

RESEARCH ARTICLE

## Forensic accounting in predicting the financial performance growth of MTN mobile communication in Nigeria

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### Abstract

To emphasize the importance of fraud reporting, fraud prevention, and litigation as forensic accounting instruments, it is necessary to address the issue of financial performance growth in every consistent manner for any company in Nigeria to avoid a collapse in financial performance. The purpose of this paper is to demonstrate how forensic accounting may be used to predict the financial performance and growth of MTN mobile communication in Nigeria in the future.

Methods: The data used for this study was collected from world bank publication, Nigeria stock exchange factbook and National bureau of statistics (NBS) record from a period of 1990 to 2021. The method of data analysis that will be adopted for this paper are ordinary least square (OLS) regression analysis, unit root test, and cointegration analysis. The ordinary least square (OLS) regression model was used in this paper, and the results show that the model is statistically significant, indicating that there is a significant relationship between forensic accounting instruments and growth in financial performance. According to the coefficient of determination (R-squared), forensic accounting indicators can explain approximately 73 per cent of the variation in financial performance growth. This indicates that the fitted model is adequate for predicting the growth of financial performance in the future. A long-term relationship exists between forensic accounting and the financial performance growth of MTN mobile communication in Nigeria, according to the results of the Johansen cointegration test, which was conducted recently. The regression analysis conducted for this paper reveals that the number of fraud cases reported and the rate of fraud prevention, both of which are forensic accounting indicators, are statistically significant and have a positive significant impact on financial performance growth. Furthermore, if fraud is not controlled, it has the potential to devastate the financial performance of telecommunication companies. Therefore, MTN and other telecommunication companies must put in place a policy within their respective organizations that will continuously fund the cost of forensic accounting so that they can maintain a sustainable level of financial performance growth.

**Keywords:** Financial performance growth; forensic accounting; OLS regression model; R-squared; Johansen cointegration

### Introduction

As a result of the increasing prevalence of fraudulent practices in modern organizations, traditional auditing and investigation methods have become inefficient and ineffective in the detection and prevention of the various types of fraud that confront businesses around the world, particularly in Nigeria. Oyejide (2008) said that fraud is a topic that has gotten a great deal of attention both internationally and in Nigeria, and that this is true. This heightened awareness has been fueled by several high-profile incidents involving a variety of organizations. In

the academic literature, issues linked to fraud have also been the subject of careful theoretical and empirical investigation (Appah & Appiah, 2010). The increasing prevalence of fraud, according to Karwai (2002), is causing significant disruption in the Nigerian telecommunications business. There are billions of dollars in losses as a result of telecommunication fraud. Respondents to a recent Communications Fraud Control Association (CFCA) fraud study reported a total of \$2 billion (USD) in proven fraud losses at their respective companies, according to the results of the poll (Communications Fraud Control Association, 2011). The most common types of fraud losses recorded by operators are compromised voicemail systems, subscription theft,

and by-pass fraud, among others. The reason for this is that fraud has permeated every element of Nigerian culture to the point that many businesses have lost the trust of their customers as a result of the fraud epidemic. According to Adesola (2008), the threat of fraud to the global economy is better illustrated by statistics released by Criminologists at a consulting firm, which revealed that over two hundred thousand cases of online fraud were committed in the United Kingdom in 2006, more than doubling the number of real-world robberies committed in the same period. According to the findings of the study, online fraud accounted for 75% of all card not present fraud in 2006. Fraud in both high and low locations is a source of concern for the global market. Enron, WorldCom, and other similar companies are well-known to us. In addition, we are seeing an increase in the number of scams committed in society. Following a string of corporate failures, Okunbor and Obaretin (2010) reported that accountants now have greater responsibility and function to equip themselves with highly sophisticated skills to identify and act upon indicators of poor corporate governance, mismanagement, and fraud and other malpractices. It has now become mandatory for accountants at all levels to possess the necessary skills and expertise for identifying, uncovering, and preserving evidence of all types of irregularities and fraud, regardless of their degree of experience. As a result, fraud requires a more complex strategy for its management, ranging from prevention to detection and investigation. When it comes to fraud management, including prevention, detection, and comprehensive control, one of the more contemporary techniques that can be used is the forensic accounting service. This is one of the more modern approaches that can be used. In the opinion of Hansen (2009), computer forensics is the most appropriate and, in many cases, the greatest instrument for investigators to utilize in the detection and implementation of white-collar crime investigations. forensic accounting, according to Degboro and Olofinsola (2007), is defined as the application of criminalistic methods, as well as the integration of accounting investigative operations and legal procedures, to detect and investigate financial crimes and related accounting misbehaviors. The persistent string of embarrassing audit failures that have occurred over the previous 52 years has triggered a paradigm shift in the accounting profession (Eliezer & Emmanuel, 2015). According to popular belief, forensic accounting developed in response to several newly discovered fraud-related incidents. While the Enron and WorldCom cases are well-known, recent scandals that have rocked the business world, such as the well-publicized Enron and WorldCom cases, have also brought the field of forensic accounting to the forefront. When it comes to identifying

financial wrongdoing, forensic accounting is considered a synthesis of all other investigation-related fields. Because financial fraud is becoming increasingly sophisticated, forensic accounting must be added to the arsenal of techniques available to investigators and prosecutors to ensure that those involved in criminal activities are successfully investigated and prosecuted (Moduga & Anyaduba, 2013). Generally speaking, forensic accounting is expected to provide some relief from the perceived vulnerability of standard accounting and auditing systems to financial fraud. The use of forensic accounting services in fraud management in the Nigerian telecommunications industry is projected to be a topic of great importance in the sector shortly. Unfortunately, the application of forensic accounting skills in the management of financial fraud in telecommunication businesses in Nigeria has not piqued the interest of policymakers in the industry and regulators of Nigeria's telecommunications sector. There has been a great deal of scholarly attention paid to forensic accounting and fraud control, detection, and prevention by scholars, writers, and academics in the field of accounting and other allied areas, but none of this literature has addressed forensic accounting and fraud management issues in the Nigerian telecommunications industry. Referencing the thread of studies by Akindele (2011), Chi-Chi & Ebimobowei (2012), Famous and Okoeguale (2012), Odi (2013), and others as cited in Eliezer and Emmanuel (2015), which have focused on the impact of fraud on commercial banks' performance, while another thread of studies by Idowu (2009), Nwaze (2006), Ogunleye (2010) have focused on the factors that influence the Other studies on forensic accounting, fraud detection, and prevention include those by Eliezer and Emmanuel (2015), Temitope (2014), Dada, Ajao, and Okwu (2013), Modugu & Anyaduba (2013), Okoye & Gbegi (2013), Augustine & Uagbale-Ekatah (2013), and Modugu & Anyaduba (2012). Litigation, fraud detection, fraud cases reported, and fraud prevention rate are some of the forensic accounting indicators that will be used in predicting MTN's financial performance. The major purpose of this study is to apply forensic accounting indicators to predict the financial performance growth of MTN mobile communication in Nigeria. Additionally, this research will look into the impact of forensic accounting on the financial performance growth of MTN mobile communication in Nigeria, as well as the relationship between forensic accounting and financial performance growth at MTN mobile communication in Nigeria.

## **Literature review**

When forensic accounting was first introduced in the 1980s, it was considered a novel career, with the breadth of this new profession encompassing management accounting, auditing, and investigative abilities (Muslimat & Hammid, 2012). Individuals who served as the pharaoh's eyes and ears over his grain, gold, and other assets, according to Singleton and Singleton (2010), can trace the history of forensic accounting back to the reign of the Pharaoh in Egypt, where they worked as his eyes and ears. Forensic accounting is an indispensable tool for greater accountability, fraud detection, fraud reporting and fraud prevention that could jeopardize the performance growth of any company (Chariri.A, 2019). In addition to fraud investigation, fraud prevention, and the inspection of anti-fraud systems, they define forensic accounting as the collection of both financial and non-financial information, which includes both financial and non-financial information (Brown, Aiken, and Visser, 2020). Forensic accounting, on the other hand, is characterized by Crumbley (2016) as a subfield of forensic science that can be defined as the application of natural law to human laws, as opposed to criminal law. A forensic scientist who also provides an expert opinion regarding their findings in a court of law is regarded as an examiner and interpreter of evidence and facts in legal proceedings, according to the professor. Because it is an accounting science, it is expected that the examination and interpretation would be undertaken to obtain economic data. Based on financial data analysis, forensic accountants can compute values, draw inferences, and identify unusual patterns or questionable transactions. A forensic accountant's responsibilities include, among other things, identifying fraud offenders and tracing money laundering and theft operations, which may involve tax evasion and tax avoidance. Fraud, according to Modugu and Anyaduba (2013), is classified as a property crime. They define it as the illegal conversion of another's property into one's possession through the use of one's techniques. Williams (2005) delves more into the topic of financial crimes, which include fraud and corruption. According to Williams's (2005) description of the phenomenon, bribes and cronyism are among the methods of corruption used. Other methods of corruption include political donations, kickbacks, voicemail systems, telecommunication fraud, most notably MTN mobile communication (subscription/identity theft, international revenue share fraud, credit card fraudulent transactions, and bypass fraudulent transactions), artificial pricing, and other types of fraud. To cover all of the aspects of financial crime, several of which have already been discussed, it is impossible to list them all. The Economic and Financial Crimes Commission Act 2004, which is cited in Modugu and Anyaduba (2013), tries to capture economic and financial crimes that are

committed within or outside the organization's borders. By the Economic and Financial Crimes Commission (EFCC) Act (2004), violent, criminal, and illicit actions are defined as those performed to illegally accumulate riches in a manner that violates existing regulations. In addition to child labor, illegal oil bunkering and illegal mining, tax evasion, and foreign exchange malpractice, such as the counted currency mafia, these activities include all forms of fraud, narcotics drug trafficking, money laundering, embezzlement, bribery, and looting. Among the financial crimes committed by corporate entities, as well as those described by the provision's authors, are those involving money laundering (William, 2005; Khan, 2005). According to historical evidence, financial crimes have been linked to the demise of numerous corporate entities in the past. According to Cotton (2003), corporate-wide fraud was to blame for the failure of Enron, WorldCom, Tyco, and Adelphia, among other companies. The fraudulent scheme is estimated to have cost 460 billion (USD). It has been determined that Cacao Nigeria Plc's financial records were fraudulently altered by the company's management, resulting in an N15 billion loss in the Nigerian market. Various financial malpractices are believed to have resulted in the loss of approximately one trillion nairas in Nigeria's nine collapsed commercial banks. According to the EFCC Act (2004), the EFCC is still investigating this situation. According to operators in the telecommunications industry, the following are the top five (5) categories of fraud losses: Fraud losses totalled 4.96 billion (USD), with 4.32 billion (USD) attributed to compromised PBX/Voicemail systems, 3.84 billion (USD) attributed to international revenue share fraud, 2.88 billion (USD) attributed to by-pass fraud, and 2.40 billion (USD) attributed to credit card fraud in 2013. It is possible to commit financial fraud in a variety of ways, and it is usually done by both individuals and organizations. The nature, character, and mode of operation of financial fraud in businesses vary significantly depending on the industry (Ajie&Ezi, 2000; Karwai, 2002). A fraudster who is distinct from another fraudster and a fraudster who conducts fraud using different methods are two types of fraudulent activity that can be distinguished in general. Internal fraud, external fraud, and mixed fraud are all types of fraud that can be classified according to the characteristics of the perpetrators. Internal fraud is committed by members of the organization's staff and directors, whereas external fraud is committed by individuals who are not affiliated with the organization, and mixed fraud is committed by outsiders who work in conjunction with the organization's staff and directors to perpetuate the fraud. According to Karwai (2002), pinpointing the root causes of fraud can be a difficult undertaking. Moreover, as he pointed out, modern-day

corporations generally perpetrate frauds through a sophisticated web of conspiracy and deception, which serves to conceal the true nature of the fraudulent activity. In a study conducted by the researchers Ajie and Ezi (2000), it was discovered that on average, out of every ten employees, eight would look for opportunities to steal if given the opportunity, and only four would be honest in their daily work. In addition to that, forensic accounting is available. Forensic accounting, according to Joshi (2003), is defined as the application of specialized knowledge and specific talents to unearth evidence of economic abnormalities. Howard and Sheetz (2006) define forensic accounting as the process of evaluating, summarizing, and presenting complicated financial issues in a timely and factual manner, most often as a witness in a legal proceeding. Particularly relevant is the application of accounting discipline to the resolution of factual disputes in commercial litigation, which is the subject of this paper (Okunbor & Obaretin, 2010). Forensic investigation, according to Degboro and Olofinsola (2007), is defined as the discovery and establishment of facts to support a legal claim or action. Therefore, forensic accounting techniques can be applied to the detection and analysis of crimes, allowing investigators to uncover all of the underlying characteristics and identify the perpetrators. As Gray (2008) argues, forensic accountants are the best-prepared professionals to conduct forensic investigations because they combine the skills of an auditor with the skills of a private investigator. Law enforcement agents require a wide range of skills including investigative abilities, research skills, legal knowledge, mathematical methods, financial knowledge, auditing and accounting knowledge, as well as the ability to think critically. The primary responsibility of a forensic accountant is to examine complex financial and business-related issues, interpret and synthesize them, and present them in a way that the general public can understand and appreciate. Internal control systems have been referred to as the most important tool for preventing and detecting fraud in a variety of settings, including financial institutions (Wells, 2004). Forensic accounting, as defined by Dhar and Sarkar (2010), is the application of accounting concepts and procedures to the resolution of legal disputes. When fraud is discovered, it must be reported as soon as possible, and the report is admissible as evidence in a court of law or an administrative hearing procedure. A forensic accountant's skills are applied in potential, real civil or criminal disputes, such as determining losses or profits, incomes and damages, internal control estimations and frauds, and other situations involving the incorporation of accounting knowledge into the legal system. According to the Association of Certified Fraud Examiners (ACFE), forensic accounting is defined as the

application of skills in potential, real civil or criminal disputes.

### **Review of Financial performance growth of MTN Nigeria Communication PLC**

The Nigerian telecommunications industry has grown exponentially in the last two decades as a result of deregulation and liberalization (NCC, 2020). While the sector contributed only 0.1% of Gross Domestic Product (GDP) in 1999, it will generate 2.3 trillion in revenue in quarter 2, 2020, accounting for 14.30% of total GDP (NBS, 2020). The sector has established itself as one of the most resilient in Nigeria, contributing to the country's positive growth in the gross domestic product by capitalizing on the country's rapidly growing population. The Coronavirus pandemic has wreaked havoc on economies worldwide, including those in Nigeria. On the other hand, the telecommunications industry has benefited enormously from the pandemic (NCDC, 2021). The current popularity of lockdown directives and work-from-home policies has boosted the demand for virtual communications, internet access, and teleconferencing services (NCDC, 2021).

Nigeria's telecommunications industry also benefited from the pandemic printing, posting an 18.10% real growth in quarter 2, 2020, despite the economy contracting by 6.10% in quarter 2, 2020, putting the country on track to enter its second recession in less than five years (WHO, 2020).

As of July 2020, the data indicated that Nigeria had 198.9 million GSM mobile subscribers. MTN Nigeria led the market in Nigeria with a 40.39 per cent lion's share, followed by its fiercest competitors Airtel (26.99%) and Glo (26.99%). (26.51 per cent). With 12,163,330 GSM subscribers, 9mobile (formerly Etisalat) has the smallest market share at 6.11 per cent (NSE, 2020). An examination of the nitty-gritty of Nigeria's leading telecom's performance (MTN Nigeria) should shed light on how Telecoms fared both during and after the lockdown. MTN Nigeria is well on its way to achieving its lofty annual revenue target of \$1 trillion.

MTN Nigeria added 6.8 million subscribers, bringing the total number of mobile subscribers on the network to 71.1 million by June 2020. Revenues generated in the first half of the year increased by 12.5% to 638.08 billion, up from 566.95 billion in the same period last year. Revenue growth was primarily driven by a 12.6% increase in revenue from services provided, which accounted for 99.8% of total revenue during the quarter (NCC, 2021).

### **Research methodology**



This study adopted a secondary quantitative research design which involves the collection of quantitative data from already existing reliable sources such as where the data used for this work is collected. The quantitative data used for this work is also called secondary data and was collected from a world bank publication, the Nigeria stock exchange factbook and the National Bureau of Statistics (NBS) record from a period of 1990 to 2021. The secondary quantitative research was used to analyze the relationship between two variables of interest in this study and also to make useful future predictions. The method of data analysis that will be adopted for this paper is descriptive statistics (using mean and standard deviation for the data summary), ordinary least square (OLS) regression analysis, unit root test, and cointegration analysis. The variables of interest in this study are forensic accounting and the financial performance growth of MTN mobile communication. Forensic accounting indicators are Litigation, Fraud detection, Fraud cases reported, and Fraud prevention rate, which are the independent variables while the dependent variable is the financial performance growth of MTN mobile communication. The computer software for the analysis of this work is EViews version 11.0.

## Results and discussion

**Table 1.** Variable measurements

Variables	Measurements (unit)
Financial performance growth	Percentage (%)
Litigation	Percentage (%)
Fraud detection	Percentage (%)
Fraud cases reported	Percentage (%)
Fraud prevention	Percentage (%)

**Source:** Author

## OLS regression analysis

Regression analysis is an analytic technique that is very appropriate for predicting a dependent variable with one or more independent variables. It also establishes relationship between the variables as well as the impact of independent variables on the dependent variable. The regression model adopted for this paper can be expressed as follow;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

where

Y = Financial performance growth of MTN mobile communication

X<sub>1</sub> = Litigation

X<sub>2</sub> = Fraud detection

X<sub>3</sub> = Fraud cases reported

X<sub>4</sub> = Fraud prevention rate

$\beta_0$  is the constant term or the intercept while  $\beta_1$  to  $\beta_4$  are the coefficient estimate of the independent variables while  $\varepsilon$  is the random error term.

The constructed model for this research is regression model and it is a parametric test predicting the financial performance growth of MTN mobile communication. Dependent variable is financial performance growth of MTN mobile communication, while the independent variables are forensic accounting indicators are Litigation, Fraud detection, Fraud cases reported, and Fraud prevention rate.

The normality and multicollinearity check are necessary to ensure the model is reliable and robust. Multicollinearity usually caused a misleading R-squared and P-values (that is, misleading results) if present. The Shapiro-Wilk test (Razali, Norna diah; Wah, Yap Bee, 2011) was performed to test for normality of the data set and variance inflation factor (VIF) is the indicator for the checks of multicollinearity (O'Brien, R. M, 2007). If VIF is less than 5 (VIF<5), it means the model does not suffer from the problem of Multicollinearity. However, for normality, the null hypothesis strictly state that the data is normally distributed when it is accepted (that is, P>0.05) and not normally distributed if rejected. EViews version 11.0 is the computer software that will be used for this research paper.

## Unit root test

When a series lacks stationarity, the unit root test, also known as the stationarity test, detects the presence of a unit root, which may yield erroneous findings if not eliminated. Unit root testing is performed using the augmented dickey-fuller (ADF) test to eliminate the possibility of erroneous results. The hypothesis to accomplish the unit root test is stated below as:

H<sub>0</sub>: there is a presence of a unit root (series is not stationary) vs H<sub>a</sub>: there is no unit root (the series is stationary). The ADF test can be presented mathematically as:

$$\begin{aligned} \Delta Y_t &= \theta + \gamma Y_{t-1} \\ &+ \sum_{i=1}^p \beta_i Y_{t-i} + \omega_t \end{aligned}$$

Where,  $\theta$  is a constant,  $\gamma$  is the coefficient of process root,  $\beta_i$  coefficient in time tendency,  $p$  is the lag order and  $\omega_t$  is the disturbance (error) term.

## 3.4 Cointegration analysis

Johansen cointegration test is an approach for testing cointegration of integrated series with zero level I (0), order 1, I (1)- after first difference or of order 2, I (2)- after second difference (Johansen, 2001). This test permit

more than one cointegrating relationship. So, it is more generally applicable than Engle-Granger test which is based on the Dickey-fuller (or augmented) test for unit root. There are two types of Johansen test which are the trace and max eigen value, and they form the basis of the inference or decision and their result might be little different from other.

The Var model indicated by Var(p) is mathematically defined in a general term below as:

$$y_t = a + \beta_1 y_{t-1} + \beta_2 y_{t-2} + \dots + \beta_p y_{t-p} + e_t$$

It is important to note that the variables should be stationary before proceeding to Johansen Cointegration test.

**Table 2.** Descriptive statistics

Variables	Observations	Mean	Standard deviation
Financial performance growth	32	85.84	10.74
Litigation	32	70.72	8.52
Fraud detection	32	52.56	7.75
Fraud cases reported	32	63.53	8.83
Fraud prevention	32	12.19	2.33

**Source:** Author's computation using EViews software

The fraud detection (M = 52.56, SD = 7.75) means that the average fraud detection is about 53% with variability of about 8%. Fraud cases reported (M = 63.53, SD = 8.83) indicate that the average of reported cases of fraud

## Result and Interpretation

Table 2 show that financial performance growth (M = 85.84, SD = 10.74) indicate that average financial performance of MTN mobile communication grow by about 86% with variability of about 11% which agree with the situation on ground as MTN Nigeria benefited greatly from the pandemic situation with an usual increase in subscribers making MTN the lead in telecommunication. Litigation (M = 70.72, SD = 8.52) implies that the average litigation cases is about 71% with variability of about 9%.

is about 64% with variability of about 9%. In the same vein, fraud prevention (M = 12.19, SD = 2.33) implies that the average of fraud prevention within the period under review is about 12% with the variability of about 2%.

**Table 3.** Ordinary least square (OLS) Regression analysis

Variables	Coefficient estimate	STD error	Test statistic	P-value
Financial performance growth				
Litigation	0.1926	0.234	0.82	0.417
Fraud detection	0.0999	0.175	0.57	0.574
Fraud cases reported	0.6199	0.221	2.81	0.009*
Fraud prevention	1.4533	0.496	2.93	0.007*
Constant	9.8805	9.720	1.02	0.318
Model P-value	0.0000			
R-squared	0.7319			

Where asterisk \* represent 1% significant level

**Source:** Author's computation using EViews software

Table 3 shows that the overall model (P<0.01) indicate that the OLS regression model is statistically significant and this indicate that there is a significant relationship between Financial performance growth and forensic accounting instruments such as litigation, fraud detection, fraud cases reported, and fraud prevention. R-squared = 0.7319 indicate that about 73% variation in financial performance growth can be explained litigation, fraud

detection, fraud cases reported, and fraud prevention. The regression model is significant and R-squared is relatively large which implies that the regression model is an adequate fit for the data and it is very appropriate for future prediction of MTN financial performance growth. Besides, fraud cases reported ( $\beta = 0.6199$ , P<0.01) and fraud prevention ( $\beta = 1.4533$ , P<0.01) indicate that fraud cases reported and fraud prevention are statistically significant and therefore have significant impact on financial performance growth.

**Table 4.** Unit root test (Augmented Dickey fuller)

Differenced Variables	Test statistic	P-value	Order
Financial performance growth	-7.32	0.0000*	I (1)
Litigation	-7.60	0.0000*	I (1)
Fraud detection	-8.57	0.0000*	I (1)
Fraud cases reported	-4.94	0.0005*	I (1)
Fraud prevention	-4.88	0.0006*	I (1)

Asterisk \* represent 1% level of significance

**Source:** Authors computation using E-views

Table 4 shows the unit root test result using augmented dickey fuller approach and we can see that all the series (financial performance growth and forensic accounting

indicators) are statistically significant which implies that they are stationary after the first difference. It also suggested that all the series are integrated of order 1. Since the series are stationary, hence, further time series analysis like cointegration test can be conducted.

**Table 5.** Johansen cointegration test

Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.698189	92.03700	69.81889	0.0003
At most 1 *	0.611923	57.29633	47.85613	0.0051
At most 2 *	0.417355	29.84634	29.79707	0.0493
At most 3	0.320944	14.18120	15.49471	0.0781
At most 4	0.096930	2.956697	3.841466	0.0855

The table 5 indicates three cointegrating equations are significant at 5% level and their trace statistic values are greater than their corresponding critical values which means that there is existence of cointegration among the series and this suggest a long run relationship between

forensic accounting and financial performance growth of MTN in Nigeria.

**Figure 1:** Graph of MTN financial performance and forensic accounting indicators

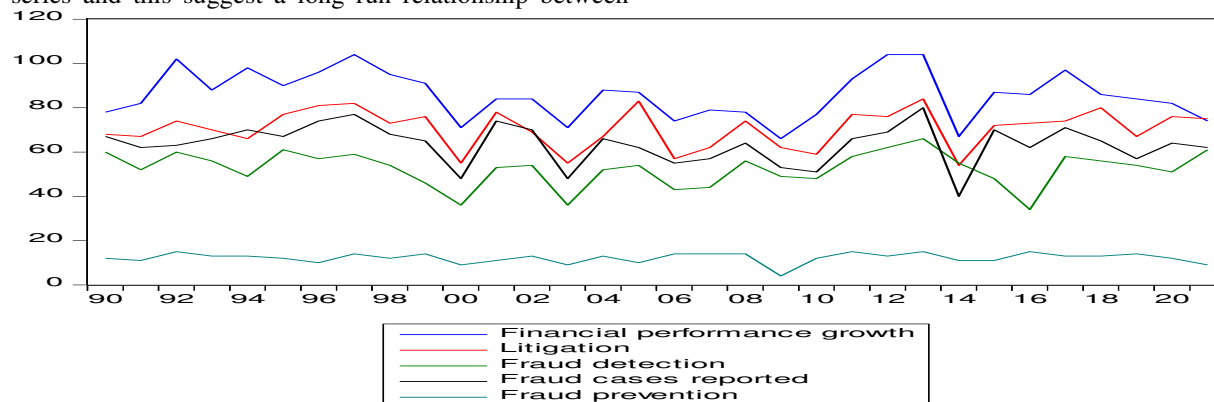


Figure 1 shows the graph of MTN financial performance and forensic accounting indicators (litigation, fraud detection, fraud cases reported and fraud prevention).

The financial performance growth is seen to have the highest but fluctuating growth pattern from 1990 to 2021 being the period under review with fraud prevention having the lowest fluctuating growth pattern.

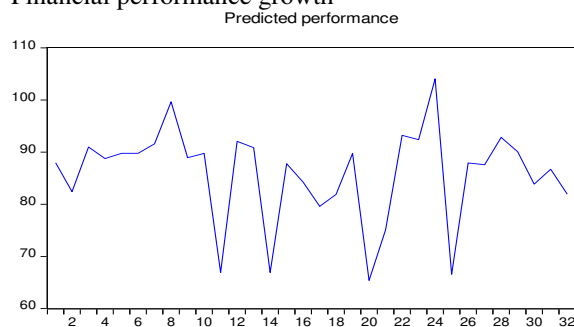
**Figure 2:** Graph showing the future prediction of Financial performance growth

Figure 2 reveals the graph showing the future prediction of Financial performance growth of MTN mobile communication and we can see that the prediction is very close to the actual value with no volatility clustering and this implies that the future financial performance growth of MTN Nigeria is constant with no fear of future collapse in their financial performance growth.

### Diagnostic test

**Figure 3:** Normality test**Table 6.** Multicollinearity

Predictor variables	VIF
Litigation	3.46
Fraud detection	1.61
Fraud cases reported	3.33
Fraud prevention	1.17
Mean VIF	2.39

Source: Author's computation using EViews software

Table 6 shows that the variance inflation factor (VIF) of all the predictor variables are less than 5 ( $VIF < 5$ ) which indicate that the regression model does not suffer from the problem of multicollinearity.

**Table 7.** Heteroscedasticity and Autocorrelation

Test	Obs'R-squared	P-value
Heteroscedasticity	4.1489	0.3862
Autocorrelation	0.6495	0.7227

**Source:** Author's computation using EViews software

Table 7 shows that  $P > 0.05$  for both the heteroscedasticity and autocorrelation test which means that the regression model does not occur the problem of heteroscedasticity and autocorrelation. This also satisfy the ordinary least square assumption for the regression model. This make the model robust and very reliable.

### Conclusion and recommendation

Specifically, the primary goal of this research paper is to use forensic accounting instruments to predict the

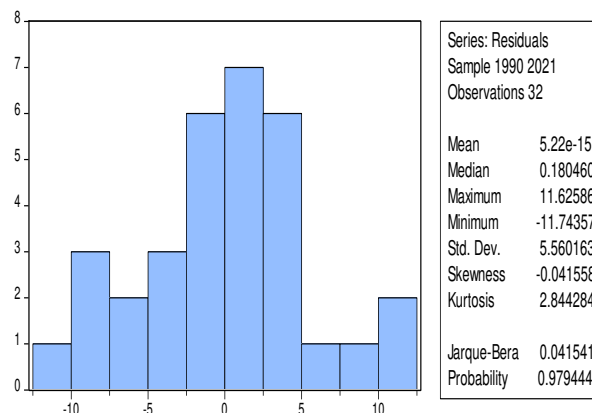


Figure 3 shows the normality test ( $P > 0.01$ ) using Jarque-Bera and we can see that the residual error is approximately normally distributed at 1% level of significant. We can also see that from the statistics that skewness approaches zero while kurtosis is approximately 3 which also indicate that assumption of normality is satisfied.

financial performance of MTN mobile communication in Nigeria and the growth of its financial performance. The descriptive statistics reveal that MTN's financial performance increased by approximately 86 per cent, which is consistent with the reality because MTN Nigeria benefited greatly from the covid-19 pandemic situation and has experienced an unusual increase in subscribers, propelling them to the top of the telecommunication market leaderboard which is very consistent with NCC (2021) report. The regression model demonstrates that forensic accounting indicators such as the number of reported fraud cases and the level of fraud prevention have a positive and statistically significant impact on the financial growth of MTN. The implication of this is that timely reporting of fraud cases to a regulatory body such as the EFCC, followed by prompt action to prevent fraud will ensure that MTN continues to achieve consistent financial performance growth which support the works of Chariri (2019) and Brown, Aiken, and Visser (2020). While this is happening, the regression model is significant, indicating that there is a statistically significant relationship between forensic accounting and the financial performance growth of MTN mobile



communication. It is because all of the model assumptions were met that the coefficient of determination (R-squared) is relatively large, making the model very robust and suitable for predicting the financial and economic growth of MTN Nigeria.

However, the Johansen cointegration test was used to conduct the cointegration test, and the results indicate that there is a long-term relationship between forensic accounting and financial-economic growth. The forecasting of future values of financial performance

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