

## EXPLORING THE INFLUENCE OF SOCIOECONOMIC AND POLICY FACTORS ON INFORMAL WORKERS' ENROLLMENT IN NIGERIA'S HEALTH INSURANCE SCHEME

ONAFALUJO, A.K.<sup>\*1</sup>, BAMGBOSE, Olalekan.S.<sup>2</sup> & Olufawo, H.S.<sup>3</sup>

### Abstract

This study examines factors influencing enrollment in Nigeria's National Health Insurance Act 2022 (NHIA) healthcare program among informal economy workers, who often face poor safety, health conditions, and limited insurance coverage, leading to preventable health issues. A sample of 389 workers from Ikorodu, Lagos, completed structured questionnaires. Using Least Square statistics, results show that life events, disposable income, sales agent influence, and friendly society engagement positively impact NHIA enrollment. The findings suggest that healthcare providers should innovate existing offerings by including benefits like hospital reimbursement and co-payments, while collaborating with friendly societies to build trust and improve healthcare access for informal sector workers.

**Keywords:** informal economy, health insurance, NHIA enrollment, workforce, health care

### INTRODUCTION

Informal economy workers in Nigeria comprise individuals employed mainly by private enterprises owned by households or individuals, engaged predominantly in non-agricultural activities such as trading, personal services, construction, transportation, manufacturing, and various repair services (ICLS, 2000; NBS, 2010). These workers play a vital role in the country's economic landscape, with estimates indicating that the informal sector accounts for over 80% of non-agricultural employment, 60% of urban employment, and contributes significantly to Nigeria's GDP—up to 30% with agriculture included and around 17% without it (Ahiuma-Young & Adeniyi, 2020, 2021; Hussmann & Ralf, 2002b). The agriculture and industry sectors are particularly affected by informality, with approximately 94% of agricultural workers and 57% of industrial workers operating informally (Adesina, 2009).

The informal sector's activities extend beyond traditional trades to include petty trading, personal services, construction, transportation, money lending, vehicle repairs, appliance repairs, hairdressing, and carpentry, among others. Despite

their significant contributions, informal workers are largely excluded from formal social protection systems, making them highly vulnerable to economic shocks and health crises (Hussmann & Ralf, 2002a). This vulnerability is compounded by systemic issues such as low levels of education, limited skills, and inadequate access to vocational training, which trap many in a cycle of poverty and insecurity (Santana et al., 2006). Using the international poverty threshold of USD 3.10 per day, most informal workers in Nigeria live below this line, facing persistent in-work poverty that affects their overall wellbeing. Their economic disadvantage also correlates with higher rates of crime, poorer health outcomes, and lower access to healthcare, factors that exacerbate their vulnerabilities. Income disparities significantly influence health status; constrained resources hinder access to medical services, leading to poorer health outcomes. Additionally, poor health can impose further financial burdens, reducing overall welfare and perpetuating a cycle of poverty. Nigeria's healthcare system is notably regressive, with both rich and poor paying identical high fees, which are often unaffordable for informal households. Over 70% of private health expenditures are out-of-pocket, with

<sup>1</sup>1.Professor of Risk Management & Insurance, Department of Insurance, Lagos State University.

<sup>2</sup>2. Department of Actuarial Science & Insurance, Lagos State University of Science

96% of health costs paid directly by individuals, deterring many from seeking necessary medical care (WHO, 2010). Poverty and high healthcare costs contribute to reluctance in visiting health facilities, worsening health outcomes among informal workers. Recognizing these challenges, the Nigerian government has made several efforts to reform healthcare access, including the establishment of the National Health Insurance Scheme (NHIS) in 1999, aimed at providing affordable healthcare. However, participation remains low; by 2021, only about ten million Nigerians were enrolled. The primary obstacle is the scheme's voluntary nature, which leaves many informal workers unprotected. To address this, the government enacted the National Health Insurance Act (NHIA) in 2022, a comprehensive reform designed to mandate health insurance coverage for all Nigerians and residents, including provisions for subsidies to vulnerable and indigent populations (Ajala & Anyanwu, 2022). The NHIA aims to regulate and unify health insurance schemes, ensuring wider coverage and increased participation.

Despite these legislative efforts, uptake of health insurance among informal workers remains low, partly due to lack of awareness, affordability issues, and limited trust in the system. This situation highlights the need to understand the factors influencing enrollment and participation in the new scheme. This study focuses on examining these factors in Lagos, Nigeria, over the three years preceding the enforcement of the mandatory NHIA, aiming to inform policies that can improve health coverage and reduce vulnerability among informal economy workers.

## LITERATURE REVIEW

### *Theoretical Framework*

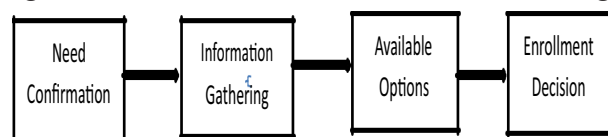
This study draws on two key theories to enhance the understanding of the decision-making process related to health insurance enrollment.

The first is the Decision Making Theory, which comprises a collection of principles and analytical techniques designed to assist individuals in selecting among various alternatives based on their potential outcomes (Levi, 1974). This theory is applicable in situations of both certainty and uncertainty. Under certainty, each choice results in a single, predictable consequence, making decision-making straightforward. In contrast,

in uncertain conditions, individuals must evaluate the possible outcomes of each alternative. For example, choosing not to purchase health insurance may lead to specific consequences such as paying higher medical costs when illness occurs and experiencing poor health status. Conversely, purchasing health insurance can provide benefits like lower costs and certain privileges, which are realized after coverage. Understanding these potential outcomes—such as paying more without insurance, the benefits of having coverage, and health risks—can influence an individual's decision on whether to acquire health insurance.

According to McKinsey (2009), consumers systematically evaluate various available options, make decisions, and purchase products or services in an organized manner. After the purchase, the post-sale phase acts as a trial period during which consumer loyalty is established, affecting the likelihood of repeat purchases. For informal economy workers, the primary motivation to enroll in health insurance schemes is the recognition of a genuine need for healthcare coverage. Once this need is acknowledged, they typically gather information from colleagues, social groups, and other personal contacts. After collecting relevant details, they evaluate different options available in the market based on their needs, preferences, and financial capacity, selecting the most suitable scheme. The final step involves deciding to enroll in the NHIA scheme if it is deemed the best option. Following enrollment, individuals assess the usefulness of the scheme to themselves and their families, a process known as post-enrollment evaluation. This is followed by interpreting the usefulness of the health care scheme to a worker and the family which is referred to as Post enrollment evaluation.

Figure 1: Modified Enrollment Decision-Making



Authors' Framework

*Empirical Review*

An individual's purchase behavior, as an internal influence, significantly affects the activation of their needs (Milner and Rosenstreich, 2013). In the context of health insurance enrollment, key life events such as marriage or the birth of a child are considered crucial factors influencing the decision to enroll, a notion supported by extensive empirical research. Hong and Rios (2004) emphasized how different demographic stages impact health insurance enrollment. Similarly, Milner and Rosenstreich (2013) argued that life events are pivotal in influencing enrollment due to their social and financial implications. Conversely, researchers like Sarkodie and Yusif (2015) and Perera (2016) highlighted that the number of dependents has a more significant influence on the decision to enroll. Inoue (2014) identified life events as primary drivers for health insurance enrollment among informal economy workers. Despite the recognition that such events can prompt enrollment, Shah (2012) noted that delays in key life events—such as marriage or childbirth—contribute to lower uptake of health insurance in the informal sector.

Ionciă et al. (2012) found associations between factors like income, gender, and age, concluding that income exerts the strongest influence on health insurance purchasing decisions. In contrast, Sahu et al. (2009) argued that variables such as consumer loyalty, service quality, and company reputation are critical factors affecting health insurance purchase decisions, alongside demographic considerations. Other scholars like Ulbinaite et al. (2013), Shrivastava and Singh (2017), and Perera (2016) emphasized that monetary considerations play a more vital role than social or emotional factors in the decision to purchase health insurance. Parsons and Maclaran (2011) supported this view, noting that although demographic factors influence decisions, income remains the most significant, especially given the long-term financial commitment involved in health insurance.

Traditionally, health insurance has been marketed through direct channels, brokers, and sales agents. However, emerging channels such as bancassurance and group schemes are gaining prominence (IBSL, 2016). Inoue (2014) pointed out that traditional sales channels are struggling because many people are often away from home or too busy. With the rise of digital media, online platforms for selling insurance products have grown substantially

(Ohbyung and Yixing, 2010; Van Den Bulte and Wuyts, 2007). Additionally, Stanley (2013) found that informal economy workers tend to prefer purchasing health insurance through their community-based organizations rather than direct approaches. Conversely, Scanlon (2016) argued that globally, most people—including informal workers—prefer face-to-face interactions with sales agents. Similarly, Kagucia (2016) reported that 77.6% of informal economy workers in Kenya preferred buying directly from sales agents, with only 12.1% opting to purchase through banks. Studies by Sidhardha & Sumanth (2017) and Yu et al. (2015) indicated that while most workers favor enrolling via sales agents, many are also open to other channels. Although informal workers generally prefer sales agents, Agnihotri & Rapp (2012) emphasized that these agents need to enhance their skills to meet the expectations of this demographic.

Most informal economy workers now access information through various media channels. Peterson (2004) observed that modern companies rely less on traditional advertising, as workers increasingly obtain information online. Hershatter and Epstein (2010) highlighted the challenge of targeting informal workers, given their exposure to diverse media sources. Many scholars have noted that informal workers often look to their peers and social networks before making enrollment decisions. Godes et al. (2015) noted that review sites have become highly influential in shaping consumer choices. Supporting this, Barbagallo (2022) found that the younger generation of informal workers is heavily influenced by consumer-driven marketing, including word-of-mouth recommendations from family and friends. Moss et al. (2022) observed that informal workers tend to distrust commercial advertising, placing greater credibility on information shared by other consumers.

Muthur (2023) argued that technological advancements have fostered a culture of instant gratification among modern informal workers. McIsaac (2014) explained that this desire for immediate satisfaction persists even for complex products like life and health insurance. Similarly, Smith (2011) suggested that once a need for health insurance is identified and options evaluated, consumers prefer to purchase quickly. Instant gratification favors products with short production times and immediate benefits. Although insurers may

contend that processes like data analysis and underwriting are lengthy, such delays are largely irrelevant to the modern informal worker, who values speed and convenience in enrollment.

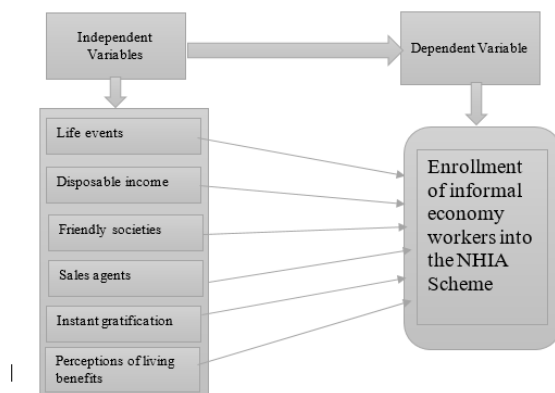
Informal economy workers expect access to products and services worldwide that can help improve their living standards. Shah (2012) noted that during periods marked by conflict and high mortality rates, people prioritized protecting their families. However, with increased life expectancy, fewer dependents, and improved living conditions, basic death benefits are viewed as less attractive. Despite these improvements, medical expenses tend to rise with increased life expectancy. Interestingly, studies like the Vertafore Survey (2017) reveal that informal workers often prioritize travel, purchasing smartphones, or dining out over buying life insurance. The perceived importance of health insurance, preferences for other products and services, and perceptions of insurance as an investment all influence their attitudes toward health coverage.

### Conceptual Framework

Based on an initial review of relevant theories concerning the behavior of informal economy workers and supporting empirical evidence, the researchers have developed the following conceptual framework.

The literature review carried out enforces the relationship between the said variables.

Figure 2: Conceptual model of factors influencing the enrollment of informal economy worker.



Source: Authors' Framework

H1 – There is no significant relationship between life events and the enrollment of informal economy workers into the NHIA scheme.

H2 – There is no significant relationship between disposable income and the enrollment of informal economy workers into the NHIA scheme.

H3 – There is no significant relationship between friendly societies and the enrollment of informal economy workers into the NHIA scheme.

H4 – There is no significant relationship between sales agents and the enrollment of informal economy workers into the NHIA scheme.

H5 – There is no significant relationship between instant gratification and the enrollment of informal economy workers into the NHIA scheme.

H6 – There is no significant relationship between perceptions of living benefits and the enrollment of informal economy workers into the NHIA scheme.

### 3. METHODOLOGY

*Data:* The hypotheses were tested using data collected from a large sample and analyzed through statistical methods. The target population for this study comprises informal economy workers aged over 30 who have been engaged in their work for at least 10 years within the Ikorodu division of Lagos State, which has a total population of approximately 1,197,000 (NBS, Population Projection, 2022). This division was chosen because it is considered the fastest-growing sector of the informal economy among Lagos's five divisions.

A sample size of 384 was determined at a 95% confidence level using the Krejcie and Morgan (1970) formula. Purposive sampling was employed to select respondents specifically from Ikorodu North Local Government, an area believed to have the highest concentration of informal workers. Data collection was conducted using a structured questionnaire employing a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The collected data were analyzed using the Statistical Package for Social Sciences (SPSS).

*Method:* This study's conceptual framework is rooted in decision-making theory and the process of enrollment decision-making, which involves choices made under conditions of preferences. Building on the effective integration of the prospect and utility models by Einar (2013)—who suggested that health scheme enrollment results from a combination of consumer characteristics—this study develops its own model.



Consequently, health scheme enrollment is hypothesized to depend on both socio-economic factors at the aggregate level and demographic characteristics of individual consumers within the economy.

Thus, giving a general model specified as:

$$NEnr = (LEv, DI, FS, IG, IOA, SA.)$$

Where

NEnr = NHIA Enrolment

LEv = Life Event

DI = Disposable Income

IOA = Influence of Association

SA = Sales agent motivation.

### 3. RESULTS

The Table 1 below shows results of tested hypotheses.

Table 1: Test of hypotheses on factors influencing enrollment of informal sector economy workers into NHIA Scheme

Scheme						
Hypothesis	Variable	Pearson Correlation		Regression		Results
		Pearson	Significance	R <sup>2</sup>	Significance	Supported
Correlation						
H1	Life Events	0.694	0.000	0.48	0.000	Supported
H2	Disposable Income	0.791	0.000	0.62	0.000	Supported
H3	Influence of sales Agent	0.492	0.000	0.24	0.0000	Supported
H4	Influences of associate	0.788	0.000	0.62	0.000	Supported
H5	Instant clarification	-0.796	0.000	0.063	0.000	Supported
H6	Living Board	-0.739	0.000	-0.75	0.000	Supported

Source: Authors' computation

The results of the hypotheses test indicate that all explanatory variables considered in the study have a significant impact towards the enrollment into the NHIA Act 2022 among the informal economy workers. A generalized least square regression analysis was performed to develop a model to predict the enrollment

pattern into the health care scheme of the NHIA Act 2022 behaviour based on the predictor variables considered. The table 1 and 2 show the SPSS outputs of the final regression analysis where five out of the initially considered variables were found to be significant in the model.

Table 2: Model summary of Relationship between independent and dependent variables

Table 2: MODEL	R	R <sup>2</sup>	ADJUSTED R <sup>2</sup>	STD. ERROR OF THE SITUATION
1	0.926	0.857	0.849	0.30051

a. Predictors:

b. (Constant), independent variables

Source: Authors' computation

The model summary shows that both the R-squared (85.7%) and the adjusted R-squared (84.9%) are quite high, suggesting that the predictor variables are appropriate.

Table 3: Factors influencing enrollment into the NHIA Scheme

MODEL	UNSTANDARDIZED CERTIFICATED		UNSTANDARDIZE D CERTIFICATED		T	SIG
	B	STD. ERROR	BETA			
1 (CONSTANT)	0.591	0.173			3.407	0.001
Life Events	0.159	0.05	0.174		3.174	0.002
Disposable Income	0.228	0.074	0.198		3.103	0.003
Influence of Associate	0.101	0.071	0.098		1.425	0.000
Instant Gratification	-0.431	0.075	-0.402		-5.787	0.000
Living Benefits	-0.217	0.055	-0.215		-3.919	0.000

a. Dependent Variable: Enrollment into the NHIA Scheme  
Source: Authors' computation

The multiple regression equation can be expressed as: NHIA Health Care Enrollment (NHIA ENR) =  $0.591 + 0.159LE + 0.228DI + 0.101IOA + (0.431IG) + (-0.217LivB)$ .

The notable negative correlations between enrollment decisions in the health care scheme and perceptions of instant gratification and living benefits are significant. Instant gratification was assessed through indicators such as preference for products with quick production times and short-term benefits. Living benefits were evaluated based on the importance assigned to life insurance reward schemes, preferences for other products and services over life insurance, and perceptions of life insurance as an investment. The negative correlations suggest that the NHIA health care scheme is not perceived to offer immediate rewards, and as a result, the expected living benefits are not particularly attractive to most respondents.

#### Discussion of Findings

The study demonstrated that all six independent variables had a significant relationship with the dependent variable after hypothesis testing. Among these predictors, the influence of sales agents' motivation exhibited the weakest correlation, whereas disposable income and the influence of friendly (cooperative) societies showed the strongest impact.

The positive correlation between the influence of friendly societies and enrollment into the NHIA Act 2022 scheme underscores the importance of social networks, trust, and peer influence in motivating informal workers' interest in health insurance products.

Interestingly, instant gratification and perceptions of living benefits revealed strong yet negative relationships with enrollment. The complexity, lengthy processes, and perceived unattractiveness of health insurance plans—often seen as offering benefits only upon injury, sickness, or disability—contribute to this negative perception. This aligns with McIsaac (2014), who argued that the current generation of workers prefers instant rewards, even when dealing with complex products like life and health insurance. Consequently, informal workers seeking immediate benefits may opt for alternative products or services, such as travel, mobile phones, or dining experiences, rather than health insurance, as supported by Vertafore (2017).

The low positive influence of life events suggests that respondents may prefer out-of-pocket expenditure over utilizing health insurance products. Meanwhile, disposable income showed a moderate positive influence, consistent with economic theories of risk and insurance, which posit that greater wealth increases the utility of decision-making under uncertainty.

#### 4. CONCLUSIONS AND RECOMMENDATIONS

Despite less than 10% of Nigeria's population being enrolled in the NHIS Act 1999 health care program, there has been an influx of local and foreign healthcare providers entering the market. However, achieving higher enrollment among informal economy workers remains a significant challenge. This research aimed to identify factors that could encourage this demographic to enroll in the NHIA Act 2022 health scheme. The insights gained fill a gap in knowledge specific to the Nigerian context and provide practical recommendations for industry stakeholders.

The findings indicate that the informal workforce is less receptive to traditional media messaging. Instead, there is a positive relationship between the influence of peers and enrollment, confirming the importance of word-of-mouth and social trust. Therefore, it is recommended that healthcare providers develop strategies to boost positive reviews, referrals, and user experiences, which are likely to be more effective than conventional awareness campaigns.

Given the preference for instant gratification, regulators and providers should consider re-evaluating their processes to be more appealing. For example, reducing claim settlement times—from the current range of three days to a month—by streamlining claims processing, implementing shorter application forms with generalized medical questions, and enabling instant online underwriting based on health habits could significantly enhance perceived benefits. Additionally, improving service speed and patient treatment times should be prioritized.

Offering living benefits within life and health plans is crucial. Traditionally, benefits are provided at policy maturity or upon death; however, informal workers seeking ongoing, tangible benefits need to see continuous value to maintain their interest. If the sector does not adapt, existing health insurance products risk becoming obsolete. Innovations such as hospital reimbursement schemes, co-payments for critical and terminal illnesses, and integrated offerings with banking or vehicle purchase services could provide the desired living benefits, making health insurance more attractive and relevant to informal workers.

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