AN ANALYSIS OF THE SOCIO-ECONOMIC IMPLICATION OF LOW INCOME LEVELS ON HOUSEHOLD CONSUMPTION PATTERN IN MUBI NORTH LOCAL GOVERNMENT AREA, ADAMAWA STATE, NIGERIA

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ABSTRACT

Households' consumption pattern is dynamic, due to income, social and economic changes. This research analyses the socio-economic implications of low-income levels on households' consumption pattern in Mubi North Local Government Area, Adamawa State of Nigeria. The sample size of the study was 400 low-income households from a population of 274,188 of Mubi North Local Government Area. Yamane's Sample Size formula was applied in determining the sample size of the study. Primary data were used during the course of the research, and were sourced using questionnaire administered to low-income households in Mubi North Local Government Area. Stratified and systematic sampling techniques were applied in administering the questionnaire. The study adopted Ordinary Least Square (OLS) and Probit models. Descriptive and inferential statistics were used for data analysis and presentation. Ordinary Least Square (OLS) was used in estimating the determinants of households' income, Probit model was used in explaining socio-economic determinants of factors such as Age, Gender, Education and Hours Worked per Day, and their implication on households' consumption pattern. The findings of this study showed that socio-economic factors such as Age, Gender, Education and Hours Worked per Day have significant impact on households' income generation, and they are statistically significant of p=0.0000 probability value. It also showed that social and economic factors have implications on income and households' consumption pattern. It was recommended that government should improve the welfare package of civil servants' household income through reviewing their minimum wages and salaries and also set good social intervention program to assist low-income level households. Government of the federation should set an interest rate policy that can encourage borrowing in order to boost business activities that will improve income earning.

Keywords: *Income, Consumption Pattern, Low-income and consumption*

1.1 Introduction

Over the years, socio-economic changes in living and economic circumstances have been reflecting in households' consumption pattern, especially the low-income level households whose income proportion is substantially for the demand of necessary goods to survive. Rationally, households' consumption expenditure patterns should be apportioned base on their levels of income for their daily needs, and change their consumption patterns as their income level changes.

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Some households live in a luxury while others earn barely enough for survival. Some people are fortunate enough to inherit capital and land that provide them with income from such properties.

Many households cannot survive without financial assistance through government's support and programs. Attitudinally, the consumption pattern of households differs. This is as result of income disparity and consumers' habitual interest of consuming a given commodity. Some households' consumers organized their consumption pattern rigorously based on their level of income without taking the consumption pattern behaviours of their neighbours into cognizance, while others organize their consumptions pattern in comparison with their associates (Duesenberry, 1949). Income vary both between family to family and for the same family at diverse stages in its life. There are also group of families that do not maintain their own households as a result of low income, but make their home with a relative. These are also likely to be found in low-income group of households. Low-income individuals with large family size in the urban and rural centers do used up significant proportion of their income on food, education and medical care. Low-income groups in particular, have a greater tendency to consume food with low calorie intake, receive poor medical services, lack access to good drinking water and poor transportation, etc. Children in residence with insufficient income are less likely to go to colleges, polytechnics and universities than those whose families are less likely to stay in the institution up to graduation period (Sharon, 2004).

Low income influenced the ability of children and adult to have access to dietary food, good quality education, proper medical care, portable drinking water, which will have implication on consumption pattern behavior (Catherine, 2004). This is because in a family with low-income level, some parents may decide not to invest in their children schooling and rather take them to work in their family enterprises or alternatively move to their parents' firms than taking them to school to acquire human capital. In that regard, supply of human capital would be low and in turn results to intergenerational transfer of poverty (Galor & Maor, 2004).

Under a situation of tighter liquidity, economy with slow growth rate, social budgeting and social expenditure will be likely face pressure. Reduced spending on this scale can limit the provision of crucial health and education services at a time when poor households are also experiencing shocks from decreased income (Smeeding, 2004). However, of all the negative economic implications of low-income level on households' consumption behaviours, government has a role to play in correcting the negative economic implications on low-income level individuals. Social policy in general and anti-poverty policy in particular is in need as great and useful indicators which reflect changes and their effects on low-income families and consumer units.

1.2 Statement of the Problem

Household consumers have been facing serious challenges and changes on their consumption pattern. There is wide income disparity between the rich and the poor, and or between low and high-income households, and uneven distribution of income among households. The removal of fuel subsidy, naira devaluation and high dependence on import goods are affecting consumption pattern, especially low-income level households. Nigeria is characterized by substantial and costly income inequality with higher proportion of low-income households. Very few low-income households are able to access food with high calorie intake, good quality education and proper medical care as a result of high rate of: poverty, excessive increase in prices of products, inadequate human resources empowerment, lack of access to basic necessities, uneven distribution of income and high living cost.

Similar researches were conducted in different parts of the country and the world at large, using different sample size, techniques and method of data estimation. The researches used small sample size of the population, simple percentage, simple percentage and Chi-square, without including a large

number of people, applying Ordinary Least Square (OLS) and probit method of data analysis. Thus, this study is out to cover this gap.

The broad objective of the study is to examine the socio-economic implication of low-income levels on households' consumption pattern, and also specifically to examine the determinants of households' income in Mubi North Local Government Area of Adamawa State, and to investigate the effects of low-income on households' consumption pattern.

The following hypothesis were formulated and tested for the purpose of this study.

H_{o1}: Socio-economic factors do not determine income among households in Mubi North Local Government Area of Adamawa state.

H_{02}: There is no socio-economic implication of low-income on households' consumption pattern in Mubi North Local Government Area of Adamawa State.

2.1 Literature Review

2.1.1 Conceptual Clarifications

According to Eyiyere (2000), the term consumption means the expenditure on final goods and services which are to be used up within a short period of time such as a week, a month or a year, and whose usage does not lead directly to the production of goods and services. That is, it involves the expenditure on final goods and services incurred by an individual or group of individuals to satisfy their immediate consumption and whose usage does not lead to further production of goods or services directly. Keynes (1936) viewed consumption expenditure as expenses that is mainly depend on absolute income of the current period, and it is a positive function of absolute level of the current income, which serves as the foundation for consumption theories. In other word, consumption pattern is a manner through which households design the Consumption pattern is the combination of qualities, quantities, acts and tendencies characterizing a community of human group's use of resources for survival, comfort and enjoyment expenditure of their income for providing their daily social and economic needs. The concept income is defined as the amount an individual can spend in a period while leaving his or her capital unchanged (Black, 2003). According to Baye (1999), income affects the ability of consumer to buy a product. Lampman (1959), defined "low-income person" as "one with an income equivalent to that of a member of four-person family with total money income of not more than the purchasing power of that period".

2.2 Theoretical Empirical Literature Review

Keynes (1936), propounded a theory of absolute income hypothesis of consumption, it is also known as consumption income relationship. According to Keynes, "the fundamental psychological law of consumption which form the basis of the consumption theories, upon which we are entitled to depend with great confidence both a priori from our knowledge of human nature and from the detailed facts of experience, is that men are disposed, as a rule and on the average, to increase their consumption as their income increases, but not by as much as the increase in their levels of income" as reported by Jhingan (2002). The law implies that there is a tendency on the part of the people to spend on consumption less than the full increment of income. That is, households spend less than equal proportion of their incremental income.

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He propounded three related propositions of the law as; firstly, when household income increases, his/her consumption expenditure also increases but by a smaller amount. Suffice to say that, as income increases, our wants are fulfilled side by side, so that the need to spend more on consumer goods diminishes. It does not mean that the consumption expenditure falls with the increase in income. That is to say that, individuals normally react in a positive way by changing their consumption expenditure as their income increases. In fact, the expenditure increases with increase in income but less than proportionate increase in income. Secondly, the increased income will be alienated in some proportion between consumption expenditure and saving which will be used as capital for investment in order to generate profit. This follows from the first proposition because when the whole of increased income is not spent on consumption, the remaining is saved. In this way, consumption and savings move simultaneously. Lastly, increase in income always leads to an increase in both consumption and saving. This means that increased income is unlikely to lead either to fall in consumption or saving than before. This is based on the second proposition because as income increases consumption also increases but by a smaller amount than before which leads to increase in saving. Thus with increased income both consumption and saving increase.

The objective factors are exogenous or external to the economic system. They may therefore, undergo rapid changes and may cause changes in the consumption behavior. These objective factors include changes in the wage level, windfall gains or losses, changes in the fiscal policy, change in expectations, changes in the rate of interest, financial policies of corporations, holding of liquid assets, the distribution of income and attitude toward saving (Blare, 1978).

Duesenberry (1946), propounded a relative income hypothesis theory of consumption, which is based on the rejection of the fundamental assumptions of the consumption theory propounded by Keynes, the assumption of the independence of individual′s consumption and postulated interdependence theory of consumption behavior of every other individual, and that consumption relation is irreversible and not reversible in time. He posited that consumption behavior is not independent, but interdependent on the behavior of every other individual. In formulating his theory of consumption function, he wrote “a real understanding of the problem of consumer behavior must begin with a full recognition of the social character of consumption patterns”.

Duesenberry further writes “A real understanding of the problem of consumer behavior begins with a full recognition of the social character of the consumption patterns. A rich person will have lower Average Propensity to Consume (APC) because he will need a smaller portion of his income to maintain his consumption pattern as reported by Ahuja (2013). On the other hand, a relative poor man will have a higher Average Propensity to Consume (APC) because he tries to keep up with the consumption standards of the neighbours or associates. This provides the explanation of the constancy of the long-run Average Propensity to Consume (APC) because lower and higher Average Propensity to Consumes (APC) would balance out in the aggregate.

The second part of Duessenbery’s theory is, “as peak of income” hypothesis which explains the short run fluctuations in the consumption function as disprove the Keynesian assumption that consumption relation are reversible in consonant with households level of income that they are obtaining. During the period of prosperity where the economic activities are in a better condition, consumption will increase and gradually adjust itself to a high level. Once people reach a particular hit the highest point income level and become familiarized to this standard of living, they are not ready to reduce their consumption pattern during a recession period when the economy is in undesirable situation. In the word of Duessenbery, it is harder for a family to retrain from making high expenditure in the first place. Thus, it is ideal if as income of individuals fall, consumption declines but proportionately less than the decrease in income because the consumer dissaves to sustain his consumption. On the other hand,

when income increases during the recovery period, consumption rises gradually with a speedy increase in saving. He explained that people do not only derive satisfaction from consumption compares with that of others (Ahuja, 2013). That is, households strive constantly toward a higher consumption level and imitate the consumption pattern behavior of a neighbor as reported by Ohale, (2002).

If the level of income of all individual households rises, by the same percentage, the relative income would remain the same regardless of the increase in absolute income. Since the relative income remains the same, the same share of income would still be spent on consumption, Average Propensity to Consume (APC) will thus, remain the equal. If income should fall, consumption expenditure does not fall much as households try to maintain previously attained consumption level which they are adapted to. This is often called the "Rachet effect," (Ahuja, 2013).

Veblen (2001), propounded a conspicuous consumption theory. The theory is based on the evolution of leisure classes whose some members are not working; acquire a surplus produced from the working class. Once society start to produce a surplus, the relationship between private property and status becomes increasingly vital. It becomes crucial to acquire property in order to retain one's good name, (Veblen, 1994). A hierarchy develops in which some people own property and others do not. To own property is to have status and honour, a position of esteem in the hierarchy: to have no property is to have no status. Categorically speaking, the accumulation of property can indicate that a person has been efficient and productive. That is, it can indicate financial proud in financial matters. But Veblen argues that inherited wealth confers even more status than wealth that is gained through efficiency. "By a further enhancement, wealth acquired inactively by transmission from ancestors to other antecedents presently becomes even more respectful than wealth acquired by the possessor's own effort". Key to the transformation of wealth into status is the social performance of members of the leisure class. Status derives from the judgments that other members of the society make of an individual's position in society, and for this position to be established, there must be a display of wealth.

There are two main ways in which an individual can display wealth. These are: through extensive leisure activities and through generous expenditure on consumption and services. The common thread that runs through both of these types of displays is "the element of waste that is common in both. In the one case, it is a waste of goods" (Veblen, 1994). In principle, people can display their wealth through either method with equal facility; all this requires is an effective network for word to get ground about a person's degree of leisure and the object he or she possesses.

Veblen argues, however, that as the population becomes more mobile, communities become less close-knit. In a more mobile society, people may be less well informed about the leisure activities in which other people engage, and so the display of wealth through consumption of goods becomes more important than the display of leisure. He labels this type of behavior conspicuous consumption. people spend money on artifacts of consumption in order to give an indication of their wealth to other members of society in view of that, he viewed conspicuous consumption as the most important factor in determining consumer behavior, not just for the rich but for all social classes

Freidman (1957), proposed the permanent income hypothesis to explain the stylized factors for which Keynes absolute income hypothesis did not give account. Friedman rejects the use of "current income" as the determinant of consumption expenditure and instead divides both consumption and income into permanent and transitory components. Freidman defined permanent consumption as "the value of the services that it is planned to consume during the period in question". Measured consumption is also divided into permanent consumption and transitory consumption. Measured or current consumption may deviate from or equal consumption depending on whether the transitory consumption is positive,

negative or zero, permanent consumption is a multiple of permanent income. He emphasized that consumers smooth their expenditures by borrowing and lending. He posited that consumption is determined by long term expected income rather than current level of income. He argued that consumption in one day is determined not by income received on that day, but on the average daily income received for a period, (Anyanwu, 1993).

Income consist of a permanent (anticipated and planned) component and a transitory (windfall gain/ unexpected) component. Friedman noted that permanent income or expected long average income is earned from both human and non-human wealth consisting of labor income, saved money debentures, equity shares, real estate and consumer durables (cars, refrigerators, air conditioners, TV sets, and other house equipments). He defined permanent income as "the amount a consumer unit could consume while maintaining his wealth intact". It is the main income of the family unit which in turn depends on its horizontal and farsightedness. That is, it includes non-human wealth that is owns, the personal attribute of the owners, such as the occupation followed, the location of the economic activity, and so on.

Transitory income may rise or fall with windfall gains or losses and cynical variations. If the transitory income is positive due to windfall gain, the measure of income will rise above the permanent income, and if the transitory income is negative due to theft, the measured income falls below the permanent income. He also focuses permanent income into this direction as the value of the services that it is planned to consume during the period in question. Measured consumption is also question. It is divided into permanent and transitory consumption. Measured consumption may deviate from or equal permanent consumption depending whether the transitory consumption is positive, negative or zero permanent consumption is a multiple of permanent income. This theory made an important contribution by laying stress on changes in interest rate and wealth and the desire to add to one's wealth (Forgha, 2008).

Skoufias (2012), brought a theoretical contribution on the impacts of climate change on households' consumption and policy implication. Firstly, changes in the environment affect consumption of rural livelihoods through their impacts on agricultural production and income, since farm yields are directly affected by weather elements. Ex ante risk management and ex post shock-coping abilities of the household, respectively, may or may not be able to insulate or smooth consumption from income/yield effects. Given the income risk or shock, some reallocation of resources within the household is also likely to take place. Secondly, health-related effects may also be expected, indirectly if food such as health related commodities or other resources are downsized, or directly if changes in weather elements affect the prevalence of diseases or the level of the risk associated with the exposures to non-trivial weather changes; Self-sufficient households without access to markets, sellers of food, food producing households that are net, food-producing households that are net buyers of food, rural landless, and non-farm rural and poor urban households.

Ayaode and Adeola (2012) conducted a similar study in Orire local Government Area of Oyo State, Nigeria consisting ten (10) political wards. Descriptive and inferential statistics methods were used for analysis. The result revealed that all the respondents were adversely affected by poverty in their household in one way or the other. This implies that the major effects of poverty on the respondents were low standard of living, low income level and low life expectancy. Ola (2012), also conducted a study on the impact of poverty on housing condition in Mushin Local Government area of Lagos state, Nigeria. The study used descriptive statistics for the analysis of data. Based on the result of this study, it found that majority of the low-level income households had secondary school education, and the high income earners have higher education certificates. That is, low-income levels hinder the low income earners the opportunity to further their educational programs to higher level so as to increase

their income level through investment in human capital. This in turn leads to intergenerational poverty transfer. But the study was restricted dominantly on the urban poverty areas and left rural poverty areas untouched. For this, it is unrealistic to conclude based on this study that, poverty levels generally militate low-income levels households from furthering their education to the higher level since the study narrowed it scope to urban areas and in Mushi Local Government Area only. The scope of the study should have covered both urban and rural areas.

Moreover, Gina, Rainier and David (2012), has conducted a similar study among low-income household in Rural Uganda. The study employed an inferential statistic for the analysis using hierarchical multiple regression (HMR), where the participants could be explained by demographic variables and theoretical perspectives. Conventional wisdom dictated that savings is more difficult for low- income individuals and households than their wealthier counterparts. It also adds evidence that rural low-income level individuals in SSA can and do save, especially when given opportunities. The analysis of this study was based on the data collected from rural areas of Uganda, areas from which the questionnaires were administered to needy individuals. The result is in line with the theoretical a priori expectation that low-income level households do hardly save compare to their wealthier counterparts, and when they are giving an opportunity in form of aid or intervention, can hardly save.

Amao (2013), has also conducted a similar study on households' consumption pattern of protein and other social goods in Ila Local Government Area of Osun State, Nigeria. The study employed descriptive to analyze the determinants of protein consumption in the study area. Primary data through interview schedule were used during the course of this study. Multistage sampling technique was used, where a total number of one hundred and sixteen (116) respondents were selected for the study. Majority (36%) of the respondents were aged 30 years and below and their mean age was 39 years. This directly affects protein intake as people tend to reduce the quality of protein consumed as they grow older. The findings showed that 12% of the respondents were less than 50 years of age, while those above 50years accounted for over 47%. Male constitute of 55.26% of the respondents. This affects the consumption of protein because male needs more protein calorie than female for body building. The study mainly centered on protein consumption and disregards other social consumption expenditures such as education, health care services, food, water and other living expenses. The study failed to include income, which is the major determinant of consumption of protein and all social goods.

Tshediso (2012), has also conducted a study on socio-economic determinants of household food expenditure in a low income township in south Africa. Both descriptive and inferential statistical were used for analysis. A multiple regression model was used to determine the socio-economic factors affecting household food expenditure. The sample data was based on responses from the head of the household. The results show that youngest head of households was 18 years, with the oldest at 90 years old. The number of person per household varied from 1 to 13 members. The average households had 4 members. There were greater variations in households' income, with the lowest household income recorded at R30 ($3.75) per month and the highest household income recorded at R18000 ($2250). Household income is the total income earned by the various household members.

In a similar study conducted by Sudhakara (2014), in Mumbai of India, findings revealed that the use of bio-fuels for cooking has been a noticeable feature of household energy consumption in India. From 1980 to 2000, a large number of households continue to depend on traditional fuel for cooking and water heating. The household sector is responsible for about 45% of total primary energy use in India as a result of low-income level, a large share of which is through non-commercial fuels such as fuel wood, dung, etc. primary energy use increased more than 1.5 times between 1980 and 2000, from 4,760 to 6,786 Peta Joules. This reflects the change in the fuel mix. By 2000, the shares of oil and gas

in the secondary energy use increased about three percentage points each over their 1980 level. That is from 4.93 to 8.24% for kerosene, and from 1.13 to 4.22% for LPG. That is, socially and economically, low level of income among households influences 45% of the population from the source of secondary energy for cooking and other energy uses. As their income increases, they also increase their consumption of energy increases due to increase of dishes prepared. Also supplementary items like vegetables, milk, and meat are added to food grains and more energy is required to cook the additional food. The implication of low-income level on households shows that there is a difference between the use of bio fuel in urban and rural areas. Rural households depend on twinges and branches whereas, urban households use logs which usually required the felling of trees. Thus, urban firewood consumption has a much greater negative environmental impact as compared to rural use.

2.3 Theoretical Framework

This study is basing on Keynesian theory of consumption, because he propounded a psychological law of consumption. This law is also based on the assumption that the psychological and institutional complexes influencing consumption expenditure remain constant. Such complexes are income distribution, social customs, habits, price movement, population growth, and the propositions that socially and economically underpins households' consumption expenditure behavior of utilizing their income on consuming different social goods and savings for future investment in order to generate income. He propounded "the fundamental psychological law of consumption which form the basis of the consumption theories, upon which we are entitled to depend with great confidence both *a* priori from our knowledge of human nature and from the detailed facts of experience, is that men are disposed, as a rule and on the average, to increase their consumption as their income increases, but not by as much as the increase in their income". The law implies that there is a tendency on the part of the people to spend on consumption less than the full increment of income.

3.1 Methodology

The study employed descriptive and inferential statistics for data presentation. Ordinary Least Square (OLS) Estimators probit and logit models were used for data estimation. This is because, variables like: gender, education and households' consumption pattern were dichotomous and variables like: hours worked per day, age and income were not and were used for the analysis of the study. The data were sourced from the responses of the respondence, using questionnaire that were administered randomly to low-income levels households who are under the salary level six (6) civil servants, farmers, businessmen and those who are engaged in handwork within the eleven (11) political wards of Mubi North Local Government Area. The study employed 400 people as the sample size, based on Yamane's (1967) sample size formula as: $n= \frac{N}{1+N(\propto^2)}$, which the sample size was driven as.

Primary data were employed for the purpose of this study, using a questionnaire. Stratified and systematic sampling methods were applied. Mubi North local Government was divided into eleven (11) stratums, according to the numbers of wards within the local government area. The questionnaires were distributed within the political wards of the local Government, and simple random sampling technique for data collection was employed from each stratum. The population sample of the study was comprised of junior staff of different organization. That is, low level income earners who are under salary level five (5) and below in civil servant or equivalent

3.2 Model Specification

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For the purpose of this study, two Models were used. That is, the first Model is on the determinants of households' income, and the second model is on the factors that determine households' consumption pattern behaviours.

Model I: The Determinants of Households' Income in Mubi.

$INC=F\ (GND+AGE+EDU+HWPD)$ - - - - - - (1)

$INC= \beta_0 + \beta_1 GND_i + \beta_2 AGE_i + \beta_3 EDU_i + \beta_4 HWPD_i + U_i$ - - - - (2)

Where: INC= Income, GND= Gender, AGE= Age, EDU= Education, HWPD= Hours Work Per Day, U_i= Stochastic Error Term. The Apriori Expectations: β_1, β_2, β_3, & β_4 are variables that determined households' income levels which would be use up for their consumption expenditure.

Model II: The Effects of Variations in Households' Consumption Expenditure Pattern Behaviours.

$HCP=F\ (INC+GND+AGE+EDU)$ - - - - - - - (1)

$HCP= \beta_0 + \beta_1 INC_i + \beta_2\ GND_i + \beta_3 AGE_i + \beta_4 EDU_i + U_i.$ - - - - (2)

Where: HCP= Households' Consumption Pattern, INC= Household Income, GND= Gender, AGE= Age, EDU= Education and U_i= Stochastic Error Term

The Apriori Expectations: β_1, β_2, β_3, & β_4 are variables by implication, all the independent variables are: low-income and resources that are used from households' consumption expenditure patterns, and are influenced socially and economically with low-income levels. The Apriori Expectation of this study is also similar with the study conducted by Ayaode and Adeola (2012), within ten (10) political wards of Orire local Government Area of Oyo State, Nigeria.

Variables and their Measurement

The various variables used for modeling in this research are mentioned below and their various units of measurements:

Households Income (INC) - Measured in Naira (₦)

Gender of the respondent (GND) - Dummy variable: 1= male, 0 = otherwise

Age of the respondents (AGE) - Measured in years

Education Status of the respondents (EDU) - Dummy: 1=educated of school certificate level and 0=otherwise

Hours Work Per Day (HWPD) - Measured in hours spend working per day

Households' Consumption Pattern (HCP) - Dummy variable: 1= male, 0 = otherwise

4.1 Analysis and Presentation

The sum of four hundred (400) questionnaires were administered to households in Mubi, where three hundred and ninety-six (396) were retuned and thus used for the analysis. The determinants of households' income and their consumption pattern were analyzed using Ordinary Least Square (OLS) estimators, the tests of autocorrelation, hetrokedasticity and reliability of the data were conducted.

The result of the analysis of the determinants of households' income in Mubi North Local Government Area using the first model in examining the determinants of households' income using variables like; gender, age, hours worked per day, and educational qualification of the despondence as they have determined the income levels of household consumers in the Local Government Area showed that:

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Table 4.1: Regression Result for Determinants of Households' income

Depended Variable: INC	
Constant	-2107.221***
	(3087.441)
Regressors:	
GND	4812.256***
	(1520.613)
AGE	628.763***
	(77.476)
EDU	11057.37***
	(1562.443)
HWPD	648.651***
	(1562.443)
$R^2 = 0.51$	
DW = 1.68	

Source: Author's Computation

Based on the estimated Ordinary Least Squares (OLS) regression result, the variables Gender, Age, and Education and Hours worked per day all have positive impact on the income level of the households. This is consistent with the apriori expectation of the model. The coefficient of gender being 4812.256 suggests that if the gender is male, there is a likelihood that income level will increase by 4812.256 naira. The variable is also statistically significant as the probability and the t-statistics suggests. The coefficient of age is 628.7625, which suggests that as age increases by 1 year, income earning capacity is also likely to increase by 628.7625 naira. However, education has the most impact on the earning capability of an individual as the coefficient of education is 11057.37. this suggests that as the educational attainment of an individual increases from say, secondary school certificate holder to diploma holder and on and on, his earning capacity is likely to increase by an average of 11,057.37 naira. This variable is equally statistically significant in explaining income level of individuals in Mubi. The coefficient of hours worked per day is also statistically significant in explaining the income earning potential of individual low income earners in Mubi Metropolis. The coefficient of hours worked per day being 648.6517 suggests that as one increases the hours he works per day by 1 unit; he is likely to earn 648.6517 naira more than his initial level of income. The variable is also statistically significant in explaining income potentials of low income earners in Mubi metropolis. The R^2 value of the model being 0.51, suggests that about 51% of the variation in income level among low income households in Mubi is explained by the variables modeled. The variables are also jointly significant in explaining income earning potentials of low income earners in Mubi metropolis. The D.W. statistic of the model being 1.68 suggests the absence of serial correlation among the residuals of the variables in the model. The results of the post estimation tests suggest are presented and interpreted. That is, the normality test results, serial correlation LM test, heteroskedasticity test.

Table 4.2: Result of Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM test			
F-statistic	4.752853	Prob. F(2, 388)	0.1091
Obs* R-squared	9.445785	Prob. Chi-Square (2)	0.0789

Source: Author's computation using E-views 9.0, 2024

Based on the result of the Breusch- Godfrey serial correlation LM test, the result presented in table 4.2.0, there is no serial correlation among the residuals of the model. This because the result suggests

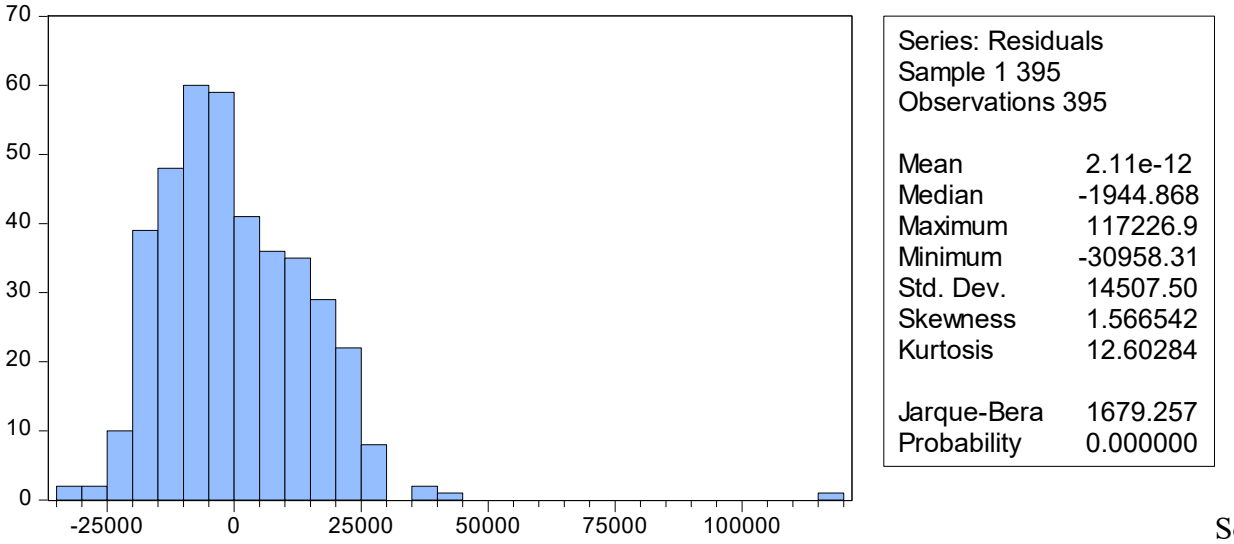
that we accept the null hypothesis of there is no serial correlation, as the probabilities are greater than 5%. Therefore, there is no evidence of positive serial correlation among the residuals in the model.

Table 4.3: Result of Heteroskedasticity Test

Heteroskedasticity Test: Breusch- Pagan- Godfrey			
F-statistic	3.230311	Prob. F(4, 390)	0.1126
Obs* R-squared	12.66722	Prob. Chi-Square (4)	0.2130
Scaled Explained SS	71.63920	Prob. Chi-Square (4)	0.1000

Based on the result of the Breusch- Pagan heteroskedasticity, test result presented in the above table, there is no heteroskedasticity among the residuals of the model. This because the result suggests that we accept the null hypothesis of there is Homoscedasticity, as the probabilities are not less than 5%. Therefore, there is Homoscedasticity among the residuals in the model

Normality Test Result



Source: Author's computation using E-views 9.0, 2024

This result of the analysis of households' consumption pattern in Mubi North Local Government Area, using probit and logit method of analysis is presented in table 4.4.

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Table 4.4: Regression Result for Households' Consumption Pattern

Depended Variable: HCP	
Regressors:	
INC	$3.00 \text{ X } 10^{-6}$ ***
	$(1.48 \text{ X } 10^{-6})$
GND	4812256***
	(0.0233833)
AGE	628.763***
	(0.012426)
EDU	11057.37***
	(0.257231)
McF R^2 = 0.024	
LR Statistic = 11.86	
Prob (LR Statistic) = 0.01	

Source: Author's Computation

The partial slope 3.00E-06 of INC suggests that holding other variables constant, if INC increases by a unit, the logit HCP (Measure for household consumption pattern) will increase by 3.00e-06 units. The partial slope coefficient of AGE,- 0.021411 suggests that if age should increase by a unit, on average, the logit will decrease by 0.021411 units. This suggests that as people growth older, their consumption pattern tends to get distorted. The slope coefficient of GND being 0.559987 suggests that as gender tends towards being male, Household consumption pattern tends to increase by 0.559987 units. Similarly, the coefficient of education being 0.460323 suggests that when educational attainment increases by 1 unit, household consumption pattern should increase by 0.460323 units. The probabilities suggest that income and gender are statistically significant in explaining Household consumption pattern at 5% level of significance, while age and education are statistically significant in explaining consumption pattern at 10% level of significance. From the estimated LR statistic, we can see that collectively the five variables are significant at about 0.02 percent level. If we use the conventional 5% level of significance, the variables are very significant. The R^2McF is quite low (0.024), but it is not a very relevant statistic in conventional logit models.

The households' income levels were determined by social factors such as: Age, Gender, Education and Hours of work per Day. They have significant impact on determining households' income in their day-to-day living. Age and Education of households played an important role in determining their income levels.

5.2 Conclusion

Based on the findings of this study, it can be concluded that social and economic factors have implications on income and households' consumption pattern since there is a significant relationship between Age, Gender, and Education and hours worked per day and households' income, as well as Age, Gender, Education, income and households' consumption pattern. The results showed that low-income levels influences individual consumers' demand of their basic sustain goods and as well affected the rate of their savings rate for unforeseen contingencies and investment purposes. The two null hypothesis of: socio-economic factors do not determine income levels among households in Mubi North Local Area of Adamawa state and there is no socio-economic implication of low-income levels on households' consumption pattern in Mubi North Local Government Area of Adamawa State are rejected, because the findings of the study have proven that, there are significant relationship between socio-economic factors, low-income levels and households' consumption pattern.

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