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Regression Analysis of Deposits Pattern in Fidelity Bank Plc, Lagos

Okorafor[1], U., Ogunjirin[2], O., Lucas[3], B. O. Karokatose[4], G. B. and Martins[5] O. D.
Department of Statistics[1,4,5], Yaba College of Technology, Yaba, Lagos State, Nigeria.
Department of Social Sciences[2], Yaba College of Technology, Yaba, Lagos State, Nigeria.
Department of Educational Foundations[3], School of Technical Education, Yabatech., Nigeria.

Abstract
Effectiveness or ineffectiveness, success or failure of financial institute or banking systemdepends largely on contingentconsistency systems not being able to provide enough financial resources as a result of means low budget regulation ofpolicies,financial embezzlement leading to inadequate and supervision of economic changes. Therefore,these problems cause so many financial institutes or firm their reputation over the years. The least squares indicated an annual decrease in the deposits level each year. Secondary data was collected from Fidelity Bank. The major assumptions (linearity and additivity, statistical independence, homoscedasticity and normality of regression analysis were tested. There were variations in the data collected from the company, therefore, alternative hypothesis is rejected and it is concluded that there is no change in the deposits made over the period under consideration.From the analysis conducted, in which the method of least square was used. The regression model is Yt= 873.8 + 12.96t which indicates that in the absenceof deposits, the bank makes a profit of 873.8 million naira monthlywhile increase of a unit deposit produces 12.96 million naira profit.We recommend that concerted efforts should be made to ensure huge deposits for maximum profitability.

Key Words: *Deposits, Regression, financial institution, economic.*

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I. Introduction

Companies have different departments, all in a bid to meet the set mission and vision of the organization. Some of these departments are sales, supply, maintenance, production and so on. When such department as production is well positioned, the evaluation and sorting of quality output of the products of the organization is achieved. There are variations in the operations of companies and organizations. These are due to the business cycle and every organization has to phase all the four phases of a business cycle some time or the other. Prosperity or boom, recession, depression, and recovery are the four phases of a business cycle.Thus, these variations may be due to floods, famines, earthquakes, strikes, etc.

1.1 Problem Statement

Major bank operations centre around deposits of cash and withdraws of money. There is high competiveness in the banking sector. These pose severe challenge to the financial system of any organization. Several problems are encountered in these main activities of the bank. The amount of money in the deposit archive of these banks is always and at all times insufficient as the coordinating body, CBN will at one time or the other ask for an upward review of the deposits of banks.

1.2 Purpose of The Study

This research is to assess and evaluate the patterns experienced in the deposits made to these banks so as to look into the future for productive prospect. When the past is studied, the future can be evaluated and projected. Other stakeholders can make use of it in their forecasts.

1.3 General aim and objectives

The general aim of this study is to evaluate the cash deposits made to Fidelity Bank Plc, Lagos with these specific objectives

- Access the cash deposits for the past ten years
- Determine the increase or decrease in the cash deposits
- Determine the impact of cash deposits on the growth of the bank

1.4 Hypotheses Statement

Ho1: There is no increase in cash deposit charge.

Ho2: There is nochange in significant on the cash-deposit out-turn rate in the time series data.

1.5 SCOPE OF THE STUDY

This research focuses only on deposits of moneyin Fidelity Bank Plc, Lagos for a time frame of ten years.

1.6 LIMITATIONS OF THE STUDY

This research is faced with the challenge of the bureaucratic protocols of the banking system. This study is limited to Fidelity Bank Plc, Lagos. This research is limited to the deposits of money into Fidelity Bank Plc, Lagos.

1.7 Significance of The Study

This research is of great importance to financial operators and managers. It will benefit the staff and managers of Fidelity Bank Plc, Lagos and all other managers of financial institutions. The planning and implementation of deposit process will be enhanced by this study.

II. LITERATURE REVIEW

Depositing money in a bank is a schematized process which must be followed according to laid down procedure. It is believed that without customers there will be no bank deposits. Also without human managerial effort and wizardry, there will be no profit, which is made by financial sectors of an economy.

According to Fidelity Bank Plc, Lagos, customers deposit manual volume one, the advantage of being continuous in line testing is that any unnecessary deviation from expected standard with result in the management being alerted so that corrective action can be taken immediately. Every financial management situation, from conceptualization to design, revolves around techniques of its' staff training, motivation, being able to interpret and analyse financial data available to them. To do this, it has to build up its own literature, language and concepts, and develop an overall management approach for the implementation of its principles. The principle of financial control based on the taking of random samples and the sampling distribution.

Inyama&Iheagwam (2015) writes, that the conceptualization can be applied to risk capital to the financing, risk management and capital budgeting decisions of financial institutions or firm, it is the aspect of financial management concerned with the classification, control and assignment of arranged data for the purpose of control and guidance of management.

Ngozi (2017) agrees that the statistical test has to be carried out on level of productivity of new approaches developed by financial firm geared towards attracting customers to verify their effectiveness. According to him, he said that financial firms and other business organizations should try to keep accurate information on data in order to ultimatum satisfaction of customersrequirements or wants through organisedactivities that would make the organization to reach its goals.Providing accurate information to customers in the major thrust of the performance concept as applied to banking activities as well as to other business organizations. With this information, business can create satisfying goods and services. The building blocks of financial engineering include traditional instruments, such as interest rate swaps. This is to create an effective maintenance, development system and efforts of improvement of the numerous groups in an organization or banking institutions to permit elastic performance at low budget to enable satisfaction to customers, since customers comes first before organization.

But right now, technical efforts to improve the level of cash-deposit from customers and investors are sound indicator of nation growth capability in process technologies. A number of firms professed to have a permanent interest in improving qualitative services, but their efforts were sporadic and no one was assigned responsible for this function.

Banks target youths, students in renewed deposit drive. In an attempt increase their market share and bring services closer to more customer segment. Nigeria banks have discovered a new business haven in tertiary institutions, where product exclusively designed for the youth are being marked. To win the market, banks are attaching some of the most tempting offers which they believe could swing the youth to their side.

It's revealed that the banks renewed interest in institution of higher learning was part of the strategy to rejuvenate their client ale base hitherto. Banks experts disclosed that this initiative of the emergence of youth account will go along way inculcating banking and saving habit in their potential customer. Fidelity Bank Plc, is among the three banks in Nigeria. Championing the development of students, youth's customers.

Work is done by virtually all firms at the final stage, to avoid problems with customers. It is also done by more than 80 percent of banks at the time of cash registering, and during the process of cash analysis for instance, in banking sector, visual cash analysis is used to make sure parts of process cash deposits is correct before the cash is assembled.

Ogunniyi (2017), "More knowledge of the total output cannot satisfy the needs of management". "For proper control and effective managerial decision, management is to analyse and classify out-puts". For this purpose, the total out-put is analysed by elements i.e. the nature of the expenditure. Any industry which desires growth must establish a system and a standard for its activities. The enterprise should compare actual results achieved with set out standard to know its' extent of progress; standard performance which an industry uses to set objectives for itself. Management work to meet these objectives following an observing set out standards. It then follows that for there to be a good performance system, the industry must draw its budgets of activities for a given period. It must set-out standard for the level of it's performance, and for the cost of working equipment as well as personnel needed to produce the estimated out-put unit.

Larry (2018) said that man created his problem, man can solve them. The position of financial sector today is that problems created by the government as the prime mover of the economy, can be solve by the government, if there is improvement in internal effectiveness, efficiency and accountability. Larry (2018), reviewing problems facing commercial banks product marketing, has summarizes that potential customers always pass through services of stages before reaching the decision of whether or not to keep their hard-earned money in the bank. And this decision taken by potential customers are the major problems facing commercial banks today.

Lapin (2017), said that the lesson of our past has established that as the financial sector is clamouring for governments acknowledgement of weak capital base, none can thrive in a chaotic policy environment occasioned by sudden and inconsistent changes in policy. He concluded that the prevailing economic recession caused by inadequate finance in the hands of individuals and corporate bodies has challenged banking sector to be more innovative and creative.

Sally (2019), said that rampant power failure deteriorating state of business growth, an archaic and inadequate communication system, chaos in the country" educational system, uncertainties in the political horizon and worsening situation of social security and other areas which adversely affect level of cash in-flow into commercial banks, thus denial of economic prosperity. The experience of emergent of industrial nation has demonstrated that active financial sector participation is a cardinal requirement for sustainable growth of the economy. In order for this to take place, there has to be a coherence of vision and policy instruments between the public and the financial sector of the economy. He concluded that the inability of Nigeria to establish this atmosphere of harmonious partnership has contributed a serious structural short-coming in the development process.

According to Ngozi (2017), she made mention that a steady growth in outputs of financial sector is the one of many ways developing nation can free themselves from economic strangulations by the industrialized countries. She also added that effective performance by financial sector is a way to eradicate bad policy, and suggested that to make the financial sector more productive, the following proved and tested points should be considered; staff adjustment whereby staff or workers are placed on the right job training and retaining of public sector staff to improve the quality of work, adoption of safety regulations in the work-place, equal attention should be given to the recognition of hard-work, less bureaucracy whereby it affects work in a negative fashion and limits performance. Above all, she concluded that Nigeria has every reason to be a productive nation given the abundance of human and material resources in her possession.

Akala (2018), called for aggressive people-oriented and implemented programmes in improving the dwindling performance of commercial banks in the economy. He argued that the nation's economy could be turned around on the path of growth that will guarantee Nigerians a high standard of living if only the populace can become more productive and efficient in managing their finance.

Lotus &Geottery (2017) traced the nation's poverty to it's inability to maximize its economic potentials. According to him, the nation's per capital income from $1,000 in 1980 to $260 in 1996 was a "classic paradox of wealth" and hinged the worrisome position on the present low output of the nation's workforce.

Emekwe (2015), opined that the processes involved in the modern scientific management of finance, begin with the process of designing to transform a targeted input element(s) into a specified set out put element(s) involves in scientific financial management

Nwachukwu, (2018) in viewing the recurring problems in most firms, he opined that most firms blames the manager for shortcomings while other department are quick to share credits for success directly attributed to performance.

Watson andHuntsberger (2013) opined that managers have limited contact outside the company while remunerations are poor and most of them have poorly furnished and cramped offices. The manager's function is even made more difficult because of relations with other departments. Work planning producing unworkable schedules, personnel employing people in considerations other than competence, quality control of cash in-flow and out-flow being unreasonable with set out specifications. Maintenance units doing a shoddy job and leaving you in the lurch. Work study being ignorant of shop-floor conditions and specification requirements not being their job and leaving one to sort out shortages. In spits of the disadvantages associated with financial firms, some managers (especially those who rose through the ranks from the shop floor) tend to derive satisfaction from their factual mastery of the aspect of the bank.

Nwachukwu (2018), in his article "Industry Development" said that one of the fastest growing industries in Nigerian economy is banking sector. In 1970, for example, only banking sector was in operation in Nigeria. Comparing it with the number in operation today shows a large percentage growth. These business set-ups, however produced several millions and billions of Naira in 1970. He latter viewed the factors that accounted for growth of the industry which he stated as follows. The political instability that engulfed in 1970 brought tension in the minds of many people. As a way of easing the tensions gripping them tightly, they accelerate their saving habit which necessitated the economic growth witness at that period time.

III. Source of Data Collection

The data for this research were gathered from secondary source.
Data were obtained from the financial analysis department of the company (Fidelity Bank Plc,Lagos). The data was for a period of one year.

3.1 Sampling Procedure

In choosing the sample for this study, the amount of cash-deposits per month was taken in each year. Three months of the year were taken as the quarter. Hence, Jan, Feb and Mar as the first quarter. April, May, June as the second quarter. July, Aug, Septas The third quarter. Lastly, Oct, Novand Dec as the fourth quarter.

3.2 Method of Data Analysis

The data collected were analyzed using Regression analysis approach.

IV. Data Analysis And Presentation

The data presented and analyzed as shown below is based on the data collected from secondary source as mentioned in chapter three previously and yet to be interpreted in the course of this analysis.

4.1 Data Analysis

X	Y	XY	X^2
98	3138	307524	9604
99	1795	177705	9801
100	1625	162500	10000
101	2894	292294	10201
102	498	58796	10404
103	1891	194773	10609
104	2876	299104	10816
105	2431	255255	11025
106	2070	219420	11236
107	2804	300028	11449
1025	22022	2267399	105845

$\sum x = 1025$, $\sum y = 22022$, $\sum xy = 2267399$

$\sum x^2 = 105845$, $n = 10$

$Yx = a + bx$ (Trend equation)

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2}$$

$$b = \frac{10(2267399) - (1025)(22022)}{10(105845) - (1025)^2}$$

$$= \frac{22673990 - 22572550}{1058450 - 1050625}$$

$$= \frac{101440}{7825}$$

$$= 12.96$$

$\hat{a} = y - b^x$

$$y = \frac{\sum y}{n} = \frac{22022}{10}$$

$= 2202.2$

$$X = \frac{\sum x}{n} = \frac{1025}{10}$$

$= 102.5$

:. a = 2202.2 – 12.96 (102.5)
= 2202.2 – 1328.4
= 873.8
But: Yt= 873.8 + 12.96t (Trend Equation)

4.2 Projections
We can project for the year 2008 to 2012
Thus:
For the year 2008 :x = 108
Y = 873.8 + 12.96 (108)

= 873.8 + 1399.68
= 2273.48
For the year 2009 :x = 109
Y = 873.8 + 12.96 (109)
= 873.8 + 1412.64
= 2286.44
For the year 2010 :x= 109
Y = 873.8 + 12.96 (110)
= 873.8 + 1425.6
= 2299.40
For the year 2011 :x = 111
Y = 873.8 + 12.96 (111)
= 873.8 + 1438.56
= 2312.36
For the year 2012 :x= 112
Y = 873.8 + 12.96 (112)
= 873.8 + 1451.52
= 2325.32

The trend-line $Y_{est} = a + bx$ indicates that the cash-deposit out-put rate undergone a remarkable decrease for every change in the year.

4.3Test of Hypothesis
Ho: There is no difference in significant on the cash deposit rate for the over 10 years.
Hi: There is difference insignificant on the cash-deposit rate of the company for the over 10 years.

S/N	y	y^2
1	3138	9847044
2	1795	3222025
3	1625	2640625
4	2894	8375236
5	498	248004
6	1891	3575881
7	2876	8271376
8	2431	5909761
9	2070	4284900
10	2804	7862416
∑y =	22022	54237268

$\bar{y} = \sum y/n = \frac{22022}{10}$ 2202.2

Statement of Hypothesis

Test; Ho: There is nochange in significant on the cash-deposit out-turn rate in the time series data.

Against

Hi: There is change in significant on the cash-deposit out-turn rate in the time series data.

Using □ = 0.05 level of significance

Applying the test statistic

$$X_{n-2} = \frac{r}{\sqrt{\frac{1-r^2}{n-2}}}$$

$$X_{10-2} = \frac{0.0151}{\sqrt{\frac{1-(0.0151\,4)^2}{10-2}}}$$

$$X_8 = \frac{0.0151}{\sqrt{\frac{0.9998}{8}}} = \frac{0.0151}{0.3536}$$

$$:.\ X_8 = 0.043$$

$$X□ = x_{(□/2,n-2)} = x_{(0.025,\,8)} = 2.306$$

Decision

Since $t_{cal} = 0.043 < t_{tab} = 2.306$, we do not reject Ho and therefore conclude that there is nodifference of significance on the cash deposit output charge in the time series data.

Statement of Hypothesis

Ho: There is no increase in cash deposit charge.

Hi: There is increase in cash deposit charge.

$$SST = \sum y^2 - \frac{(\sum y)^2}{n}$$

$$= 54237268 - \frac{(22022)^2}{10}$$

$$= 54237268 - \frac{484968484}{10}$$

$$= 54237268 - 48496848.4$$

$$:.\ SST = 5740419.6$$

$$SSR = b^2 \left(\sum x^2 - \frac{(\sum y)^2}{n}\right)$$

$$\text{But } b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2} = \frac{101440}{7825}$$

$$b = 12.96$$

$$:.\ SSR = (12.96)^2 \left(105845 - \frac{(1025)^2}{10}\right)$$

$$= 167.96 \left(105845 - \frac{1050625}{10}\right)$$

$$= 167.96\,(782.5)$$

$$= 131428.7$$

$$SSE = SST - SSR$$

$$= 5740419.6 - 131428.7$$

$$= 5608990.9$$

$$MSR = \frac{131428.7}{1} = 131428.7$$

$$MSE = \frac{SSE}{n-2}$$

$$= \frac{5608990.9}{10-2} = 701123.86$$

V. Findings, Recommendations and Conclusions

Findings

1. From the analysis conducted, in which the method of least squares was used, it indicated an annual decrease in the deposits level each year.
2. Also, from the analysis conducted on the data of the bank's cash-deposits records using least squares method, it indicated slight decrease in the yearly output.
3. The trend also indicates a fall in cash-deposits rate of the sector, thus, thealternative hypothesis is not acceptable. we conclude there are no significant extensions in the cash-deposits rate of the firms. I observed that the original output and deseasonalize output are normal within a given range of setting.

5.1 Conclusion

The production department of any company is primarily concerned with the marking, evaluating and sorting of products of acceptable quality. The production department constitutes a major part of the company, and it is in this department that efforts are made to achieve the pre-planned set-out production target. Whether the company is a factory, bank or whatsoever, the data recording department is always important and essential.

Thus, the importance of data recording as an organizational goal made it mandatory for firm owners to employ individuals who are responsible for directory inclined and work inspection.

Based on the analysis of output of the company, we conclude that the company is not leaving up to expectation in the cash-deposits level of customers. The company should prepare details of available resources to act as an unexpected deficit in their production capacity thereby improving their data quality.

This analysis of deposited-cash records of Fidelity Bank Plc, Lagos; will assist the banks management or will provide them with the basis for a continuous review of strategy for their financial survival.

The management of this company must know that high performance in their level of rendering financial services is the prime objective they must pursue in order for them not to fall below the standard or CBN requirement(s). Managers must be made to that there is change of strategies in modern banking and these strategies requires different approach; an approach that is different from that which there is used to be.

5.2 Recommendations

Based on the above analysis, the following recommendations are offered on the basis of the fundings of this study. Since it is a fact that any improvement in recorded cash-deposits will lead to an improvement in performance of activities of this sector. We recommend that preventive strategies relating to timely actions be taken to prevent these problems of fluctuation in the rates of deposited cash in commercial institutions (bank).
The recommended strategies include:

1. Purposeful business planning.
2. Efficient management of resources.
3. Effective information and system management.
4. Effective management of change relating to opening of new account system(s).

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