Income Inequality among Entrepreneurs in Ondo State, Nigeria

Abstract

The study examined the income inequality among entrepreneurs in Ondo State, Nigeria using a questionnaire based survey. Multistage sampling technique was used to select the 200 respondents and the data was subjected to descriptive statistics, Lorenz curve, Gini coefficient and Double - Log regression model.

Findings showed that 40% of the respondents spent at most 12 years in school, while hair dressing (43.5%) and fashion designing (31.5%) were the most common enterprises among the respondents. The findings also revealed that majority of the entrepreneurs earned below N200, 000 per annum. The result of the Gini coefficient (0.58) showed that there was income inequality as shown by the Lorenz curve while the regression indicated that gender, family size and number of workers significantly affected the income of the entrepreneurs.

This study is important as it recommends policies targeted at improving income as well as reducing the income inequality of the entrepreneurs.

Keywords: Entrepreneurs; Income inequality; Entrepreneurship; Globalisation; Poverty; Gini coefficient; Double – log regression; Lorenz curve; Developing economies; Africa.
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1 Introduction

Entrepreneurs have always played a significant role in the world economy (Luthans et al., 2007) and have become a dominant image in both the developed and developing economies (Harrison et al., 2016). Entrepreneurship has been shown to improve firm performance (Buttar and Kocak, 2011; Schwarz et al., 2009), enhance innovation (Harms et al., 2009, Zali et al., 2013), trust (Cherry, 2014; Toledano and Karanda, 2014) and promote rural development (Rao, 2011). However, despite the advancement in entrepreneurship research in recent times, it is arguable that most studies have focused on North America and Europe with less known about Africa (Dana and Ratten, 2017; Sheriff and Muffatto 2015). Dana and Ratten (2017) argue that Africa has been marginalised in mainstream entrepreneurship research but should be the focus of more studies due to the substantial number of informal businesses that exist. This clarion call has led to greater interest in entrepreneurship research in Africa especially in line with sustainability and growth (Juma et al., 2017).

Entrepreneurship has contributed significantly to the growth and development of Asian countries (China, Malaysia and Singapore) and African countries (South Africa and Nigeria) in general. An entrepreneurial economy on the national, regional or community level differs greatly from a non-entrepreneurial economy in many aspects, not only by its economic structure and its economic vigorousness but by the social vitality and quality of life which it offers with a consequent attractiveness to people (Onuoha, 2005). Ajagbe et al. (2007) posited that the various enterprises in Nigeria have played indispensable roles in both economic growth and social development over the years.

The awareness on entrepreneurship given by the government and other organisations has significantly increased the number of entrepreneurs in the country (Soyibo, 2006), which is seen as a pivot for a growing economy like Nigeria. Also, economic growth is often attributed to the role of both government and entrepreneurs. In Nigeria, like some other economies, the government helps to encourage development in entrepreneurship by empowering them to be gainfully employed thereby reducing unemployment problems in the
country. Furthermore, it has led to wealth creation, utilisation of resources and also stimulates various linkages which results to economic development in the country and as well links up various sectors of the economy (Soyibo, 2006).

Since the early 80s, there has been much commitment by the government to the development of entrepreneurship especially after the introduction of the Structural Adjustment Program (SAP), coupled to the establishment of the National Directorate of Employment and Small and Medium Enterprises Development Association of Nigeria (SMEDAN). Also, the role played by individuals/entrepreneurs in Nigeria’s economy involves increasing per capita output and income, use of local raw materials and other resources. Entrepreneurs in Nigeria’s economy help in creation of jobs as well as wealth (Nwafor, 2007).

Furthermore, entrepreneurial development and growth in Nigeria have been evident in most facets of the economy most especially in the small and medium industries, telecommunication services, food vending, clothes making, embroidering, agricultural products, manufacturing, textile, hosiery, wood products, music and film production and among others. Income distribution varies among these entrepreneurs who are seen as an important pattern in determining economic growth and development. Income variation is seen and virtually visible in Third World nations, Nigeria inclusive.

Moreover, with the rapid development between 1965 and 1975, there was a serious income disparity with lots of variation (Oluwatayo, 2008). This shows that though the economy may be performing very well, the difference between the entrepreneurs with low income and those with upper income is high. This is an indication that the rapid economic growth experienced has only resulted in further concentration of national income in the hands of few proportion of the population (Oluwatayo, 2008). This national trend is also evident at the community level, which makes income inequality a useful yardstick in knowing the state of the community.

Income inequality can be linked to a number of intertwined factors such as education, occupation and political differences. These factors do not only produce the same pattern of income distribution but do create a context of community infrastructure through policies that affect other factors as opined by Bakare (2012); in which education play a key role. The evidence of income disparity is glaring in most Sub-Saharan Africa (SSA) countries. Studies further revealed that income inequality is on the high side and has risen in many developing
countries over the years where people of a country or community have diverging fortunes which could be as a result of social and political fracturing.

Income equality is not just an imperative and vital for only the poor and for the social cohesion and wellbeing of society, it is also necessary for a stable economy. The scourge of inequality has led to the current economic and financial crisis. Many leading economists regard growing inequality as one of the main causes of financial crashes. According to the International Monetary Fund (IMF), inequality has led to the huge debts behind the 2008 bank crisis; and Rajan (2010) argues that the growing income inequality was a key factor leading to the financial crisis and to the current economic down turn. Van Treeck and Sturn (2012) saw income inequality as the cause of the recent recession. In addition, Greenspan and Kennedy (2007) say that increasing inequality is bad for business while the former UK Prime Minister, David Cameron, emphasised that more unequal countries do worse according to every quality of life indicator. While income inequality matters in its own right, it is also key to reducing poverty.

This study therefore seeks to investigate the income inequality among respondents in different small enterprises in Ondo State, Nigeria. The study will specifically examine the socio-economic characteristics as well as the estimated income of the respondents, determine the level of income inequality among selected entrepreneurs and factors affecting the entrepreneurs’ revenue in the study area.

2 Theoretical Framework and Literature Review

The Concept of Inequality

Inequality is a property of the distribution in a population of various resources such as income and wealth. It could also be seen as the separation of different terms either in consumption, income or any other quality that shows the welfare status of a population.

It also refers to things that exist across groups in countries, individuals, races and gender which could be in terms of income, opportunity, employment and wealth. Income inequality measures the extent of the gap in income received by individuals in the population; from the lowest to the highest difference in the levels of income among individuals in a particular country. The distribution of income is a description of the fractions of population that are at various levels of income. The wider the gap in income, the worse the effect on the distribution of the population. According to Bhensdadia and Dana (2004, p. 464), “Initially severe income disparities, hence work against poverty reduction both by slowing the expansion of incomes and by indicating conditions, further increase the inequalities.” Overall,
inequality is wider than poverty in that it is defined over the whole distribution, not only the censored distribution of individuals or households below a certain poverty line (World Bank, 1991).

Decomposition of income inequality is needed for both authentic and analytical reasons as economists may wish to access its contribution to overall inequality within and between different sub-groups of the population which is among people in industrial, urban and also rural sectors (World Bank, 1999).

Income inequality is often shaped by the increasing concentration of income at the top end of the income distribution (Hoeller, 2012). There is evidence that global inequality has been increasing throughout the last decade (Bhensdadia and Dana, 2004). In the United States, for example, the top 1% of the population received 18% of pre-tax income in 2008, up from 8% in 1980, while the share in total income of the top earners has risen in most other Organisation for Economic Co-operation and Development (OECD) countries. Technological advances do affect labour income inequality as they tend to benefit higher-skilled workers more than others. According to Autor et al. (2006) and Goos et al. (2009), technological progress reduces the earnings or employment of medium-skilled workers relative to both the low and high-skilled ones. Globalisation also widens inequality; a first channel through which this happens is offshoring. The tasks that are relocated from richer to poorer countries are typically not skill intensive from the perspective of the skill-rich country, but they are from the perspective of the skill-poor country. As a result, offshoring makes labour demand more skill intensive in both poorer and richer countries, thus increasing inequality in both groups of countries (Feenstra and Hanson, 1995).

Second, if firms differ in their profitability and low-income workers work disproportionately in low-productivity firms that are battered by import competition, trade may increase income inequality by lowering employment or the relative earnings of low-income workers (Egger and Kreickemeier, 2009; Helpman et al., 2010). The implied positive link between globalisation and inequality is supported by a growing body of studies of individual firms, but it is more difficult to establish a robust link at the aggregate level (Bhensdadia and Dana, 2004). Bhensdadia and Dana (2004) examined the effect of globalisation on rural poverty, challenging the presumption of a positive relationship between globalisation and welfare of the poor. For these scholars, globalisation not only has its potential benefits but has ‘real dangers’ one of which is income inequality.

Reforms to increase human capital are important for improving living standards, and are also likely to reduce income inequality. New analysis shows that a rise in the share of
workers with upper secondary education is associated with a decline in earnings inequality (Fournier and Koske, 2012). Higher inequality lowers growth by depriving the ability of lower-income households to stay healthy and accumulate physical and human capital (Aghion et al., 1999; Galor and Moav 2004). For instance, it can lead to under-investment in education as poor children end up in lower-quality schools and are less able to go on to college. As a result, labour productivity could be lower than it would have been in a more equitable world (Stiglitz, 2012). In the same vein, Corak (2013) finds that countries with higher levels of income inequality tend to have lower levels of mobility between generations, with parent’s earnings being a more important determinant of children’s earnings.

In particular, studies have argued that a prolonged period of higher inequality in advanced economies was associated with the global financial crisis by intensifying leverage, overextension of credit, and a relaxation in mortgage-underwriting standards (Rajan, 2010), and allowing lobbyists to push for financial deregulation (Acemoglu, 2011). Many studies suggest that growing wealth inequality in advanced economies is largely driven by rising wealth concentration at the top (Piketty, 2014; Saez, 2014). Indeed, some studies have found that financial development, measured as the relative share of the banking and stock market sectors in the economy, boosts top incomes mostly in the early stages of development (Roine and Waldenström, 2009). Moreover, inequality can increase as those with higher incomes and assets have a disproportionately larger share of access to finance, which may further increase the skill premium, and potentially the return to capital (Claessens and Perotti, 2007).

Another way to look at the income inequality is to examine the drivers of poverty rate—defined as the population living below $2 a day (PPP-adjusted) and look at the interplay between poverty and inequality. According to literature, various sources for poverty reduction, including higher economic growth (Kraay, 2006) and a rise in the income share of the poor (Ravallion, 2004) should be considered. A large strand of the literature also explores how inequality affects poverty reduction via its growth impact; Bourguignon (2003) and Fosu (2010), using a sample of almost 100 Economically more Developed Countries (EMDCs) for the period 1985–2010, investigated what is behind the declining share of people living below the $2 a day poverty line over the last 30 years and looked at the importance of inequality and growth on poverty reduction. Results showed that while the impact of the change in inequality, as measured by the Gini, does not appear to be significant per se, higher initial inequality lowers the growth elasticity of poverty reduction. Moreover, a higher initial level of education inequality dampens the growth elasticity of poverty, with higher employment growth in manufacturing, which is seen in emerging market economies in Asia, associated
with a lower share of the population living below the poverty line. It was also observed that greater trade openness can amplify the growth elasticity of poverty, albeit not in a statistically significant way, while financial openness amplifies it in a significant way.

According to Bradley et al. (2003) on survey carried on the treatment of pensions. Countries where pensions are provided by public social insurance schemes, people tend to save less in working years but pay mandatory social security contributions (which are usually matched by their employers). When such people reach retirement age, their private sector income often falls to zero and they live from transfer payments in the form of old-age pensions while in countries without such public systems, people pay into private, capital-based schemes during their working lives and in retirement receive annuities (which are usually counted as private sector incomes). Hence, both inequality of market incomes and redistribution will be lesser in the latter class of countries, while the degree of market inequality and redistribution will be ‘inflated’ in countries that provide pensions through social insurance systems.

Some studies have examined income inequality and are worth mentioning. Ipinnaiye (2001) found out that the analysis of income in non-farm contributes the most to the total income inequality in both the semi-urban areas of Ibadan. The author stated that income inequality was higher in semi-urban areas than urban areas in 2000. Adebayo (2002) investigated the income inequality in the rural areas of Ibadan metropolis and found out that agricultural income contributes most to the income inequality which accounts for 91% while rental income was the least which contributed to rural income inequality for just 17%. In the urban areas, non-farm income was the largest contribution of about 80% while transfer income reduces urban income inequality to 13%. The estimated income inequality for Ecuador, Mozambique and Madagascar found out by Elbers et al. (2003) on a statistical procedure that combines households’ survey data with population census data showed that the share within-community inequality in totality is high. Also, Gini-coefficients computed were between 0.320 – 0.518 and 0.320 – 0.440 in Madagascar and Mozambique respectively. From various studies conducted on income inequality, it is of the opinion that high inequality makes people to go beyond their financial ability. For instance, Rajan (2010) opined that rising inequality in the US induced low-income individuals to borrow beyond their means to sustain consumption, and that this overleveraging brought about the seeds of crisis. Stiglitz (2012) and Acemoglu (2011) claimed that increasing political influence of the wealthy individuals and the financial industry contributed to the financial excesses that generated the
crisis. Fitoussi and Saraceno (2010) argue that the roots of the crisis lie in a structural change in income distribution that has been going on for the past three decades.

According to Kakwani and Son (2001) and Son (2007), the elasticity of inequality should always be positive since a decrease in inequality would decrease poverty. As argued by Ravallion (1997) and Kakwani and Son (2001), high inequality makes poverty to be more insensitive to growth. Deininger and Squire (1996) and Bruno (1995), using cross-country studies, opined that, on average, a country’s inequality is stable over time, or changes slowly to make a significant difference in poverty reduction. However, country and regional studies according to Kanbur (2008), have looked beyond the 'average' and refuted the initial cross-country evidence, arguing that large increases in income inequality in countries in Sub-Saharan Africa, Latin America, Eastern Europe and Central Asia over the 1990s, was by greatly exacerbating the effects of negative growth on poverty (Kanbur, 2008).

Crivellaro (2012) opined that accessibility of tertiary education cannot only decrease disparities among different educated groups, but can also lower college wage levels. This, in turn, can lower the incentives to invest in human capital accumulation which will be among the driving forces of inequality. As female participation rates in the labour force have increased over the recent decades in most states, a wage gap with males could widen the income distribution (Bardolino et al., 2004). Gender-based inequalities are further enforced by the fact that women are more often engaged in part-time work than men. In this regard, the creation of more full-time work opportunities for females might act as an instrument to reduce the differences between certain percentiles of monthly earnings.

Germany as an example, Dustmann et al. (2005) argue that technological change is crucial to understanding the widening wage gap at the higher ranges of the distribution. The higher inequality at the bottom can be better explained by supply shocks, such as rising participation of women in the workforce and institutional reforms such as deregulation. While trade might play a role as a driver of inequality, its role does not seem to be overwhelmingly significant. According to Jaumotte et al. (2008) and Afonso et al. (2012) technological progress and globalisation tend to increase the returns to skills, but the contribution of technology to rising wage inequality is definitely higher. Nonetheless, trade can stimulate innovation and the diffusion of technologies. However, the volume of trade between developed and developing countries is large enough to generate the observed increase in inequality, as most trade flows occur between countries with similar endowments (Matano and Naticcioni, 2010). According to Flaig and Rottmann (2013), a tighter system of employment protection and a higher tax burden on labour income and generous
unemployment benefit systems tend to increase, while a higher centralisation of wage formation decreases unemployment; the stricter the regulation in the labour and product market, the greater the persistence of inequality. In contrast, the degree of unionisation and corporatism, as well as the tax wedge, tend to lessen persistent inequality. Also, Sologon and O’Donoghue (2012) find that the inequality of labour earnings is negatively related to unionisation, the degree of corporatism, and the tax wedge. A rationale for the latter finding is that an increase in the tax wedge, other things being equal, will lead to higher government revenues that are available for income redistribution. Manning (2011) opined that minimum wages have little effect on employment but do have impacts on wage inequality beyond the workers who are directly affected.

According to a survey on the impact of income inequality on happiness or life satisfaction, Senik (2006) finds that inequality has a negative effect on life satisfaction while Alesina et al. (2004) show that this result is driven by the detrimental effect of income inequality on people with low income and to those belonging to the left ideological spectrum. On the contrary, richer individuals seem indifferent about income inequality. In Germany, Schwarze and Harpfer (2007) argue that income inequality has a negative effect on life satisfaction while Ferrer-Carbonell (2005) shows that the higher the income of the reference group, the lower is the level of happiness. Clark (2006) reports similar findings for Britain while using life satisfaction as the outcome. Additionally, Clark (2006) argues that higher income inequality within the reference group actually increases life satisfaction. Senik (2006) finds that in contrast to the evidence from Europe that inequality in the U.S. has a positive effect on life satisfaction. This result is challenged by evidence provided by McBride (2001), Luttmer (2005), and Dynan and Ravina (2007), they report that a higher ‘reference group income’ negatively affects happiness.

2.1 Lorenz Curve

The main feature of the Lorenz curve includes the curve and the line of perfect equality. This curve widely shows the income inequality. In Figure 1, the horizontal axis shows the proportion of the population while the vertical axis indicates the proportion of the national income. The more the distance between the Lorenz curve and the line of perfect equality, the more unequal the distribution of income in that country or among the population.

Figure 1 Hypothetical Concentration Curve of Income Inequality

{Insert Figure 1 about here}
2.2 Gini Coefficient
This is used to show the level of income inequality, among various entrepreneurs in a population. The Gini coefficient is a way of knowing how the Lorenz curve is positioned. It has a value between 0 and 1. If the Lorenz curve is at 45° line, then the value of the Gini coefficient would be zero. In all, the closer the Lorenz curve is to the line of perfect equality, the less the inequality and the smaller the Gini coefficient (Oluwatayo, 2008).

3 Research Methodology
A research methodology is the framework which a researcher uses for a study, and it usually involves the process of data collection, analysis, and interpretation (Creswell, 2009). There are two types of research methodologies based on the epistemological and ontological assumptions of the researcher: the qualitative method, and the quantitative method. The quantitative method is deductive and tends to examine relationships between variables using statistical techniques; while the qualitative approach is usually inductive, and is helpful in understanding the meaning of the world from the lens of the participants (Saunders et al., 2012). The research methodology used by a researcher to investigate a phenomenon is usually driven by the individual’s philosophy. The philosophy adopted for this study is positivism. It provides an objective stance about reality (King and Horrocks, 2012; Saunders et al., 2012). This perspective is usually supportive of the quantitative approach (Creswell, 2009; Easterby-Smith et al., 2008; Saunders et al., 2012).

Study Area
This study was carried out in Ondo State, which is one of the States in South – West, Nigeria. The area has a land mass of 76,852 square kilometres and population of 25.2 million. The area lies between longitude 2° 31' and 6° 00' East and Latitude 6° 21' and 8° 37' North (Agboola, 1979). It is majorly a Yoruba speaking area, although there are different dialects even within the same state. The weather conditions vary between the two distinct seasons in Nigeria; the rainy season (March - November) and the dry season (November - February). The dry season ushers in Harmattan dust; cold dry winds from the northern deserts blow into the southern regions around this time.
The climate of Southwest Nigeria is tropical in nature and it is characterised by wet and dry seasons. The temperature ranges between 21°C and 34°C while the annual rainfall ranges between 1500mm and 3000mm. The wet season is associated with the southwest monsoon wind from the Atlantic Ocean while the dry season is associated with the northeast trade wind from the Sahara desert. The vegetation in Southwest Nigeria is made up of fresh water swamp and mangrove forest at the belt, the low land in forest stretches inland to Ogun and part of Ondo state while secondary forest is towards the northern boundary where it is derived and southern Savannah exist (Agboola, 1979). The south west owns about 60 percent of the nation’s industrial capacity, 44 percent of banking assets, 68 percent of insurance assets and is house to the nation’s three deep sea ports of Apapa, Tin can Island and Roro.

The three main agro – ecological zones in the area are the swamp on the Atlantic coast, tropical rainforest in the middle and guinea savannah in the North. It has 85 constituted Forest reserves with a forest area cover of 842,499 hectares. Varieties of animal husbandry, food and cash crops cultivation systems are accommodated in the area. Prominent crops cultivated include oil palm, cocoa, citruses, plantain, banana, cassava, vegetables, maize, rice, Kolanut, cashew, sugar cane and pin – apple. Ondo State is known for various forms of enterprises comprising of trading, self – employed artisans, market operatives, caterers, launderers.

3.1 Data Collection and Sampling Technique
The information gathered for this study was sourced from a cross – sectional survey by use of questionnaires. Sample was selected through multistage sampling technique. Akure South Local Government Area of Ondo state was purposely selected because of the preponderance of the enterprises in the study area. They are hair dressing, fashion designing, laundry services, restaurant and food vending and pure water production. The second stage was the random selection of 200 respondents that were employed for this study.

3.2 Analytical Technique
Analytical techniques employed include descriptive statistics such as mean and standard deviation in analysing the demographic characteristics of the respondents and the pattern of income. Income inequality was measured by using both the Lorenz curve and Gini coefficient
while double - log regression model was used to determine factors affecting the income of the respondents in Ondo State, Nigeria.

Gini – coefficient is presented as follows:
\[
\text{Gini – coefficient (G)} = \frac{A}{(A+B)}
\]  
(Eq. 1)

A = Area that lies between the line of equality and the Lorenz curve
A + B = Total area under the line of equality

Double - log regression model is specified as:
\[
\log Y_i = b_0 + b_1 \log X_1 + b_2 \log X_2 + b_3 \log X_3 + b_4 \log X_4 + b_5 \log X_5 + U_i
\]  
(Eq. 2)

\[
\log Y = \text{natural log}; U_i = \text{error term}; b_0 = \text{intercept term}; X_i = \text{vectors of explanatory variables which are gender (1=male and 0 otherwise) education (years spent in school), age, household size and number of employees.}
\]

4 Results and Discussion

Demographic Characteristics of the Selected Entrepreneurs

The findings of the demographic characteristics of the selected respondents are shown in Table 1. Findings showed that 63 percent of the respondents were males, implying that males dominated most businesses which agreed with Schmidt and Parker (2003) who reported that male – owned enterprises are represented in all industries and that more lucrative manufacturing sector is dominated by males who have a long tradition of skills. Also, males have significantly higher entrepreneurial intention than females which was also reported by Mazzarol et al. (1999). It was further shown that, 73 percent of the respondents were below 50 years old with a mean age of 44 years while majority of them, about 50 percent were within the age range of 40 – 49 years. This shows that the respondents were fairly young and active in age. This corroborates with the findings of Adewunmi et al. (2011) on activities in non – farm and as well as poverty level of the rural households in Ogun State. This study further showed that majority (90%) of the entrepreneurs was married. Majority of them (40%) spent at most 12 years in school, this shows the level of their educational attainment which could impact positively in innovative ideas and improving their businesses. Also the entrepreneurs were literate and one could deduce that this would decrease income inequality among the entrepreneurs in Ondo State, Nigeria. The number of people in a particular household is seen as one of the key determinants of income inequality. The average number
of people in a particular household was five members per family and most of the entrepreneurs (81%) had four and six members per family.

This study also revealed that 43.5 percent of the selected entrepreneurs were into hair dressing, 31.5 percent into fashion designing, 5 percent into pure water production, 10 percent into laundry services, and 10 percent into restaurant and fast food among the sampled respondents. This implies that hair dressing and fashion designing formed the major part of the selected enterprises. This might be as a result of the enterprises being less expensive and easy to establish.

**Table 1** Demographic Characteristics of the Respondents
{Insert Table 1 about here}

The income of the selected entrepreneurs is presented in Table 2. It was revealed that 79.3 percent of the entrepreneurs in hair dressing enterprise, 74.6 percent in fashion designing, 55 percent in laundry services and 65 percent in restaurant and food vending earned income less than ₦200,000 per annum; while entrepreneurs in pure water production earned income above ₦800,000 per annum. This revealed that pure water enterprise is a lucrative enterprise and capital intensive than the other enterprises; hence, this would affect their income inequality.

**Table 2** Income of the Selected Entrepreneurs per Annum
{Insert Table 2 about here}

4.1 *Analysis of the Lorenz Curve and Gini Coefficient*

The Lorenz curve and Gini coefficient examined the distribution of income as well as the inequality of income among the selected entrepreneurs in various selected enterprises in the State. The Lorenz Curve which is a distribution of income is represented graphically in Table 3. Also, in Figure 2, the Gini coefficient, which is a measure of inequality in the distribution of income, has a value of 0.58. The implication of this value is that there is a certain level of income inequality among selected entrepreneurs with a difference of 58 percent among the income earners.

**Table 3** Computation of Income of Selected Entrepreneurs
{Insert Table 3 about here}
**Figure 2** The Gini Coefficient

{Insert Figure 2 about here}

Area in the line of equality (A+B) = 0.5

Area between the line of perfect equality and the Lorenz Curve (A) = 0.5 – 0.21 = 0.29

Gini – Coefficient \( G = \frac{A}{A+B} \)

\[ G = \frac{0.29}{0.50} = 0.58 \]

Table 4 revealed the total income and income inequality of each selected entrepreneur. It shows that among the selected enterprises, those in pure water production had the highest total income of 34.2 with income inequality of 0.16. This indicates that, the enterprise is a lucrative one and the difference in income earned among the entrepreneurs in this enterprise is low.

**Table 4 Income Inequality Distribution among Selected Entrepreneurs**

{Insert Table 4 about here}

The result of coefficient of determination \((R^2)\) for selected entrepreneurs in Ondo State was 0.577 as presented in Table 5. It implies that, there is 57.7 percent variation in the income among selected entrepreneurs as explained by the explanatory variables. F-value in the model was significant at 5 percent level of probability indicating all explanatory inputs jointly exerted significant influence on income. Results showed that age, education and number of employees had positive coefficients, which means, increase in any of the explanatory inputs, increases income of the selected entrepreneurs. While gender and household size had a negative coefficient indicating that increasing any of these values decreases income of the entrepreneurs. Also, the gender of the entrepreneurs, number of members in a household and the number of workers highly influenced income of the entrepreneurs.
5 Summary of Findings

This study focused on analysing the socio-economic characteristics, income inequality and factors affecting the income among selected entrepreneurs in the study area. 200 entrepreneurs were sampled through multistage technique. Overall, the findings of this study showed that most of the respondents, that is, 63 percent were male, 90 percent were married and 40 percent spent at most 12 years in school. The entrepreneurs in the study area were into different enterprises such as hair dressing, fashion designing, laundry service, restaurant and food vending and pure water production. The study revealed that 43.5 and 31.5 percent were into hair dressing and fashion designing respectively. Also, it was revealed that 79.3, 74.6, 55 and 65 percent of the entrepreneurs in hair dressing, fashion designing, laundry services and restaurant and food vending earned income less than ₦200,000 per annum.

The Lorenz curve analysis showed the income inequality of the entrepreneurs with a Gini coefficient of 0.58. It further revealed the income inequality of the entrepreneurs in each enterprise with entrepreneurs in pure water production having the least Gini coefficient of 0.16 indicating that the difference between the income earners in the enterprise is low. The study also revealed that explanatory variables; gender, number of members in the family and number of workers influenced the income of the entrepreneurs.

6 Conclusion and Recommendations

There is income inequality among the selected entrepreneurs with Gini coefficient of 0.58. It can be concluded that large household size should be discouraged among the entrepreneurs so as to reduce income inequality. Consequently, income inequality among the entrepreneurs is not a good indicator for a developing economy like Nigeria. From the findings of this study, it is recommended that policies targeted at improving income of those in various enterprises should be put in place with a favourable environment to bring the income inequality of the entrepreneurs to the barest minimum.

Furthermore, education policies are keys to reducing income inequality. In a world in which technological change is increasing productivity and simultaneously mechanising jobs,
raising skill levels is critical for reducing the dispersion of earnings. Improving education quality, eliminating financial barriers to higher education, and providing support for apprenticeship programs are all keys to boosting skill levels in both tradable and non-tradable sectors. These policies can also help improve the income prospects of future generations as educated individuals are better able to cope with technological and other changes that directly influence productivity levels. In advanced economies, with an already high share of secondary or tertiary graduates among the working-age population, policies that improve the quality of upper secondary or tertiary education would be important. In developing countries with currently low levels of education attainment, policies that promote more equal access to basic education (for example, cash transfers aimed at encouraging better attendance at primary schools, or spending on public education that benefits the poor) could help reduce inequality by facilitating the accumulation of human capital, and making educational opportunities less dependent on socio-economic circumstances.

Reforms aimed at raising average living standards can also influence the distribution of income. Combating inequality goes beyond other factors such as of labour, social welfare and tax policies. The key to minimising the downside of both globalisation and technological change in advanced economies is a policy that aims at the top rather than the bottom. Policies to encourage innovation, reduce burdensome product market regulations that stifle competition and technology diffusion, move goods produced upwards in the value chain, and ensure that this rise benefits the entrepreneurs. In developing countries, raising agricultural productivity, rapid accumulation of capital, and technology diffusion in labor-intensive sectors can substantially lift growth and ensure that the fruits of prosperity are more broadly shared (Dabla-Norris et al., 2015). Government policies should be tailored toward increase in the national incomes so as to increase per capita income of individuals. However as stated by Dana (2007) prior to the expenditure of money by Government on new venture programmes, a policy framework and infrastructure should be established first. This should involve the “development of infrastructure (telephones, roads, etc.) to facilitate the activities of small business, as well as the reduction of excessive regulation which at present is a burden on the small business sector.” (Dana, 2007, p. 171)

7 Limitations and Future Research
As with all research in the area of entrepreneurship, there are methodological limitations to this study that should be acknowledged. The limitations associated with this study concerns the sample size. The research was conducted in only Ondo state in South West Nigeria.
Future studies should extend to entrepreneurs in other states within the same geopolitical zone. A larger sampling base will provide greater insight about the level of income inequality among the entrepreneurs in these states.

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FIGURES

Figure 1 Hypothetical Concentration Curve of Income Inequality

Source: Lorenz, 1905

Figure 2 The Gini Coefficient
# TABLES

**Table 1** Demographic Characteristics of the Respondents

<table>
<thead>
<tr>
<th>Entrepreneurs characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>126</td>
<td>63.0</td>
</tr>
<tr>
<td>Female</td>
<td>74</td>
<td>37.0</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>10</td>
<td>5.0</td>
</tr>
<tr>
<td>30 – 39</td>
<td>57</td>
<td>28.5</td>
</tr>
<tr>
<td>40 – 49</td>
<td>80</td>
<td>40.0</td>
</tr>
<tr>
<td>50 – 59</td>
<td>35</td>
<td>17.5</td>
</tr>
<tr>
<td>Above 60</td>
<td>18</td>
<td>9.0</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>180</td>
<td>90.0</td>
</tr>
<tr>
<td>Unmarried</td>
<td>20</td>
<td>10.0</td>
</tr>
<tr>
<td><strong>Household size</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 – 3</td>
<td>8</td>
<td>4.0</td>
</tr>
<tr>
<td>4 – 6</td>
<td>162</td>
<td>81.0</td>
</tr>
<tr>
<td>7 – 9</td>
<td>24</td>
<td>12.0</td>
</tr>
<tr>
<td>10 above</td>
<td>6</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Education (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>1 – 6</td>
<td>74</td>
<td>37.0</td>
</tr>
<tr>
<td>7 – 12</td>
<td>79</td>
<td>39.5</td>
</tr>
<tr>
<td>13 – 18</td>
<td>30</td>
<td>15.0</td>
</tr>
<tr>
<td>19 – 20</td>
<td>14</td>
<td>7.0</td>
</tr>
<tr>
<td>21 and above</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Enterprise</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sachet water production</td>
<td>10</td>
<td>5.0</td>
</tr>
<tr>
<td>Laundry service</td>
<td>20</td>
<td>10.0</td>
</tr>
<tr>
<td>Fashion designing</td>
<td>63</td>
<td>31.5</td>
</tr>
<tr>
<td>Restaurant and fast food</td>
<td>20</td>
<td>10.0</td>
</tr>
<tr>
<td>Hair dressing</td>
<td>87</td>
<td>43.5</td>
</tr>
</tbody>
</table>

Total population 200
### Table 2 Income of the Selected Entrepreneurs per Annum

<table>
<thead>
<tr>
<th>Entrepreneur’s Income (N)</th>
<th>Hair Dressing</th>
<th>Fashion Designing</th>
<th>Laundry Service</th>
<th>Restaurant and Food vending</th>
<th>Pure water production</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 200,000</td>
<td>69</td>
<td>79.3</td>
<td>47</td>
<td>74.6</td>
<td>11</td>
</tr>
<tr>
<td>200,001 – 400,000</td>
<td>13</td>
<td>15.0</td>
<td>12</td>
<td>19.0</td>
<td>6</td>
</tr>
<tr>
<td>400,001 – 600,000</td>
<td>5</td>
<td>5.7</td>
<td>3</td>
<td>4.8</td>
<td>3</td>
</tr>
<tr>
<td>600,001 – 800,000</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1.6</td>
<td>-</td>
</tr>
<tr>
<td>Above 800,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>87</td>
<td>100.0</td>
<td>63</td>
<td>100.0</td>
<td>20</td>
</tr>
</tbody>
</table>

### Table 3 Computation of Income of Selected Entrepreneurs

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Income</th>
<th>Proportion of Income</th>
<th>Cumulative of Income</th>
<th>Proportion of Quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>597,000</td>
<td>0.02</td>
<td>0.02</td>
<td>0.2</td>
</tr>
<tr>
<td>40</td>
<td>1,380,000</td>
<td>0.05</td>
<td>0.07</td>
<td>0.4</td>
</tr>
<tr>
<td>60</td>
<td>2,040,000</td>
<td>0.08</td>
<td>0.15</td>
<td>0.6</td>
</tr>
<tr>
<td>80</td>
<td>4,380,000</td>
<td>0.16</td>
<td>0.31</td>
<td>0.8</td>
</tr>
<tr>
<td>100</td>
<td>18,050,000</td>
<td>0.69</td>
<td>1.00</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Total 26,447,000
### Table 4 Income Inequality distribution among Selected Entrepreneurs

<table>
<thead>
<tr>
<th>Selected Enterprise</th>
<th>Total Income(N)</th>
<th>Total Income’s share (%)</th>
<th>Income Inequality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hair dressing</td>
<td>6,152,873.00</td>
<td>23.3</td>
<td>0.57</td>
</tr>
<tr>
<td>Fashion designing</td>
<td>5,112,860.00</td>
<td>19.3</td>
<td>0.48</td>
</tr>
<tr>
<td>Laundry service</td>
<td>2,234,176.00</td>
<td>8.4</td>
<td>0.41</td>
</tr>
<tr>
<td>Restaurant &amp;food vending</td>
<td>3,900,891.00</td>
<td>14.8</td>
<td>0.69</td>
</tr>
<tr>
<td>Pure water production</td>
<td>9,046,200.00</td>
<td>34.2</td>
<td>0.16</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

### Table 5 Factors determining Selected Entrepreneurs Income in Ondo State, Nigeria

<table>
<thead>
<tr>
<th>Explanatory variables</th>
<th>Coefficients (t - value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.842 (2.992)*</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.898 (-3.598)*</td>
</tr>
<tr>
<td>Age</td>
<td>0.801 (1.126)</td>
</tr>
<tr>
<td>Household size</td>
<td>-1.043 (2.277)*</td>
</tr>
<tr>
<td>Education</td>
<td>0.346 (0.884)</td>
</tr>
<tr>
<td>No of employees</td>
<td>0.909 (6.578)*</td>
</tr>
<tr>
<td>R²</td>
<td>0.577</td>
</tr>
<tr>
<td>F - value</td>
<td>25.34*</td>
</tr>
</tbody>
</table>

* Means significant at 5 percent level of probability