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ECONOMICS OF FRAUD AND FORGERY IN DEPOSIT MONEY BANKS IN ILORIN METROPOLIS, NIGERIA

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Abstract

This paper investigates the relationship between attitudinal factors and product services or technologies responsible for fraud and forgery in bank operations and transactions for banking public. The research design is a case study and uses survey and descriptive approach. A structured questionnaire was used for data collection and a simple random sampling technique was employed to draw 10 deposit money banks out of 14 deposit money banks in Ilorin metropolis that constituted the population frame for the study. A total number of 100 respondents made of both bank staff and customers of the banks were randomly drawn from 10 deposit money banks that constituted the sample frame. Descriptive statistics, Pearson Product Moment Correlation Coefficient, t- test statistics and coefficient of variation were used investigate the level of variability and strength of association between the attitudinal factors and product services/technologies. From the hypotheses testing, the difference in the means of the variables using Pearson Product Moment Correlation coefficient and t- test statistics showed that t-test value was statistically significant (t-test value =7.515) and correlation coefficient was (r = 0.242). The result reveals that there was a weak linear relationship between the variables. However, both the attitudinal factors and product services/technologies induced fraudulent practices in the banking industry. It was concluded that the hypothesized attitudinal factors have domineering influence in stimulating and inducing frauds and fraudulent practices in the industry than the product services or technologies. The study recommended that bank staff must be trained and retrained on frauds /forgeries prevention.

Keywords: Banking, fraud, forgery, attitudinal factors, product services and technologies

Introduction

The issue of fraud and forgery in human society is as old as human genealogy. Fraudulent practices in economic transactions have grown beyond time and the level of technology in human history. Oxford (1948) defined fraud as the crime of cheating to get money or goods illegally, while forgery is seen as a crime of coping money, documents, faking a piece of paper money or documents to cheat. Your Dictionary (2016) posited that electronic fraud and forgery is an online trickery or deception to cheat or steal money or goods using e-banking (i.e. electronic banking). Awelewa (2016) reported that payment platforms have been strengthened today through plethora of alternatives namely: online payment services, electronic bills payment (internet banking), wire transfers, direct credit, direct debit, debit cards, credit cards and good old cheques (negotiable instruments).

Adelabu (2016) investigated that electronic payment technologies have received a serious and rapid transformation and development, but these technologies have been abused by "bad guys"

resulting into monumental fraudulent activities on banks and customers alike. The incidence and spate of sharp and irregular practices in banking industry in Nigeria, in recent time is worrisome and distasteful to macro-economic environment. FITC (2019) noted that fraudulent activities were perpetuated through different channels such as the ATMs, Web, mobile banking platforms, Bank branches, POS (Point of Sales) terminals and agent banking channels.

The sector is one of the most expanding and vibrant sectors of Nigerian economy. However, despite the above scenario, our economic activities are highly and largely cashing based economy that has made banking industry being confronted with compendium of manipulations and deceptions (Appah, 1998). FITC (2020) revealed in the report of 2020 that forgeries return of banks in that year showed an increase in number of fraud cases reported and total amount involved in fraudulent activities.

Tade (2021) found that frauds attacks on deposit money banks increased year in, year out in the industry although the actual monetary lost dropped in 2019 as against 2018. He claimed further that technology mediated transactions such as the use of automated teller machines and internet-based transactions experienced the most frauds. On the contrary Adelabu (2016) again observed that electronic payments and usage in Nigeria has contributed US$460 million to Nigeria gross domestic product (GDP) from 2011 to 2015. He reported that growth in electronic payments system would snowball Nigeria into digital economy making electronic transactions to play a role in our financial system. The industry has the obligation of making the sector more socially responsible financial system which would stimulate growth and creativity in the economy (Articlesng, 2015).

Fraud is seen as a negative catalyst in the banking industry (Akindele, 2011). Frauds and forgeries have reached alarming proportions in the industry today, even the apex bank (i.e. Central Bank of Nigeria) is not left out in the epidemic of fraud and forgery (Channel News, 2016). However, the apex bank introduced the use of Bank Verification Number (BVN) to check frauds and fraudulent practices in the financial sector of Nigerian economy. FITC (2017) pointed out that operators in the industry believe that Nigeria banking system is fragile and marginal in terms of operation, capital base and best global practices. Inadequate capital base stand to undermine and snowball banks into undue pressure to engage in sharp and irregular practices as a way of survival (Soludo, 2004**).**

Adelabu (2016) claimed that frauds and forgeries are attitudinal behavior which affects personality development of affected individual. According to (Okoli, 2002) many psychologists include Sigmund Freud, Robert Havighurst, Piaget and Erickson have developed theories on personality development and have shown that human beings developed faulty personality at their 'phallic' stage (i. e. stage of identity). Hence, fraudulent behavior is seen as behavior difficulty which requires behavioral modification that focuses on behaviors that can be observed and measured.
Many studies (Adewumi, 1986; Ajomale, 1990; Appah, 1998; FITC, (2016 – 2021); NDIC, 2014a; Nwankwo, 1992; Olufidipe, 1995; Owho, 2005; Ozigbo, 1997; Soludo, 2004., Unugboro & Idolor, 2007) have been conducted on fraudulent practices but most of these studies did not examine the relationship between the attitudinal/behavioral factors and bank product services or technologies as determinants responsible for fraud and forgery in deposit money banks. FITC (2019) reported

that in the first quarter of 2019, a total of 11,356 cases of frauds and forgeries using ATM, computer/web and mobile banking were recorded as against 11,318 reported cases in the 4th quarter of 2018 representing 0.34% increase. However, FITC (2020) noticed that 18,326 fraud and forgery cases were reported using ATM, computer/web and mobile banking in the first quarter of 2020, compared to 13,922 reported cases in the 4th quarter of 2019 representing 31.63% increase. It is against this backdrop, that the study examines the relationship between hypothesized attitudinal factors and product services/technologies as a springboard to gain insight into the causes of frequent frauds and forgeries in the banking industry.

The study contributes to helping regulatory authorities and banks on how best to manage frauds and forgeries in the banking industry and to arrest the level of deterioration and distress nature in the condition of banks.

Literature Review

Conceptual Review

Conceptually, fraud and forgery in banking industry could be summarized as theft, embezzlement, stealing, sharp and irregular practices, suppression, fraudulent substitution, payment against unclear effects, unauthorized lending, lending to ghost customers, kite flying and cross firing, unofficial borrowing, foreign exchange malpractices, impersonation, over invoicing, manipulation of vouchers, fictitious contracts, fictitious account opened, under valuation of properties, false declaration of cash shortages and assets, fraudulent use of status reports, issuance of draft without cover and duplication of cheque books (Owho, 2005). Irregular practices are therefore dishonest acts which are clouded with criminal intention to steal, cheat and deceive individual or organizations. Forgery is seen as mainly falsification or manipulation or alteration of documents. Elements of forgery include fake writing and alteration of an instrument, defrauding instrument, or intent to defrauding (Owolabi, 2010). Criminologists believe that there are three major elements responsible for fraudulent act. They are called" WOE" W= refers to the fact that for fraud to occur, there must be a will. O= refers to opportunity. Fraud occurs if the opportunity to commit the fraud is available E= refers to exit or escape route from relevant institutions or sections that are against fraud or related deviant behavior (Idolor, 2010).

Most of the frauds in banking industry in Nigeria today are perfected on the services using computers and mobile cell phones. According to Ololade et al. (2020), fraudsters employ seven tactics of deception to defraud their victims. They are: masking (Hiding and destroying critical evidences/information), Dazzing (Disguising critical information), Decoying (Distracting the victims attention from critical information), Mimicking (Assuming somebody's identity or impersonating someone else), Inventing (Making up information), Relabeling (Misleadingly presenting information) and Double Play (Suggesting to the victim that the victim is taking advantage of the deceiver).Ololade *et al* (2020) reported that Phishing, Skimming, SIM Swap and Account take over are means use on the channels of electronic payments to defraud public bank account holders. Economists and professional bankers regard fraud as a leakage in the system.

Theoretical Framework

Frauds and forgeries constituted a systemic risk in banking industry. System model is one of the approaches that explained failure of banking system due to insolvencies leading to financial crisis. System risk model is associated with economic shocks such a market or institutional failure that triggers panic or otherwise, or a chain of significant losses to financial institutions (frauds and forgeries), or financial market price volatility in which distress of one of the institutions endangers the rest of the financial system (Keregero & Mcmillan, 2021). Systemic risk model is made of two components that explain financial failures or crisis in financial system or markets. They are basic and contagious defaults. Basic default explains initial random shock effects to the point of failing of one financial institution while contagious default transmits negative effects to other financial institutions in the financial system. Basic default is systemic risk of a single financial institution (Acharya et al, 2010; Andrian and Brunnermeier,2016; and Tarashev et al, 2010) while contagious default influenced other institutions in the financial system (Huang et al, 2011; and Illing and Liu, 2006).

Review of Empirical Studies

Empirically, most extant literatures focused on causality factors to analysis frauds and fraudulent practices in Nigerian banking industry. Owho (2005) posited that operational inefficiency has been identified as the major cause of frauds and forgeries in banks. Tade (2021) reported that the role of insiders particularly all cadres of staff were mostly involved in frauds and majority of those involved were temporary staff. Examining the trend in 2000s, frauds and forgeries have taken a sophisticated dimensions arising from cybercrimes to manipulation of technological product services or lines offered by banks. CBN (2015) reported that the key operational risk of banks were incidence of frauds and forgeries, disruption of banking activities during fuel crisis and slow implementation of the Bank Verification Number scheme (i.e. unique identifiers) and insecurity in some parts of the country. However, most of these studies never examined the relationship between causality factors (i.e. attitudinal factors) and product service technologies used by banks to facilitate payments and remittances. The novelty of this study which made it different from most other empirical studies in Nigeria that investigated frauds and forgeries in Nigerian banking industry, was that the study used Pearson Product Moment Correlation Coefficient (PPMCC), t-test statistics and coefficient of variation to examine the relationship and variability between attitudinal factors and product services/technologies as variables that stimulate and motivate fraudulent and sharp practices in Nigeria banking public.

Frauds and forgeries started to manifest significantly in Nigerian banks in early 1990s (i.e. 1991-1996) which later became endemic component of Nigerian banking and financial system (Appah, 1998).

Frauds and Forgeries Ecosystem in Nigerian Banking Industry

Table 1: Banks Staff Involved in Frauds and Forgeries

Status	2008		2009		2010	
	No.	%	No.	%	No.	%
Supervisors & Managers	48	15.33	94	14.32	92	25.77
Officers, Accountants & Executive Asst.	127	40.58	137	20.88	79	22.13
Clerks/Cashiers	48	15.33	200	30.49	115	32.22
Typist, Technician Stenographers	20	6.39	64	9.76	23	6.44
Messengers, Drivers, Clerks, Security Guards etc.	-	-	11	1.68	15	4.20
Temporary Staff	70	22.37	150	22.87	33	9.4
TOTAL	**313**	**100**	**656**	**100**	**357**	**100**

Source: NDIC Annual Reports, Bank Returns (2014a).

A total of 357 members of banks' staff were reported to be involved in frauds/forgeries in 2010, which is a decrease of about 45.58% when compared with year 2009 when it was 656 staff. The total core operation staff such as Supervisors, Officers, Accountants, Managers, Executive Assistants, Clerks and Cashiers total 286 accounting for above 80.11% of the category of staff were involved in frauds (NDIC,2014a). From 2015 onward, fraud cases in banking industry have taken a different dimension. FITC (2017) reported that electronic frauds contributed 80.41% to the total amount that was lost to fraud in 2017 and suggested that banks should pay attention to their security system in particular and expand counter frauds strategies on electronic payment platforms. On the other hand, FITC (2018) reports claimed that a total of 67 quarterly returns were received from 24 deposit money banks on incidences of frauds and forgeries during the last quarter of 2018. Tables 2 and 3 below showed the profile with respect to the incidences of frauds and forgeries.

Table 2: Analysis of Frauds and Forgeries in Nigerian Banking Industry Quarter Ending 2017 and 2018

	2017	**2018**
Total Cases Reported	6233	11,318
Amount Involved	N4,240,845,904.59	N9,799,817,216.49
Amount Lost	N1,101,639,419.98	N8,490,476,463.41
Outsiders Involvement	3813	6454
Insiders Involvement	324	176
Number of Staff Terminated	40	87

Source: FITC Annual Reports on frauds and forgeries in Nigerian Banking Industry for the 4th Quarter Ending 2017 and 2018.

Table 3: Number of Cases of Frauds and Forgeries through Various Payment Channels as at Quarter Ending (2017 and 2018).

Channel	2017	2018
Website	1400	3340
ATM	3038	5219
Bank Branch	339	337
Mobile	1240	2240
POS	147	180
SPECIE VAN	0	0
Agents	69	2
Total	**6233**	**11318**

Source: FITC Annual Reports on frauds and forgeries in Nigerian Banking Industry 4th Quarter (2017/2018).

From 2016 to 2020 the dimension of fraudulent practices in the banking industry changed due to dynamics of the economy and COVID-19 response. Frauds increased in three parameters use in payment channels. These are ATM withdrawals, Mobile banking, and POS (Point of Sales). Total amount lost to frauds through ATM withdrawals and Mobile banking increased by 15.67% and 37.39% respectively. A sum of N6.3 million was lost to frauds through POS (FITC, 2019). FSR (2020) and (NeFF, 2016) sustained efforts at reducing the incidences of frauds, enriching the quality of regulatory reports by banks and payment service providers as well as improving time taken to conclude investigation, prosecutions, and adjudications of reported e-frauds. However, with this above scenario, in 2019 volume and value of frauds and forgeries in 2019 a total of 11,356 cases were reported in the first quarter of 2019 compared to 11,318 reported cases in the fourth quarter of 2018, indicating that reported cases of frauds in the banking industry increased marginally by 0.34 percent between the periods. The most prevalent type of frauds during the period included ATM withdrawals, Computer/Web frauds and Mobil banking frauds (FITC, 2019).

Table 4: Analysis of Frauds and Forgeries in Nigerian Banking Industry Quarter Ending 2018 and 2019

	2018	2019	PERCENTAGE
Total Cases Reported	11318	11,356	0.34
Amount Involved	N9,799,817,216.49	N3,856,950,614.87	(60.64)
Amount Lost	N8, 490,476,463.41	N379, 032,127.62	(53.32)
Outsiders Involvement	6454	6291	(2.53)
Insiders Involvement	176	196	11.36
Number of Staff Terminated	87	90	3.45

Source: FITC Annual Reports on frauds and forgeries in Nigerian Banking Industry for the 4th Quarter Ending (2018) and (2019).

FITC (2019) claimed that in 2019 fraud cases decreased significantly to N3.85 billion naira from initial N9.79 billion naira, thus indicating a 60.64 percent fall while amount lost to frauds incidences also plummeted by 55.38 percent (that is N3.79billion naira in 2019 as compared to N8.49billion naira reported in 2018 quarter ending). Moreover, in 2020, FITC (2020) also said that fraudulent activities increased by 31.63% compared to 2019 quarter. The most prevalent types of frauds during this period included ATM withdrawals, Mobile banking, computer web frauds and other fraudulent withdrawals. It was further reported that a total amount involved in fraud cases increased by 102.25% to N8.39billion naira in 2020 from initial N4.15billion naira in 2019. It was noticed that channel of payments such as ATM, Web, Mobile banking platforms, Bank branches, POS (Point of Sales), cash and cheques were instruments of payments mostly used by fraudsters.

Table 5: Analysis of Frauds and Forgeries in Nigerian Banking Industry between First Quarter Ending 2019 and First Quarter Ending 2020

	2019	2020	PERCENTAGE
Total Cases Reported	11,356	18,326	1.37
Amount Involved	N3, 856,950,614.87	N8, 399,594,513.28	117.78
Amount Lost	N379, 032,127.62	N719, 481,304.71	89.82
Outsiders Involvement	6291	6833	8.62

Insiders Involvement	196	122	(37.76)
Number of Staff Terminated	90	46	(48.89)

Source: FITC Annual Reports on frauds and forgeries in Nigerian Banking Industry for the 1st Quarter Ending (2019 and 2020).

Table 6: Number of Cases of Frauds and Forgeries through Various Payment Channels as at Quarter Ending 2019 and 2020

Channel	**2019 (CASES)**	**2020 (CASES)**	**PERCENT CHANGE**
Website	2573	2751	6.92
ATM	7026	9785	39.27
Bank Branch	1219	957	(21.49)
Mobile	2701	4371	61.83
POS	402	462	14.93
SPECIE VAN	0	0	0
Agents	1	0	100
Total	**13,922**	**18,326**	**31.63**

Source: FITC Annual Reports on frauds and forgeries in Nigerian Banking Industry 4th Quarter (2019/2020).

Methodology

The study was conducted within Ilorin Metropolis, the Kwara state capital. The survey type of descriptive research was adopted for this study. Structured questionnaire was designed as an instrument used to collect necessary data for the study. The questionnaire contained item statements for each of the variable being considered for the study. The expected responses from the respondents were structured along 5-type Likert scale as follows: SA (Strongly Agree), A (Agree), U (Undecided), D (Disagree) and SD (Strongly Disagree). They were graded 5-1 in that order. This was explained to the respondents. The population of the study comprised the list of all 14 deposit money banks in Ilorin metropolis and it also represents the researcher's population frame.

Simple random sampling technique was used to draw the 10 deposit money banks from the 14 deposit money banks to represent the sample frame. All the banks are within Ilorin metropolis, Kwara State. Ten (10) respondents each was randomly selected using simple random technique from each of the 10 sampled banks. The respondents were made up of both the banks' staff (bank managers, heads of banking operations, cashiers, customer services officers and messengers as well as bank customers. Negligible margins or differences were seen in the total numbers of staff and customers among the sampled banks. The respondents were served with questionnaire without prejudice to their social status. This gave a sample size of 100. The rate of return of the questionnaire was 100%. This was due to personal involvement of the researcher in the administration of the questionnaire.

Data was analyzed using descriptive statistics such as frequency, means, percentages, co-efficient of variation and standard deviation to measure the proportion of responses to the variables used. Descriptive and inferential statistics were used in estimating the relationship between the variables used in the study. Validity of the research instruments used indicated that instruments measured what intended to measure using statistical tools and structured questionnaire/oral interview. Uzoagulu (1998) stated that Cronbach alpha is a unique estimate of the expected correlation of one instrument with an alternative form composed of the same number of items. The Cronbach alpha reliability coefficient was 0.6 for attitudinal factors and for product services /technologies was 0.4. The 0.6 indicated a moderately high correlation to incidence of frauds/ forgeries while 0.4 was moderately low correlation. This was a credence to instruments reliability; hence data were obtained for investigation. The t – test statistic was used to estimate the significance of the means of the variables (causes or factors) that influence and induce frauds and forgeries and product services or technologies that are used for bank transactions or operations. The difference between the two-population means was investigated to determine whether they affect or influence each other inducing frauds and fraudulent practices in the industry.

$$t_{\alpha/2} = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \quad \text{----------(1)}$$

Where:
$\bar{x}_1$ = Sample mean of causes of fraud and forgery
$\bar{x}_2$ = Sample mean of product services or technologies
s_1 = Sample standard deviation of causes of fraud and forgery
s_2 = Sample standard deviation of product services or technologies
n_1 =Sample size for causes of fraud and forgery
n_2= Sample size for product services or technologies
$\bar{x}_1 - \bar{x}_2$ = Point estimator of the difference between the two independent sample means
t = t- test statistic and $\alpha/2$ = measures the critical region or value of two-tailed test.

The preference for the use of t-test is supported with the observation of (Nwogu, 1991; Uzoagulu, 1998 and Anderson *et al.,* 2009) that when the sample size becomes sufficiently large, the t-distribution tends to coincide with the z- distribution which is for large sample. The t distribution provides excellent results and is relatively easy to use. That t-test can as well be used for large sample just as z-test can be used for small sample.

Likert scale rating was used to obtain dichotomy of opinions on the variables. Each level was assigned a number ranging from 5 (SA) to 1 (SD) with 3.0 computed mean. It means that any factor or variable with 3.0 or above may be regarded as positive while all others with mean below 3.0 are regarded as negative in rating the opinions of the respondents (Uzoagulu 1998). Correlation coefficient r (Pearson's product movement) was used for the sample to measure and determine the level of relationship between factors responsible for frauds and forgeries and product services or technologies.

$$r_{xy} = \frac{n\sum xy - \sum x \cdot \sum y}{\sqrt{[n\sum x^2 - (\sum x)^2] \times [n\sum y^2 - (\sum y)^2]}} \quad (2)$$

The direct values of x and y are used to measure the correlation coefficient.

Where:

r_{xy} = Correlation coefficient to estimate x and y.

x = Attitudinal factors hypothesized for responsible for fraud and forgery.

y = Product services or technologies automated for banking transactions.

n = Number of observations for the sample.

The coefficient of variation which is a relative measure of dispersion was used to compare the level of variability between the attitudinal factors hypothesized and product services or technologies used for banking operations. Coefficient of variation model used:

$$\text{Coefficient of variation (CV)} = \frac{\text{Standard deviation}}{\text{Mean}} \times 100\ \% \quad (3)$$

Results and Discussion

Analysis of Relationship between Attitudinal Factors and Product Services/Technologies

The correlation coefficient (r) was used to measure the strength of relationship between the causes of fraud and forgery and the product services or technologies. Two sets of hypotheses were tested. The first one with respect to the correlation coefficient (r) at 5% level of significance while the second one with respect to the difference in the sample means of the two observations using t-test statistic was also at 5% level of significance. This is presented in Tables 7 and 8.

Table 7: Output for Paired Samples Statistics and Sample Correlation Co-efficient Results

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Attitudinal Causes	41.0400	100	11.13546	1.11355
Product Services or Technologies	51.0400	100	10.46777	1.04678

	N	Correlation
Pair 1Attitudinal Causes of fraud and Product Services	100	0.242**

Source: SPSS (Version 21.0) Data Analysis on Field Survey, (2019).

** Correlation coefficient significance at 0.05 levels. To test the value of correlation coefficient (r = 0.242), the following hypotheses were set at 5% level of significance.

Hypothesis 1

H_{O1} : There is no relationship or variability between the variables (unrelated), (H_O : p =0).

The p- value of (0.015) is less than the significance level of 0.05 (5%). The null hypothesis was rejected. The conclusion was to accept the alternative hypothesis (H_1) that there was a positive relationship between the variables but a weak or no linear relationship. This implies that there was no strong positive correlation between attitudinal factors and product services or technologies; hence their influence on each other is mutually exclusive with respect to incidence of fraud and forgery in the sector.

Hypothesis 2

H_{O2}: There is no difference between the sample means with respect to attitudinal factors and product services/ technologies.

Table 8: Paired Samples Test (2 tailed Test) Output for the Causes of Fraud and Product services or Technologies, Rating Hypothesis test

	N	Mean	Std.Deviation	Std. Error Mean
Rating	100	-10.0000	13.30603	1.33060

Pair 1 Causes of fraud – product services			Sig:2-tailed	95% Confidence interval of the difference	
	T	**Df**		**Lower**	**Upper**
Rating	-7.515	99	0.000**	-12.6402	-7.35979

Sources: SPSS (Version, 21.0) Field Survey, (2019).
** Significant at 5% level.

Table 8 shows a two- tailed test of α /2 =0.025 in each tail of the distribution. The p- value was zero, which was less than 5% level of significance (critical value). The absolute value of t- test statistic is (7.515) and highly significant at 5% level. The null hypothesis (H_O) thereby was rejected. The conclusion was that there was a difference in the means of attitudinal factors and product services or technologies. We are 95% sure that there was a difference in the means. The degree of association between the variables was weak or even absence. The standard error of (13.3060) showed that the sample means had a high probability of being a good estimate of the population mean (μ). The analysis evidenced that, though the variables act independently, the level of frauds and forgeries in the banking industry depend on hypothesized attitudinal factors and the product services/ technologies. Both variables independently, have significant contributions to incidence of frauds and forgeries in the industry.

Comparing of the Degree or Level of Contributions to Fraud and Forgery

The Coefficient of Variation (VC) was used to measure and compare the level of contribution or variability between attitudinal factors and product services or technologies. Sample means and sample standard deviations (see table 8) were adopted to examine how large the standard deviations are relatively to sample means of the observations. The attitudinal factors constituted 27.13% variability which means that sample standard deviation is 27.13% of the value of the sample mean with respect to causes of fraud and forgery while that of the product services or technologies constituted 20.51% variability.

Even though, the former has a higher standard deviation in absolute terms, its dispersion or variability is also higher in relative term than the latter. Attitudinal factors had critical dimension in terms of their output and variability in inducing frauds and fraudulent practices in the industry than the product services or technologies. Moreover, both are significant in explaining the variation in the level of frauds and forgeries in the sector.

Descriptive Statistics of Constraints to Prevention and Control of Fraud and Forgery

Means and standard deviations of hypothesized factors (i. e. causes) responsible for fraud and forgery and product services or technologies were discussed in the tables 9 and 10. Table 9 shows factor analysis with respect to attitudinal or behavioral variables that are responsible for inducing frauds and forgeries.

Table 9: Output for Means and Standard Deviations of Attitudinal Hypothesized Factors

S/N	Attitudinal factors of Frauds and Forgeries.	Mean ($\bar{x}$)	S. Deviation (S.D)
1.	Inefficient operational procedure	3.7	1.3
2.	Greed	3.6	1.3
3.	Bank staff- Customer collusion	3.3	1.5
4.	Inadequate staff training/incompetency	3.0	1.4
5.	Poor records keeping	2.6	1.4
6.	Poverty/infidelity of staff	3.1	1.5
7.	Poor welfare package for staff	3.3	1.3
8.	Unofficial borrowing from bank managers	3.5	1.4
9.	Foreign exchange manipulation	2.8	1.5
10.	Suppression/concealment of frauds	3.1	1.5
11.	Unprofessional female staff for marketing	2.9	1.4
12.	Political pressure from government officials/politicians.	2.8	1.5

Source: Field Survey, (2019)

Table 9 showed the ranking status for the variables or factors of frauds and forgeries with respect to their means ($\bar{x}$). Five (5) points likert–type scale was employed to determine the factors that were considered positive or negative of fraud and forgery. The computed 5 - point Likert scale mean was 3.0 and the same was compared with the samples mean ($\bar{x}$). Factors or variables with 3.0 or above were considered positive while others with a mean below 3.0 were considered

negative causation. The Table presented nearly all the factors are positive, significant and consistent in responsible for the causes of fraud and forgery in the industry. However, the most prominent and pronounced among the factors in terms of ranking were inefficient operational procedure which had the highest ranking (3.7), then greed of staff- customer (3.6) and thirdly by unofficial borrowing from bank managers (3.5). The bank staff- customer collusion (3.3) and poor welfare package for staff (3.3) also ranked next. These factors were closely related in terms of ranking which also underpinned the fact that the factors were responsible for incidence of frauds and forgeries. Other factors that were of mean values of 3.1, 3.0, 2.9 and 2.8 in their magnitudes were significantly positive inducing frauds and fraudulent practices.

Table 10: Output for Means and Standard Deviations of Product Services or Technologies use in Banking Transactions and Operations

S/N	Product services/technologies.	Mean ($\bar{x}$)	S. Deviation (S.D)
1.	Electronic cards (ATMS) [e- banking]	3.5	1.5
2.	Negotiable instruments (e.g. cheques, drafts, money transfers etc.)	3.5	1.3
3.	Issuance of license financial intermediaries to provide financial services	3.0	1.4
4.	Bank Verification Number (BVN)	2.5	1.4
5.	Mobil payments (e.g. GMS, Telex, Telephone, Internet pay pad etc.) (Internet Banking)	2.4	1.2
6.	Large value payments (e- banking)	2.9	1.4
7.	Cleaning system	3.0	1.4
8.	Counter or desk services (Anti – Fraud)	2.7	1.5
9.	Electronic fund transfers (e-banking)	3.2	1.5
10.	Credit risk (loans/ advances)	3.5	1.5
11.	Letter of credit	2.9	1.4
12.	Bill of exchange	3.2	1.4

Source: Field Survey (2019)

Table 10 showed that some of the variables by their mean values were the same or above the computed Likert scale mean value of 3.0 with exception of Mobile Payment (2.4), Bank Verification Number (BVN), (2.5), Large Value Payments (2.9), Counter or Anti - fraud Desk Services (2.7) and Letter of Credit (2.9). The positive values of these measured variables clearly showed that they were vulnerable and prone to frauds and forgeries in the course of using them for banking transactions and operations. Product Services such as Automated Teller Machines (ATM) (3.5), Negotiable Instruments (3.5) and Credit Risk (3.5) have the highest ranking. This evidenced that ATM, Negotiable Instruments and Credit Risk were the major stimulant in inducing frauds and fraudulent act in banking industry today. This is due to the preference for these products or technologies by the banking public.

In fact the credit risk which relates to loans and advances has created large volume and value of unauthorized lending of non-performing loans (i. e. toxin assets) in most banks arising from

fraudulently disbursed loans and overdrafts which affect banks' liquidity. The ATMs, Cheques, Drafts, Money Transfers and other Negotiable Instruments are sometime stolen and used to perpetrate frauds and fraudulent act. This has led to high incidence of frauds and forgeries in the sector. The Bank Verification Number (BVN) and Mobil Payment are product services or technologies that have limited effect on the incidence of frauds and forgeries in bank transactions and operations. On the other hand, issuance of License to financial intermediaries (3.0), Clearing System (3.0), Electronic Funds Transfer (e-banking) (3.2) and bill of exchange (3.2) are positively significant in influencing the volume and value of frauds in the industry.

Findings

Based on the responses, views and opinions of the respondents using structured questionnaire with five-point Likert scale, the co-efficient of variation showed that the two-classified data (i.e. hypothesized attitudinal factors and product services or technologies) acted as motivating parameters and forces to induce fraudsters to commit frauds and forgeries. Inefficient operational procedures, greed, unofficial borrowing from bank managers, poor welfare package for bank staff, staff-customer collusion, suppression and concealment of financial instruments, poverty, and staff inadequate training and incompetence were significant in their ranking based on their averages or the means (See Table 9). Hence among all these attitudinal factors: greed, unofficial borrowing and inefficient operational procedures are most responsible for e-frauds and forgeries.

These are closely related to the means and ranks of the electronic card (ATM), Negotiable instruments, licenses given to financial intermediaries to operate financial services, electronic funds transfer, credit risk (i.e. lending) and bill of exchange (money market instruments) for short term lending to finance foreign exchange transactions (See Table 10). Both the attitudinal and institutional factors do influence and induce frauds and forgeries in the industry. However, Automated Teller Machines (ATMS), Negotiable instruments, and credit risk are major product services or technologies that have high financial vulnerability to frauds and forgeries. From the analysis all e-banking transactions and operations are susceptible to fraud and forgeries. Banking transaction today are highly based on e-banking technology (i.e. software foreign technology) and most financial institutions seem not having adequate control as well as checks and balances of these software technologies thereby resulting in operational and procedural inefficiency. This also has aided bank staff -customer collusion in fraudulent and sharp practice in the industry. This has hampered efficiency of the industry leading to deficient corporate governance, illiquidity, and a threat to staff retention in the system (that is the situation today in the industry –staff retrenchment). The large value payments system closely ranked with political pressure from government officials and politicians and the use of unprofessional female staff for marketing or deposit drive. This serves as propellant and induced factors for money laundering and financial "terrorism" resulting into fraudulent practices. These above factors do motivate greedy bank managers to engage in unprofessional and unethical banking practices. For instance, the recent attempt by some staff of the central bank of Nigeria CBN to defraud the apex bank of $100, 00.00 US dollar is an example of greed among the staff (Channel News, 2016).

With letter of credit and bill of exchange representing foreign exchange transaction having of 2.9 and 3.2 revealed the level of susceptibility of the product services to frauds. There is an indication here, that foreign exchange allocations are subject to manipulation, frauds and diversion to parallel market which could account for hoarding of the hard foreign currencies thereby creating bottleneck

and uneasiness for the exchange rate regime. The Bank Verification Number (BVN) and Mobil payment system (e.g. GSM, internet, telex, telephone etc.) are having low means (see table 10). This evidenced that these product services are efficient in tracking down fraudulent practices in the system.

Conclusion and Recommendations

Conclusively, the study reveals that attitudinal factors and product services/technology are significant and they have the capacity in inducing fraud and forgery in the industry. They are major stimulants and propellants to incidence of frauds. However, their influences on fraudulent activities are seen at a different level of variability and proportions. The relationship between them is a weak or no linear relationship which implies that both variables are nearly mutually exclusive, and they act independently in inducing fraud and forgery.

Based on the findings, the followings recommendations were made:

i. Banks staff need adequate training and retraining of staff at every level towards understanding the intricacies of latest software technologies or product services or lines for banks' transactions.
ii. Bank staff and their lifestyles after work and during the office hours must be closely monitored by the management to maintain a lifestyle or standard of living that conforms to their streams of income.
iii. Moreover, recruitment programs of staff into the industry should meet the global best practices.
iv. Procedural operations and routines must be subjected to checks and balances. To strengthening the operational efficiency and procedures, most banks need to improve on technological financial services (i.e. or product services) to check cyber and other related financial crimes (NDIC, 2014b).
v. Regular 'call over' of the audit trail (i.e. records keeping) of the daily banking transactions must be handled by senior officers and the same checked by the branch operation managers, to forestall fraudulent transactions.
vi. Welfare package of staff should be improved through social welfare and security programs of the bank.
vii. Concept of 'KYS' or 'KYC must be sustained by the management. The 'KYS means Know Your Staff while 'KYC' means Know Your Customers.
viii. Banks must work within the framework of (Hibers*et al,* 2000) described as CAMELS framework to safeguard their customers' liabilities and bank assets. This framework looks at six important aspects of a financial institution. These are Capital adequacy (C), Asset quality (A), Management soundness (M), Earnings strength (E), Liquidity sufficiency (L) and Sensitivity to market risks (S). The financial ratios that measure camels rating system will help to assess banking system's vulnerability to external shocks such as frauds and forgeries in the industry.
ix. Nigeria Electronic Frauds must be strengthened in areas of information gathering and resource sharing among the operators in the industry to reducing fraudulent practices.
x. Instrument of Bank Verification Number must be used by banks effectively to control frauds in the industry.

xi. Nigerian economic climate and its ecosystem must be improved to provide job opportunities for Nigerian teaming youth to stem the tide of frauds and forgeries.

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