Fraud Detection Practices and Claims Management Efficiency in Nigerian Insurance Companies

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Abstract
An insurer has to separate genuine from fraudulent claims without slowing the settlement of valid ones, so the way fraud is detected may be related to how efficiently claims are managed. This descriptive and correlational study examines how three fraud-detection practices (fraud identification systems, fraud investigation procedures and fraud prevention controls) relate to claims management efficiency in Nigerian insurance companies. It draws on Fraud Triangle Theory and uses a cross-sectional survey of 96 insurance employees in claims, underwriting, risk and compliance, internal control and related functions; each practice was measured with five five-point Likert statements and efficiency with six. Respondents agreed that the practices were in place (scale means 3.66 to 3.88) and rated claims management efficiency lower (3.43); timeliness was the lowest-rated feature of claims handling (mean 2.98, against 3.84 for accuracy, coordination and resource use). Cronbach's α ranged from −.09 to .17. Fraud prevention controls correlated positively with claims management efficiency ($r = .24$, $p = .017$), whereas fraud identification systems ($r = −.10$, $p = .317$) and fraud investigation procedures ($r = .10$, $p = .334$) were not significantly correlated with it, so the null hypothesis was rejected for prevention controls only. Insurers should keep preventive controls formal and evidenced, manage and report claims turnaround for genuine and flagged claims separately, and introduce digital tools in stages.

Keywords: *fraud identification systems, fraud investigation procedures, fraud prevention controls, claims management efficiency, Nigerian insurance industry*

1.0 Introduction

Claims management is where an insurer's contractual promise meets the policyholder's experience of a loss. It covers notification, documentation, investigation, assessment, decision-making, settlement and record keeping, and doing it efficiently means processing legitimate claims accurately and within reasonable time while controlling cost and exposure to fraudulent claims. Fraud detection is therefore part of claims administration. Similarly, from their survey of 127 claims managers and other staff, Yusuf, Ajemunigbohun and Alli (2017) reported that claims-handling had a significant influence on claims-management processes, and they suggested better record keeping, monitoring and training of staff. The Nigerian regulatory framework recognises the link. The updated market conduct guidelines include loss estimation and investigations, claims rejection processes, compliance monitoring, segregation of duties

and written internal claims handling processes to prevent claims fraud, among other things, as part of claims-management control, and mandate insurers to maintain statistics on claims settlement times and trends (NAICOM, 2024). Yusuf and Ajemunigbohun (2015) found that having an effective and efficient claims handling was linked to operational claims processes and that timely claims handling can help in fraud detection and prevention.

Other Nigerian studies describe the fraud side. Ajemunigbohun, Isimoya and Ipigansi (2019), using 221 respondents from 31 general insurance companies, found repeated occurrence of homeowners' claims fraud and identified weak organisational systems among its causes, and Azeez (2025) found that most surveyed motor insurers relied on traditional detection and prevention approaches and that few used modern tools. The question that remains is whether the way insurers identify, investigate and prevent fraudulent claims is related to the efficiency of the wider claims process. Inappropriate payments may result if any suspicious claims are not sufficiently investigated, or if all claims are investigated over a long period that are poorly coordinated, legitimate policyholders wait. This study thus explains the ratings of staff of Nigerian insurance companies on fraud identification systems, procedures of fraud investigation, fraud prevention controls and efficiency of claims management and the correlation of the rating for each of these practices with claims management efficiency. It has three goals which match the three research questions and hypotheses in Section 2.3. The results are intended to inform insurers and the National Insurance Commission (NAICOM) where to begin in their anti-fraud drive and claims speed considerations, and the paper ends with recommendations on who should do what, when and how.

2.0 Literature Review and Hypotheses Development

2.1 Theoretical Framework: Fraud Triangle Theory

The Fraud Triangle derives from Cressey's (1953) study of embezzlers. Cressey concluded that financial trust violations occur when three conditions are present together: a perceived non-shareable financial pressure, a perceived opportunity to commit the violation, and a rationalisation that lets the person see the act as acceptable. Fraud can be reduced by acting on any of the three conditions and, because opportunity is the one an organisation controls most directly, through stronger controls, verification and monitoring. The elements of each practice are taken as opportunity reduction in the claims process for the present study. The use of identification systems and investigation procedures increases the odds that an irregular claim will be detected and investigated prior to settlement, and the prevention controls will plug the holes through which irregular claims enter or further develop. Based on this theory, the following hypotheses are developed.

2.2 Empirical Review and Research Gap

Ajemunigbohun et al. (2019) used a descriptive design and purposive sampling with 221 participants from 31 general insurers and found repeated claims fraud, with causes that included weak organisational systems, poor employee motivation and weak legal sanctions. Yusuf et al. (2017) and Yusuf and Ajemunigbohun (2015) surveyed claims staff; the first linked claims-handling processes to claims-management processes and the second linked efficient, prompt handling to fraud detection and prevention. Azeez (2025) surveyed 36 motor insurers, obtained 49 valid responses from claims staff and found that traditional detection approaches dominated. Shoyemi (2024) evaluated fraud-risk management practices in Nigerian motor insurance. Three gaps follow from this review. First, in outcome: the studies examine fraud occurrence and causes or the general claims process, and claims management efficiency in relation to fraud-detection practice remains to be examined. Second, in concept: fraud identification systems, fraud investigation procedures and fraud prevention controls have not been set side by side. Third, in direction: Yusuf and Ajemunigbohun (2015) moved from

claims-handling efficiency toward fraud detection, whereas this study moves from fraud-detection practices to efficiency. This study addresses these gaps with descriptive and correlational evidence from staff of Nigerian insurers.

2.3 Hypotheses Development

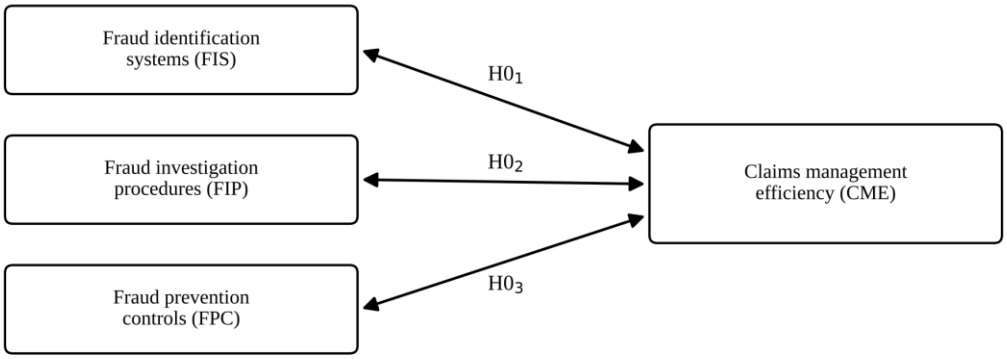
Fraud identification systems. These are the processes and tools used to identify suspicious claims: documented procedures, regular screening, verification, cross-checking with records and digital/analytical tools. A proper and timely identification should help to move on true claims and keeping irregular claims aside.

Fraud investigation procedures. These govern what happens once a claim is flagged: further investigation before a decision, defined procedures, verified evidence, communication between claims and investigation staff, and documented findings. Orderly investigation should reduce rework and disputed decisions (Yusuf & Ajemunigbohun, 2015).

Fraud prevention controls. These are the controls that reduce opportunity: written anti-fraud controls, separation of duties, training, management review and internal monitoring. Such controls give the claims process a clear structure, which the Fraud Triangle (Cressey, 1953) and the regulatory guidelines (NAICOM, 2024) both associate with more controlled administration. The following null hypotheses were therefore tested at the 5% level (two-tailed):

Figure 1

Conceptual Framework and Hypotheses



H_{01}: There is no significant relationship between fraud identification systems and claims management efficiency in Nigerian insurance companies.
H_{02}: There is no significant relationship between fraud investigation procedures and claims management efficiency in Nigerian insurance companies.
H_{03}: There is no significant relationship between fraud prevention controls and claims management efficiency in Nigerian insurance companies.

3.0 Methodology

3.1 Design, Population and Sample

The study used a descriptive and correlational cross-sectional survey. The target population was employees of insurance companies in Nigeria who are directly or substantially involved in claims administration, claims investigation, underwriting, internal control, risk management or related fraud-control activities. Purposive sampling reached people in these functions, and responses were collected with an online questionnaire form. Participation was voluntary. A

minimum of 80 valid responses had been targeted, and 96 were received, all of which were analysed (Section 4.1).

3.2 Measures

The first section recorded age group, gender, highest educational qualification, area of responsibility, years of experience in insurance and the type of insurance business mainly handled, and these items describe the sample. Each remaining section used statements rated from 1 (strongly disagree) to 5 (strongly agree): fraud identification systems (FIS; five items, e.g., "Claims are routinely screened for unusual patterns before final settlement"), fraud investigation procedures (FIP; five items, e.g., "Investigators obtain and verify relevant evidence before recommending a claims decision"), fraud prevention controls (FPC; five items, e.g., "Duties within the claims process are appropriately separated to reduce opportunities for fraud") and claims management efficiency (CME; six items covering timeliness, accuracy, coordination, resource use and the identification of suspicious claims without delaying genuine ones, e.g., "Genuine claims are processed within reasonable time in my organisation"). A construct score was the mean of its items, and the Likert composites were treated as approximately interval-level measures (Norman, 2010). Face and content validity were reviewed by insurance and research-methods experts before the questionnaire was used.

3.3 Data Screening and Analytical Procedure

Responses were checked for eligibility, out-of-range values, missing values, duplicate records and respondents who gave identical ratings to every item. Analysis covered descriptive statistics (means, standard deviations, skewness, kurtosis and the percentage agreeing with each item), reliability (Cronbach's α, with .70 or above acceptable; Nunnally, 1978; Tavakol & Dennick, 2011), and the Kaiser–Meyer–Olkin (KMO) measure (Kaiser, 1974), Bartlett's test and the eigenvalues of the item correlation matrix. Relationships were examined with Pearson correlation, supplemented by Spearman rank correlation, with 95% confidence intervals from the Fisher transformation. Correlations were described as small, medium or large at about .10, .30 and .50 (Cohen, 1988). Each null hypothesis was decided on the Pearson correlation between the practice score and the efficiency score and was rejected where $p < .05$.

4.0 Results and Discussion

4.1 Data Screening and Respondent Profile

All 96 responses were retained: none had a missing or out-of-range value, none was duplicated, none gave the same rating to every item, and every respondent reported a role within the target population. Men (n = 55, 57.3%) outnumbered women (n = 39, 40.6%), and two respondents (2.1%) preferred not to say. By age, 17 (17.7%) were 18–25, 41 (42.7%) were 26–35, 24 (25.0%) were 36–45, 13 (13.5%) were 46–55 and one was 56 or older. Most held an HND or B.Sc. (n = 57, 59.4%) or a master's degree or MBA (n = 30, 31.2%), and three held a doctorate. By function, 36 (37.5%) worked in claims, 28 (29.2%) in underwriting, 16 (16.7%) in risk and compliance, 9 (9.4%) in internal control or audit and 7 (7.3%) in other related functions. Experience ranged from under three years (22.9%) to more than fifteen (14.6%), and the business handled was life (35.4%), composite or multiple lines (34.4%) or general business (30.2%).

4.2 Descriptive Statistics and Reliability

Table 1 shows mean scores from 3.43 for claims management efficiency to 3.88 for fraud investigation procedures, so respondents agreed more that the practices were in place than that claims were handled efficiently; 59% of efficiency responses were in the agree categories, against 65% to 75% for the practices. Distributions were mildly skewed (−.39 to .41).

Cronbach's α was .06 for FIS, −.09 for FIP, .06 for FPC and .17 for CME, and the average correlation between items of the same scale was close to zero (FIS .00, FIP −.01, FPC .01, CME .03). The KMO measure was .46 and Bartlett's test was not significant, $\chi^2(210) = 217.73$, $p = .343$. These results show that the items in each scale describe separate practices (documented procedures, screening, verification, cross-checking and tools, for instance) and not a single trait, so the scale scores summarise a set of practices and Table 2 reports every item.

Table 1

Descriptive Statistics and Reliability (N = 96)

Construct	Items	*M*	*SD*	Skew.	Kurt.	α	Mean *r*
Fraud identification systems (FIS)	5	3.66	0.45	−.39	−.13	.055	.001
Fraud investigation procedures (FIP)	5	3.88	0.43	−.28	−.02	−.091	−.014
Fraud prevention controls (FPC)	5	3.86	0.44	−.21	−.61	.063	.013
Claims management efficiency (CME)	6	3.43	0.48	.41	.62	.172	.033

Note. Scores are item means on a 1–5 scale. Skew. = skewness; Kurt. = excess kurtosis; α = Cronbach's alpha; Mean *r* = average correlation between items of the same scale.

Within the efficiency scale the items fall into two groups. Respondents rated the timeliness items lowest: only 35% agreed that genuine claims are processed within reasonable time (CME1, $M = 2.91$) and 41% that decisions are made with minimal unnecessary delay (CME2, $M = 3.06$), while accuracy, coordination and resource use (CME3–CME5) averaged 3.84. The mean of the two timeliness items (2.98) was well below the mean of the other three (3.84), $t(95) = 7.96$, $p < .001$. The item on identifying suspicious claims without delaying genuine ones (CME6) was also low ($M = 3.10$; 45% agreed and 33% disagreed). Among the identification items, the use of digital or analytical tools (FIS5) was the lowest-rated practice ($M = 3.04$; 40% agreed and 35% disagreed), against 3.81 for the other four, in line with Azeez's (2025) finding that few insurers use modern tools.

Table 2
Item-Level Descriptive Statistics (N = 96)

Code	Statement (abbreviated)	*M*	*SD*	% agree	% disagree
FIS1	Documented procedures for identifying fraudulent claims	3.72	0.85	68	9
FIS2	Routine screening for unusual patterns before settlement	3.97	0.81	74	4
FIS3	Claimant and policy information verified when indicators arise	3.88	0.93	74	7
FIS4	Claims cross-checked against internal records	3.68	1.11	68	12
FIS5	Digital or analytical tools support identification	3.04	1.20	40	35
FIP1	Suspicious claims investigated before final decision	3.90	1.03	72	10
FIP2	Investigators follow defined procedures	3.97	1.01	79	9
FIP3	Evidence obtained and verified before recommendation	3.77	1.03	69	15
FIP4	Claims and investigation staff communicate effectively	3.88	0.87	72	8
FIP5	Findings documented and considered in decision	3.89	1.04	79	10
FPC1	Written controls designed to prevent fraudulent claims	3.80	0.87	73	9
FPC2	Duties in the claims process appropriately separated	3.97	0.91	77	8
FPC3	Staff receive fraud-prevention guidance or training	3.74	1.07	71	16
FPC4	Management regularly reviews claims controls	3.95	0.93	75	7
FPC5	Internal monitoring ensures compliance	3.85	0.99	78	11
CME1	Genuine claims processed within reasonable time	2.91	1.27	35	40
CME2	Decisions made with minimal unnecessary delay	3.06	1.10	41	36
CME3	Claims information processed accurately	3.93	0.93	80	10
CME4	Claims activities well-coordinated	3.70	1.03	73	15
CME5	Efficient use of organisational resources	3.91	0.91	80	8
CME6	Suspicious claims identified without delaying genuine claims	3.10	1.25	45	33

Note. Agree = ratings of 4 or 5; disagree = ratings of 1 or 2. Percentages are of 96 respondents.

4.3 Correlation Results and Hypothesis Tests

Table 3 shows the correlations among the four scores. The three practices were essentially uncorrelated with one another (r = .06, −.01 and .05). Fraud prevention controls were significantly and positively correlated with claims management efficiency: r = .24, 95% CI [.05, .42], p = .017 (Spearman ρ = .25, p = .014), a small-to-medium correlation, so H_{03} was

rejected. Fraud identification systems (r = −.10, 95% CI [−.30, .10], p = .317) and fraud investigation procedures (r = .10, 95% CI [−.10, .29], p = .334) were not significantly correlated with efficiency, so H_{01} and H_{02} were not rejected (Table 4).

Table 3

Correlations Among the Study Variables (N = 96)

Construct	1	2	3	4
1. Fraud identification systems	—			
2. Fraud investigation procedures	.06	—		
3. Fraud prevention controls	−.01	.05	—	
4. Claims management efficiency	−.10	.10	.24*	—

Note. Pearson correlations of scale scores (p* < .05, two-tailed).

Table 4

Summary of Hypothesis Tests

Hypothesis	Relationship	r	95% CI	p	ρ	p (ρ)	Decision
H_{01}	FIS → CME	−.10	[−.30, .10]	.317	−.17	.099	Not rejected
H_{02}	FIP → CME	.10	[−.10, .29]	.334	.04	.686	Not rejected
H_{03}	FPC → CME	.24	[.05, .42]	.017	.25	.014	Rejected

Note. r = Pearson correlation; ρ = Spearman rank correlation; CI = confidence interval for r. FIS = fraud identification systems; FIP = fraud investigation procedures; FPC = fraud prevention controls; CME = claims management efficiency.

Item-level correlations with the efficiency score give more detail. Among the five prevention items, the strongest was segregation of duties (FPC2, r = .28, p = .006). The prevention score was correlated with the timeliness items (r = .21, p = .036) and showed a weaker correlation with accuracy, coordination and resource use (r = .09, p = .359). Among the identification items, use of digital or analytical tools (FIS5) was negatively correlated with efficiency (r = −.29, p = .005).

4.4 Discussion

Fraud prevention controls were the one practice significantly correlated with claims management efficiency. This is consistent with the Fraud Triangle theory which states that opportunity is the most controllable aspect of fraud by the insurer (Cressey, 1953), and with the earlier findings in Nigeria that claims processes and fraud control are close knit (Yusuf & Ajemunigbohun, 2015; Yusuf et al., 2017). Clearly separated roles and review points had the highest item-level correlation and the connection was strongest for timeliness, indicating that well-segmented roles and review points create a clear pathway for claims to move through and increase speed of movement. Likewise, those insurers that have implemented such controls might be the ones that are efficient on the claims side. There were no significant correlations between fraud identification systems, fraud investigation procedures and efficiency in this sample. The lowest rated identification practice was digital and/or analytical tools, with a negative correlation with efficiency, possibly because these tools are new or being used to address claims problems that are already present. Timeliness is the most underperforming aspect of claims handling, scoring a lower mark than accuracy, coordination and resource use and is most evident in practice from the study.

5.0 Conclusion, Implications and Recommendations

5.1 Conclusion

This study described how staff of Nigerian insurance companies rate fraud identification systems, fraud investigation procedures, fraud prevention controls and claims management efficiency, and tested how strongly each practice correlates with efficiency. Respondents agreed that the practices were in place and rated efficiency lower, and timeliness was the weakest feature of claims handling. Fraud prevention controls were the only practice significantly correlated with efficiency ($r = .24$), so H_{03} was rejected and H_{01} and H_{02} were not rejected. Segregation of duties had the strongest link with efficiency among the prevention controls.

5.2 Implications

Theoretical implications. The findings support the opportunity-reduction logic of the Fraud Triangle for preventive controls that structure the claims process. *Practical implications.* Insurers that concentrate anti-fraud effort on detection alone may leave unmanaged the structural controls that are linked to efficiency, and delay, the weakest part of claims handling in this study, deserves direct management.

5.3 Actionable Recommendations

The evidence points to preventive controls and to timeliness as the places to start. The recommendations below are ordered from claims practice to regulation, and each is given an owner, a timeline and an indicator in Table 5. Insurers should pilot the changes and compare results with similar units before extending them.

For insurers and claims management.

R1. Keep preventive controls formal and evidenced. Maintain written anti-fraud controls for claims, separate the people who register, assess, approve and pay a claim, and have management review those controls and internal monitoring report on compliance at least quarterly.

R2. Make claims turnaround a managed measure. Record the time from notification to decision separately for genuine claims and for claims flagged for investigation, set service standards by class of business, and review results monthly.

R3. Give flagged claims a defined and time-bound route. Specify who investigates, what evidence is needed, how claims and investigation staff communicate and when a flagged claim is escalated, so that checking suspicious claims does not hold up genuine ones.

R4. Introduce digital and analytical tools in stages. Pilot them on one line of business and judge them on both fraud findings and claims cycle time before scaling.

R5. Maintain documented identification and investigation procedures, evidence verification and recorded findings, and track how long each investigation takes.

R6. Combine a refined short survey with claims records (days to settle, share of claims flagged, flagged claims confirmed as fraudulent, claims cost) so that practice and outcome are related using recorded data.

For the regulator and industry bodies.

R7. NAICOM, working with industry associations, could build on the existing requirement that insurers keep statistics on settlement times and trends (NAICOM, 2024) by asking for turnaround to be reported separately for genuine and fraud-flagged claims, add a few questions on fraud-control practice to market-conduct monitoring, and publish good practice on segregation of duties.

Table 5
Implementation Plan for the Recommendations

No.	Recommended action	Responsible party	Timeline	Indicator of progress
R1	Formal, evidenced preventive controls; segregation of duties; quarterly management review	Insurers; claims, internal control and compliance units	0–6 months	Controls documented; review completed each quarter
R2	Record and review claims turnaround for genuine and flagged claims; set service standards	Insurers; claims managers	0–6 months	Median and spread of days to decision by claim type, reviewed monthly
R3	Defined, time-bound route for flagged claims with escalation	Insurers; claims and investigation units	0–6 months	Share of flagged claims resolved within the set period
R4	Staged pilot of digital and analytical tools judged on fraud findings and cycle time	Insurers; IT and analytics units	6–18 months	Pilot results against comparison units
R5	Maintain documented procedures, evidence checks and investigation records	Insurers; investigation units	Ongoing	Share of investigated claims with documented findings
R6	Refined survey linked to claims records	Insurers; research or analytics units; researchers	6–12 months	Linked dataset available
R7	Turnaround reporting, practice questions in monitoring, good-practice guidance	NAICOM; industry associations	12–24 months	Guidance issued; benchmark report published

Note. Timelines are suggested starting points.

5.4 Limitations and Future Research

The sample of 96 was purposive and the questionnaire did not capture a respondent's company, so the number of insurers represented is not known. The Cronbach α was low for all four scales, the study was correlational, and efficiency was measured with respondents' perceptions and not by the number of claims. The instrument should be improved with future studies to achieve acceptable reliability for each scale, add identifiers for the companies, use larger and more diverse samples, correlate survey responses to claims, and test the effectiveness of the preventive controls and digital tools in pilots.

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