CO-OPERATIVE INSURANCE IN LAGOS STATE, NIGERIA: CHALLENGES AND ISSUES

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Abstract
Insurance is a mechanism through which members of the society channel their resources into a pool in order to address the impact of perils that could cause devastating losses to them. Insurance per se is a form of cooperative for pooling of funds for the purposes of indemnifying losses. This study aimed at reviewing the operations of the cooperative insurance model by looking at their challenges, and benefits to the public. This study involved the use of primary data collected from respondents who are staff of co-operative insurance societies operating in Nigeria. A total of 150 copies of questionnaires were administered to the respondents from the 3000 cooperative societies in Lagos State, Nigeria. The descriptive survey research design was used in carrying out this study. The Statistical Package for Social Sciences (SPSS) was used in the test of hypotheses using Chi-square as a tool. The findings showed that there have been few studies on cooperative insurance society in Nigeria as compared to what is tenable in countries like Japan or Sri Lanka. However, this study also found that irrespective of the lower capital base of the cooperative insurance society in Nigeria, these societies provide cover for high-risk perils such as in motor insurance and more so as they do not have reinsurance protection for such covers. Cooperative insurance society could be used as a vehicle for increasing insurance penetration in Nigeria, but there is need for a review of the general operational guidelines for them.

Key words: Cooperatives, Insurance, Challenges, Inclusion, Nigeria

Introduction

Insurance is a mechanism through which members of the society channel their resources into a pool to help them mitigate the negative impacts of perils that could cause devastating losses to them. Insurance per se is a form of cooperative for the pooling of funds for the purposes of indemnifying losses. This could be seen from the perspective of insurance offering a form of protection for financial loss in which, in exchange for a fee, a party agrees to compensate another party in the event of a certain loss, damage, or injury already insured. There are many ways through insurance protection could be provided. One of such ways is through what is commonly referred to as the conventional insurance market. In this market, insurance companies are incorporated and licensed by a regulator allow them sell insurance products to the insuring public. A good example in the Nigerian case are companies licensed by the National Insurance Commission in line with the provisions of the Insurance Act 2003 that empowers them to sell both life and non-life insurance products to the insuring public. These companies could be specialist life companies, specialist general companies or composite composites. In most jurisdictions, aside from these sellers of insurance products, there could be alternative methods for the selling of insurance products such as Takaful insurance (Chilekezi, 2023 and Hemrit, 2020), who treated Takaful insurance from the cooperative perspective and Micro insurance perspective (Agboola, 2023). This presupposes that insurance products could be sold from these other marketing models different from conventional insurance models. At this juncture, it is pertinent to observe that the co-operative insurance model is very prominent in countries like Sri Lanka, Japan, and even in Saudi Arabia with the latter by way of Islamic insurance.

In Nigeria, co-operative insurance has been in operation alongside the conventional insurance, but the caveat is that they can only sell insurance products to their members and members of their family. The existence of this model of insurance as a result is not quite known, as most Nigerians are unaware of their existence. Hence, this study aims at examining the cooperative insurance as a means of increasing insurance penetration, and its benefits to the public. The specific objectives of the study is to examine if there is any significant relationship between gender and the growth of cooperative insurance society in Nigeria, and to assess the level of significant differences in the perception of cooperative insurance societies, and the improvement of the performance of insurance acceptance among members of cooperatives, and by extension members of the insuring public.

Literature Review

Ogbuokiri (2021) posited that the genesis of co-operative society in the form of co-operation among human beings dates back to time immemorial which span "creation". This premise is corroborated by Nadeau & Nadeau (2016). For over 160 years, cooperatives have been an effective way for people to exert control over their economic livelihoods and provide a unique tool for achieving one or more economic goals in an increasingly competitive global economy (Dogara, 2005). In other words, there has been some form of co-operation among human beings, which later transformed into a form of business known as cooperative society. Ogbuokiri went further to define a co-operative society as a union made up of a group of people with a common goal to run an enterprise in order to achieve their aim(s) and objectives. A Cooperative Society could then be described as a voluntary association of individuals or legal persons united by a common purpose to pursue their socio-economic goals for mutual benefits. This society has helped members to solve their economic problems.

Cooperatives, according to the United Nations (n.d.) are member-owned businesses. The world body observed that the simplest way to understand them is that they aggregate the market power of people who as individuals could achieve little or nothing, and in so doing they provide ways out of poverty and powerlessness. Dogara (2005) argued that in an era where many people feel powerless to change their lives, cooperatives represent a strong, vibrant, and viable economic alternative. He further argued that cooperatives are formed to meet peoples' mutual needs, which are based on the powerful idea that together, a group of people can achieve goals that none of them could achieve alone. Similarly, the representative body for cooperatives, the International Cooperative Alliance (ICA) defines a cooperative as:

> *An autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations, through a jointly owned and democratically controlled enterprise (International Cooperatives Alliance, 2024).*

Through this definition, the ICA revealed that there are seven cooperative principles, and these are: voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training and information; cooperation among cooperatives; and concern for community. It is pertinent to note that the first four of these form the core principles of cooperatives without which a cooperative would lose its identity. These core principles guarantee the conditions under which members own, control and benefit from the business. On the other hand, the education principle involves a commitment by members to make membership effective. This serves as a precondition for democratic control; while cooperation among cooperatives is really a business strategy without which cooperatives remain economically vulnerable. The last principle, concern for community, is about corporate responsibility, and it leads to other concerns promoted by ICA such as prevention of poverty and protection of the environment (United Nation, n.d.).

A cooperative is a non-profit organization established voluntarily by a group of people who desire to improve their wellbeing, as well as carry out various activities. Anyone who pays a membership fee in accordance with the terms and conditions of each organization can become a member (Japanese Cooperative Insurance Association, 2018). The Japanese Associations revealed that the members of a cooperative are able to take advantage of various services offered by each cooperative and can reflect their own views on the operation. This is shown in their slogan, "One for all and all for one," cooperatives aim to protect and enrich the lives of their members based on the concept of mutual help (Japanese Cooperative Insurance Association, 2018). The services of cooperatives are wide-ranging and related to all aspects of our daily life, including agriculture, forestry, fisheries, purchasing, banking, insurance, job creation, traveling, housing, welfare, and medical care. Cooperatives around the world share the same principles that put these values into practice. Especially, they are internationally expected to serve as veritable platforms for finding solutions to social problems in each country in the areas of unemployment, poverty, and social disparity (Japanese Cooperative Insurance Association, 2018).

It is pertinent to note that worldwide, the cooperative sector has about 800 million members in over 100 countries through the membership organizations of the ICA. Across different countries, the proportion of the cooperative membership to population varies, but can be as high as 1 in two people as in Finland and Singapore, one in three in Canada, New Zealand, Honduras, and Norway, one in four in the USA, Malaysia and Germany. Viewed in terms of households, cooperative membership represents as much as 1 in 2 households in Finland, and 1 in 3 in Japan. In terms of percentage of a country's GDP attributable to cooperatives, the proportion is highest in Kenya at 45 per cent, New Zealand with 22 per cent. Cooperatives account for 80 to 99 per cent of milk production in Norway, New Zealand and USA. They account for 71 per cent of fishery production in Korea, 40 per cent of agriculture in Brazil; 25 per cent of savings in Bolivia; 24 per cent of the health sector in Colombia; 55 per cent of the retail market in Singapore, 36 per cent in Denmark and 14 per cent in Hungary. It is estimated that cooperatives account for more than 100 million jobs around the world (ILO, 2007). On the development of cooperatives in Nigeria, EFInA (2012) posited that co-operatives could be a significant force in empowering rural communities, farmers, women and micro-entrepreneurs throughout Nigeria. It estimated that in 2010, there were 82,460 co-operative groups with over 1.4 million members in 605 local government areas in Nigeria (EFInA, 2012). However, there is little systematic data available on co-operatives.

Benefits of Cooperative Insurance

One of the reasons why SMEs will want this form of insurance is that starting a business comes with risk. From an operations perspective, a cooperative society is not much different from any other types of business, and as an incorporated entity, a cooperative can be more complex depending on its size and mandate. Finding the right cooperative insurance provider and plans to protect the business and its people will help guard against unexpected incidents and give the cooperative society's board and management some peace of mind. In this way, it is pertinent for them to first ascertain the kind of cooperative insurance their business would need. In some cases, a cooperative society might require a specific kind of insurance policy. For instance, a housing cooperative society could want to maintain insurance policies that cover the buildings, machinery, and common areas owned by the cooperative. In this case, the society, if they are small may decide to outsource this or form their own insurance vehicle to cover these risks.

The cooperative insurance is a mutual aid system where the members share their premium to establish mutual assets, and funds are paid out at times of unexpected contingencies, to compensate for the financial deficit and stabilize the lives of the members and their family in preparation for various risks that jeopardize daily living such as the death, hospitalization, house damage or traffic accidents (Japanese Cooperative Insurance Association, 2018). A review of the Association's members shows that they sell all classes of insurance from motor to life insurance policies. Japan is not the only country that allows this. In Sri Lanka the cooperative insurance sell similar products as well. Nevertheless, there are various kinds of cooperative insurers in Japan, which could be summarized in accordance with the country's applicable laws under three categories: "Organizations operating cooperative insurances under cooperative laws", "Organizations providing indemnity services for agricultural products and fisheries or fishing vessel damages as a kind of social security measures under Indemnity Laws", and "Organizations operating Mutual Relief Work under Local Autonomy law. This is not the case with most insurance markets in Africa.

Theoretical Review

The theories relevant to this study are reviewed as they relate to the theoretical framework of the study. In this case, the first theory for review is the Theory of Workers' Cooperatives. Altman (2016) noted the importance of this theory to contemporary economic analysis regarding the activities of cooperative societies and their contributions to the economy. This notwithstanding, cooperatives should been seen as organisations that assist in providing possible solutions to economic dilemmas faced by the economically marginalized members of the society (Altman. 2016). The cooperative is not regarded as a source of economic efficiency and possible contributor to material welfare (Bonin et al., 1993; Dow, 2003; Hill, 2000; Kalmi, 2007). This is a product of the behavioural assumptions embedded in the theory. Although cooperatives are not dominant, their quantitative importance in most countries in both marginal and mainstream sectors, and their profitability and relatively high levels of productivity compared to their privately owned counterparts suggest that cooperative economic organizations must be doing something right to have maintained a significant presence in an increasingly competitive global economy (Altman, 2016). The Theory of Workers' Cooperative helps us to understand why cooperatives are not dominant if they are economically efficient.

In this way, it attempts to address the issues surrounding the economic success of workers' cooperatives in that the conventional theory assumes that no such success is possible given that cooperatives are not obliged to invest profits (focusing on employment and workers' income), and are too egalitarian to generate economically efficient incentives and to engage the services of superior management (Altman, 2016). However, there is need to emphasise that the cooperative advantage in the workers' cooperative lies in its capacity to increase the quantity and quality of effort inputs into the "production process," thereby producing higher levels of output and a superior quality of output (Altman, 2002, 2006; McCain, 2008). This can also be referred to as the x-efficiency effect (Altman, 2001; Leibenstein, 1966) of cooperative organisation. In this form of cooperative society, the worker-owners and owner managers have the incentive to work harder and smarter – a possibility assumed in the traditional modelling of the firm (Altman, 2016). This is notwithstanding the fact that the conventional theory assumes that the manner in which a firm is organized does not impact the extent of x-efficiency. The workers' cooperatives, however, focus on improving benefits and working conditions whilst maintaining and even growing employment that are incentivized to adopt and develop technologies that make them competitive. Workers' cooperatives can, therefore, be more costly to operate than traditional firms, especially low-wage traditional firms, but they can also be much more productive, such that their unit costs and profits can be the same as that of the traditional firm.

This way the cooperative productivity advantage is improved and countervails the increased costs of operating the cooperative. This means that the worker's cooperatives workers would be much better off without their benefits causing their firm to become uncompetitive. Workers' cooperatives can yield competitive outcomes without driving out of the market non-cooperative traditional firms (Altman, 2016). Such workers' cooperative can function and prosper in mainstream economic sectors, even in highly competitive environments. Moreover, when workers are also owners, there is less willingness for workers to quit. Reducing quit rates and thus turnover rates increases labour productivity and reduces production costs by maintaining the most productive workers and reducing average training costs. Overall, workers' cooperatives can generate higher levels of material welfare than the traditional firm.

Contemporary economic theory has played an effective role in cooperative societies (Hill, 2000; Kalmi, 2007). Nevertheless, alternative theoretical lenses provide insight into the cooperative advantage in different economic sectors and why this advantage is not always realized or exploited. In fact, the evidence is overwhelming that cooperatives can be potentially much more economically efficient than their non-cooperative counterparts and can represent important dynamic components of contemporary competitive market economies (Altman, 2006; Bonin et al., 1993; Dow, 2003; Doucouliagos, 1995). This is the basis of the cooperative insurance, which apart from allowing members to pool their resources together for their economic benefits also provides the platform for them to mutually share their risks' exposures. This works better where the cooperative is a workers' cooperative.

The Access Theory developed by Demirguc-Kunt et al (2018) posited that an increase in financial services increases financial inclusion by providing access to financial services for underserved population. This theory made a case for increase in financial activities as a way of bridging the financial access gap in the society. According to Demirguc-Kunt et al (2018), access to financial services is a critical factor in increasing financial inclusion. CGAP (2015) maintained that this theory suggested that increased access to financial services could lead to improvements in the general economy, and thereby lead to poverty reduction in the society.

. The main drawback of this theory is that its position on financial services did not address issues of financial literacy and capability (Kumar et al., 2019). Also, regulatory challenges could arise such as licensing requirements and anti-money laundering regulations, which can hinder the growth of mobile money services (CGAP, 2015). The above weakness notwithstanding, the Access Theory has contributed in a valuable manner in the understanding of the role financial institutions play in increasing financial inclusion in the world. More so, financial services providers have shown that they have the ability to expand access to financial services for underserved populations. This way, the theory will provide the basis for understanding the role cooperative insurance could play in increasing insurance penetration and thereby helping in improving financial inclusion in Nigeria.

Empirical Reviews

In an empirical study titled: Cooperative societies as a distribution channel for insurance services in Kenya, Kuloba, Gicheru & Maiyo (2020) posited that cooperative enterprises the world over have had tremendous social, economic, and environmental impact on their societies. The study noted that in Kenya, cooperatives operate in different sectors like agriculture, finance, housing, insurance, fisheries, transport, and arts and culture. It revealed that the contribution of cooperative societies to the Kenyan GDP is estimated at 45% while they contribute 31% to national savings and deposits. The cooperative movement is therefore a key aggregator and accelerator for growth of the financial services sector in which insurance is a key player (Kuloba, et al 2020).

This study analysed how cooperative societies can be used as distribution channels for insurance services in Kenya. The study used a mixed method approach for collecting data through observations, personal interviews, focus group discussions, and an analysis of documents and case studies for collecting relevant qualitative and quantitative data as per its objectives. The study was carried out in five purposively and conveniently selected counties. The findings showed that awareness and knowledge about insurance in the cooperatives was low. Cooperatives should have a strong capital base, effective governance structures, and competent managerial and technical staff, who are up to date with ICT, and close to their members. Cooperatives in Kenya have strong regulatory frameworks that can conveniently accommodate the insurance distribution business. The study recommended that the insurance sector should actively engage with the cooperatives in the distribution of insurance services.

In February 2012, EFInA (2012) carried out an empirical study on the development of co-operative societies in Nigeria by commissioning Ipsos (a Global Market and Opinion Specialist) to undertake qualitative and quantitative research on cooperatives in 3 states in Nigeria. The primary objective of the research was to provide comprehensive analysis on cooperatives in Enugu, Kebbi and Oyo States, (because there is active cooperative activity due to the large number of traders and farmers in these states), in order to better understand co-operative sizes; operations; sources of funding; governance; internal capacity; members' needs'; growth prospects; and existing challenges. The research provided evidence-based information that enabled policy makers and financial service providers to develop a strategy to unlock the potential for using co-operatives as distribution channels to promote financial inclusion in Nigeria. This research was conducted using qualitative methodology in order to provide a structure for the quantitative phase. It consisted of 2 different interviewing approaches – In-depth Interviews (IDI's) and Focus Group Discussions (FGD's): FGDs were conducted in April amongst members of primary cooperatives to provide some understanding of the way cooperatives operate and IDIs were conducted in March amongst co-ordinating agencies, more specifically key apex organizations and cooperative service agencies to better understand the issues the sector faces. Although co-operative operations in Nigeria exist, the growth potential of the sector is not entirely clear. The limited development of the sector can be attributed to inadequate staffing of the coordinating agencies, funding, low public awareness and inconsistent government policies. Many cooperatives fail due to a range of reasons such as a lack of managerial skills within the cooperatives or group dynamics that favour certain individuals or outright fraud. Agricultural cooperatives seem to receive quite a bit of attention. It may be worth evaluating the impact of the initiatives that have been undertaken by both local and international organizations. Cooperative regulatory bodies are under-resourced and their activities are tightly bound to the budgets allocated by the Federal Ministry of Agriculture and Rural Development, with no clear disbursement timetable.

Nonetheless, given the estimated size and outreach of cooperatives, they could potentially be used as a vehicle for distributing formal financial products, especially in rural areas.

Chilokwu, Akubilo & Agbasi (2018) investigated the effect of cooperative farmers' insurance premium on the growth of agricultural gross domestic product in Nigeria with the objective of the study being to ascertain the effect of cooperative farmers' insurance premium on the economic growth of agricultural sector. The study used secondary data and adopted ex-post facto research in which the secondary data obtained from the Nigeria Agricultural Insurance Corporation, Headquarters, Abuja and Statistical bulletins of Central Bank of Nigeria, from 1989 to 2015 were used for analysis. Data for the study were analysed using descriptive statistics, graphs, ordinary least square, panel unit root analysis, pairwise granger causality test and co-integration.

The result from the analysis showed that total cooperative farmers' insurance premium had positive insignificant effect on the growth of agricultural gross domestic product in Nigeria, with co-efficient value of 0.028603, t-value of 0.140011 and p-value of 0.8898. The study concluded that in order to record positive significant effect on Nigeria's agricultural gross domestic product consistently over a long period of time, sufficient funds as agricultural loans should be delivered to cooperative farmers to make agricultural produce and products available, accessible and affordable especially at this period of economic recession and also an increase in the coverage of insurance to Nigeria's cooperative farmers in order to attract more premiums to government by bringing into the insurance sector larger number of cooperative farmers through credit delivery to service their agricultural businesses. The study advised government to offer agricultural insurance to cooperative farmers at a reduced and subsidized rate of 25%, instead of the 50% premium they are currently paying (Chilokwu et al 2018). This means that apart from selling insurance, cooperatives could also serve as a distribution channel for requisite insurance products in the country.

Methodology

This study involved the use of primary data collected from the respondents who are staff of cooperative insurance societies operating in Nigeria. The questionnaire is divided into two sections consisting of the bio-data of the respondents and questions relating to the research questions, which are stated in chapter one of this study. A total of 150 copies of questionnaires would be administered to the respondents from the over 3000 cooperative societies in Lagos State (Salau, 2023). Descriptive survey research design was used in carrying out this study. Descriptive research operation focuses on the explanation of the characteristics of individuals or groups (Loeb, Morris, Dynarki, Reardon, McFarland & Reber, 2017). Due to the consideration of the objectives of the study and the nature of data needed to achieve the objectives, survey method is considered appropriate to generate the required primary data. The study is cross-sectional in nature since findings and conclusions would be based on primary data obtained from members of cooperative insurance societies in Nigeria. This method is less cumbersome than in longitudinal survey design and several scholars have found it appropriate for studies of similar nature (Harris, Gibson, & McDowell, 2014). There is no available data on the number of cooperative insurance societies in Nigeria hence the convenient sampling method was used for the study as respondents were randomly selected from these cooperatives across Nigeria. On the validity of the research instrument, this was shared among some colleagues who are experts in insurance, and they made some inputs from the improvement of the instrument before it was finally accepted.

The method chosen is justified as it helps the researcher to collect relevant data directly from the respondents. The convenience sampling is an easy means of collecting data as it allows the researcher easily select his respondents. This is more convenient for a study with low population such as this study, and also where the researcher does not have the benefit of time for the study. This is the main reason why the convenience sampling method was adopted for the study.

Method of Data Analysis

The collected data were presented in tabular form. The Statistical Package for Social Sciences (SPSS) was used in the test of the hypotheses. According to Chandler (2012), SPSS is a comprehensive system for analysing data, which takes data from almost any type of file and uses them to generate tabulated reports, chats and plots of distributions and trends, descriptive statistics, and complex statistical analysis. Copies of the questionnaire were self-administered to the respondents at their various natural settings. The justification for adopting SPSS as our method of data analysis is that this method is more amenable to quantitative data and since the data collected was based on questionnaires, SPSS is more suited for analysing such types of data.

Hypothetical Tests

We considered two appropriate hypothetical tests from the questionnaire responses:

1. Chi-Square Test of Independence:

Reason for using Chi-Square Test is because of its suitability for testing the association between two categorical variables.

Hypothesis

Question Variables:

i. Gender (Question 1)

ii. Opinion on high turnover (Question 8)

The detail of the steps used for performing the analysis.

H_0: There is no significant association between gender and the opinion on whether the cooperative insurance society in Nigeria experiences high growth.

H_1: There is a significant association between gender and the opinion on whether the cooperative insurance society in Nigeria experiences high growth.

SPSS Steps

a. Entered the data.

b. Define the variables: Gender (categorical), High Growth (categorical).

c. Use `Analyze > Descriptive Statistics > Crosstabs`.

d. Select Gender for rows and High growth for columns.

e. Click on `Statistics` and choose `Chi-square`.

f. Click `OK` to run the test.

Independent Samples t-Test

The Independent Samples t-Test is suitable for comparing the means of a continuous variable between two independent groups.

Hypothesis

Question Variables:

a. Management level (Question 5)

b. Perception of improvement in performance (Question 12)

The detail of the steps used for performing the analysis.

H_0: There is no significant difference in the perception of cooperative insurance society and impact on performance on the members of cooperative societies.

H_1: There is a significant difference in the perception of cooperative insurance society's impact on performance on members of cooperatives.

SPSS Steps

a. Define the variables: Management Level (categorical), Perception of Improvement (continuous).

b. Use `Analyze > Compare Means > Independent-Samples T Test`.

c. Define Impact on members of cooperatives as the grouping variable and cooperative insurance society as the test variable.

d. Click `Define Cooperative insurance societies`.

e. Click `OK` to run the test.

Interpretation of Results

Chi-Square Test: If the p-value is less than 0.05, reject the null hypothesis, indicating a significant association between gender and opinion on high growth.

Independent Samples t-Test: If the p-value is less than 0.05, reject the null hypothesis, indicating a significant difference in the impact on cooperative members.

The Chi-Square Test and Independent Samples t-Test based on the outcome of the responses provided.

Chi-Square Test of Independence

Hypothesis

H_0: There is no significant association between gender and the opinion on whether the cooperative insurance society in Nigeria experiences high growth.

H_1: There is a significant association between gender and the opinion on whether the cooperative insurance society in Nigeria experiences high growth.

Data Preparation

From the available data

Gender:

i. Male: 88 respondents

ii. Female: 59 respondents

High Growth Opinion:

i. Yes: 115 respondents

ii. No: 32 respondents

The cross-tabulated counts:

a. Male - Yes: 70

b. Male - No: 18

c. Female - Yes: 45

d. Female - No: 14

SPSS Steps

1. *Data entered:*

Variables:

- Gender (1=Male, 2=Female)
- High Turnover (1=Yes, 2=No)

2. *Input Data:*

- For each respondent, input their gender and their response to the high growth question.

3. *Perform Chi-Square Test:*

SPSS Menu

a. `Analyze > Descriptive Statistics > Crosstabs`

b. Select Gender for rows and High Growth for columns

c. Click on `Statistics` and select `Chi-square`

d. Click `OK` to run the test

Independent Samples t-Test

Hypothesis

H_0: There is no significant difference in the perception of cooperative insurance society's impact on performance of cooperative members.

H_1: There is a significant difference in the perception of cooperative insurance society's impact on performance of cooperative members.

Data Preparation

From the available data:

3. Perform Independent Samples t-Test:

SPSS Menu

a. `Analyze > Compare Means > Independent-Samples T Test`

b. Define Management Level as the grouping variable and Perception Score as the test variable

c. Click `Define Groups` and specify the groups

d. Click `OK` to run the test

Interpretation of Results

Chi-Square Value: Indicates the test statistic.

Degrees of Freedom (df): Calculated based on the number of categories.

P-Value: If $p < 0.05$, reject the null hypothesis, indicating a significant association between gender and the opinion on high growth.

t-Value: Indicates the test statistic.

Degrees of Freedom (df): Calculated based on the sample sizes.

P-Value: If $p < 0.05$, reject the null hypothesis, indicating a significant difference in perceptions based on cooperative insurance society.

Results of the Chi-Square Test and Independent Samples t-Test based on the available responses.

Chi-Square Test of Independence

Hypothesis

H_0: There is no significant association between gender and the opinion on whether the cooperative insurance societies in Nigeria experiences high growth.

H_1: There is a significant association between gender and the opinion on whether the cooperative insurance societies in Nigeria experiences high growth.

Table 1 Observed Frequencies

	High Turnover (Yes)	**High Turnover (No)**	**Total**
Male	70	18	88
Female	45	14	59
Total	115	32	147

Expected Frequencies Calculation:

\[E_{ij} = \frac {(Row \ Total \times Column\Total)}{Grand\Total}\]

For Male - Yes:

\ [E_ {11} = \frac{88 \times 115}{147} \approx. 68.8 \]

For Male - No:

\ [E_ {12} = \frac{88 \times 32}{147} \approx. 19.2 \]

For Female - Yes:

\[E_{21} = \frac{59 \times 115}{147} \approx. 46.2 \]

For Female - No:

\[E_{22} = \frac{59 \times 32}{147} \approx. 12.8 \]

Table 2 Expected Frequencies

	High Turnover (Yes)	High Turnover (No)
Male	68.8	19.2
Female	46.2	12.8

Chi-Square Statistic Calculation:

χ2=∑Eij(Oij−Eij)^2

χ2=∑{(70 - 68.8)^2}{68.8} + \frac{(18 - 19.2)^2}{19.2} + \frac{(45 - 46.2)^2}{46.2} + \frac{(14 - 12.8)^2}{12.8} \]

χ2=\frac{1.44}{68.8} + \frac{1.44}{19.2} + \frac{1.44}{46.2} + \frac{1.44}{12.8} \]

χ2 = 0.0209 + 0.075 + 0.031 + 0.1125 \]

[χ2 = 0.2394 \]

Degrees of Freedom (df) = (Rows - 1) * (Columns - 1) = 1

P-Value (from Chi-Square Distribution Table for df = 1):

\[P(\chi^2 > 0.2394) > 0.05 \]

Since the p-value is greater than 0.05, we fail to reject the null hypothesis.

Independent Samples t-Test

Hypothesis

H_0: There is no significant difference in the perception of cooperative insurance societies' impact on performance on the members of cooperatives.

H_1: There is a significant difference in the perception of cooperative insurance societies' impact on performance based on the members of cooperatives.

Summary Statistics:

Lower Level:

- Mean: 3.75

- Standard Deviation: 1.03

- N: 40

Middle Level:

- Mean: 4.25

- Standard Deviation: 0.89

- N: 80

Independent Samples t-Test Calculation:

$$ t = \frac{M_1 - M_2}{\sqrt{\frac{SD_1^2}{N_1} + \frac{SD_2^2}{N_2}}} $$

$$ t = \frac{3.75 - 4.25}{\sqrt{\frac{1.03^2}{40} + \frac{0.89^2}{80}}} $$

$$ t = \frac{-0.5}{\sqrt{\frac{1.0609}{40} + \frac{0.7921}{80}}} $$

$$ t = \frac{-0.5}{\sqrt{0.0265 + 0.0099}} $$

$$ t = \frac{-0.5}{\sqrt{0.0364}} $$

\[t = \frac{-0.5}{0.1908} \]

\[t value is approx. -2.62 \]

Degrees of Freedom (df) ≈ 118 (using Satterthwaite's approximation)

P-Value (from t-distribution table):

$P(t < -2.62) < 0.05$

Since the p-value is less than 0.05, we reject the null hypothesis.

Table 3 Results Table

Test	**Test Statistic**	**Degrees of Freedom**	**P-value**	**Conclusion**
Chi-Square	0.2394	1	>0.05	Fail to reject the null hypothesis
Independent Sample t-Test	-2.62	118	<0.05	Reject the null hypothesis

Summary of Interpretation

Chi-Square Test: There is no significant association between gender and the opinion on whether cooperative insurance societies in Nigeria experience high growth.

Independent Samples t-Test: There is a significant difference in the perception of cooperative insurance societies' impact on performance based on members of cooperative societies.

Conclusion

The state of cooperative insurance society in Nigeria is still low compared to what is obtainable in countries like Japan or Sri Lanka and a host of others. However, this study found that irrespective of the lower capital base of the cooperative insurance society they still provide cover for high risk perils such as in motor insurance; and more so, they do not have reinsurance protection for such covers. The study found that even some members of the cooperative societies do not buy cover from them hence their insurance profile in terms of provision of covers to perils is low. In this regard, the National Insurance Commission should work with the Director of Cooperatives to regulate the practice of cooperative insurance in Nigeria. It is important to note that the enabling law on cooperatives in Nigeria, the Nigerian Cooperative Society Act 2004 did not restrict the members of such cooperatives from providing insurance protection for their members as it is silent on the nature of businesses that could be carried out by them unlike in Japan where the law specifies requirements for cooperative insurance – although such Japanese companies are run as mutual insurance companies. This notwithstanding, there are potential for the growing of cooperative insurance in Nigeria so they could complement the activities of the micro-insurance companies in providing insurance covers to low income earners in our society.

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