ROAD TRANSPORT RISKS' IMPACT ON THE PAYMENT OF CLAIMS IN THE NIGERIAN INSURANCE SECTOR

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ABSTRACT

The impact of road transport risks on claims handling in Nigeria's insurance sector is investigated in this study. Vehicle collisions happen as a result of various driving behaviours and other variables, which is why motor vehicle insurance is necessary to cover losses, damages, or injuries. The primary cause of death in Nigeria is the occurrence of dangers associated with motor mobility. The Central Bank of Nigeria (CBN) Statistical Bulletins, Nigeria Insurance Association (NIA), and National Insurance commission (NAICOM) Annual Reports from 1981 to 2024 provided secondary data for the study ex post facto design. Descriptive statistics, correlation, and autocorrelation tests are among the econometric analyses carried out in this study; the research hypotheses were tested using the p-values from the multiple regression results. It was discovered that the premium costs associated with paying for road transport risks were negligible, and only claims payments for road transport risks (motor vehicle and general accident) protections have considerable combined influences on total claims payment in the Nigerian insurance business. The government should enforce the purchase of vehicle insurance policies more strictly as doing so will increase the cost of premiums for covering road transport risks and compensate victims of such incidents.

Keywords: *Road-transport risk, Insurance, Payment of Claims. Nigeria*

1.0 INTRODUCTION

1.1 Study Background

The distribution of goods both inside and outside of a nation's borders depends heavily on transportation. Economic, social, industrial, and agricultural progress, as well as mass production and price stability, are all aided by transportation. In addition to enabling traders to control the supply of commodities at multiple places in response to shifting demand, transportation provides a means of ensuring stable prices in numerous markets. Even while transportation is crucial, there are risks involved. The possible risks and uncertainties involved in transporting persons or products from one place to another are referred to as transportation risk. Since the transportation of commodities is an essential part of the entire process, this risk is especially important in supply chain and logistics activities. A motor vehicle, sometimes referred to as a motorised vehicle, automotive vehicle, or road vehicle, is a self-propelled land vehicle with wheels that is used to move people or goods and does not run on tracks like trains or trams. In order to move people and goods from one place to another, motor vehicles are essential. When a car collides with another car, a pedestrian, an animal, or a stationary object, it is referred to as a motor vehicle accident. When a car collides with another car, a pedestrian, an animal, road debris, or another moving or stationary barrier like a tree, pole, or building, it's referred to as a traffic collision, motor vehicle collision, or automobile crash.

Risks associated with motor vehicles include being struck by moving cars, falling from them, getting hurt by objects falling from them, getting hurt when a car overturns, getting hurt when doing maintenance, and more. Every transportation risk that arises when operating a motor vehicle has an expense that must be covered by the vehicle's owner, passengers, or a third party. Motor insurance, which is intended to cover the insured against loss or damage to his vehicle, damage to third-party property, including bodily harm, and accident-related death to third parties, becomes essential. By paying for replacement or repair costs in the event of theft, vandalism, or natural disasters like storms or floods, motor insurance helps reduce the risk associated with mobility. If the car is stolen or destroyed, you run the danger of losing a significant sum of money if you don't have insurance. The risk of transportation comes with a price. The cost incurred when transportation risk materialises is how transportation risk is quantified. In this case, the exchange of certainty (premium cost) for uncertainty (occurrence of transportation risks) is represented by the premium paid to the insurance company for the protection of transportation risks. The sum of money that a car owner or passengers must pay for an insurance policy to protect themselves from transportation risks is known as an insurance premium. In general, a premium is a cost that exceeds some fundamental or inherent worth.

In a similar vein, it is the cost of protection against a loss, risk, or injury (e.g., insurance or options contracts). The insurance company pays claims when covered transportation hazards materialise. As a result, efficient claims processing aids in compensating the victims of transportation-related incidents. In the insurance business, the claim management procedure is crucial to guaranteeing that policyholders get the money they are entitled to in the event of a loss or damage. There are a number of steps in this procedure that must be meticulously followed. Negotiations between the policyholder and the insurer may be necessary, and it might be complicated. The insurer may occasionally contest the claim or provide a sum that is less than what the policyholder is requesting. In certain situations, the policyholder might have to get legal counsel or participate in mediation to settle the conflict. The impact of transportation risks (motor

vehicles) on claims handling in the Nigerian insurance sector is investigated in this study. Nigeria has a 204,200 km road network with an estimated 12.5 million registered automobiles (the function of FRSC, Oyeyemi, 2019). There are numerous factors that contribute to the dangers of utilising motor vehicles for transportation. The elements that determine the risks associated with motor vehicle transportation are these drivers. In Nigeria, the most common cause of death is transportation-related hazards. This reduces the country's labour force and has a detrimental economic impact.

Although it makes sense that roadways devoid of moving cars would ensure safety, human movement needs—particularly during these developing stages—make motor vehicle use unavoidable. Given the aforementioned, it became necessary for this study to address the persistent problems of transportation risks related to motor vehicles and claims handling in Nigeria's insurance industry. The particular objectives are to: Examine the combined impact on total claims payment in the Nigerian insurance sector of premium costs for road transport risks (motor vehicle and general accident) coverage. Analyse the combined impact on overall claims payments in the Nigerian insurance sector of road transport risks (motor vehicle and general accident) coverage. Examine the combined effects on total claims payment in the Nigerian insurance sector of premium costs for road transport risks (motor vehicle and general accident) protections and claims payments for road transport risks (motor vehicle and general accident) protections.

2.0 REVIEW OF RELATED WORK

2.1 An Overview of Nigerian Insurance Industry Claims Management

In order to maintain client satisfaction, trust, and repeat business, Nigerian insurance businesses struggle to manage claims (Ajemunigbohun, Olowokudejo, & Ukpong 2022). The Nigerian insurance sector has seen an increase in policyholder claims, according to a recent analysis by Ebong (2023). By the end of June 2017, claims expenses had surpassed N40 billion, up 17.3% from N34.1 billion the year before, according to financial disclosures of 22 major insurance companies (Vanguard, 2020). This growth is concerning since it contrasts with the 8.76% increase in premium income over the same period (Remigius, Okeke, & Gbenga, 2025). Many insurance businesses in Nigeria struggle to satisfy claims since old claims keep coming up, making the sector demanding and performance-driven (Fadun & Silwimba, 2023). In anticipation of a business recovery, the Managing Director/Chief Executive Officer of Starco Insurance, one of Nigeria's top insurance businesses, recognised the company's dedication to rapidly resolving outstanding claims and responsibilities (Popoola, 2022). In response to policyholders' dissatisfaction with unpaid claims, Nwoji (2023) notes that some customers are personally holding insurance brokers accountable for selling policies without guaranteeing the reimbursement of claims, which has led to a decline in market share for insurance companies (Nwoji, 2023; Ugwuanyim, Onwuegbuchunam, Bartholomew, Anikpe, 2021).

According to Vanguard magazine, Standard Alliance has started a recapitalisation process to settle all outstanding claims once new investors join the market (Iwunze, 2022). Concerns about the delayed payout of claims by insurance companies such as Niger Insurance, Standard Alliance, and IGI Insurance continue despite structural and regulatory improvements. Alika and other clients are waiting for their legitimate claims, which raises concerns regarding NAICOM's assistance to policyholders. Even with unpaid payments to policyholders, NAICOM has enabled financially troubled insurance businesses to carry on with business as usual and offer new policies. According to Vanguard study (2022), Niger Insurance's total assets decreased somewhat from N22.7 billion in 2019 to N22.1 billion as of the end of 2020, having an excess of N2.2 billion in assets over liabilities. In a similar vein, Standard Alliance's total assets dropped from N13.5 billion in 2019 to N11.3 billion by the end of 2020, resulting in a surplus of N3.9 billion in assets over liabilities.

Additionally, Standard Alliance's total liabilities dropped from N8.1 billion in 2019 to N7.4 billion in 2020. This investigation shows how Nigerian insurers have performed differently, with some reporting profits and others suffering losses. Furthermore, the industry's return to shareholders is erratic and prone to change over time.

Numerous scholars, including Oytunji, Adepoju, and Oladokun (2021) and Olarinre, O. T., Sunday, S. O., and Gabriel, E. D. (2020), have examined the impact of claims management on the profitability of Nigerian insurance companies; the impact of underwriting and claims management on the performance of East African property and casualty insurance companies; and the efficacy, efficiency, and promptness of the claims handling process in the Nigerian insurance industry. There is widespread agreement among insurance industry professionals in West African countries that the current insurance sector does not have a positive public perception when compared to other developing and developed economies worldwide.

2.2 Motor Vehicle Insurance Claim Payment Options

Insurance claims can be settled in four different methods (Bassey, Ankoh, & Ekanem, 2024). First, the most popular method of resolving issues is cash settlement. In actuality, this is the only practical way to handle a responsibility claim if the policyholder gets compensated for expenses incurred by third parties. Sometimes an insurer considers it more convenient to replace an item rather than pay cash, which is why the replacement approach is utilised. Additionally, the insurer may decide to fix the insured item. For example, with automotive insurance, the insurer may decide to fix the car that was involved in the collision. Reinstatement primarily applies to fire insurance. In this instance, the insurer attempts to reconstruct or restore the property to its original state. According to Bassey *et al*. (2024), "the insured is entitled to receive payment when all activities associated with adjustment of the loss are completed and the amount of loss is determined and agreed upon." In order to resolve claims, insurers can use at least four different payment mechanisms. Cash payments, repairs, replacements, and reinstatements are their names. Ex gratia happens "when a client incurs a liability or experiences a loss for which the insurer is not liable under the policy." The insurer may consider this client to be a valued client and may wish to sympathise with him during his difficult time. The practice of insurance permits the insured to receive money "out of grace" (ex gratia) in certain circumstances. Thus, even though there is no legal

duty, the insurance paid this claim out of favour (Van Boom, 2023).

2.3 Road Transport Risks' Impact on Claims Payment

Insurance firms' ability to settle disputes is crucial to maintaining policyholder and customer loyalty. The payment of claims for policyholders is one of insurance's many essential functions (Matemera, 2024). This takes the form of monetary compensation that is given to the policyholder either as a result of the dangers covered by the policy or after the policyholder has experienced a loss as a result of traffic accidents. Effective handling of claim settlement is essential since it greatly influences how the insurance business is perceived. Since the first traffic accidents were documented in Lagos in 1906, road traffic accidents have had a detrimental effect on Nigeria's population and economy (Nwosu, 2024). Numerous other traffic accidents have occurred since the original one, resulting in numerous fatalities, disabilities, and property destruction. Between 2010 and 2015, there were 50,061 traffic accidents in Nigeria, resulting in 30,677 fatalities and over 158,909 injuries (FRSC, 2015). Road users or youngsters may perish in deadly accidents. Since nobody can predict when an accident will occur, insurance is required to cover the losses resulting from accidents.

2.4 The Perception of the Insurance Sector and Payment of Claims

Insurance company owners are sometimes perceived as con artists and extortionists who take advantage of people in need without providing much in return other than sporadic claims, which they are obligated to pay either out of fear of being exposed in court or discredited, losing their clients to another syndicate (Alhunieti & Al-Khasawneh, 2025). According to Bassey et al. (2024), "unwholesome public perception is bogging down the insurance industry in Nigeria and of course in the West African sub-region." The public's false perception of the insurance subsector is known to the insurance business. The insurance industry is seen as being quick to collect premiums, sluggish to pay claims, confusing you with small print, offering subpar services, and participating in dishonest business tactics.

2.5 Nigeria's Road Accident and Insurance Claims Trend

Nigeria's road traffic accident statistics show a severe and expanding issue, with injury numbers and absolute death rates rising quickly. Accident frequency and associated fatalities are correlated with either the number of vehicles or the population in most emerging nations. Ironically, research in Nigeria has shown that improved infrastructure, such as high-quality, standardised highways, has been linked to a rise in accidents (World Health Organisation, 2023). This is in contrast to the patterns in nations where both the amount of motor traffic and the sophistication of the road network are (Dangisso, 2023). Traffic accidents affect people physically, socially, emotionally, and financially. In 2003, it was projected that road traffic accidents cost the world's economy $518 billion annually, of which $100 billion came from impoverished developing nations (WHO, 2019). Every year, traffic accidents cost Nigeria roughly 80 billion naira. According to Oladeji, Ezeme, Baiyewu, Okunola, and Ogunlade (2024), 29.1% of individuals engaged in traffic accidents in Nigeria are disabled, and 13.5% are unable to resume their jobs. Insurance firms' ability to settle disputes is crucial to maintaining policyholders' and customers' loyalty.

Since the first traffic accidents were reported in Lagos in 1906, road traffic accidents have had a detrimental effect on Nigeria's population and economy (Oladeji et al., 2024). Numerous other traffic accidents have occurred since the original one, resulting in numerous fatalities, disabilities, and property destruction. Between 2010 and 2015, there were 50,061 traffic accidents in Nigeria, resulting in 30,677 fatalities and over 158,909 injuries (FRSC, 2015). Road users or youngsters may perish in deadly accidents. Since nobody can predict when an accident will occur, insurance is required to cover the losses resulting from accidents. The public and policyholders have been dissatisfied with insurance firms' handling of claim settlement over the years, and governments have taken notice (Bassey et al., 2024).

Research Conjectures: The following theories are expressed in different ways.

H_{A1}: The overall amount of claims paid in the Nigerian insurance sector is significantly impacted by the premium costs of covering road transport risks (motor vehicle and general accident) policies. H_{A2}: In the Nigerian insurance sector, claims payments for road transport risks (motor vehicle and general accident) can have a substantial combined impact on overall claims payments.

H_{A3}: The overall amount of claims paid in the Nigerian insurance sector is significantly influenced by both premium costs for road transport risks (motor vehicle and general accident) protections and claims payments for transportation risks (motor vehicle and general accident) protections.

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3.0 METHODS

For this study, an ex post facto research design will be used. The usage of secondary data, which is already available, justifies the design choice. As a result, this design supports the utilisation of secondary data to accomplish the study's goals. Geographically, the study is conducted in Nigeria, with a focus on the insurance sector. The CBN Statistical Bulletin in Nigeria is one of the secondary sources of the data used. The use of secondary data is justified by the fact that it is readily available, completely suitable, and sufficient to make inferences, provide a solution to the question, and resolve the issue. The Archival Retrieval Technique (ART) is used in this work. This method was used to extract data from Nigeria's CBN Statistical Bulletin.

3.1 Study Variables

The dependent and independent variables are the two categories of variables used in this study. Table 3.1 below lists the variables used to collect the data, their measurement, the notations used in this investigation, and the a priori expectations:

Table 3.1: Variable Measurement and Econometric Notations

Variable	Notation	Measurement	Predicted signs
Dependent: Total claims payment in Nigerian insurance industry	TCPIN	Naira value of total claims payment in Nigerian insurance industry	

Independent:			
Premium costs of motor vehicle insurance	PCMVIN	Naira value of total premium costs of motor vehicle insurance	+/-
	PCGAIN		+/-
Premium costs of general accident insurance	CPMVIN	Naira value of total premium costs of general accident insurance	+/-
	CCGAIN		+/-
Claims payments of motor vehicle insurance		Naira value of total claims payments of motor vehicle insurance	
Claims payments of general accident insurance		Naira value of total claims payments of general accident insurance	

Descriptive statistics, correlations, multiple linear regression analysis, and inferential statistics methods are used to analyse the gathered data. In order to identify the most important and influential explanatory variables of road transport risks on claims payment in the Nigerian insurance sector, Ordinary Least Squares (OLS) is used. To demonstrate that the estimation method (OLS) has a number of desirable characteristics and to enable the validity of hypothesis tests concerning the coefficient estimations, several fundamental presumptions must be met. The estimators found using OLS will have several desired characteristics known as Best Linear Unbiased Estimators if these Classical Linear Regression Model assumptions are true. When the presumptions are met, all of the data from the patterns has been utilised. In order to verify that the assumptions of the classical linear regression model are satisfied, the following diagnostic and statistical tests are carried out for this investigation.

3.2 Model Details

The parameters of the model created in this study were estimated using the multiple regression technique. The regression model was subjected to multiple regression analysis in order to quantify, interpret, and forecast the correlation between the variables. The following lists the various linear regression models:

$Y_{i,\ t} = \beta_0 + \beta_1 X_{i,\ t} + \beta_2 X_{i,\ t} + \ldots \beta_n X_{ni,\ t} + \mu_{i,t}$ Equation 1

Where β_1, β_2…. β_n are parameters or the coefficients of the independent variables, and μ_t represents the stochastic error term or random variable. The model above indicates that "Y" is a linear function of $X_{1,1}$, $X_{1,2}$ … $Xi,_n$. Hence, β_0 is the regression constant or intercept, while X_1, X_2, …, X_n are independent variables.

The functional equations for testing the research hypotheses are presented in a multiple regression model below:

TCPIN = f (PCMVIN, PCGAIN) Equation 2

TCPIN = f (CPMVIN, CCGAIN) Equation 3

TCPIN = f (PCMVIN, PCGAIN, CPMVIN, CCGAIN) Equation 4

The equations are linearized in a multiple linear regression model as:

$TCPIN_{it} = \beta_0 + \beta_1 PCMVIN_{it} + \beta_2 PCGAIN_{it} + \varepsilon_{it}$ Equation 5

$TCPIN_{it} = \beta_0 + \beta_1 CPMVIN_{it} + \beta_2 CCGAIN_{it} + \varepsilon_{it}$ Equation 6

$TCPIN_{it} = \beta_0 + \beta_1 PCMVIN_{it} + \beta_2 PCGAIN_{it} + \beta_3 CPMVIN_{it} + \beta_4 CCGAIN_{it} + \varepsilon_{it}$ Equation 7

Where:

TCPIN = total claims payment in the Nigerian insurance industry.

PCMVIN = premium costs of paying for road transportation risks (motor vehicle insurance)

PCGAIN = premium costs of paying for road transportation risks (general accident insurance)

CPMVIN = claims payments for road transportation risks (motor vehicle insurance)

CCGAIN = claims payments for road transportation risks (general accident insurance)

ε_{it} = Stochastic error term;

β_0 = regression constant or intercept;

$\beta_1 - \beta_4$ are the parameters or variables' coefficients.

3.3 Methods of Estimation and Rationale

The statistical dependability of the estimated result is assessed using the R-squared (R^2) and F-value statistics. The regression equations' explanatory power is evaluated using the R^2. It evaluates how well the regression line fits the data. The relevance of the entire model is tested using the F-statistic. At a specified level of significance, it entails comparing the computed F value (Fc) with the table value (Ft). The value of R^2 appropriately reflects the fluctuations in the dependent variable and demonstrates the predictive potential of the model if Fc > Ft, that is, the computed F value is greater than the table value. When Fc is less than Ft, the regression's overall significance is poor, indicating a weak model.

The least squares regression procedures are the econometric methods used in this investigation. The following explanations serve as the foundation for its use: The temporal feature of the obtained data allows for long-term research (time series). Regression analysis of time series data yields better results because it reduces degrees of freedom, increases sample size, avoids multicollinearity, aggregation bias, and endogeneity issues, and helps capture the individual cross-sectional (or firm-specific) effects that the different pools may exhibit with respect to the dependent variable in the model.

Both the individual statistical significance test (T-test) and the overall statistical significance test (F-test) were employed to assess the regression results. Crucially, the coefficient of determination (R-square) is used to determine the model's goodness of fit. Every analysis was carried out at the significance level of 5per cent. Using a 5 per cent (0.05) level of significance, H_0 is rejected if the computed statistical probability is less than the p-value of 0.05.

4.0 PRESENTATION OF DATA, ANALYSIS, AND RESULTS INTERPRETATION

Table 4.1 below displays the secondary data that was gathered for this investigation.

Table 4.1: Study variables in millions of Nigerian Naira from 1981 to 2024

YEAR	TCPIN	PCMVIN	PCGAIN	CPMVIN	CCGAIN
1981	74.21	116.42	27.91	46.95	3.66
1982	79.17	121.4	28.43	44.65	5.48
1983	78.58	115.74	24.93	55.64	5.59
1984	77.7	94.19	28.72	53.71	6.28
1985	64	99.26	29.42	54.15	6.41
1986	86.39	104.72	30.17	54.22	5.88
1987	109.43	126.8	47.81	55.64	8.37
1988	151.14	151.54	58.39	67.83	11.24
1989	278.93	161.9	111.3	73.11	28.82
1990	306.51	343.86	124.17	114.49	30.8
1991	386.87	501.76	176.27	164.84	42.78
1992	613.89	906.28	249.78	267.44	66.77
1993	2,684.11	1,907.97	605.5	607.33	448.73
1994	1,315.29	2,284.88	602.82	605.16	193.83
1995	1,508.88	2,346.81	763.1	563.64	207.14
1996	1,654.07	3,384.71	1,832.62	712.33	276.88
1997	1,677.28	3,771.25	1,286.32	780.89	376.62
1998	1,956.21	3,616.41	1,717.81	832.87	396.75
1999	5,923.18	6,293.13	2,351.91	1,824.67	1,649.04
2000	5,629.52	7,403.98	2,872.57	1,804.24	806.33
2001	6,110.52	10,101.83	3,888.02	2,315.94	957.82
2002	6,856.15	11,715.49	4,918.67	2,818.65	109.29
2003	9,415.20	12,871.62	5,812.68	3,040.17	2,266.79
2004	12,084.04	15,482.44	8,370.93	3,476.24	2,852.92
2005	12,402.40	16,322.63	11,050.14	3,733.39	3,138.16
2006	76,276.11	20,734.98	15,239.75	20,734.98	15,239.75
2007	15,843.73	25,771.39	16,566.74	6,196.12	3,829.06
2008	25,864.87	38,701.20	23,208.40	9,935.50	4,467.50
2009	49,498.93	43,784.17	25,918.89	13,040.29	6,567.45
2010	37,589.56	43,925.65	27,816.16	13,219.03	6,444.45
2011	39,389.16	45,421.77	30,706.67	13,205.62	6,820.64
2012	73,162,280	55,008.41	33,671.84	16,080.83	10,387.18
2013	92,951,094	66,246.36	23,691.75	25,935.58	9,024.90
2014	87,007,805	42,175.69	27,700.15	14,512.03	10,050.14
2015	105,217,232	40,287.30	29,106.58	17,254.58	10,550.36
2016	119,632,518	41,428.05	9,875.53	18,137.15	10,397.97
2017	244,334,343	45,083.60	27,678.31	20,849.42	9,994.79
2018	252,190.20	40,149.33	28,782.71	17,455.64	11,175.70
2019	225,171.30	43,878.79	34,878.19	19,764.95	13,246.25
2020	247,234.90	47,515.23	36,587.63	19,068.71	14,945.24
2021	323,804.70	57,297.24	41,088.72	26,752.70	17,829.65
2022	348,424.58	68,970.43	55,370.66	30,282.33	21,330.84
2023	536,500.11	114,977.32	59,061.87	32,175.98	22,312.35
2024	645,985,.75	126,975.21	64,870.05	33,767.85	24,665.94

Sources: Central Bank of Nigeria (CBN) Statistical Bulletins, NIA, and NAICOM Annual Reports

The data were analysed using descriptive statistics and correlation techniques.

4.1 Descriptive Statistics

Table 4.2: Descriptive Statistics Analysis Result

	TCPIN	PCMVIN	PCGAIN	CPMVIN	CCGAIN
Mean	16837642	20159.10	13211.88	7595.948	4563.408
Median	6110.520	10101.83	4403.345	2315.940	957.8200
Maximum	2.44E+08	68970.43	55370.66	30282.33	21330.84
Minimum	64.00000	94.19000	24.93000	32.10000	3.660000
Std. Dev.	11422746	12085.80	11219.51	3204.390	2849.247
Skewness	3.239406	0.674866	0.820667	0.893477	1.139497
Kurtosis	14.08343	1.989980	2.542296	2.421764	3.257369
Jarque-Bera	295.2979	5.091770	5.081076	6.320219	9.424262
Probability	0.000000	0.078404	0.078824	0.042421	0.008986
Sum	7.24E+08	866841.5	554899.1	326625.8	196226.5
Sum Sq. Dev.	9.45E+16	2.05E+10	9.50E+09	3.56E+09	1.44E+09
Observations	44	44	44	44	44

Source: Researcher's Computation (2025)

The data were clustered below the mean, as indicated by the research variables' standard deviation values being lower than the mean values in Table 4.2 above. Consequently, there is little variation in the factors across years.

4.2 Correlation Test

Table 4.3 Correlations

		TCPIN	PCMVIN	PCGAIN	CPMVIN	CCGAIN
TCPIN	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	44				
PCMVIN	Pearson Correlation	.544**	1			
	Sig. (2-tailed)	.000				
	N	44	44			
PCGAIN	Pearson Correlation	.567*	.965**	1		
	Sig. (2-tailed)	.000	.000			
	N	44	44	44		
CPMVIN	Pearson Correlation	.662**	.947**	.939**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	44	44	44	44	
CCGAIN	Pearson Correlation	.543*	.885**	.936**	.965**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	44	44	44	44	44

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher's Computation (2025).

Perfect is indicated by a correlation coefficient value of 1. Strong correlation coefficient values are between 0.7 and 0.9, moderate correlation coefficient values are between 0.4 and 0.6, and weak correlation coefficient values are between 0.1 and 0.3. At the 5% (0.05) and 1% (0.01) levels of significance, every variable in Table 4.3 has a correlation coefficient of 5.0 or above, suggesting strong positive relationships.

4.3 Analysing Research Theories

The generated p-values from a multiple regression analysis were used to assess the study hypotheses.

4.3.1 Testing of Hypothesis One

H_{O1}: The Nigerian insurance industry's overall claim payment is not significantly impacted by the premium prices of covering road transport risks (motor vehicle and general accident coverage).

. Table 4: OLS Regression Analysis for Hypothesis One

Dependent Variable: TCPIN
Method: Least Squares
Date: 07/06/25 Time: 10:30
Sample (adjusted): 1981 2024
Included observations: 43 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3835929.	9085807.	-0.422189	0.6752
PCMVIN	-2433.728	2112.763	-1.151917	0.2567
PCGAIN	-2734.423	1672.987	-1.634455	0.1102

R-squared	0.246707	Mean dependent var	17238526
Adjusted R-squared	0.208077	S.D. dependent var	47923788
S.E. of regression	42647419	Akaike info criterion	38.04358
Sum squared resid	7.09E+16	Schwarz criterion	38.16770
Log likelihood	-795.9152	Hannan-Quinn criterion.	38.08908
F-statistic	6.386339	Durbin-Watson stat	1.056956
Prob(F-statistic)	0.003988		

Source: Researcher's Computation (2025)

When the computed p-value is less than the 5 per cent (0.05) level of significance, the null hypothesis (H_0) is rejected in the test against the alternative hypothesis (H_{A1}). The null hypothesis that there is no significant joint effect of premium costs of paying for road transport risks (motor vehicle and general accident) protections on total claims payment in the Nigerian insurance industry was accepted based on the empirical results from Table 4, where the computed p-values were greater than the 5 per cent (0.05) level of significance.

4.3.2 Testing the Second Hypothesis

H_{o2}: In the Nigerian insurance sector, claims payments for road transport risks (motor vehicle and general accident) protections do not significantly affect total claims payments**.**

Table 5: OLS Regression Analysis for Hypothesis Two

Dependent Variable: TCPIN

Method: Least Squares

Date: 07/06/25 Time: 10:32

Sample: 1981 2024

Included observations: 43

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2390176.	7683359.	-0.311085	0.7574
CPMVIN	9841.670	2470.187	3.984180	0.0003
CCGAIN	-12168.32	3887.092	-3.130442	0.0033

R-squared	0.368085	Mean dependent var	16837642
Adjusted R-squared	0.336489	S.D. dependent var	47422746
S.E. of regression	38628755	Akaike info criterion	37.84411
Sum squared resid	5.97E+16	Schwarz criterion	37.96698
Log likelihood	-810.6483	Hannan-Quinn criterion.	37.88942
F-statistic	11.64982	Durbin-Watson stat	1.410087
Prob(F-statistic)	0.000103		

Source: Researcher's Computation (2025)

When the computed p-value is less than the 5% (0.05) level of significance, the null hypothesis (H_0) is rejected in the test against the alternative hypothesis (H_{A2}). The alternative hypothesis, which asserts that there is a significant joint effect of claims payments for road transport risks (motor vehicle and general accident) protections on total claims payment in the Nigerian insurance industry, was accepted while the null hypothesis was rejected based on the empirical results from Table 5. The calculated p-values of 0.0003 and 0.0033 for CPMVN and CCGAIN, respectively, are less than the 5per cent (0.05) level of significance.

4.3.3 Testing of Hypothesis Three

H_{o3}: The total amount of claims paid in the Nigerian insurance sector is not significantly impacted by the premium costs of paying for road transport risks (motor vehicle and general accident) protections and claims payments for transportation risks (motor vehicle and general accident) protections**.**

Table 6: OLS Regression Analysis for Hypothesis Three

Dependent Variable: TCPIN
Method: Least Squares
Date: 07/06/25 Time: 10:33
Sample (adjusted): 1981 2024
Included observations: 43 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1391456.	8576550.	0.162240	0.8720
PCMVIN	-2433.728	2112.763	-1.151917	0.2567
PCGAIN	2390.909	2883.353	0.829211	0.4123
CPMVIN	15640.97	5330.719	2.934120	0.0057
CCGAIN	-18654.03	7488.360	-2.491070	0.0173

R-squared	0.391877	Mean dependent var	17238526
Adjusted R-squared	0.326134	S.D. dependent var	47923788
S.E. of regression	39340332	Akaike info criterion	37.92474
Sum squared resid	5.73E+16	Schwarz criterion	38.13161
Log likelihood	-791.4196	Hannan-Quinn criterion.	38.00057
F-statistic	5.960732	Durbin-Watson stat	1.609571
Prob(F-statistic)	0.000832		

Source: Researcher's Computation (2025)

When the computed p-value is less than the 5 per cent (0.05) level of significance, the null hypothesis (H_0) is rejected in the test against the alternative hypothesis (H_{A3}). The computed p-values showed conflicting findings based on the empirical data in Table 6. First, the overall amount of claims paid in the Nigerian insurance market is not significantly impacted by the premium rates of covering road transport hazards (motor vehicle and general accident) policies. Second, in the Nigerian insurance sector, claims payments for transportation risks (motor vehicle and general accident) policies have a substantial combined impact on overall claims payments.

4.4 Analysis of the Results

The analysis's findings were contradictory. A regression coefficient of -2433.728 in the first hypothesis suggests that the premium cost of paying for road transport risk (motor vehicle) protections has a negative impact on the total amount of claims paid in the Nigerian insurance market. However, the coefficient of -2734.423 suggests that the total claims payment in the Nigerian insurance sector is negatively impacted by the premium cost of paying for road transport risk (general accident) policies.

The coefficient of determination (R2) was 0.246, meaning that premium costs for road transport risks (motor vehicle and general accident) protections accounted for approximately 24.6% of variations in total claims payment (TCPIN), with other factors outside the regression model accounting for the remaining 75.4%. According to the p-values of the findings, the total claims payment in the Nigerian insurance sector is not significantly impacted by the premium costs of paying for road transport risks (motor vehicle and general accident) protections. This result is in line with Augustine & Ayoni's (2021) conclusion that Nigeria's insurance gross premium is not significantly impacted by motor vehicle insurance premiums.

Similarly, the gross premium income of insurance companies in Nigeria is not significantly impacted by the insurance premium income from general accidents.

Additionally, a regression coefficient of 9841.670 in the second hypothesis suggests that total claims payments in the Nigerian insurance sector are positively correlated with road transport risk (motor vehicle) protections. However, the correlation of -12168.32 suggests that the Nigerian insurance industry's overall claims payment and road transport risk (general accident) protections have a negative relationship.

The coefficient of determination (R2) was 0.368, indicating that claims payments for road transport risks (motor vehicle and general accident) protections accounted for approximately 36.8% of variations in total claims payment (TCPIN), with other variables outside the regression model accounting for the remaining 63.2%. According to the p-values of the findings, claims payments for road transport risks (motor vehicle and general accident) coverage have a considerable joint effect on the total amount of claims paid in the Nigerian insurance sector. This result supports the findings of Nwite, Okparaka, and Okeke (2020), who found that insurance density in Nigeria was positively and significantly impacted by total insurance claims.

The computed p-values for the third hypothesis showed conflicting findings. First, the overall number of claims paid in the Nigerian insurance market is not significantly impacted by the premium rates of covering road transport hazards (motor vehicle and general accident) policies. Second, in the Nigerian insurance sector, claims payments for road transport risks (motor vehicle and general accident) policies have a substantial combined impact on overall claims payments. This result is in line with that of Ajemunigbohun et al. (2022), who found that settlement of claims encourages policyholders of auto insurance to have positive risk attitudes.

5.0 CONCLUSIONS, RECOMMENDATION, AND SUMMARY

5.1 Synopsis of the results

This study's main goal was to investigate how road transport risks affect the payment of insurance claims in Nigeria. The study's specific goals were to investigate how premium pricing for road transport risks (motor vehicle and general accident) policies affected the overall amount of claims paid in the Nigerian insurance market. Analyse how claims payments for road transport risks (motor vehicle and general accident) protections affect the overall amount of claims paid in the Nigerian insurance market. Additionally, assess the combined effects on total claims payment in the Nigerian insurance market of premium costs for road transport risks (motor vehicle and general accident) protections and claims payments for road transport risks (motor vehicle and general accident) protections.

In this study, three hypotheses were developed and examined. Given the nature of the investigation, the researcher adopted an ex post facto design, utilising secondary data from 1981 to 2023. The multiple regression approach was employed to assess the research hypotheses, and descriptive statistics, correlation, and autocorrelation tests are among the econometric assumptions addressed in this work. The following is a summary of the study's findings:

i) The total amount of claims paid in the Nigerian insurance market is not significantly impacted by the premium rates of covering road transport risks (motor vehicle and general accident) policies.

ii). In the Nigerian insurance sector, claims payments for road transport risks (motor vehicle and general accident) protections have a substantial combined impact on overall claims payments.

iii). While the premium prices of paying for road transport risks were negligible, claims payments for road transport risks (motor vehicle and general accident) protections have a substantial joint influence on total claims payment in the Nigerian insurance business.

5.2 Conclusion

The impact of road transport risks on the settlement of claims in the Nigerian insurance sector was investigated in this study. It was discovered that the Nigerian insurance industry's overall claims payment is significantly influenced only by claims payments for road transport risks (motor vehicle and general accident protections). Road transport risks came at a negligible extra cost. The Nigeria Insurance Act of 2003's Section 68 (1), which mandates third-party motor insurance coverage for all vehicle owners, is one tactic to assure that the general public has a backup plan in case something untoward occurs while transportation. The researcher draws the conclusion that road transport risks significantly impact the payment of claims in the Nigerian insurance sector.

5.3 Suggestions

i. In order to meet policyholder expectations and guarantee better service delivery and timely claim settlement in the event of road transport risks, insurance companies must be proactive and creative in their service delivery tactics.

ii. To lower the risks connected with road transportation, several risk management techniques must be implemented, such as internal control, driver orientation, and collaboration with law enforcement, particularly those stationed along transportation routes.

iii. The government should enforce the purchase of motor insurance policies more strictly, as this will increase the cost of premiums for covering transportation risks and compensate victims of incidents involving road transportation hazards.

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