



Nigeria's Working Poor Households: Characterizing Factors and Proposals for Social Welfare Programs

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Author's contributions

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ABSTRACT

The paper focuses on the increasing incidence of working poor families in Nigeria. Data from the ILO and NBS suggest that, not only is the number of working poor families in Nigeria increasing, despite governments efforts at increasing the number of jobs created. This point to the assertion that, removing working poor families out of poverty will not solely depend on their being employed. The paper uses data from Nigeria's General Household Survey to characterize inducing factors of working poor families in Nigeria. The findings suggest that female – headed households, polygamous and divorced households, individuals who have never been married, size of employment establishment, and household expenditures, are determining factors of working poor families in Nigeria. We recommend the supplementing of working poor families incomes through Living wage and contributory savings, establishment of State Health Insurance Schemes, and affordable housing through a state guaranteed Mortgage Schemes.

Keywords: Poverty; working poor; living wage; social welfare; social protection.

1. INTRODUCTION

Over the years, several government's poverty alleviation strategies have focused on reducing

the economic burden on the extreme poor, who are generally characterized as being unemployed or earning no paid income. Indeed, the existence of extreme poverty in Nigeria and various climes

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is deeply associated with the belief that the poor do not work and therefore earn no income. It is in this sense that the majority of standalone poverty alleviation strategies in Nigeria have focused on either providing a minimum income to the poor through welfare transfers or providing paid jobs for the poor. However, these poverty alleviation strategies have failed to capture an increasingly important subset of the poor population - those who are gainfully employed but still live in poverty. In the literature, this subset of the poor are referred to as the Working poor.

For a better understanding of the emerging working poor families in Nigeria, a proper definition of the working poor becomes imperative. Working poor families are described as having at least one member of the family being gainfully employed and making a contribution to the family's economic independence¹. Nonetheless, such working poor families are a vulnerable group in that they live in poverty conditions and suffer the multiple stresses of these conditions (US Bureau of Labour Statistics, 2009). A somewhat more expansive definition of the working poor includes those who have jobs but do not earn enough to "afford the necessities of life," or to "maintain a conventional standard of living in their community," and to "avoid poverty during periods of temporary unemployment". Other researchers consider the working poor not just in terms of the current economic earnings of workers but also their "back ground of poverty," which embodies the socio-structural factors from their past that may have led to their current situation [1,2]. Thus, the condition of the working poor encompasses a set of past (and present) factors that affect the worker's experiences.

Though the economic conditions that persist for both the poor and working poor are similar, there is still considerable debate on the assertion that working poor families are more receptive to state welfare reforms in developing. This is founded on the associated difficulties in modelling inclusive poverty alleviation strategies for non – working poor families. Thus, as a next best solution, some researchers have argued for the targeting of working poor families in developing countries in order to reduce the incidence of overall poverty [3]. Consequently, there has been a resurgence in economic research on what propagates the emergence of working poor

families in developing and developed societies. Some studies focus on profiling working poor families within the context of needed state welfare reforms in tackling extreme poverty [4,5,6]. Others have extended diverging reasons for the incidence of working poor. For example, skill mismatch in the labour market [7,8,], arguments that the working poor are poor because they work part-time jobs [9], and societal and economic factors beyond their control [10].

Despite Governments efforts to tackle extreme poverty through proactive strategies aimed at job creation (formal and informal) and increases in income levels of the poor (through conditional cash transfers), data on the demographic categorization of poor families indicates that the working poor families in Nigeria are increasing. Alleviating extreme poverty and reducing the occurrence of working poor families has remained limited at best [11]. Therefore, the emerging occurrence of working poor families in Nigeria highlights the urgent need for determining factors that propagate the incidence, feasible state welfare programs and a possible re-focusing of government's poverty alleviation strategies in such a way that working poor families are empowered to meet their basic needs. Therefore, the broad objective of this paper is to provide a holistic evolution on the emergence of Nigeria's working poor over time with the goal of identifying characterizing factors and proffering possible targeted welfare reforms. To achieve this, the paper provides a trend analysis on the emergence of the Working poor in Nigeria, with emphasis on the degree of association between changes in the trend of the working poor and changes in economic conditions. In addition, the paper evaluates the characterizing factors through specific demographic and social – economic factors on the incidence of working poor families in Nigeria. Lastly, from the identified characterizing factors, the paper constructs possible and targeted state welfare reforms that would mitigate the emergence of the working poor in Nigeria.

1.1 Trend of Working Poor Families in Nigeria

In this analysis, working poor families are those families, whose incomes fall below the International Labour Office (ILO) categorization of poverty threshold, but earned a considerable amount of their income (at least more than half) from their engagement in self-employment or

from wages and salaries. By the categorization of poverty in the ILO data, working poor families are divided into subgroups. The extremely poor (expenditure of less than US\$1.9 a day in purchasing power parity), moderately poor (expenditure of greater or equal to \$1.9 but less than \$3.1 a day in purchasing power parity), and near poor (expenditure of greater or equal to \$3.1 but less than \$5 a day in purchasing power parity).

For a large and growing number of Nigerians, the comfort of gainful employment is no more enough to lift them out of poverty. This is assertion is supported by the increasing trend in the number of families in working-poor group since 2000. Data from ILO [12] in Fig. 1, show that in 2000 there were 16 million working poor families living in extreme poverty in Nigeria, while

in 2017, the number of working poor families grew by 37% to 22 million families. This increase in the trend of working poor families also occurred with families categorized as near poor and moderately poor. For near poor families the growth from 2000 to 2017 was about 100%, while for moderately poor families within the same period, the growth was also above 100%.

Likewise, the incidence of working poor families show that the amount of working poor families are greater when the family's income was earned by a male member compared to when earned by a female member of the family (See Fig. 2) . As at 2017, the incidence of working poor families with a female income earner had grown by 61.43% amounting to 31.09 million families as compared to a growth of 43.04% for male income

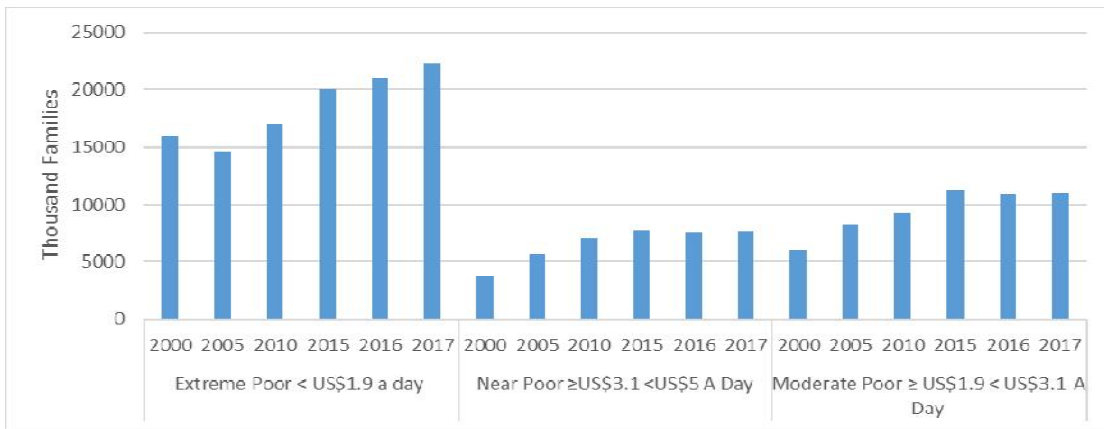


Fig. 1. Number of working poor families in Nigeria
Source: ILO, 2017 [12]

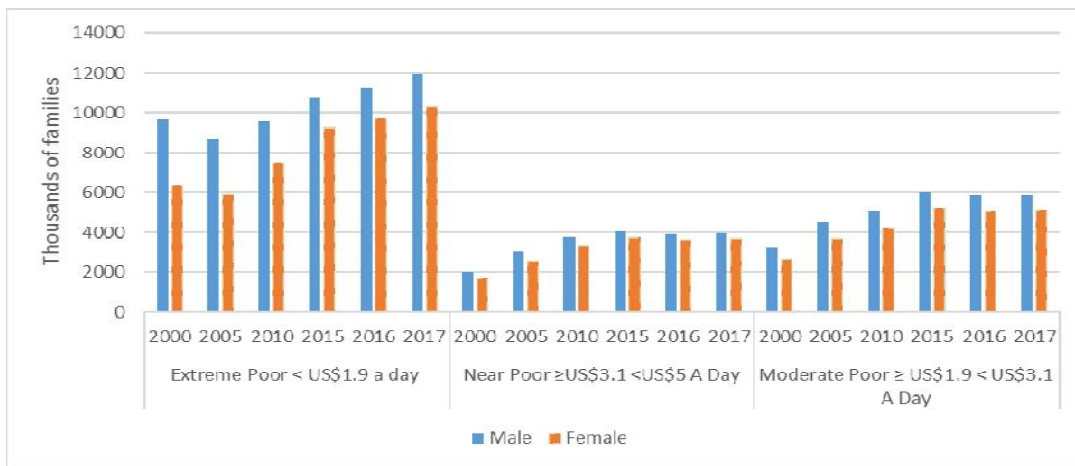


Fig. 2. Number of working poor families in Nigeria by gender
Source: ILO, 2017 [12]

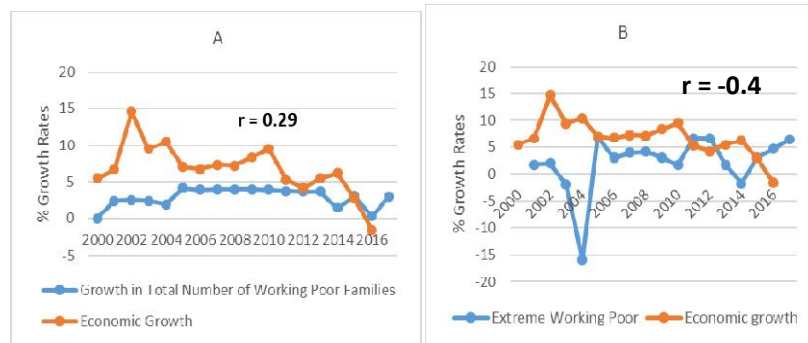


Fig. 3. Growth in Total Working Poor, Extreme Working Poor Families and Economic Growth *r* represents a correlation statistic, with positive (negative) *r* implying positive (negative) association among variables

Source: ILO, 2017 [12]

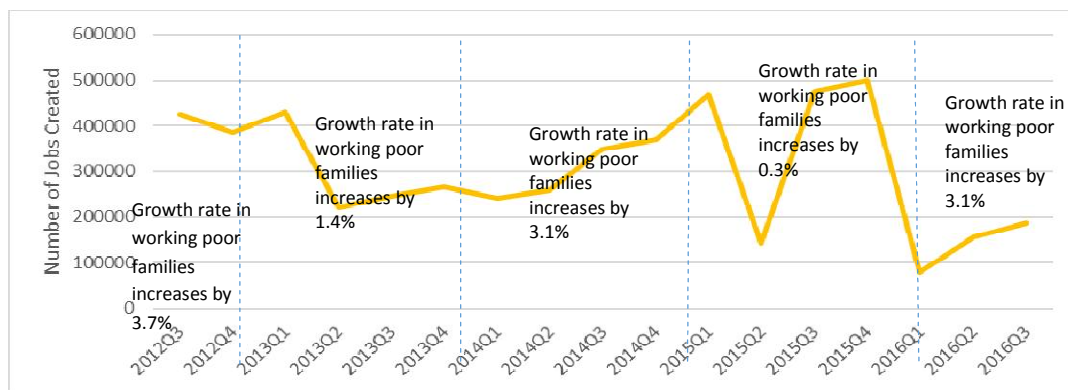


Fig. 4. Total jobs created and growth in working poor families

Source: ILO, 2017 and National Bureau of Statistics

earners which amounted to 41.53 million families. A common theme in explaining the emergence of working poor families in any society is the direct link with economic conditions, specifically economic growth. The intuition in such an idea is based on the trickle-down effect of economic growth, where the economic benefits of output expansions within the economy ultimately improves the material and economic wellbeing in the society. Thus, the a priori expectation is that with improved economic growth, the incidence of working poor families should reduce.

However, the data presented in Fig. 3 indicates a striking counterfactual. In Fig. 3(A), the correlation analysis between the growth rates of the total amount of working poor families in Nigeria and economic growth is positive. This indicates that increases in economic growth is associated with increases in growth in working poor families in Nigeria. This same finding is persistent when we consider the different categorization of working poor families (moderate

and near Poor). However, in Fig. 3(B), the correlation analysis² between extreme poor and economic growth was negative, indicating that increases in economic growth is associated with reduction in the growth of working poor families in the extremely poor category. A possible explanation of the findings from the trend analysis can be directed to the nature and structure of Nigeria's growth process. Contrary to the trickle down expectations, improved economic growth rates may not translate to improved economic and material wellbeing for working poor families because of the non – inclusivity of the growth process. Although this reason may provide possible explanations for the positive correlation results, it would not suffice for the negative correlation result for extremely poor working families.

² The correlation statistic if positive, shows that increases (decreases) in one variable is associated with increases (decreases) in another variable and negative if, increases (decreases) in one variable is associated with decreases (increases) in another variable.

The trend in working poor families has consistently increased from 2012 to 2017. This is despite government's effort at job creation, which remains a cardinal strategy for alleviating poverty. Fig. 4 compares growth rates in working poor families with the total amount of jobs created. Clearly, from 2012Q2 to 2014Q4 the number of jobs created within the economy was on the increase, but the number of working poor families also grew by 3.1%. The trend analysis indicates that the degree of increase in the growth of working poor families is more when jobs created is increasing relative to when jobs created are reducing. Consequently, from a policy standpoint, the data from the trend analysis indicates that the strategy of job creation for alleviating poverty among working poor families may not have been effective.

2. METHODOLOGY

In order to determine the casual effects of specific demographic and social – economic factors on the incidence of working poor families in Nigeria, the paper employs survey data from Nigeria's General Household Survey, Panel 2018 – 2019 (Wave 4). Nigeria' GHS-Panel is a nationally representative survey of approximately 5,000 households that focuses on the development of an innovative model for collecting agricultural data inter – institutional collaboration and a comprehensive analysis of welfare and socio – economic characteristics (NBS, 2019).

Following Moscovice, et al., [13], we would expect to have members of working poor families in the agriculture sector, service sector, industry, informal sector, government, non – durable and durables, transport, construction and health care. Due to the structure of the GHS – Panel, data used were drawn from post – harvest household responses to the survey questionnaire. The choice of post – harvest rather than post – planting questionnaires is premised on the fact that the timing of post – harvest responses allows for the possibility of respondents to have been actively engaged in employment as compared to post – planting responses. Assuch, the data drawn from the GHS –Panel is restricted to only households that had at least one person earning income, such income comes from working for a person not amember of the household, and the income is the primary source of income. Therefore, the data used captures household demographics, wages earned from employment, expenditure on food and non – food

items, expenditure on housing and expenditure on health.

3. RESULTS

To elicit the casual effects of household demographics and socio – economic factors, there should be a logical threshold for defining working poor families. The paper use the ILO definition of poverty as the conventional definition for working poor families. This implies that, a family who has a member employed and provides a significant proportion of household income be termed to be extremely poor if such income is less than \$1.99 a day. A family is termed near poor if such income is less than \$3.1 a day and moderate poor such income is less than on \$2.55 (average of \$1.99 and \$3.1) a day. Thus, the data on wages earned from employment is used for this classification of working poor families. Another consideration is the possibility that the household gets income from other sources that does not include paid employment. Another threshold used in the paper is the net income after expenses. It is intuitive to assume that, after expenses on the basic household necessities, if remaining incomes were negative or too small, such households would be more susceptible to unforeseen shocks as compared to households with larger remaining incomes. Families with lower net incomes after expenses become vulnerable and have higher propensities to be poor. While the former classification of working poor families focuses on just incomes, the latter focuses on how household demands on such income propagates poverty for such families. While these classifications provide robust estimates, the primary need for the latter classification is to capture the effects of household consumption demands.

Both classifications of working poor families will form the dependent variables in the binary dependent linear regression model used in the paper. For robustness, the classification used are the ILO poverty definitions and the net income after expenditure.

$$Y_i = \begin{cases} 1 & \text{if } Y_i^* > \text{given threshold} \\ 0 & \text{if } Y_i^* \leq \text{given threshold} \end{cases}$$

Where Y_i represents the dichotomous dependent variables and Y_i^* is the observed dependent variable. In the consideration of wages and wages plus other autonomous income, the given threshold for extremely poor is Nigerian Naira (₦)21,492; near poor ₦33,480; and moderate

poor ₦27,540³. However, a closer look at the data on wages shows that responses covered different periods – monthly, weekly and daily. Thus, the transformation of weekly and daily responses are on the assumption of twenty working days and four working weeks in a month. For the second classification, the given threshold will be if the net income – wages plus other income minus household expenditure – is positive or negative. Thus, the dependent variable will have the value of one if the net income is negative and zero otherwise. There is the argument that restricting the effects to only households with negative incomes may not capture the true effects of household expenditure demands on these incomes. If household expenditure significantly diminishes household incomes, even though they do not become negative, such households may still be vulnerable to becoming poor [14]. Therefore, an expansion of the conditions to include the dependent variable being one when net incomes are negative or are not more than 10% of total income after household expenditure.

Other than categorizing working poor families by their wages or net incomes, we categorize the variables used as independent variables based on their intuitive impact on family incomes. Thus, the independent variables encompassed household demographic characteristics, characteristics of job types, and socio – economic variables. In recognition of the multidimensional nature of poverty, there is empirical evidence to suggest that household characteristics like household size, marital status, age of head of house and primary income earner, dependency rates, and the decision maker on how household incomes are spent, are important determinants of household poverty [15,16,17]. Yurdakul and Atik [18] were able to show how religious beliefs of the poor help in their responses to shocks leading to poverty and respective coping strategies.

The nature of working conditions and type of employment are included as a subgroup of explanatory variables. Evidence from Pradella (2015) and Hallerod et al. (2015) point to the increasing influence of number of working hours, availability of maternity leave, health and housing allowances provided by employers, as important explanatory factors in understanding working poor families. The economic factors included as explanatory variables are restricted to household expenditures – expenditure on food, fuel,

housing, health and education – due to the limitations of the GHS – Panel. As argued by Marchal et al. [14], household incomes net expenditures, rather than absolute incomes, is a more appropriate indicator of the incidence of working poor families.

In determining the demographic and socio – economic factors, the paper estimates a logit regression model of the form;

$$P_r(Y_i = 1|Z_i\beta) = \frac{e^{z_i\beta}}{(1 + e^{z_i\beta})} + \mu_i$$

Where $P_r(Y_i = 1|Z_i\beta)$ represents the probability of the dependent variable Y_i observing a value of one, given a vector of independent variables Z_i , parameters to be estimated β and regression residuals μ_i . Y_i represents our four definition of working poor families, while Z_i variables capture household demographics, nature of work, economic conditions, and possible interaction variables. Implicitly, we assume in this representation that the index specification $Z_i\beta$ is linear in the parameters.

4. DISCUSSION

Does household demographics matter?

We begin our estimations by first focusing on the dynamics of household demographics. Family dynamics and composition are important determinants of the incidence of poverty, irrespective of being a working family or not. There is ample evidence to suggest that household size, and the gender of head of house, has a strong negative correlation with household residual incomes and poverty thresholds [19].

The association between gender and all definitions of working poor families is unambiguous. It is more likely for households who had a woman as the primary income earners to fall below all thresholds of poverty as earlier defined as well as having such household's expenditures being higher than incomes. This finding corroborates those of Dunga [20], Ajala [21] and Rogan [22] where female-headed households consistently remained poorer than male-headed households, irrespective of poverty alleviating stimulus. Another important conceptual argument is that, the nature of the marriage, whether polygamous or monogamous, could determine if the household could remain above the poverty line. This argument stems from [23,24], in

³ At an official exchange rate of ₦360:\$1

Table 1. Summary of wage and net income definitions for working poor families

Variable	Obs	Mean	Std. Dev.	Min	Max
wages_trans	1210	56152.16	69844.75	0	820000
wages_near_poor	1210	0.453719	0.498059	0	1
wages_mod_poor	1210	0.353719	0.478321	0	1
wages_ext_poor	1210	0.2801653	0.449266	0	1
d_net_inc_1	1210	0.5016529	0.500204	0	1
d_net_inc_2	1210	0.5247934	0.4995914	0	1

Source: Author's compilation from the data

polygamous households, there is a tendency for higher number of children and consequently higher household expenditures, given there is more than one wife. In addition, in the instances where only one person earns the highest share of household incomes, when such families separate or divorce, there is the possibility that the partner who earned lower incomes or no incomes at all may become susceptible to poverty. This is very probable as such separations and divorce are mostly done informally – family or religious settlements – and not through the judicial system. As such, there is limited enforcements of terms of separation or divorce agreements, leaving the partner with lower incomes at the prerogative of the partner with higher incomes [23].

However, the estimated model in Table 2 does not support these individual propositions, as the estimated likelihoods were mostly insignificant. Using ILO definition of poverty by income levels, suggests that individuals who had never been married are more likely to be working poor as compared to individuals in a monogamy [23]. A plausible reason is the nature of social support in the context of the contemporary Nigerian society. The social support for families is greater than that of an individual [25,26]. Such support comes in the form of food and income palliatives from extended family, religious organizations to which the family belongs to and Non – Governmental Organizations. The preference for targeting families rather than single individuals, premises on the focus of targeting children in vulnerable situations as stipulated in the Sustainable Development Goals [27,28].

We calculated the likelihood for both gender classification and nature of marital status. The estimated probabilities provide insights on how each household variable contributes to the incidence of working poor families. As established through the reported odds ratios, with female-headed households, there is a 33% chance that such household would become a working poor family as compared to 23% change

for male-headed households. This finding was consistent in all the models estimated. For marital status, polygamous households were more likely to become working poor as compared to monogamous households, with a marginal probability difference of 1% percentage points across all models. However, calculated probabilities for other types of marriages differ across models. Households defined as separated or widowed had the lowest probabilities of becoming working poor as compared to other classifications. When net household incomes after expenditures are used, all probabilities for each classification of marriage significantly increase. This clearly leans towards the argument that irrespective of marital classification, household expenditures are not able to keep up with household incomes, inducing poverty. For female-headed households, the likelihoods are higher.

Why are female-headed households more likely to be poor relative to male-headed households? We abstract and investigate the conceptual propositions put forward by Chant [29]. The first proposition is that the disproportionate burden of poverty is mostly borne by female-headed households, the “feminisation of poverty”. The link between the incidence of poverty and female-headed household has inter – generational transmissions, where poverty-inducing characteristics passes to their children, who then inherit these characteristics [30]. As argued by Aldaz – Carroll and Moran [31], education is one way of escaping this poverty trap, with parents who had higher levels of education more likely to educate their own children and mitigate the transmission of the poverty trap. We estimated our model on demographics, restricting the model by education qualification of the mother of the female-headed household.

Chant [32] asserted that dual parenthood offers the best prospects of social, moral and psychological well – being for children. Irrespective of the type of marriage, female-

headed households are prone to economic hardship given that such households arise in conditions of economic stress, conjugal instability and insecurity [29]. Thus, we would expect that, households with dual parenthood and practice either monogamy or polygamy would be less susceptible to becoming poor. Another important channel of poverty is the conflict that arises from who makes the decision on how household incomes are spent [33]. In situations where the woman earns significant proportions of household incomes, cultural and religious beliefs regularly places the responsibility of spending these incomes on the man. This often leads conflict between spouses and sub-optimal expenditure allocations.

We restrict education qualification to, high and low, with high signifying some form of tertiary education and low signifying senior secondary education and below. We also restrict the model by type of marriage, estimating for only monogamous and polygamous marriages. The expectation is that, households with these types of marriages are less susceptible to being working poor due to social support from spouses [32]. In addition, we restrict the model to capture, male decisions on household incomes earned primarily by women. This would capture the possibility of decision-making conflicts and their likelihood of increasing poverty among female-headed households. Lastly, we restricted for dual parenthood, following the postulates of Chant [32]. The result remains consistent with a higher likelihood of female-headed working households becoming poor relative to male-headed households. Interestingly, a comparison of higher and lower educational levels show that there is a higher likelihood for female headed working households whose parents had lower education (secondary or primary education), 38% likelihood to become poorer as compared to same type of household but with parents having higher education (tertiary education), 31% likelihood. The results for the type of marriage and dual parenthood does not support the argument of Chant [32]. Although we expected an unlikely possibility for these factors, being a monogamous, polygamous or having both spouses living in the same household, does not insulate households with a working female head, from being poor in Nigeria. With respect to conflict that arises from decision making on how household incomes are spent, the results show that in households where these decisions are male dominated, there is a likelihood of becoming working poor, in support with the arguments of Kabear [33].

Low paying jobs or high household expenditures?

A reoccurring constraint for poor families is that they possess very low financial assets and their expenditures tend to outweigh their financial assets (Gjertson, 2016; Ghalib et al., 2015). This has the adverse repercussion of inducing a form of poverty trap, wherein either increased financial assets or lower household expenditure can pull them out of this trap (Gjertson, 2016). To understand this congruence between low paying jobs and high household expenditures, we estimate a model where total household expenditure and net household income after expenditure are the main variables.

From Table 4, the association between net household income after expenditure and income definitions of working poor families is unambiguous. Across all ILO definitions of poverty, for households whose household expenditures are greater than their incomes, such households are more likely to become poor as compared to households whose expenditures were less than their incomes. Both disaggregated and aggregated household expenditure are used to determine what type of expenditure puts working households at a higher risk of being poor. This gives an opportunity for devising a direct policy tool that effectively mitigates the incidence of working poor families. The significant expenditures from the model include Food – expenditure, non – food expenditure and fuel expenditure. However, the degree of explanatory power of their odds are limited.

To have a better understanding of how household expenditure contributes to the incidence of working poor families, we calculate a combined probability for households with net household incomes (positive or negative) but with total expenditure increasing from ₦50,000 to ₦200,000. The idea is to determine the probability of becoming poor for households with positive and negative net incomes after expenditure, when their total expenditures are increasing. The probabilities reveal that, irrespective of increasing household expenditures, working poor households with negative net incomes have a higher probability of becoming poor as compared to households with positive net incomes. Strikingly, as household expenditure increases, the probability of becoming poor reduces for working households with both negative and positive net incomes. We expected that increasing household expenditures

should be a burden on incomes and increase susceptibility to becoming poor. However, household expenditures serve also serve as an indicator of standard of living, where higher expenditures on household needs signify income's coverage over household needs. Even in instances where household income does not cover such consumption demands, higher expenditures indicate household consumption beyond subsistence levels, household living standards that are above poverty levels.

Are household jobs pro-poor?

There is sufficient evidence in the literature to suggest that the nature of jobs worked by working poor families and the industry are determining factors [34]. To test this assertion, we used the number of hours worked and the size of employment as explanatory variables on the incidence of working poor families. The expectation is that with higher working hours, earned incomes increase and families would have the advantage to stay above the poverty threshold [35,36]. In addition, poverty incidence in Nigeria is predominant, for workers in the informal sector [37]. Micro, Small and Medium Scale Enterprises (MSMEs) characterize the informal sector, which provides a significant proportion of total employments [38]. Dapel [39] submits that an average poor person in Nigeria is likely to escape from poverty at 85 years of age. This implies that the subsistence nature of living standards make it difficult if not impossible for the poor to overcome their condition.

The association between number of hours worked and net household income is unambiguous but ambiguous for ILO definitions of poverty. As the number of working hours increase for the main income earner, there is a higher likelihood that the family becomes poorer. This finding provides insights to the nature of employment contracts in Nigeria that fixes incomes on a monthly and yearly basis, irrespective of number of hours worked [40]. Thus, as workers increase working hours at a particular employment, they lose the opportunity of working in other lucrative jobs, thereby reducing their propensity to earn more incomes.

The effect of household size is not significant when we consider ILO income definitions. This finding is similar to that of household expenditure, where we found little influence of household expenditure on the incidence of

working poor families. This points to the insight that household size and demands on household incomes cannot explain the incidence of working poor families, when income definitions of poverty are used. However, when we defined working poor families through net incomes, a household with more members is more likely to become poor as compared to a household with smaller members. This highlights the contributing influence of household expenditure demands on inducing poverty for working families.

Interestingly, workers in smaller establishments of 1 to 5 employees are the most susceptible to being poor. This size of establishments characterizes the informal sector, dominated by MSMEs [37]. The calculated probabilities indicate that for a worker in an establishment of 1 to 5 employees, there is a 45% chance of becoming poor, as compared to 12% for establishments of 20+ employees. As workers in the informal sector rely heavily on daily incomes, such jobs do not provide a structured contract that stipulates any form of income safety nets, health insurance, paid leave or sick leaves, housing allowance, and maternity leaves. However, larger establishments tend to more formalized and abide by labour laws, while providing elements of safety nets for their works [41].

4.1 Proposals for Targeted Social Welfare

Augmenting wages of working poor families

The associated difficulties in improving wages for working poor families through tax cuts, cash transfers and minimum wage increases, reinforces the need for innovative social welfare reforms that would be effective. One of such needed welfare reform is the proposal that state and local governments enact Living Wage Laws that prioritizes incomes for women headed households. Such Living Wage Law, would require that all businesses and organizations that benefit from State and Local government service contract, concessions, pay a certain living wage (which is normally above the federal government minimum wage or a wage above the poverty threshold) to workers, especially women, employed as a result of the respective government's contract with the business or organization. Through Living Wage Laws, working poor families would be assured of higher incomes that are poverty alleviating and enhance the local economy through increased spending on consumption.

Table 2. Estimation results for household demographics and working poor

	Extreme poor	Near poor	Moderate poor	Negative net income	Negative net income (<10%)
Household Size	0.966 (.021)	0.968* (0.184)	0.963* (0.019)	1.05*** (0.019)	1.067*** (0.020)
Gender					
Female	1.734*** (3.36)	1.490*** (0.226)	1.581*** (0.247)	1.352** (0.203)	1.393** (0.210)
Marital status					
Married (polygamous)	1.052 (.208)	0.975 (0.171)	1.188 (0.217)	1.066 (0.183)	1.090 (0.189)
Divorced	0.696 (-0.47)	1.951 (1.138)	1.565 (0.896)	1.580 (0.916)	1.419 (0.823)
Separated	0.401 (0.224)	0.604 (0.257)	0.411* (0.210)	0.837 (0.337)	0.854 (0.344)
Widowed	0.670 (0.173)	0.772 (0.176)	0.743 (0.179)	1.001 (0.225)	0.943 (0.213)
Never Married	1.794*** (0.004)	2.204*** (0.435)	2.149*** (0.422)	1.041 (0.201)	1.015 (0.197)
Constant	0.354*** (0.057)	0.760)* (0.107)	0.499*** (0.749)	0.652*** (0.091)	0.657*** (0.930)
Probabilities (margins)					
Gender					
Male	0.23***	0.40***	0.30***	0.47***	0.49***
Female	0.33***	0.49***	0.40***	0.54***	0.57***
Marital Status					
Married (Monogamous)	0.26***	0.41***	0.31***	0.49***	0.51***
Married (Polygamous)	0.27***	0.41***	0.35***	0.50***	0.54***
Divorced	0.2*	0.58***	0.41***	0.60***	0.60***
Separated	0.12**	0.30***	0.16	0.44***	0.48***
Widowed	0.19***	0.35***	0.25***	0.49***	0.50***
Never Married	0.38***	0.60***	0.49***	0.50***	0.52***

Note: Estimation of equation are done using different dependent variables. Significance at 1%, 5% and 10% levels are denoted by ***, **, * respectivel

Table 3. Estimation results for the focus on female headed households

	Inter-generational transmission (lower education)	Inter-generational transmission (higher education)	Monogamous and polygamous marriage	Male decisions on household incomes	Dual parenthood
Female	2.03* (0.740)	1.499** (0.247)	2.572*** (0.656)	1.395* (0.280)	2.738*** (0.620)
House size	0.973 (0.0439)	0.965 (0.022)	0.962 (0.030)	0.967 (0.023)	0.951* (0.026)
Maternity Leave	0.498 (0.274)	0.40*** (0.1004)	0.537* (0.178)	0.5255** (0.155)	0.486** (0.147)
Health Insurance	0.110** (0.116)	0.030*** (0.021)	0.049*** (0.036)	0.06*** (0.036)	0.069*** (0.041)
Total Household Expenses	0.99* (1.58e-06)	0.99*** (6.80e-07)	0.99*** (1.46e-06)	0.99*** (1.21e-06)	0.99*** (1.27e-06)
Constant	0.685 (0.259)	0.718* (0.124)	0.776 (0.171)	0.712* (0.129)	0.808 (0.1601)
Probabilities (margins)					
Male	0.24***	0.24***	0.21***	0.21***	0.22***
Female	0.38***	0.31***	0.37***	0.26***	0.39***

*Note: Estimation of equation are done by restricting the model for extreme poor using different classifications [32] and Kabeer [33]. Other dependent variables – moderate and near poor and net incomes are not used in this estimation. Significance at 1%, 5% and 10% levels are denoted by ***, **, * respectively*

Table 4. Estimation results for household expenditures and incidence of working poor

	Extreme poor		Near poor		Moderate poor	
	Abridged	Full	Abridged	Full	Abridged	Full
Net Negative Income	3.626*** (0.583)	3.883*** (0.645)	4.095*** (0.632)	4.302*** (0.681)	3.91*** (0.911)	4.11*** (0.660)
Total Household Expenses	0.999*** (9.49e-07)		0.999*** (7.54e-07)		0.999*** (8.82e-07)	
Food Expenditure		0.999*** (9.23e-06)		0.999*** (6.43e-06)		0.999*** (7.53e-06)
Non-Food Expenditure		0.999** (5.63e-04)		0.999** (4.7e-04)		0.999 (5.22e-5)
Education Expenses		0.999*** (1.16e-06)		0.999*** (8.83e-07)		0.999*** (1.053-06)
Health Expenses		1.000 (1.1e-04)		0.999 (1.13e-04)		0.999 (1.1e-05)
Rent Expenses		0.999 (1.57e-06)		0.999*** (1.37e-06)		0.999 (1.53e-06)
Fuel Expenses		0.999*** (4.78e-04)		0.999*** (3.91e-04)		0.999*** (4.24e-05)
Water Expenses		1.000 (5.12e-04)		1.000 (4.62e-04)		1.000 (4.85e-05)
Constant	0.392*** (0.038)	0.583*** (0.073)	0.850* (0.0731)	1.183 (0.129)	0.568*** (0.051)	0.806* (0.093)
Probabilities (margins)						
+ Net Income, expenses = N50,000	0.21***		0.37***		0.27***	
- Net Income, expenses = N50,000	0.49***		0.70***		0.60***	
+ Net Income, expenses = N100,000	0.15***		0.29***		0.20***	
- Net Income, expenses = N100,000	0.40***		0.63***		0.50***	
+ Net Income, expenses = N150,000	0.11***		0.22***		0.15***	
- Net Income, expenses = N150,000	0.32***		0.54***		0.41***	
+ Net Income, expenses = N200,000	0.08***		0.17***		0.10***	
- Net Income, expenses = N200,000	0.24***		0.45***		0.32***	

Note: Estimation of equation are done using different dependent variables. Significance at 1%, 5% and 10% levels are denoted by ***, **, * respectively

Table 5. Estimation results for nature of work and incidence of working poor

	Extreme poor	Near poor	Moderate poor	Negative net income	Negative net income (<10%)
Hours Worked	1.005 (0.004)	1.0004 (0.003)	1.002 (0.0039)	1.009** (0.003)	1.008** (0.003)
Number of Employees					
1-5	2.419** (0.850)	2.628*** (0.860)	2.781*** (0.958)	1.40 (0.473)	1.50 (0.499)
6-10	1.923* (0.699)	2.04** (0.691)	2.097** (0.747)	1.70 (0.594)	1.73 (0.599)
11-20	1.359 (0.494)	1.743 (0.596)	1.848* (0.667)	2.571*** (0.909)	2.72*** (0.956)
20+	0.359*** (0.126)	0.633 (0.198)	0.599 (0.201)	2.14** (0.692)	2.10** (0.670)
Household Size	1.0003 (0.0201)	1.002 (0.017)	0.992 (0.018)	1.04** (0.017)	1.055*** (0.018)
Constant	0.319*** (0.123)	0.680 (0.238)	0.421** (0.157)	0.287*** (0.103)	0.303*** (0.108)
Probabilities (Margins)					
Number of Employees					
Don't Know	0.28***	0.41***	0.30***	0.34***	0.36***
1-5	0.49***	0.64***	0.55***	0.42***	0.46***
6-10	0.43***	0.58***	0.48***	0.47***	0.50***
11-20	0.34***	0.55***	0.45***	0.57***	0.61***
20+	0.12***	0.30***	0.20***	0.53***	0.54***

Note: Estimation of equation are done using different dependent variables. Significance at 1%, 5% and 10% levels are denoted by ***, **, * respectively

Another proposal for supplementing the wages of working poor families is by ensuring financial stability through a store of wealth or saving. Working poor families are not able to save enough from their low incomes. If such savings do exist, it could serve as a financial safeguard against unexpected expenses, and used to finance their way out of poverty. State governments and local government can assist working poor families in promoting their asset development through a Contributory Savings Account (CSAs). These saving accounts would be similar in nature to the Retirement Savings Accounts (RSAs) as used for Pensions. The CSAs are a matching/supplemented saving accounts where the State, local and possibly private sources, match the amount of funds already saved by working poor families. Such CSAs may prioritized women headed households by offering a higher proportion of matching contributions to working poor families headed by women.

4.2 Provide Improved Health Coverage to More Working Poor Families

There is already an associated high cost of health care as out – of – pocket expenditure represents about 72% of current health expenditure as at 2015. We recommend that all states should enact their respective State Health Insurance Scheme⁴, as the current NHIS scheme is limited to workers at the federal level. To reduce out – of – pocket expenditure on health, strategies should focus on⁵, abolishing user fees and charges in public health facilities, target and exempt specific population groups such as the poor and vulnerable; and target and exempt a range of health services such as maternal and child care from official payments and deliver them free of charge. Extending public health coverage to cater for the need of working poor families would imply the improved coverage of universal Basic Health. For working poor families in the informal and private sector, health premium payments should not only be a flat rate but recognize unique characteristics of such families which limits family income to levels below the poverty threshold; amount of income earned, number of dependents, number of children in the family, member of the family

⁴ Currently, about 17 states in Nigeria have enacted State Health Insurance Schemes but their implementation has been stalled.

⁵ These are policy suggestions from the World Health Organization (available at: http://www.who.int/health_financing/topics/financial-protection/out-of-pocket-payments/en/)

working etc. Premium payments for such working poor families should be fixed at a very low percent of income (as low as 0.5% of earned income) with the possibility of lower premiums depending on the extent of vulnerability characteristics of these families. This proposal would specifically benefit women more giving their high participation rate in the informal sector as well as their perceived role as care givers in the home.

4.3 Providing Housing Support to Working Poor families

For working poor families, the problem of access to affordable and quality housing is a major factor in determining if they can retain their current employment status and earn incomes above the poverty threshold. Working poor families spend more than half of their earnings on housing, thereby reducing the amount of income available for other household consumption. Increasing high cost of housing has made it difficult for working poor families to rent quality housing, which increases their exposure to health risks along with limited income to pay for work related expenses, thereby increasing risks of losing their jobs. This cycle perpetuates poverty, homelessness and increases out – of – pocket expenditure on health.

State and local government could assist working poor families by providing a Dedicated Mortgage Housing Scheme (DMHS), targeted at the working poor families and unemployed poor families. State governments should establish a mortgage refinancing company similar in operation to the Nigeria Mortgage Refinance Company (NMRC). This state owned mortgage refinancing company would take advantage of the opportunities in the capital markets to issue standard corporate bonds into the capital markets and subsequently issue loans to mortgage lending institutions. An important success factor in regards to targeting working poor families for housing assistance is the establishment of a mortgage guarantee scheme. The state government would guarantee⁶ mortgage loans to a reasonable degree to only public or private non – bank financial institutions that comply with its Living Wage Laws and prioritize households headed by women.

⁶This guarantee can be done with the aid of the Central Bank of Nigeria or through international donor organizations like the World Bank.

5. CONCLUSION

Following the prescriptions of the Sustainable Development Goal (SDGs) one, Nigeria is expected to eradicate extreme poverty and build the resilience of the poor and those in vulnerable situations that make them susceptible to remaining in poverty. Though providing jobs for the poor has been conventionally used as a strategy in alleviating poverty, the data indicates the contrary. The findings from the estimated model suggest that it is more likely for households who had a woman as the primary income earners to fall below all thresholds of poverty as well as having such household's expenditures being higher than incomes. Although the findings suggests women headed households are more susceptible to becoming working poor, the probabilities are higher for women whose parents had a lower level of education, in households where household expenditure decisions are male dominated, for women who work longer hours in small establishments, and household size. Being employed is no more enough to keep families out of poverty. To this end, this paper proposes some targeted state welfare programs that can guarantee the objectives of the SDGs, with the caveat that government remains committed to achieving these objectives.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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