002, 3.
 5. Akhuemonkhan IA, Raimi L, Sofoluwe AO. Entrepreneurship Education and Employment Stimulation in Nigeria. *Journal of Studies in Social Sciences*. 2013; 3(1):55-79.
 6. Ali AYS, Ali AH. Entrepreneurship Development and Poverty Reduction : Empirical Survey from Somalia Ali Yassin Shaeikh Ali, PhD. Candidate College of Business Studies Sudan University of Science and Technology Dr. Abdel Hafiez Ali Associate Professor Department of Busi. Effect of Entrepreneurship Development on Wom. 2013; 2(3):108-113.
 7. Alvarez M, Moreno A, Mataix C. The analytic hierarchy process to support decision-making processes in infrastructure projects with social impact. *Total Quality Management & Business Excellence*. 2013; 24(5–6, SI):596-606.
 8. Alvarez SA, Barney JB. Entrepreneurial Opportunities and Poverty Alleviation. *Entrepreneurship: Theory and Practice*. 2014; 38(1):159-184. <https://doi.org/10.1111/etap.12078>
 9. Austin J, Stevenson H, Wei-Skillern J. Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship: Theory and Practice*. 2012; 47(3):370-384. <https://doi.org/10.1111/j.1540-6520.2006.00107.x>
 10. Ayogu DU, Agu EO. Assessment of the Contribution of Women Entrepreneur towards Entrepreneurship Development in Nigeria. *International Journal of Current Research and Academic Review*. 2015; 3(10):190-207. Retrieved from www.ijcrar.com
 11. Bagozzi RP, Yi Y. On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*. 1988; 16(1):74-94. <https://doi.org/10.1007/BF02723327>
 12. Bruton GD, Ahlstrom D, Si S. Entrepreneurship, poverty, and Asia: Moving beyond subsistence entrepreneurship. *Asia Pacific Journal of Management*. 2015; 32(1):1-22. <https://doi.org/10.1007/s10490-014-9404-x>
 13. Bruton GD, Ketchen DJ, Ireland RD. Entrepreneurship as a solution to poverty. *Journal of Business Venturing*. 2013; 28(6):683-689. <https://doi.org/10.1016/j.jbusvent.2013.05.002>
 14. Bruton GD, Khavul S, Chavez H. Microlending in emerging economies: Building a new line of inquiry from the ground up. *Journal of International Business Studies*. 2015; 42(5):718-739.
 15. Caird S. General measure of Enterprising Tendency test, 2013.
 16. Cheng MY, Chan WS, Mahmood A. The effectiveness of entrepreneurship education in Malaysia. *Education + Training*. 2009; 51(7):555-566.
 17. Creswell JW. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). London: SAGE Publications India Pvt Ltd, 2014.
 18. Easterly W. *The White Man’s Burden: Why the West’s Efforts to Aid the Rest have Done so Much Ill and so Little Good*. New York: Penguin Press, 2006.
 19. Envick BR, Langford M. The Five-Factor Model Of Personality: Assessing Entrepreneurs And Managers. *Academy of Entrepreneurship Journal*. 2000; 6(1):94-132.
 20. Friedman B. The Relationship between Governance Effectiveness and Entrepreneurship. *International Journal of Humanities and Social Science*. 2011; 1:17.
 21. Fukugawa N. Which Factors do Affect Success of Business Incubators. *Journal of Advanced Management Science*. 2013; 1(1):71-74. <https://doi.org/10.12720/joams.1.1.71-74>
 22. Gebremariam GH, Gebremedhin TG, Jackson RW. The Role Of Small Business In Economic Growth And Poverty Alleviation In West Virginia : An Empirical Analysis (No. 10). Denver, Colorado, 2004.
 23. Hair JFJ, Black WC, Babin BJ, Anderson RE. *Multivariate Data Analysis* (7th ed.). New Jersey, USA: Pearson prentice hall, 2010.
 24. Hair JF, Hult GTM, Ringle C, Sarstedt M. *A primer on partial least squares structural equation modeling (PLS-SEM)*. Los Angeles: SAGE Publications, 2014.
 25. Hamanou G, Morduch J, David IP, Gibson J, Son HH, Glewwe P, Reddy S. *Handbook on Poverty Statistics : Concepts, Methods and Policy Use*, 2005.
 26. Hart SL, Christensen CM. The great leap: Driving Innovation From the Base of the Pyramid. *Sloan Management Review*. 2002; 44(1):51-56.
 27. Haughton J, Khandker SR. *Handbook of Poverty+ Inequality*, 2015, 1. The World Bank. <https://doi.org/10.1017/CBO9781107415324.004>
 28. Henseler J, Ringle CM, Sarstedt M. Testing measurement invariance of composites using partial least squares. *International Marketing Review*. 2016; 33(3):405-431.
 29. Henseler J, Ringle CM, Sinkovics R. The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 2009-2014, 277-319.
 30. Hirschman AO. Professor Schumpeter’ s Theory of Innovation. *The Review of Economics and Statistics*. 1949; 25(1):93-96. <https://doi.org/10.1111/j.1>
 31. Hussain MD, Bhuiyan AB, Bakar R. Entrepreneurship Development and Poverty Alleviation: an Empirical

- Review. *Journal of Asian Scientific Research*. 2014; 4(10):558-573.
32. Ifeanyiichukwu OA, Eze OC, Okoli CI. Strategies For Developing Entrepreneurial Skills Among Undergraduates Of Technology Vocational Education For Poverty Alleviation In Nigeria. *European Journal of Education Studies*. 2018; 4(8):152-163.
 33. Kabongo JD, Okpara JO. Entrepreneurship education in sub-Saharan African universities. *International Journal of Entrepreneurial Behaviour and Research*. 2010; 16(4):296-308. https://doi.org/10.1108/1355_2551011054499
 34. Kareem R. Impact of Entrepreneurship on Poverty Alleviation. *Journal of Business Administration and Education*. 2015; 7(1):1-16.
 35. Khavul S. Microfinance: Creating Opportunities for the Poor. *Academy of Management Perspectives*, 2010, <https://doi.org/10.5465/AMP.2009.43479265>
 36. Kijima Y, Lanjouw P. Economic Diversification and Poverty Decline in Rural India. *Indian Journal of Labor Economics*. 2005; 48:2.
 37. Kistruck GM, Beamish PW, Qureshi I, Sutter CJ. Social Intermediation in Base-of-the-Pyramid Markets. *Journal of Management Studies*. 2013; 50(1):31-66.
 38. Liñán F, Rodríguez-Cohard JC, Rueda-Cantucho JM. Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*. 2011; 7(2):195-218. <https://doi.org/10.1007/s11365-010-0154-z>
 39. Manaf NA, Ibrahim K. Poverty Reduction for Sustainable Development: Malaysia's Evidence-Based Solutions. *Global Journal of Social Sciences Studies*. 2017; 3(1):29-42. <https://doi.org/10.20448/807.3.1.29.42>
 40. Misango SB, Ongiti OK. Do Women Entrepreneurs Play a Role in Reducing Poverty? A Case in Kenya. *International Journal of Entrepreneurship and Business Research*, 2013; 2(1):87-103.
 41. Mitra J, Abubakar YA, Sagagi M. Knowledge creation and human capital for development: the role of graduate entrepreneurship. *Education + Training*. 2011; 53(5):462-479.
 42. Murphy G, Trailer J, Hill R. Measuring research performance in entrepreneurship. *Journal of Business Research*. 1996; 36(1):15-23.
 43. Olayinka I, Olusegun AK, Babatunde SJ. Entrepreneurship and Poverty Reduction in Nigeria: An Empirical Analysis. *IOSR Journal of Business and Management Ver. III*. 2015; 17(3):16-19. <https://doi.org/10.9790/487X-17331619>
 44. Pallant J. *SPSS survival manual: A step by Step guide to data analysis using SPSS for windows (Third)*. New York: MCGraw-Hill Higher Education, 2007.
 45. Parboteeah KP. Choice of Type of Corporate Entrepreneurship: a Process Model. *Academy of Entrepreneurship Journal*. 2000; 6(1):28-47. Retrieved from <http://facstaff.uww.edu/parboteek/files/aej.pdf>
 46. Rogerson C. Local economic development and urban poverty alleviation: the experience of post-apartheid South Africa. *Habitat International*. 1999; 23(4):511-534.
 47. Rogerson CM. Pro-Poor local economic development in South Africa: The role of pro-poor tourism. *Local Environment*. 2006; 11(1):37-60.
 48. Shaheen GE. Inclusive Entrepreneurship: A Process for Improving Self-Employment for People with Disabilities. *Journal of Policy Practice*. 2016; 15(1-2):58-81.
 49. Si S, Yu X, Wu A, Chen S, Chen S, Su Y. Entrepreneurship and poverty reduction: A case study of Yiwu, China. *Asia Pacific Journal of Management*. 2015; 32(1):119-143. <https://doi.org/10.1007/s10490-014-9395-7>
 50. Singer AE. Business strategy and poverty alleviation. *Journal of Business Ethics*. 2006; 66(2-3):225-231. <https://doi.org/10.1007/s10551-005-5587-x>
 51. Sultan F, Ahmad J, Khan AS, Rahman RU. The Role of Social Entrepreneurship in Sustainable Business. *Journal of Business and Tourism*. 2018; 04(01):159-174.
 52. Sutter C, Bruton GD, Chen J. Entrepreneurship as a solution to extreme poverty: A review and future research directions. *Journal of Business Venturing*, 2018, 0-1.
 53. Usman MF, Adam SI. The effect of entrepreneurship on poverty reduction: Empirical evidence from Sokoto State - Nigeria. *International Journal of Commerce and Management Research International*. 2017; 3(1):94-100.
 54. Ven AH, Van DE, Sapienza HJ, Villanueva J. Entrepreneurial pursuits of self- and collective interests. *Strategic Entrepreneurship Journal*. 2007; 1:353-370.
 55. Weidner KL, Rosa JA, Viswanathan M. Marketing to subsistence consumers: Lessons from practice. *Journal of Business Research*. 2010; 63(6):559-569.
 56. Wu J, Si S. Poverty reduction through entrepreneurship: incentives, social networks, and sustainability. *Asian Business and Management*, 2018, 1-17.
 57. Wujun VA, Mbella ME. Entrepreneurship and poverty reduction in Cameroon A Vector Autoregressive approach. *Archives of Business Research*. 2014; 2(5):1-11.
 58. Xiao-fu S, Xiao-tong Z, Hui-ying L, Hui C. How to Reduce Poverty Through Entrepreneurship: Theory and Practice Modes. *R&D Management*, 2017, 6.
 59. Yu B, Hao S, Ahlstrom D, Si S, Liang D. Entrepreneurial firms' network competence, technological capability, and new product development performance. *Asia Pacific Journal of Management*. 2014; 31(3):687-704.
 60. Yunus M, Moingeon B, Lehmann-Ortega L. Building social business models: Lessons from the grameen experience. *Long Range Planning*. 2010; 43(2-3):308-325.