

## Small Scale Enterprises, Poverty Alleviation and Job Creation in Nigeria: Lessons from Burnt Bricklayers in Benue State

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### Abstract

This empirical study examined the efficacy of tackling the twin economic challenges of poverty and unemployment in Nigeria through the small scale enterprise commonly known as burnt bricklaying. The study also examined the socio-economic characteristics of the bricklayers as well as the major challenges militating against their growth and performance. The results indicate that burnt bricklaying has significant positive impact on poverty alleviation, job creation, and income generation in Nigeria. The study therefore recommends that the challenges of poor infrastructure, low prices of bricks, low demand for bricks, and low operating capital faced by these small scale enterprises should be addressed by the various tiers of government and the financial system as a viable means of job creation, poverty alleviation and income generation in Nigeria.

**Keywords:** Small Scale Enterprises; Poverty Alleviation; Job Creation; Unemployment; Bricklaying;

### 1. Introduction

Poverty is a pervasive phenomenon worldwide. The increasing trend in the level of poverty has been a leading public issue in recent times (Oyesiku, 2002). According to Ajegi (2002), about 2.8 billion people live in absolute poverty. Though noticeable in all parts of the world, the extent, severity and characteristics of poverty may differ greatly within and across countries (Ikoni, 2004). Ajala and Fakoya (2003) confirmed this and stressed that poverty is more pronounced in developing countries such as Nigeria. Alegieuno and Attah (2005) stated that the areas that are hit hardest by poverty are countries in Sub-Saharan Africa and South Asia. In specific terms, 50% of Africa's population live below the poverty line; while in Nigeria, about 70% of the population are poor. The World Bank (1996) emphasized that Nigeria is rich but its people are poor.

According to the National Bureau of Statistics (2008), the national poverty rate of Nigeria increased from 28.1% in 1980 to 70.6% in 2007. UNDP (2009) report estimated the human poverty index (HPI) value for Nigeria as 36 ranking 114 out of 135 countries measured. Triggered by poverty, its consequences, the quest to alleviate it and the need to create jobs for Nigerians, most of the successive governments in Nigeria have instituted poverty alleviation programs and job creation schemes. Some of these programs include Operation Feed the Nation (OFN) in 1979, Green Revolution (GR) in 1980, the National Directorate for Employment (NDE) in 1986, the Directorate for Food, Roads and Rural Infrastructure (DFRRI) in 1987, the Family Support Program (FSP) in 1994, Family Economic Advancement Program (FEAP) in 1998, People's Bank in 1989, Community Banks in 1990, National Economic Empowerment and development strategy (NEEDS) in 2004, Community Action Programme for Poverty Alleviation (CAPP) in 1996, and the National Poverty Eradication Programme (NAPEP) in 2001.

In spite of the above government efforts and measures at alleviating poverty and creating jobs for Nigerians, the rates of poverty and unemployment are still very high in Nigeria. The unemployment rate in Nigeria increased from 11.9% in 2005 to 23.9% in 2011 (NBS, 2012). Nigeria's poverty incidence increased from 54.4% in 2004 to 69.0% in 2010, while the population in poverty increased from 68.7 million in 2004 to 112.5 million in 2010. Clearly, poverty and unemployment are the most devastating economic challenges facing Nigeria. Faced with these challenges, there is the need for a paradigm shift in policies and measures of fighting poverty and unemployment in Nigeria.

The concept of small scale enterprise offers a viable policy option in the fight against poverty and unemployment in Nigeria. A good example of such an enterprise in Benue State, North Central Nigeria, is burnt bricklaying. The existence of good clay along the river-banks, the favorable climatic conditions, the water lodged nature of Makurdi (the capital of Benue State), the widening market for burnt bricks and the water resisting ability of burnt bricks that encourage their usage indicate that burnt bricklaying could be a veritable tool for poverty alleviation and job creation.

The broad objective of this empirical study is to examine the impact of small scale enterprises on poverty alleviation and employment generation in Nigeria. However, in specific terms, this research seeks to ascertain if burnt bricklaying has significant effect on poverty alleviation in Benue State; to examine the impact of burnt bricklaying on job creation and income generation in Benue State; to assess the socio-economic characteristics of burnt bricklayers in Benue State; and to identify the major challenges faced by burnt bricklayers in Benue State.

This study is significant and justified on many counts. First, given the inability of successive governments in Nigeria to eradicate poverty and create jobs using the conventional tool of agriculture, there is an urgent need therefore to seek for other non-agricultural measures of poverty reduction and job creation. Accordingly, the burnt bricklaying enterprise is considered relevant in addressing these economic challenges and this study would be of immense benefit to policy makers in this regard. Second, this study would unveil the potentials and challenges of burnt bricklaying in Benue State so that government at all levels in Nigeria can invest in this enterprise in order to empower the people and enhance economic growth and development. Third, this study will improve the depth of literature on burnt bricklaying in Nigeria and this would be of great advantage to future researches in this area.

## **2. Conceptual Framework:**

**2.1. The Concept of Small Scale Enterprises:** There is no generally accepted definition of a small scale enterprise because the classification of businesses into large scale, medium scale or small scale is highly subjective. In Nigeria, the Central Bank of Nigeria (CBN) in its monetary policy circular No 22 of 1988 defined small-scale enterprises as having an annual turnover not exceeding five hundred thousand naira (Ali 2003). The disparities associated with the definition of this concept could be ascribed to the differences in the background of the researchers, changes in economic conditions, institutional changes and advances in technology.

The Federal Ministry of Industries (1973) defined small scale enterprises as businesses that have total capital (land, building machinery equipment and working capital) of up to N60,000 and employ up to 50 persons. Ifechukwu (2000) views a small scale enterprise as a business operated mainly with hired labour usually not exceeding 50 workers if no motive power is used. Generally, such businesses are characterized by labour intensive mode of production, flexible operation as they adjust quickly to various factors, use indigenous raw materials, localized operations, low gestation period, and low level of education/skills (Ifechukwu, 2000; Ali 2003).

Optimists have held the view that there is a negative relationship between small scale enterprises and poverty on the one hand, and between small scale enterprises and unemployment on the other hand. This is to say that the presence, growth and survival of small scale enterprises can alleviate poverty and create jobs, especially in developing countries like Nigeria.

**2.2. The Concept of Burnt Bricklaying:** Standard burnt bricks are walling units with a length, width and height of about 337.5mm, 225mm and 112.5mm respectively. However, the burnt bricks commonly used by most households have a length of 215mm, width of 102.5mm and height of 65mm; and like normal cement blocks, they must be laid in a definite pattern to form a structural wall. They are usually made from clay and lime and are available in a wide array of strengths, types, textures, colours and shapes (Benue Advance Plan Document, 2003). The bricks are of such size that they can be conveniently held in one hand. In recent times, burnt bricks are ceramic structural materials made by pressing clay into blocks and firing them to the required hardness in a kiln. In some jurisdictions, the bricks are referred to as fired bricks rather than burnt bricks (Varghese and Jenkins, 2005).

Bricks in their most primitive form were not fired but were hardened by being dried in the sun.

Good bricks are resistant to atmospheric action and high temperature and are very durable; however, where heat resistance is especially important, fired bricks are used since they are made of special refractory clays called fire clays and are fired at very high temperatures. The properties of the bricks include strength and durability, workability, availability, resistance to corrosion and fire, esthetic, and resistance to environmental changes and to insects attack. The stages involved in processing the bricks are excavation, weathering, moulding, drying/burning, loading/arranging and delivery to site (Nash, 1983; Torbet, 1990). The bricks are classified according to their uses, general physical requirement and strength. The uses of the bricks are diverse, namely: building of houses and pavements; decorative fence in pedestrian precipices; metallurgy and glass industries for living furnaces; and many houses are decorated with a layer of bricks on the outside for aesthetic appeal. The bricks usually undergo compressive strength, water absorption, abrasion and soundness tests (Varghese and Jenkins, 2005).

**2.3. The Concept of Poverty:** In economics, the term poverty has been defined by developing a poverty line using the minimum wage/income concepts like the one developed by the MURGAN Commission in Nigeria. Anyone earning below the minimum wage/income is believed to be living below the poverty line. This concept seems to be the most commonly used in relation to the least income anyone in the society needs for decent living. Poverty is also defined as the lack of material resources of certain duration and to such an extent that participation in normal activities and possession of amenities and living conditions become impossible or very limited (Townsend et al., 1992). In this study, we adopted the definition by Odion (2009); that is, poverty is defined as a deadly socio-economic phenomenon that manifests in a peoples inability to acquire the basic necessities of life such as (food, clothing and shelter) needed for decent living.

In Nigeria, corruption, unemployment, unfavorable business environment, wrong implementation of privatization programs, wrong patterns of education, political instability, poor macroeconomic policies, incessant cases of inflation, harsh economic reforms leading to retrenchments, among others, are some of the main causes of poverty (Obadan, 1996). Several types of poverty have been identified in Nigeria, namely: absolute poverty, which is the type of poverty that leads to chronic starvation where people are totally unable to care for themselves (Olaitan 2000); relative poverty, which involves the comparison between individuals and groups in terms of household income, social class, and residential area, in order to determine the position of an individual or a household compared to others; intellectual poverty, which portrays the inability of an individual to use his power of the mind to reason and get knowledge from active participation in the society; Political Poverty, which is the inability of an individual to use diplomacy and articulation in converting people in his constituency about his ideals, values and aspirations for the people in a well defined manner.

Other types of poverty that are common in Nigeria are chronic poverty, which means a persistent or long-term poverty that depends on a host of factors such as limited productive resources, lack of skills for gainful employment, locational disadvantage, endemic conditions, socio-political factors and the likes; Conjectural/Transiting Poverty, which refers to the kind of poverty caused by temporal or short-term causes such as natural disasters including, drought, flood, structural changes, among others; Locational Poverty, which is the kind of poverty that depends on the geographical or regional spread and incidence such as climatic problems; Generalized poverty, which means poverty that is widespread, common and pervasive, sometimes among gender groups, or age groups which may be due to exclusion mechanism; Island poverty, which is poverty that exists in the midst of plenty of wealth and resources, such as in Nigeria that has been termed a paradox; Case Specific Poverty, which is rare in the midst of the population, that is, a few people are poor may be due to illness or disability and this kind of poverty is also found in advanced countries.

Poverty affects the people physically, economically, psychologically and socially. The physical effect of poverty manifests when people lack money to take care of their sickness at the initial stage which may result in untimely death, maternal mortality resulting from inadequate care or treatment during pregnancy, among others. The economic effect of poverty manifests in low productivity and industrial activities because of the inability of people to engage in modern modes of production. This in turn results in increased unemployment as people who are able and willing to work are idle because of lack of job opportunities. Psychologically, poverty affects the people. For instance, children from rich homes usually go to school in exotic cars and with lunch packs, and when children from poor homes watch them enjoying these good things they become discouraged. Socially, poverty has led to broken homes when one cannot provide for the family. It has also led some people into taking drugs, alcohol, narcotic substances, and crimes such as bribery, corruption, armed robbery, and advanced fee fraud (Andoho, 2009).

The measurement of poverty is complex given its multidimensional nature. However, the World Bank (1996) identified three measures of poverty, namely: Poverty line, Poverty profile and Poverty indicators. The poverty line refers to the minimum level of income needed by an individual or a household to consume a given unit of goods and services so as not to be termed poor; it is country specific. The poverty profile is a snapshot of the poor which places poverty in the country's economic, institutional and social context starting with the definition and measurement of poverty based on one or more poverty lines and incorporates changes in the features and behaviours of the poor over time. The poverty indicators are basic indicators of social welfare that assist in tracing poverty over time as well as allow for inter-country comparisons; they include incomes indicator, social indicators and children's development indicators (Euvuomwan, 1997).

### 3. Theoretical Literature

In order to provide a proper theoretical foundation for this study, we shall briefly review the theories of poverty and full employment.

**3.1. Theories of Poverty:** Let us briefly consider the relevant theories of poverty, specifically the theory of vicious circle of poverty, the unbalanced growth theory and the basic needs theory.

**3.1.1 The Vicious Circle of Poverty:** This theory that was propounded by Nurkse (1953) posits that there are circular relationships known as the vicious circles of poverty that tend to perpetuate the low level of development in less developed countries like Nigeria. In other words, there is a circular constellation of forces tending to act and react upon one another in such a way as to keep a poor country in a state of poverty. For instance, a poor man may not have enough to eat, being under fed his health may be weak, being physically weak, his working capacity is low, which means that he is poor, which in turn means that he will not have enough to eat and so on. A situation of this sort relating to a country as a whole can be summed up in the trite proposition that a country is poor because it is poor. The basic vicious circle stems from the fact that total productivity in low income countries is low due to deficiency of capital market imperfections, economic backwardness and underdevelopment, and this circle operates both on demand and supply sides.

Clearly, the development of natural resources depends on the development capacity of human resources in the country. If the people are illiterates, low skilled and lack knowledge at entrepreneurial abilities, natural resources will remain untapped, unutilized or underutilized. On the other hand, underdeveloped natural resources will make people to remain economically backward in a country. According to Jhingan (2007), poverty and underdevelopment of an economy are thus synonymous as a country is poor because it is underdeveloped, and a country is underdeveloped because it does not have the necessary resources for promoting development. The basic idea behind the vicious circle of poverty theory is that poverty once started could continue for generations unless there is outside intervention. According to Marger (2008), breaking the vicious circle of poverty is almost impossible since poor people do not have the requisite resources to get out of poverty and this explains why Valentine (1968) noted that it is a pattern of behaviour which cannot easily be reverted.

**3.1.2. The Unbalance Growth Theory:** According to this theory, investment should be made in selected sectors rather than simultaneously in all sectors of the economy. Hirschman (1958) however popularized the theory when he advanced that deliberately unbalancing the economy according to a pre-designed strategy is the best way to achieve economic growth in an underdeveloped country. In other words, investment in strategically selected industries of the economy will lead to new investment opportunities and so pave the way for further economic development.

**3.1.3. The Basic Needs Theory:** The basic needs theory was propounded by Maslow (1943). The basic idea behind this theory is that people have needs and the desire to satisfy the unmet needs motivate them to engage in activities that will help them satisfy their needs. The theory states that different needs are active at different times and only those needs not yet satisfied can motivate people. The needs are arranged in a fixed order of importance called a hierarchy and once a lower need has been met, the individual is motivated by unmet higher needs. The needs are arranged in a hierarchical order starting from physiological or basic needs to self-actualization needs as follows:

- i) Basic needs which includes food, shelter and clothing;
- ii) Safety needs, that is freedom from harm and deprivation;
- iii) Social needs, that is friendship and team work;
- iv) Self esteem needs, that is acceptance of self as having value;
- v) Self actualization needs, which is the need for fulfillment of potentials and personal growth potentials. Maslow (1943) noted that the efforts and behavioural changes observed in individuals are meant to achieve one of these needs.

**3.2. Theories of Full Employment:** There is no unanimity in the literature on the meaning of full employment. We shall therefore present the various views of economists on this concept (Jhingan, 2010).

**3.2.1. The Classical View:** The classical economists believe in the existence of full employment in the economy. In other words, full employment was a normal situation and any deviation from this is regarded as abnormal. In the Pigovain sense, unemployment resulted from the rigidity in the wage structure and interference in the working of the free market system by way of trade union legislations, minimum wage legislations, and the likes. Hence, full employment exists when everybody who at the running rate of wages wishes to be employed and those who are not prepared to work at the existing wage rate are not unemployed because they are voluntarily unemployed (Jhingan, 2010).

**3.2.2. The Keynesian View:** In the view of the Keynes, full employment means the absence of involuntary unemployment. In other words, it is a situation in which everyone who wants to work gets work. It is assumed that an increase in employment can only occur to the accompaniment of a decline in the rate of wages. To achieve full employment therefore, Keynes advocates increase in effective demand to bring about reduction in real wages. When effective demand is deficient, there is underemployment of labour in the sense that there are men unemployed who would be willing to work at less than existing real wage. Hence, the Keynesian concept of employment involves three conditions, namely: reduction in the real wage rate; increase in effective demand; and inelastic supply of output at the level of full employment (Jhingan, 2010).

**3.2.3. American Economic Association Committee View:** According to this committee, full employment means that qualified people who seek jobs at prevailing rates can find them in productive activities without considerable delay. It does not mean people like students that are under pressure to take jobs when they don't want jobs or that unemployment is ever zero (Jhingan, 2010).

#### 4. Empirical Literature

Yusuf et al (2008) studied the poverty status of urban farm households in Ibadan metropolis of Oyo State, Nigeria, using 200 questionnaires that were administered on farming households selected from 2 local government areas in the metropolis. Descriptive statistics and qualitative modeling techniques were used to analyze the data. The findings of the study showed that those households who engaged in crop farming had the

highest poverty level of 50% while mixed farming and livestock farming households had poverty level of 37% and 17% respectively. The logistic regression showed that urban farming reduced poverty in the metropolis.

Babatope and Akintunde (2010) examined the state of industrial development in Ondo State, comparing it with other states in Nigeria. Previous forecasts and studies were also reviewed, while some cases of existing small and medium scale enterprises (SMEs) within Akure (the state capital) were also investigated with results presented in order to establish the peculiar problems militating against their profitability. These problems were found to be availability of credit facility, infrastructures and bad or poor management.

Aigboduwa and Oisamoje (2013) examined the historical trend in the development of SMEs in Nigeria and identified several opportunities and competitive advantages now exclusively reserved for Nigerian companies under the Nigerian Content Act 2010. The study emphasized the need for access to funding for development of the capital base of SMEs, and suggested that the Act would offer a turning point in the realization of all the policy trusts formulated for growing SMEs in Nigeria in the future.

Akingunola (2011) assesses specific financing options available to SMEs in Nigeria and their contributions to economic growth. The Spearman's Rho correlation test was employed to determine the relationship between SMEs financing and investment level. The analysis reported a significant Rho value of 0.643 at 10%. This indicated that there is significant positive relationship between SMEs financing and economic growth in Nigeria via investment level. Descriptive statistics were also used to appraisal certain financing indicators. The study recommended that accessibility to relative low interest rate finances should be provided to small and medium enterprises in Nigeria in order enhance economic growth.

Kadiri (2012) examined the contributions of Small and Medium Scale Enterprises (SMEs) to employment generation in Nigeria by providing a sectoral analysis of the efficacy of SMEs as a vibrant tool for employment generation. The Binomial Logistic Regression Analysis was employed as the tool for statistical analysis. The study found that the sector was unable to achieve this goal due to its inability to obtain adequate business finance. It was observed that virtually all the SMEs that were sampled relied on informal sources of finance to start their business. The study therefore recommends the integration of the activities of the formal with that of the informal financial institutions; while the government should urgently provide the needed infrastructure such as roads, water, electricity and the needed enabling environment.

Oboro and Ighoroje (2011) examined the problems of financing small scale business enterprises in Nigeria and the way forward. The study identified the sources of finance, types of finance available for small business enterprises and problems inhibiting small scale business enterprises in Nigeria in securing funds for their smooth operations. The study concluded that adequate finance is indispensable for the successful operations of small scale business enterprises in Nigeria and recommended among others that government should increase loanable funds granted to small scale businesses, while micro finance banks should also live up to their responsibility of granting loanable funds to small scale businesses in Nigeria.

Akighir (2011) examined rice processing and poverty reduction in Kwanda local government council of Benue State, Nigeria, using sample survey methodology. The study measured poverty status using head count ratio and poverty gap measures. The findings of the research showed that rice processing reduced the poverty status of the respondents. The challenges of rice processing were identified to include low capital, poor transportation network, and low price of locally processed rice among others.

Akeredolu (1972) examined 52 indigenous small scale enterprises in Lagos State, Nigeria in order to establish the relationship between small scale enterprises and poverty reduction. Structured questionnaires were used to elicit data from the respondents while simple percentages were used to analyze and present the results. The findings indicate that one of the most effective ways of poverty reduction in Lagos is the development of small scale enterprises.

Ajala and Fakoya (2003) examined the role of women's small scale business activities towards poverty alleviation in Ibadan North East local government area of Oyo State, Nigeria. The study used structured questionnaires to generate primary data from 180 small scale women entrepreneurs. The data were analyzed using frequency tables and percentages; while chi-square test was used to evaluate the research hypothesis. The results showed that small scale businesses are effective in reducing poverty in Oyo State; and that the main challenges faced by small scale businesses are lack of capital and basic infrastructure.

Jibril (2009) examined the poverty level among small scale business entrepreneurs in Bauchi State. Data were collected from 60 respondents using questionnaires; while descriptive statistics and Foster, Green and Thorbecke index were used to analyze the data. The results indicate that average annual incomes of the entrepreneurs were 25% below the poverty line.

Olusola and Olusola (2013) examined the growth in investment of micro and small scale enterprises intermediated by the informal credit market in Nigeria using primary data collected from ten local government areas of Oyo State, Nigeria. The results indicate that size of lending and experiences in lending business have positive and significant impact on growth in investment of micro and small scale enterprises. The study therefore

recommended policies aimed at making funds increasingly available to small scale enterprises in order to boost growth in small and micro enterprises.

Onakoya, Fasanya, and Abdulrahman (2013) examined the impact of financing small scale enterprises on economic growth in Nigeria, using quarterly time series data from 1992 to 2009. The study combined several econometric estimation techniques. The results indicate that loan to small scale entrepreneurs have a positive impact on the economic performance while interest rate has a negative impact on economic growth. The study thereby concluded that the greatest or worst problem confronting SMEs in Nigeria is managerial capacity, and that access to capital or finance is necessary but not a sufficient condition for successful entrepreneurial development.

Aremu and Adeyemi (2011) examined the role of small and medium enterprises in promoting economic growth and development in Nigeria. The study identified the major advantage of the sector as its employment potential at low capital cost since the labour intensity of the SME sector is much higher than that of the large enterprises. The study therefore concludes that besides the growth potential of the sector and its critical role in the manufacturing and value chains, it also has multiplier effects on the rest of the economy.

#### 4.1. Research Gaps and Contributions to Knowledge

In spite of the numerous empirical studies on the roles of small scale enterprises in poverty reduction and employment generation in Nigeria, including the ones reviewed above, no empirical study known to the authors of this paper has examined the role of burnt bricklaying as an important enterprise that could create jobs and reduce poverty in Nigeria. This study is therefore a pioneer empirical attempt to fill this gap in the literature and provide the foundation for evidence-based policies for tackling the twin economic challenges of unemployment and poverty facing low income countries like Nigeria. Besides, the bulk of previous studies had focused on the financing challenges faced by SMEs in Nigeria; thus ignoring their very important roles in job creation and poverty alleviation. Furthermore, only few studies utilized econometric tools in their analysis; most of the studies used only descriptive statistics. This study will utilize both econometric and descriptive statistics to comprehensively examine the role of small scale enterprises in poverty reduction and employment generation in Nigeria.

### 5. Research Methodology

This study was conducted in Makurdi metropolis, which is the commercial centre of Makurdi local government area of Benue State, North Central Nigeria. Makurdi local government is made up of eleven council wards with an approximate population of 486,198 people according to the 2006 population census figures. Makurdi is home to people from different parts of the globe, who live and do business in the metropolis. It is the capital city of Benue State; as well as the administrative headquarter of Makurdi local government area. It is endowed with natural resources like clay, natural gas gypsum, kaolin and columbine among others. It is situated at the narrow end of River Benue (Benue Advance Plan Document, 2003).

A pre-survey study revealed that the total population of burnt bricklayers in Makurdi metropolis is about 200 persons. The study therefore administered structured questionnaires to all the burnt bricklayers in Makurdi metropolis. The choice of a census is to give the entire respondents the chance of participating in the study and to ensure that the results are true reflections of the entire population. Descriptive statistical tools such as tables, charts and simple percentages, as well as logistic regression were used to present and analyze the data.

#### 5.1. Model Specification

In the multivariate logistic regression model used for this study, the endogenous variable is a dummy variable with a value of 1 indicating the presence of poverty and 0 indicating the absence of poverty. In order to establish the factors that influence the poverty status of the respondents, the parameters of the model were estimated using the maximum likelihood technique. Following Gujarati and Porter (2009), the model for this study is specified thus:

$$\Pr(\text{Pov} = 1 | X_1, X_2, \dots, X_k) = B_0 + \sum_{i=1}^k B_i X_i + U_i \dots \dots \dots (1)$$

Where:

$B_i$  = parameters;  $U_i$  = error term;  $X_i$  = household socio-economic characteristics such as annual income from burnt bricklaying, quantity of bricks layed, number of meals taken per day (0 if three times a day and 1 if otherwise), house type (0 if zinc roof and cemented walls/floors and 1 if otherwise), access to improved medical service (0 if respondents visit dispensary, specialized and general hospitals and 1 if otherwise), access to clothing (1 if at least one new cloth is purchased in a year and 0 if otherwise), children/family members education (0 if family members have access to formal education and 1 if otherwise), level of education of the respondent (1 if the respondent attains secondary education and above, 0 if otherwise), and family size. Pov = poverty status which is computed as:

$$\text{Pov} = \frac{\text{annual income of a household from burnt bricklaying}}{\text{total number of days in a year (that is 365)}}$$

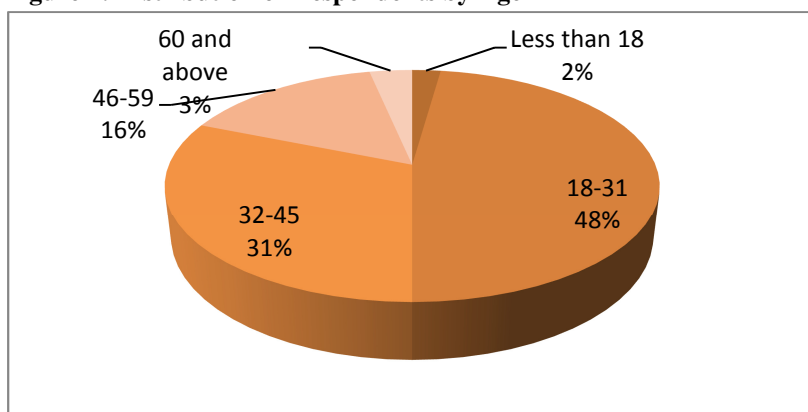
If poverty status is less than \$1.5, it means that the household is poor and would be assigned a value of 1; however, if it is \$1.5 and above, it means the household is non-poor and would be assigned a value of 0. The study used **STATA 12** software.

## 6. Empirical Results and Discussion:

To begin, out of a total of 200 questionnaires distributed to the respondents, only 180 questionnaires were retrieved. First, we present the socio-economic characteristics of the bricklayers (respondents) such as age, sex, marital status, educational level, means of transportation, house ownership status, major sources of income, type of sleeping material, children educational sponsorship from brick income, sources of feeding income, payment of medical bills from brick income, type of health facilities patronized from brick income the frequency of purchase of new clothes in a year from brick income as well as household size of the respondents.

### 6.1: Distribution of Respondents by Age

**Figure 1: Distribution of Respondents by Age**

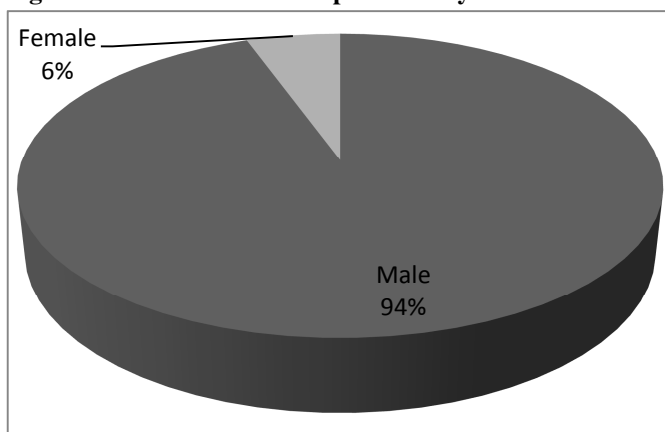


**Source: Field Survey, 2013**

Figure 1 above reveals that majority of the bricklayers were in their active years since those aged 18-59 years accounted for 95% of the total respondents. Those aged 60 and above accounted for only 3% of the overall respondents, while 2% of the respondents aged below 18 years appear to be child labourers.

### 6.2: Distribution of Respondents by Sex

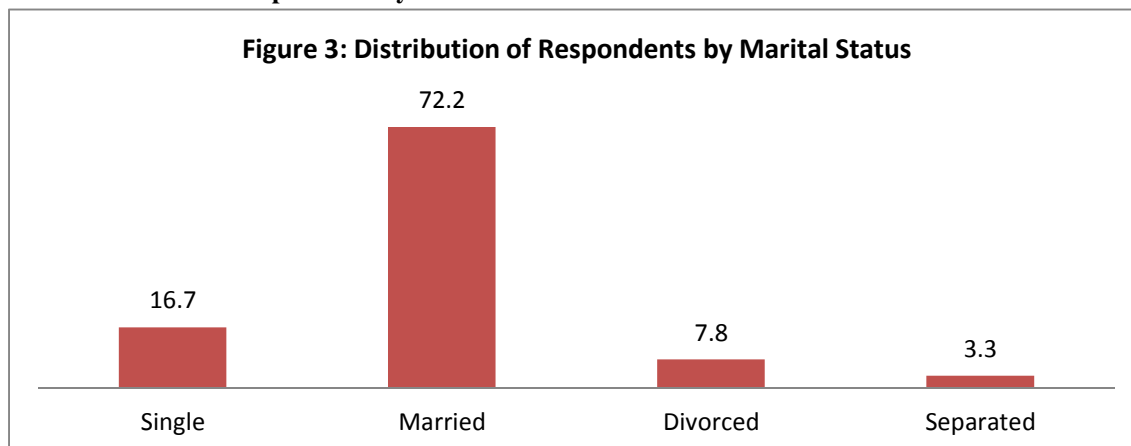
**Figure 2: Distribution of Respondents by Sex**



**Source: Field Survey, 2013**

Figure 2 above shows that 94% of the respondents were males, while only 6% of the respondents are females. This implies that burnt bricklaying enterprise within the study area is dominated by males.

### 6.3: Distribution of Respondents by Marital Status

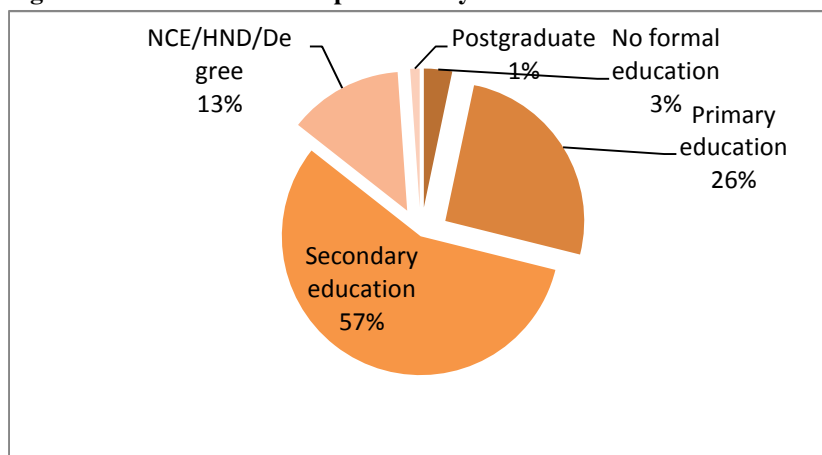


Source: Field Survey, 2013

Figure 3 reveals that majority (72.2%) of the respondents were married. This may be because married people have more responsibilities, and hence engage in income generating activities such as burnt bricklaying.

### Table 6.4: Distribution of Respondents by Level of Education

Figure 4: Distribution of Respondents by Level of Education

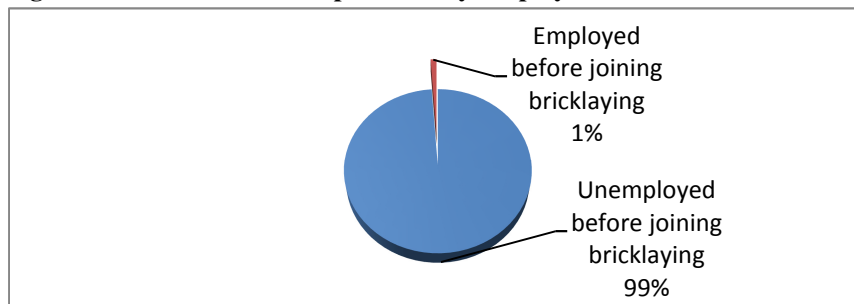


Source: Field Survey, 2013

Figure 4 shows that respondents with secondary education had the highest percentage of 57%, probably due to financial and other constraints in furthering their education. The low percentage of the postgraduate level of education could be traceable to their preferences for white collar jobs.

### 6.5: Distribution of Respondents by Employment Status before Burnt Bricklaying

Figure 5: Distribution of Respondents by Employment Status before Burnt Bricklaying



Source: Field Survey, 2013

Figure 5 shows that 99% of the respondents were unemployed before they joined the burnt bricklaying enterprise. This result clearly affirms the importance of burnt bricklaying in job creation in Nigeria.



### 6.6: Distribution by ownership of means of transportation before and during bricklaying

**Table 1: Distribution by ownership of means of transportation before and during bricklaying**

Means of transportation	Before brick		Laying		During brick		Laying	
	Frequency	percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Bicycle	10	5.6	6	3.3				
Motorcycle	26	14.4	66	36.7				
Car	0	0.0	4	2.2				
None	144	80	104	57.8				
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>				

**Source Field Survey, 2013:**

Table 1 shows that before joining the bricklaying enterprise, 80% of the respondents had no means of transportation. However, after joining the bricklaying enterprise, only 57.8% of the respondents had no means of transportation, 36.7% had motorcycles while 2.2% bought cars.

### 6.7: Distribution of respondents by house type before and during bricklaying

**Table 2: Distribution of respondents by house type before and during bricklaying**

House Type	Before brick		Laying		During brick		Laying	
	Frequency	percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Mud walls and thatched roof	50	27.8	20	11.1				
Cemented walls/floor and zinc roof	32	17.8	108	60				
Mud walls/floor and zinc roof	56	31.1	40	22.2				
Others	42	23.3	6	6.7				
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>				

**Source: Field survey, 2013**

Table 2 indicates an improvement in the house type of the respondents during bricklaying. 60% of the respondents live in good quality houses with cemented walls/floor and zinc roof during bricklaying compared to 17.8% before bricklaying. Again, before bricklaying, 27.8% of the respondents lived in thatched house, but this reduced to 11% during bricklaying, indicating that bricklaying had contributed to improving the house type of respondents.

### 6.8: Distribution of respondents by house ownership before and during bricklaying

**Table 3: Distribution of respondents by house ownership before and during bricklaying**

Type of house ownership	Before		Bricklaying		During brick		Laying	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Personal	72	40	118	65.6				
Rented	84	46.7	48	26.7				
Others	24	13.3	14	7.7				
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>				

**Source: Field Survey, 2013**

Table 3 above shows that bricklaying had enhanced the ability of the respondents to own houses. The table indicates also that before bricklaying, only 40% of the respondents owned houses, but the percentage grew to 65.6% during bricklaying.

### 6.9: Distribution by type of sleeping material before and during bricklaying enterprise

**Table 4: Distribution by type of sleeping material before and during bricklaying enterprise**

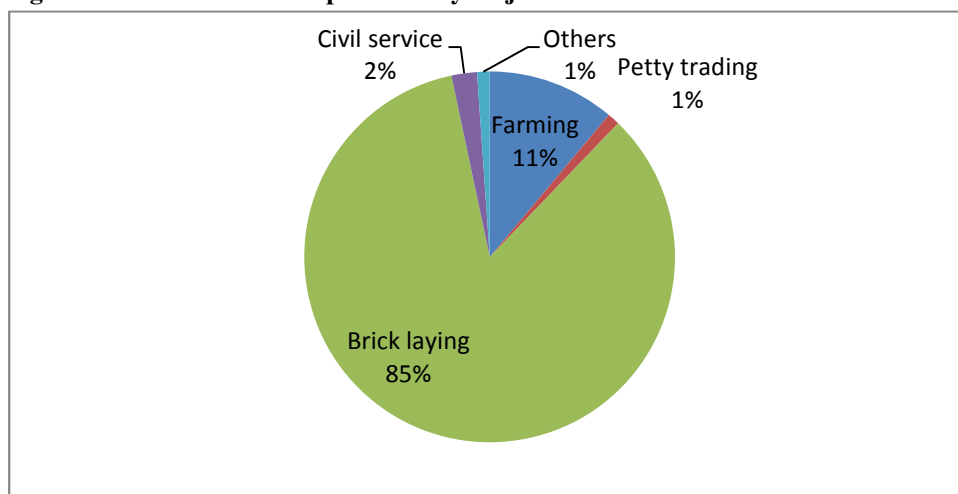
Type of sleeping material	Before		bricklaying		During		bricklaying	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Bed and mattress	128	71.1	146	81.1				
Bed and mat	40	22.2	28	15.6				
Mat	12	6.7	6	3.3				
Bamboo bed	0	0.0	0	0.0				
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>				

**Source: Field Survey, 2013**

Table 4 indicates that the respondents slept on better materials during bricklaying activities. Specifically, 81.1% of the respondents slept on bed and mattress during bricklaying compared to 71.1% before bricklaying.

### 6.10: Distribution of respondents by major sources of income

**Figure 6: Distribution of respondents by major sources of income**



**Source: Field Survey, 2013**

Figure 6 above shows that 85% of the respondents have burnt bricklaying as their major source of income. This result underlines the importance of burnt bricklaying in the lives of such entrepreneurs. A direct interview with some of the respondents revealed that the time consuming nature of burnt bricklaying made it almost impossible for such entrepreneurs to engage in other income generating activities.

### 6.12: Distribution by rate of clothes purchases in a year before and during bricklaying

**Table 5: Distribution by rate of clothes purchases in a year before and during bricklaying**

Number of purchase	Before brick	Laying	During brick	Laying
	Frequency	Percentage	Frequency	Percentage
None	44	24.4	6	3.3
Once	84	46.8	74	41.1
Twice	44	24.4	86	47.8
Thrice	8	4.4	10	5.6
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>

**Source: Field Survey, 2013**

Table 5 shows that 47.8% of the burnt bricklayers bought new clothes twice in a year during bricklaying while only 24.4% of them bought new clothes twice in a year before bricklaying. The results clearly indicate that more respondents bought new cloths during bricklaying than before bricklaying.

### 6.13: Distribution by ability to sponsor their wards in school before and during bricklaying

**Table 6: Distribution of respondents by ability to sponsor their children in school before and during bricklaying**

Opinion	Before brick	Laying	During brick	Laying
	Frequency	Percentage	Frequency	Percentage
Had ability to sponsor their children	68	37.8	128	71.1
Had no ability to sponsor their children	112	62.2	52	28.9
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>

**Source: Field Survey, 2013**

Table 6 above shows that only 37.8% of the respondents could sponsor their children in schools before bricklaying while 71.1% of the respondents could sponsor their children in schools during bricklaying. This result underscores the significance of burnt bricklaying towards the enhancement of the overall welfare of the entrepreneur.

**6.14: Distribution of Respondents by Number of Children being Sponsored in Schools before and during bricklaying**

**Table 7: Distribution of Respondents by Number of Children being Sponsored in Schools before and during bricklaying**

Number of children	Before brick	Laying	During brick	Laying
	Frequency	Percentage	Frequency	Percentage
0	112	62.2	52	28.9
1 – 4	42	23.4	78	43.3
5 – 6	20	11.1	32	17.8
Above 6	6	3.3	18	10.0
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>

Source: Field Survey, 2013

Table 7 above indicates that before bricklaying, 62% of the respondents were not able to sponsor even one child in school; but during burnt bricklaying, 71.1% of the respondents could sponsor at least one child in school.

**6.15: Distribution of respondents by health facility patronized before and during bricklaying**

**Table 8: Distribution of respondents by health facility patronized before and during bricklaying**

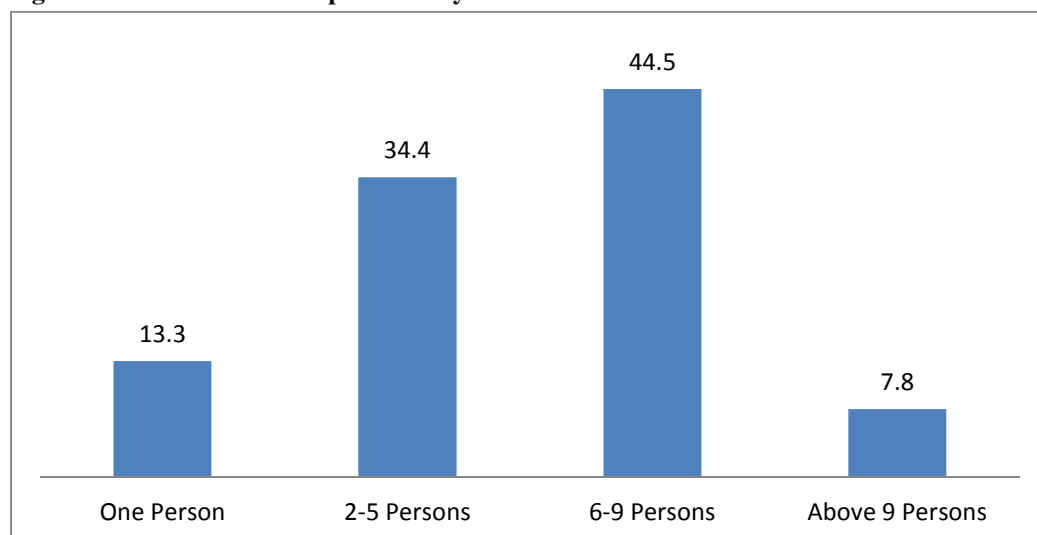
Type of health facility	Before brick	Laying	During brick	Laying
	Frequency	Percentage	Frequency	Percentage
Traditional medicine	90	50	40	11.1
Chemist	54	30	30	16.7
Small clinic	10	5.6	30	16.7
Dispensary	8	4.4	38	21.1
General hospitals	14	7.8	52	28.8
Specialist hospitals	4	2.2	10	5.6
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>

Source Field survey, 2013

Table 8 shows that 50% of the respondents patronized traditional medicine before bricklaying. However, this patronage declined to 11.1% during burnt bricklaying. Obviously, income from burnt bricklaying made access to improved healthcare facilities possible.

**6.16: Distribution of respondents by size of their household**

**Figure 7: Distribution of respondents by size of their household**



Source Field survey, 2013

Figure 7 above indicates that the burnt bricklaying enterprise encourages the economic agent to get married and live a responsible life. For example, the results in Figure 7 show that over 86% of such individuals had household sizes of more than one individual. The results further indicate that the larger the household size and responsibilities, the higher would be the tendency to be poor and hence the need to engage in income generating activities such as burnt bricklaying. It can be seen that beyond the household size of 9, the number of respondents reduced probably because burnt bricks income become too small to meet the needs of the household at this point.

**6.17: Distribution of respondents by average annual income before and during burnt bricklaying**  
**Table 9: Distribution of respondents by average annual income before and during burnt bricklaying**

Average Annual income (=N=)	Before brick	Laying	During brick	Laying
	Frequency	Percentage	Frequency	Percentage
≤ 50,000	68	37.7	18	10
50,001-150,000	82	45.6	36	20
150,001-250,000	16	8.9	60	33.3
250,001-500,000	10	5.6	42	23.4
≥500,001	4	2.2	24	13.3
<b>Total</b>	<b>180</b>	<b>100</b>	<b>180</b>	<b>100</b>

**Source: Field Survey, 2013**

Table 9 above indicates that only 16.7% of the respondents earned average annual income above =N=150,000 before joining the burnt bricklaying enterprise, while 70% of the respondents earned above =N=150,000 in average annual income while performing their burnt bricklaying activities. A further examination of the Table 9 reveals that 37.7% of the respondents earned less than \$1.5 per day before their involvement in burnt bricklaying, which invariably meant that they were poor before burnt bricklaying; while only 10% of the respondents earned less than \$1.5 per day during burnt bricklaying. This means that the proportion of the poor was drastically reduce during burnt bricklaying, and that burnt bricks laying alleviated poverty by 27.7% among the respondents.

**6.18: Distribution by access to basic necessities of life before and during burnt bricklaying**

**Table 10: Distribution by access to basic necessities of life before & during bricklaying**

BASIC NEEDS	BEFORE	DURING
Access to cemented and zinc roof house	17.7%	60%
Access to a three square meal per day	23.3%	90%
Ability to sponsor children in school	37.7%	71.1%
Access to improved health facilities	20.0%	72.2%
Access to means of transportation	12.2%	42.2%
Access to clothing	43.3%	98.8%

**Source: Field Survey, 2013**

Table 10 above shows that most of the respondents had access to better necessities of life as a result of their burnt bricklaying endeavors. For example, only 23.3% of the respondents could afford three meals per day before the burnt bricklaying enterprise while 90% of the respondents could afford three meals per day during bricklaying. These results further underline the relevance of this enterprise towards poverty alleviation and job creation.

### 6.19 Modeling the Poverty Status of the Respondents

The iteration log of the logistic model shows that the model converged quickly after four iterations. Also, the entire 180 observations in the data were used in the analysis indicating the absence of missing values. The likelihood ratio chi-square of 45.91 with a significant p-value of 0.0178 tells us that our model as a whole fits significantly better than an empty model (that is, a model with no predictors). This implies that burnt bricklaying enterprise has significant effect on poverty reduction among the respondents. The analysis of the coefficients of the model indicate that average annual income, number of children being sponsored in school, and health facility patronized significantly influence the poverty status of the respondents. The results indicate that the higher the income of the respondent and the better the health facility patronized, the lower the log odds of being poor. However, the results further indicate that the higher the number of children being sponsored in school, the higher the log odds of being poor. Lastly, the survey results indicate that the main challenges faced by these enterprises are poor infrastructure, low prices of bricks, low demand for bricks, and low operating capital.

## 7. Conclusion

This study investigated the impact of a small scale enterprise generally known as burnt bricklaying on poverty alleviation and job creation in Nigeria. In specific terms, the study examined if burnt bricklaying has significant effect on poverty alleviation in Benue State; if burnt bricklaying has significant impact on job creation and income generation in Benue State; the socio-economic characteristics of burnt bricklayers in Benue State; and the major challenges faced by burnt bricklayers in Benue State. The results indicate that burnt bricklaying has significant positive impact on poverty alleviation, job creation, and income generation in Benue State, Nigeria. The results further indicate that average annual incomes, number of children sponsored in school and health facility patronized significantly influence the poverty status of the respondents. Besides, the key challenges faced by burnt bricklayers in Nigeria were highlighted to include poor infrastructure, low prices of bricks, low demand

for bricks, and low operating capital.

Based on these findings, this research work recommends that the challenge of poor infrastructure, especially poor access roads and transportation services should be addressed by the Nigerian government. The bricklayers should form and register a formal association that will set quotas and enforce appropriate selling price of bricks as a means of addressing the challenges of low prices and demand for bricks. The financial system is urged to extend credits to the burnt bricklayers as a means of resolving the challenge of low capital and empowering emerging entrepreneurs. Finally, the various tiers of government in Nigeria are urged to explore the burnt bricklaying enterprise as a viable means of job creation and poverty alleviation in Nigeria.

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