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SOCIAL INSURANCE AND HOUSEHOLD INEQUALITY IN ANAMBRA STATE, NIGERIA

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Abstract:
Inequality without protection becomes institutionalized vulnerability. Despite Anambra State's being renowned for its commercial vitality, a significant and widening household inequality persists beneath its economic dynamism. This study investigates how social insurance impacts household inequality within the state, focusing on the disparities in health insurance access and income across rural areas. Adopting a descriptive survey design, primary data were collected from 169 households across six purposively selected Local Government Areas in the three senatorial zones of the state. The analysis, which utilized both descriptive and inferential statistics (including t-tests at a 5% significance level), demonstrates a robust positive correlation between household earnings and the ability to participate in social health insurance. These results indicate that wealthier households are better equipped to afford coverage, whereas lower-income families are largely left behind. Key factors identified as driving this income gap include heavy tax burdens, unemployment, systemic corruption, large family sizes, gender disparities, educational levels, and access to technology. The findings suggest that rather than bridging the divide, current social insurance models in Anambra State actually deepen inequality because of the lack of coverage in the informal economy. The findings also reveal a strong positive relationship between household income and participation in social health insurance, indicating that higher-income households are significantly better positioned to secure insurance coverage, while low-income households remain excluded. Ultimately, the study concludes that to achieve balanced development and reduce household disparity, the state must broaden inclusive health insurance models, improve rural social services, and adopt social protection policies that effectively redistribute resources.

JEL: D31, D63, I38, H55, O15

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1. Introduction

Household inequality defines the persistent disparities in income, access to opportunities, and social welfare across households within a given society. It represents a critical challenge in developing nations, particularly in Sub-Saharan Africa and poses one of the most formidable barriers to inclusive development in contemporary Nigeria, Africa's most populous nation (Uzonwanne et al., 2022). In recent years, inequality has come back on the agenda in international development debate and practice. The potentially negative effects of income inequality and the recent increase in health issues observed in a significant number of industrialized and developing countries have led to the revival of income inequality as a central topic in economics. A high level of inequality produces an unfavorable environment for economic growth and development. Sen (1993) nevertheless argues that unequal distributions of health, education and other welfare attributes also have important impact on human well-being: The extent of real inequality of opportunities that people face cannot be readily deduced from the magnitude of inequality of incomes, since what we can or cannot do, can or cannot achieve, does not depend just on our incomes but also on the variety of physical and social characteristics that affect our lives and make us who we are. In Nigeria, substantial levels of income inequality perverse majority of the population, as about 60% of its population are living in deep poverty, while wealth is concentrated among a small percentage (Ogujiuba, 2022; National Bureau of Statistics, 2024).

Anambra State, located in South-East Nigeria, with 21 local government areas, is one of Nigeria's most commercially active states. It boasts of bustling markets, diverse entrepreneurial activity, and a dynamic informal economy. This state not only stands as a paradoxical landscape of vibrant commerce but also a hidden vulnerability, too. Beneath this vibrancy lies a striking paradox: economic dynamism at the macro level co-exists with pronounced household inequality at the micro level, reflecting unequal access to resources, social services, and economic opportunities. For the average household in cities like Onitsha, Nnewi, or the rural hinterlands of Ayamelum, life is frequently a high-wire act, performed without a safety net. While national-level research consistently highlights deep inequalities across regions and socioeconomic groups, inequality within states, Anambra, reveals striking patterns of uneven development that undermine social cohesion and economic progress (Ezenwa & Okeke, 2024). The impact of this inequality is most visible in the intergenerational transmission of poverty.

According to Imoagwu and Anakwuba (2025), the financial inequality experienced by current households in Anambra forces a reduction in human capital investment, such as withdrawing children from school to cover emergency costs. This suggests that the current state of household inequality in the state is not just a present-day challenge but a future threat to the state's economic stability. Obi and Nwankwo (2024), like other contemporary scholars, contend that the Anambra economic model of

development must evolve from individual commercial success to a system of collective social security. Therefore, unless social insurance mechanisms are scaled to reach the last mile of informal households, the state's economic growth will continue to be overshadowed by a rising tide of inequality that threatens the very social fabric of the 'Light of the Nation.'

Most empirical studies suggest that household inequality in Anambra State is increasingly characterized by the asymmetric distribution of resilience. While the state boasts of the highest numbers of private millionaires in Nigeria, the National Bureau of Statistics (2024) highlights a widening gap in multidimensional welfare, where access to basic social protections remains an exclusive luxury for the formal elite. Evidence has also shown that inequality in the state is multi-dimensional. A study among members of farmers' cooperative societies in the state shows that a wide variation in farm size, access to inputs, credit availability, and farming techniques significantly influences income disparities among rural households, highlighting structural drivers of household inequality rooted in livelihood segmentation and resource access differentials. While Ezenwa and Okeke (2024) argue that inequality in the state is not merely a matter of income disparity, but a resource-access divide. Umeh and Onwuka (2025) pointed out that the inequality in the state is exacerbated by the structure of the Anambra economy. They argue that the state's workforce is largely informal workers, constitutes the majority and is largely excluded from state-led social insurance schemes like the Anambra State Health Insurance Agency (ASHIA). This exclusion creates a dual-class household system, where a small group of formal sector workers with guaranteed pensions and health cover, and a vast majority of informal households, who must rely on depleting their meagre savings or selling off productive assets to survive shocks.

Social insurance consists of an institutionalization framework through which the government protect individuals and households against economic risks, by pooling resources through mandatory contributions. In the Nigerian context, social insurance is a critical lifeline that prevents life-shocks from plunging vulnerable populations into permanent destitution. This social need has been identified, policies and programs instituted, but to what extent has this impacted the lives of the vulnerable population of the state, and by extension, Nigeria?

Social insurance in its functional types is targeted to specific socio-economic vulnerabilities. In Anambra, there are several social insurances, including the State Health Insurance Agency (ASHIA) 2016, which is expected to mitigate low-income households from falling into medical poverty. Pension Reform Act of 2014, designed to provide financial security for retirees. The Anambra State Disability Rights Law (2018), that provided the legal basis for social security support specifically for the disabled and Social Security Disability (2018). This is meant to provide buffers for individuals who are unable to work due to physical or mental impairments, ensuring they remain part of the social contract.

Despite these structures, there is a significant coverage gap of social insurances by the government of Anambra State. The effectiveness of insurance in Nigeria is often

hampered by a resource-access divide. Could this be the case in the state? Where the vast informal sector remains largely excluded from formal contributory frameworks.

Ezenwa and Okeke (2024) and Umeh and Onwuka (2025) observe that while formal sector employees enjoy structured social insurance, the missing middle, comprising petty traders and informal artisans, must rely on depleting personal savings or selling productive assets during crises. This is suggestive of the asymmetric distribution of the state resources. Imoagwu and Anakwuba (2025) contend that functional social insurance is necessary to stop the intergenerational transmission of poverty, as it prevents families from having to withdraw children from school to pay for emergency costs. This disparity in insurance access reinforces household inequality, as wealthier households use insurance to preserve their capital while poorer households are forced into distress sales that lead to the intergenerational transmission of poverty.

According to the 2022 Multidimensional Poverty Index (MPI), Anambra is among the top-performing states, indicating that only approximately 6% to 14.8% of households in the state are classified as poorest or in abject poverty. While the state is frequently cited as one of the least poor in Nigeria, it often masks significant structural inequalities, and research has also highlighted a growing resource-access divide that creates a precarious existence for many households. It has also been observed that poverty in Anambra is heavily rural-centric, where about 96% of the state's poorest households reside in rural communities (Ezenwa, 2024; International Statistical Institute (ISI) World Statistics Congress, 2026). Even though the inequality report is estimated at 0.31 to 0.42, classified as moderate inequality, where the top 20% (5th quintile) of the population holds about 39% of the total wealth, while the bottom 20% holds only 8%. This did not represent the total picture of opportunity inequality.

Adefila (2012) study contends that there is a continuous widening gap between the privileged and underprivileged structures across the local government areas, where out of the 21 LGAs, roughly 11 are classified as privileged (mostly urban centers like Onitsha and Awka), while 10 remain deprived in terms of health facilities, water reliability, and transportation infrastructure. Therefore, income inequality is only a significant part of inequality measurement, but a more significant and sufficient measure should be opportunity inequality (Sen, 1993). This was emphasized by current studies by Imoagwu and Anakwuba (2025) and Onoh (2024), who argued that inequality in Anambra is linked through a cycle of vulnerability. Uzoh and John (2023) also found a significant linkage where high inequality and localized poverty drive social vices, including human trafficking. As desperate families seek to escape, they're not only economic but also social status through unrealistic promises of better lives elsewhere and an image symbol.

This study will therefore identify social insurance attributes in terms of health insurance that rural households in Anambra State are mostly deprived of, which of the sub-group in the population are most vulnerable and which of the geopolitical zones have the highest inequality in access to the specified income welfare attributes. It will further determine the possible causes of income inequality in Anambra State and also show possible ways by which these attributes can be equitably redistributed among

households in order to improve their health and welfare status. This is because the identification of the most vulnerable groups who are believed to be usually neglected in development plans of Anambra State, and therefore hardly benefit from the growth process, would be targeted in redistributional policies.

Given the above problem, the following research questions are expected to be answered at the end of this research work, thus:

1) What is the impact of health insurance on household income in Anambra State?
2) What is the possible impact of the resource-access divide on household income in Anambra State?
3) What proportion of the state's vulnerable population has benefited from the social insurance of Anambra State?
4) What best mechanisms that can be used to expand the social insurance net in the state, where the majority are in the informal sector?

2. Literature Review

2.1 Basic Theories

2.1.1 Arrow's Welfare Theorem

This theory postulates that individuals are rational and that they are best judges of the sort of life and activities which maximize their utility and happiness given initial level endowments, technology and prevailing market prices. Individuals make production and consumption choices using their set of preferences over bundles of consumption and production activities. Welfare economics is concerned with the evaluation of the level of individual and social welfare, and the welfare impact of economic and social policies. Social welfare is an aggregation of individual welfare by means of an aggregator function, which can be interpreted as a social welfare function. Social welfare functions can have different forms, implying that some of them will take distributional considerations into account while others will not. If the social welfare function is the maximization of the non-weighted sum of the individual welfares, then it is a utilitarian social welfare function. Though this theory stands out in this research work giving that individuals are termed to be rational in nature and choose the best option to sort out life and activities which will maximize their utility and happiness, given initial level endowments, technology and prevailing market prices.

2.1.2 Sen's Capability Approach

The capability approach is an evaluative framework for individual welfare and social states. This theory was credited to Amartya Sen in 1980. Sen argues that the correct focus for evaluating how well-off people are their capability to live a life we have reason to value, not their resource wealth or subjective well-being. But in order to begin to evaluate how people are performing in terms of capability, we first need to determine which functions matter for the good life and how much, or at least we need to specify a valuation procedure for determining this. One way of addressing the problem is to specify a list of the constituents of the flourishing life, and this is done on philosophical

grounds (Martha Nussbaum does this for her Capability Theory of Justice). Sen rejects this approach because he argues that it denies the relevance of the values people may come to have and the role of democracy (Sen, 2004).

Sen does suggest that, in many cases, a subset of crucially important capabilities associated with basic needs may be relatively easily identified and agreed upon as urgent moral and political priorities. These 'basic capabilities', such as education, health, nutrition, and shelter up to minimally adequate levels, do not exhaust the resources of the capability approach, only the easy agreement on what counts as being scandalously deprived. They may be particularly helpful in assessing the extent and nature of poverty in developing countries. However, taking a basic capability route has implications for how the exercise of evaluating individuals' capability can proceed, since it can only evaluate how well people's lives are going in terms of the basics. This theory still stands out as relevant to this work because it focuses on evaluating how well-off people is their capability to live a life we have reason to value, not their resource wealth or subjective well-being.

2.1.3 Empirical Literature

A number of empirical studies have been done on the effects of social insurance on household inequality, some of which are reviewed in this study.

Imoagwu and Anakwuba (2025) examined the relationship between social insurance and household inequality in Anambra State, Nigeria, employing a multi-stage sampling technique alongside a Probit regression model to analyze data collected from 450 households across the state's three senatorial districts. Their results showed that although formal sector health insurance significantly lowers catastrophic out-of-pocket health expenditures, the systematic exclusion of informal traders who make up the majority of the state's labor force widens what they described as a resilience gap, thereby reinforcing household inequality. The authors concluded that social insurance in Anambra operates in a regressive manner, as it predominantly benefits individuals in secure formal employment. Consequently, they advocated for the urgent expansion of the Anambra State Health Insurance Agency (ASHIA) to incorporate informal sector groups through cooperative-based premium arrangements. Their findings are corroborated by Ezenwa and Okeke (2024), who reported that 96% of the poorest households in the state are concentrated in rural areas with no insurance coverage. However, their position contrasts with Umeh (2023), who argued that indigenous communal savings schemes (Isusu) are more effective than state-administered insurance programs in cushioning households against economic shocks.

Similarly, Onoh and Enekwe (2024), in their study titled "Impact of Social Security Expenditure on Poverty Alleviation in Southeast Nigeria," applied the Autoregressive Distributed Lag (ARDL) framework to time-series data spanning 1990 to 2023. Their findings revealed that government spending on social security produces minimal poverty-reducing effects in the short term but yields significant positive outcomes in the long run, particularly when institutional inefficiencies and leakages are curtailed. They concluded that social insurance is inherently policy-dependent, meaning that financial

allocations alone are insufficient to reduce inequality without strong administrative accountability and transparency. The authors therefore recommended the digitalization of social benefit disbursement systems to limit political interference and mismanagement. Their conclusions align with Yakubu Sule and Fatai Adekunle (2023), who emphasized the importance of digitalizing internally generated revenue systems to finance social development initiatives. However, their findings differ from Peters (2017), who maintained that direct public investment in infrastructure produces more immediate poverty-reduction effects than contributory social insurance programs in developing countries.

In another related study, Obi and Nwankwo (2024) investigated informal sector participation in social insurance schemes in Anambra State using a descriptive survey design and Chi-square analytical techniques. The study identified a significant trust deficit in government-managed funds as the primary obstacle preventing informal households from enrolling in social insurance schemes, thereby leaving them exposed to inequality-amplifying shocks. They concluded that household inequality in Anambra is influenced more by informational asymmetry and institutional mistrust than by affordability constraints. As a policy response, they proposed a tripartite advocacy framework involving traditional institutions, market associations, and the state government to enhance credibility and promote enrollment. Their findings are consistent with those of Okolie et al. (2021), who highlighted institutional distrust as a major constraint on human capital development. Nonetheless, their position diverges from Akinyemi and Vincent (2021), who contended that the major barrier to insurance participation in Nigeria is absolute income poverty rather than psychological factors such as trust.

Uzonwanne, Asogwa, Ezenekwe, & Nzeribe (2022) examined the impact of household inequality and insurance incidence on health risk financing in Nigeria. The study employed World Bank data on domestic general government health risk expenditure per capita, Out-of-Pocket Expenditure on health risk per capita. It also employed the Country Policy and Institutional Assessment (CPIA) policies for the social inclusion index. Finally, it adopted a content analytic method for analysis. Findings: The findings of the study revealed that health risk financing has been unevenly shouldered by the government and households, with the poorest households bearing a larger portion of the expenses. In line with the findings, the study recommends that governments at all levels should tax every socioeconomic stratum according to their abilities and provide health insurance to them in relation to their health needs.

Vanda (2021) examines the investigating the distributional consequences of aggregate crises and the role of inequality and social insurance in shaping aggregate activity in times of crisis using a DSGE model, with both ex-ante and ex-post household heterogeneity, and one important source of social insurance, unemployment insurance. A first quantitative experiment, aimed at exploring the model's main properties and mechanisms, produces several preliminary results. First, ex-ante heterogeneity matters. Results for economies where there is only ex-post heterogeneity are significantly different from results for economies where there are both types of heterogeneity. Second, the

model generates a substantial rise in inequality following a crisis, as a result of an increase in the probabilities of becoming or remaining unemployed. Third, social insurance helps to mitigate the impact of a crisis on aggregate consumption, and this effect is stronger for a higher degree of heterogeneity. Finally, a progressive insurance scheme produces a higher mitigation effect than a flat one. By shedding new light on how social insurance policies may shape the impacts of an aggregate crisis, this work contributes to the recent but essential literature on the relevance of considering distributional aspects when targeting macroeconomic objectives.

Anigbogu and Uzondu (2019) investigate the determinants of income inequality among cooperative farmers in Anambra State. The study modeled variables like farmers' efficiency, technology, market proximity, credit obtained, farm size, soil fertility, crop type, input supply and agric extension services using descriptive and inferential statistics. Findings revealed that: apart from market proximity, which was not significant, all other factors - farmers' efficiency, technology, credit obtained, farm size, soil fertility, crop type, input supply and agric extension services - contributed significantly to the farmers' income. This study therefore recommends that: The government should carry out a public enlightenment campaign on the potentials of agricultural cooperatives as a sustainable approach for reducing income inequality through synergy, and emphasis should be placed more on cooperative education as a requirement for growth and development since most of the people in the target areas has low educational background.

2.1.4 Literature Gap

Given the reviewed empirical literature which centers on different dimension of insurance and household inequality in the Nigerian economy, social insurance as part of the insurance can be regarded very out most important giving that if focuses on the government to intervenes in the insurance market to ensure that a group of individuals are insured or protected against the risk of any emergencies that lead to financial problems. This is also based on the premise that there is not always an equitable distribution of resources or benefits in a competitive economy, and there must be provisions to ensure that participants in the market do not end up with an "all-or-nothing game". Therefore, it is a means to allow participants of a dynamic economy to take risks and engage in economic activity with the assurance that, in the instance of an emergency, they will be protected through this accumulated fund. However, a series of work on this area has focused on the entire Nigerian economy. On this note, this research work tries to point out the meaningful and reasonable effect of social insurance on the household inequality in Anambra State.

3. Methods

3.1 Research Design

This study is a descriptive survey which aims to examine the effect of social insurance on household inequality in Anambra State. This survey research consists of asking questions, collecting and analyzing data from a supposedly representative sample of the population at a single point in time, with a view to determining the current state of that population with respect to one or more variables under investigation. This study on the appraisal of the effect of social insurance on household inequality in Anambra State was carried out in rural ecological communities across the state's three senatorial zones. The areas selected for study include: Anambra East and West Local Government Areas in Anambra North Senatorial Zone; Orumba North and Orumba South local government areas in Anambra South Senatorial Zone, and Awka North and Idemili South Local Government Areas in the Anambra Central Senatorial zone. The six (6) local governments were purposively selected for the study because of their level of household inequality, and also, the incomes of the people of the area are mainly poor.

The population of this study comprises all the members of the registered household membership in the six (6) selected Local Government Areas. Anambra East L.G.A, Anambra West L.G.A, Orumba North L.G.A, Orumba South L.G.A, Awka North L.G.A, as well as Idemili South L.G.A. Two Household was randomly selected from each of the six (6) purposively selected local governments in the three (3) senatorial zones of the state. Making a total of twelve (12) households, with a membership strength of two hundred and ninety-eight (298).

3.2 Sample Size and Sampling Technique

Table 1: Sample Size and the Distribution Criteria

Town	Membership Male	Membership Female	Total	Sample Size
Otuocha	19	11	20	12
Umuleri	29	13	42	24
Nzam	7	8	15	9
Anam	9	6	15	9
Ufuma	15	11	26	15
Awgbu	11	17	28	16
Ihite	16	21	37	21
Umunze	15	12	27	16
Achalla	14	21	35	20
Ugbene	24	10	31	18
Alor	3	7	10	6
Akwaukwu	7	5	12	7
Total	**169**	**129**	**298**	**171**

Source: Authors' Compilation.

To determine the sample size for the purpose of questionnaire distribution, the Yaro Yamani formula was used. The formula is stated thus:

n = N/1+N(e)2

Where,
n = Sample size,
N = Population,
e = Margin of error (5% or 0.05),
I = Constant,

Substituting in the above formula:

n = 298 / 1 + 298(0.05) ^ 2
n = 171

3.2 Data Collection and Analytical Tools

The researcher developed a questionnaire, which was used to collect data for the study. The questionnaire was titled "An appraisal of the effect of social insurance on household inequality in Anambra State". The questionnaire has two sections. Section A and Section B. Section A sought information on the socio-economic background of respondents. Section B was made up of items relating to the appraisal of the effect of social insurance on household inequality in Anambra State. It sought the household responses on how social insurance has affected their well-being in Anambra State. Descriptive and inferential statistics were used in the study. Descriptive statistical tools were used in analyzing the specific objectives. The t-test was performed to test the significance of each of the explanatory variables at an alpha level of 5%.

4. Presentation of Results

This chapter deals with the analysis of data collected for the study. The results were presented in accordance with the research questions that guided the study. 171 questionnaires were distributed to the respondents, while 169 were returned and properly filled, which was found useful for the study. This shows 98.83% return rate.

4.1 Demographic Profile Responses

Table 4.1: Demographic Profile Responses on Gender and Age

Variables	**Frequency**	**Percentage (%)**
Male	73	43.20
Female	96	56.80
Total	**169**	**100.00**
Variable	**Frequency**	**Percentage (%)**
18 – 25	31	18.34
26 – 35	52	30.77
36 – 45	27	15.98
46 – 55	45	26.63
56 and above	14	8.28
Total	**169**	**100.0**

Source: Authors' Computation, 2023.

From the table above, the respondents are fairly distributed between male and female. Results show that about 43.20 percent of the populations are male, while 56.80 percent of the population is female. This implies that the sample taken was dominated by females in the household tan male. The survey nets all age brackets starting from 18 years of age. The most popular age bracket in the survey is 26 – 35 years, with representation of about 30.77 percent. This was followed by 46 – 55 years, which is about 26.63%, and 18 – 25 years, which was about 18.34%, followed by 36 – 45 years, which was about 15.98% and then followed by 56 years and above, which is about 8.28%.

Table 4.2: Demographic Profile Responses on Marital Status and Education Qualification

Variables	**Frequency**	**Percentage (%)**
Single	57	33.73
Married	86	50.89
Widowed	17	10.10
Divorced/Separated	9	5.33
Total	**169**	**100.00**
Variables	**Frequency**	**Percentage (%)**
No Formal Education	11	6.51
Primary Education	52	30.77
Secondary Education	67	39.64
Tertiary Education	27	15.98
Postgraduate Education	12	7.10
Total	**169**	**100.00**

Source: Authors' Computation, 2023.

The results show that the majority of the respondents are either married or single. Respondents who are single accounted for about 33.73%, while those who are married accounted for about 50.89%. Also, about 10.10% of the respondents are widowed, while 5.33% of the respondents are divorced/separated, respectively. However, about 39.64% of the respondents attend secondary education, while that of primary education was accounted by 30.77%. Other educational qualifications, such as tertiary education, accounted for about 15.98% of the respondents, and 7.10% are postgraduate education qualifications. The result also shows that about 6.51% have no formal education.

Table 4.3: Demographic Profile Responses on Household Size and Spousal Monthly Income

Variables	**Frequency**	**Percentage (%)**
1 -3 persons	46	27.22
4 – 6 persons	76	44.97
7 – 9 persons	36	21.30
10 – 12 persons	11	6.51
Total	**169**	**100.00**
Variables	**Frequency**	**Percentage (%)**
Less than 20,000	13	7.69
20,000 – 40,000	26	15.38
41,000 – 60,000	67	39.64
61,000 – 80,000	34	20.12

81,000 – 100,000	15	8.88
101, 000 – 200,000	9	5.33
200,000 and above	5	2.96
Total	**160**	**100.00**

Source: Authors' Computation, 2023.

Table 4.3 shows that over 76% of the respondents are members of households of size ranging from 4 to 6 persons. However, about 46% of the respondent has household size of 1 to 3. Other household sizes indicated include 36% for households ranging from 7 to 9 persons and 6.5% for households ranging from 10 to 12 persons. The result also shows the distributive income range of the household under study. The income range of 41,000 to 60,000 accounted for about 39.64% of the respondents. This implies that the majority of the household has an income level below 60,000 naira. However, the results also show that few households have a greater income range of higher income, as the results posit a 2.96% percentage of the respondent that held a monthly income above 200,000. These inequalities in income level will pose a clear involvement to their health insurance. The cumulative income range is summarized in Table 4.4.

Table 4.4: Cumulative Income Range and Classification of Income Categories

Variables	Frequency (Cum)	Percentage (Cum)	Category
0,000 – 60.000	106	62.72	Poor Households
61,000 – 200,000	58	34.32	Average Households
200,000 and above	5	2.95	Rich Households
Total	**169**	**100.0**	

Source: Authors' Computation (2023).

Table 4.4 shows the classifications of the households with respect to their income level. The result indicated that households with an income range of 60,000 and below were classified as poor households, the household range of income above 60,000 to 200,000 was classified as average household, while the income range above 200,000 was classified as rich household. The result presented above shows that 62.72% of the respondents are poor, while 34.32 percent of the households are average income earner while 2.95% of the respondents are classified as high income earners. This result is summarized in a pie chart below.

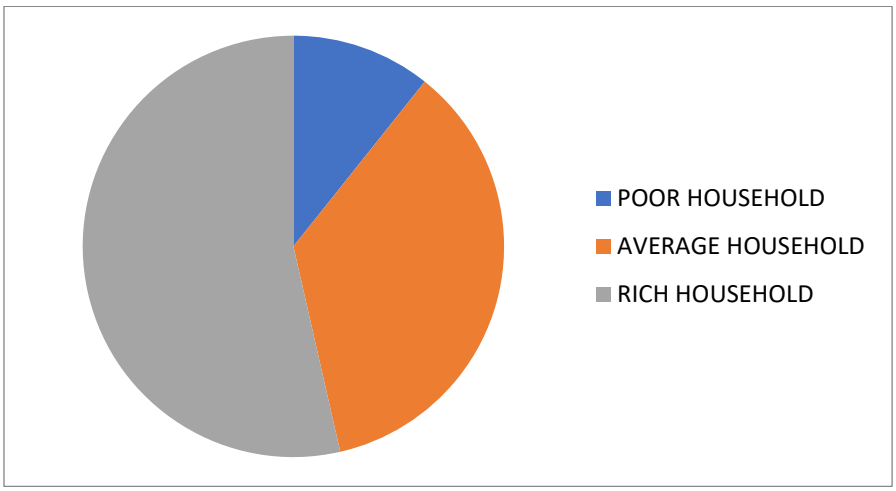

Figure 4.1: Household Income Range Category

Table 4.5: Percentage of Income Held for Social Health Insurance

Income level	Frequency	Percentage (%)	Categories
5%	0	0.00	V
10%	4	2.34	W
20%	158	93.49	X
40%	7	4.14	Y
50%	0	0.00	Z
Total	**169**	**100.0**	

Source: Authors' Computation, 2023.

The results from Table 4.5 show that the majority of respondents indicated that 20% of their income is set aside for their social health insurance. This fraction was used as a threshold for the fraction of income held for their health insurance. This result was summarized using a pie chart below.

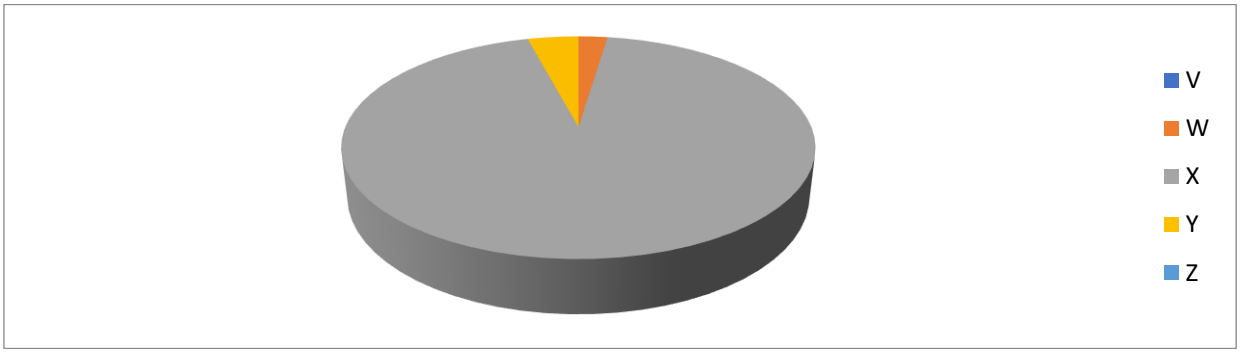

Figure 4.2: Household Fraction of Income Held for Social Health Insurance

Table 4.5: Threshold of 20% of Income Held for Household Health Insurance

Variables	Income	20% of Income
Poor Household	60,000	12,000
Average Household	200,000	40,000
Rich Household	300,000	60,000

Source: Authors' Computation, 2021.

Given the table above, which shows the stipulated income level of the categorized household, a constant rate of 20% fraction of their income was computed as held for their health insurance. Results indicate that household who earned higher income will have more to hold for their health insurance than that of the household who earn lower. The results are summarized using bar charts below for better understanding.

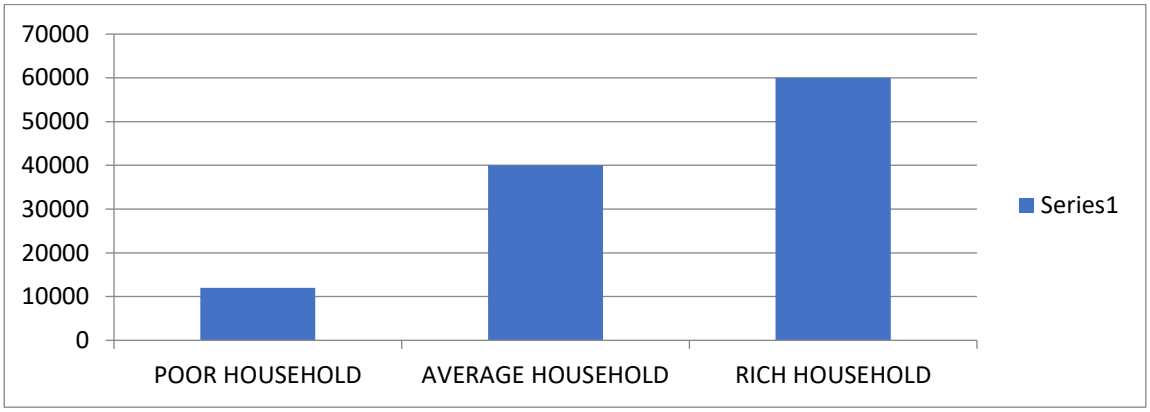

Figure 4.2: Household Categories in Relation to their Health Insurance Capacity

The figure above indicates that households with higher incomes have much more to contribute toward their health insurance than households with lower incomes. This implies that there exists a strong positive relationship between inequality in income and social health insurance. Specifically, if the income of the household increases to a certain level, much money will be held purposely for their health to be insured. Conversely, if the income of the household decreases or remains in a very low range, given some basic needs that their income is set to offset, it will be difficult for such a household to engage in social health insurance. This finding was in line with the findings of (Akanni & Opeloyeru, 2019), who modeled Healthcare Financing in Nigeria: The Analysis of the Inequity Perspective and found out that inequity in income favours the non-poor (pro-rich) in terms of health insuring package in the Nigerian economy.

Table 4.5: Possible Causes of Household Income Inequality in Anambra State

S/n	Items	Mean
1	Tax system	4.0651
2	High cost of governance	4.0592
3	Bribery and corruption	3.9467
4	Technology	3.7467
5	Level of education	3.9941
6	Unemployment	4.0355
7	Size of the family	4.0237
8	Gender	4.0178

Source: Authors' Computation, 2023.

Table 4.5.1: 5-point Linkert Scale

5-Point Linkert Scale	Range
Strongly Disagree = 1	1- Strongly Disagree 1.00 – 1.8
Disagree = 2	2 - Disagree 1.81 – 2.6
Neutral = 3	3 - Neutral 2.61 – 3.4
Agree = 4	4 - Agree 3.41 – 4.2
Strongly Agree = 5	5 - Strongly Agree 4.21 – 5.00

Source: Authors' Computation, 2023.

Given the 5-point Likert scale above, the result shows that all factors contributed significantly to the causes of household income inequality in the economy of Anambra State. The estimated result asserted that the mean value of all the factors lies in between the mean range of 3.41 to 4.20, indicating that the respondents was sorely agreed on the proposed factors that cause income inequality in Anambra State.

Tax system maintained a high mean value, implying that the government places a more onerous tax burden on the poor through multiple taxation of smaller businesses by different levels of government and informal authorities, while tax waivers are granted to big multinational companies. Technology also maintained a high mean value with respect to income. When an individual or household adopts a new innovation, their productivity tends to increase and consequently, their income increases. The high mean value of Farm size also increases the individual or household income. This implies that as the productivity of the individuals increases, the individual level of income will also increase. Conversely, large families tend to be greater risk of poverty because they have higher costs, lower incomes and more difficulty in gaining well-paid employment. The mean level of education is also high, implying the ability to access decent jobs, develop them and participate fully in society. Gender also posits a very high mean, implying that women are generally at higher risk of poverty than men, as they are less likely to be employed, tend to have lower pensions, and are more involved in unpaid caring responsibilities.

5. Discussion of Findings

The goal of this study is to see how economic disparity in Anambra State was changed by social insurance. The findings revealed that over 76 percent of respondents belong to households with a size of 4 to 6 people, while over 46 percent belong to households with a size of 1 to 3. Other household sizes that were mentioned were 36 percent for households with 7 to 9 people and 6.5 percent for households with 10 to 12 people. The result also displays the household's distributional income range. Around 39.64 percent of the respondents had incomes ranging from 41,000 to 60,000. This means that the majority of the households earn less than 60,000 naira a month. However, the findings suggest that few households have a higher income level, with 2.96 percent of respondents having a monthly income of more than 200,000 dollars. Respondents are either married or single, according to the results. Single respondents made up 33.73 percent of the total, while married respondents made up 50.89 percent. About 10.10 percent of the respondents are

widowed, while 5.33 percent are divorced or separated. However, secondary education is attended by 39.64 percent of respondents, while elementary education is attended by 30.77 percent. Other educational qualifications, such as tertiary education, accounted for 15.98 percent of the respondents, while postgraduate education qualifications accounted for 7.10 percent. The results also suggest that 6.51 percent of the population has never had any formal schooling.

The results also show that men account for 43.20 percent of the population, while women account for 56.80 percent. This indicates that the sample was dominated by the females in the household rather than the males. The survey is open to people of all ages, starting at the age of 18. The most popular age group in the poll is 26–35 years old, which accounts for around 30.77 percent of the total. This was followed by 46–55 years, which accounted for approximately 26.63 percent, and 18–25 years, which accounted for about 18.34 percent, 36–45 years, which accounted for about 15.98 percent, and 56 years and above, which accounted for about 8.28 percent. Given the categorized household's income level, a threshold of 20% of their income was calculated as held for their health insurance. According to the findings, those with higher incomes will have more money set up for health insurance than those with lower incomes.

According to the study, households with a higher income have a lot more money to put towards their health insurance than households with a lower income. This suggests that income inequality and social health insurance have a substantial beneficial association. In particular, if the household's income rises to a certain level, a significant amount of money will be set aside specifically to cover their health. In contrast, if a household's income falls or stays at a very low level, given the basic demands that their income is supposed to cover, it will be difficult for that household to participate in social health insurance.

The results also suggest that the tax system has a high mean value, implying that the government imposes a more onerous tax burden on the poor through multiple taxation of small businesses by various levels of government and informal authorities, while large multinational corporations receive tax exemptions. In terms of income, technology also maintained a high mean value. When a person or a family embraces a new innovation, their productivity rises, and their income rises as well. Farm size has a high mean value, which enhances individual or household income. This means that as an individual's production rises, his or her income rises as well. Large families, on the other hand, are more likely to be poor because they have more costs, fewer incomes, and more difficulties finding well-paid work. The average level of education is also high, meaning that they will be able to find quality work and fully engage in society. Gender has an extremely high mean, meaning that women are more likely than men to be poor since they are less likely to work, have lower pensions, and are more involved in unpaid caring tasks.

6. Conclusion and Recommendations

This study has examined the effect of social health insurance on income inequality among households in Anambra State. It has specifically examined the socioeconomic characteristics of the individual household, ascertained the income levels of individuals and how it relates to their health insurance and identified factors that determine income variation among individual households. Findings revealed that household who earned higher income will have more to hold for their health insurance than that of the household who earn lower. Also, factors such as tax system, cost of governance, level of technology, bribery and corruption, size of the family, unemployment as well as gender contributed positively in causing income inequality in Anambra State given the estimated result which asserted that the mean value of all the factors lie in between the mean range of 3.41 to 4.20 indicating that the respondents was sorely agreed on the propose factors that causes income inequality in Anambra State. Efforts to ensure a more equitable distribution of income should therefore be made with a focus on developing essential social infrastructure to improve access to education, health, transportation, telecommunications, and financial transactions. These will lead to a reduction in rural-urban migration, which this study found to have some negative consequences for reducing income inequality in Nigeria. These suggest the need to promote small-scale enterprises that are agricultural and non-agricultural based in urban and rural Nigeria. The activities of the National Directorate of Employment should not be concentrated in the urban areas alone. Skills in agricultural enterprises that can be managed within the socio-economic structure of the rural areas should be promoted. Rural and urban agricultural activities focusing on livestock, fish, and crop production should be encouraged. However, notable problems militating against agricultural development in Nigeria, like an inefficient pricing system and natural resource degradation, must be addressed. The Government of Anambra State should endeavour to provide medical facilities and also make a provision for the have-nots to have full access to be insured, even with a lower range of income.

Conflict of Interest Statement

The authors declare that there are no conflicts of interest regarding the publication of this paper. The research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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