

## Assessment of Maintenance Practice of Financial Institutions in Buildings in some Northern Parts of Nigeria.

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### ABSTRACT

This research examined the maintenance management policies of financial institutions in buildings, with the objectives of suggesting possible ways of improvement. Interviews, questionnaires and observations were employed to get concise data, and infrastructure available at various financial institutions were analyzed using simple percentage and correlation coefficient. Findings shows that there is a significant policy on building maintenance of Organization's, and that maintenance policy has significant relationship with the performance of the maintenance management of the organization with a correlation coefficient of 0.75. It was also discovered that 42.5% of the organizations employed condition-based maintenance strategy while 57.1% prefer the use of preventive (fixed time) maintenance strategy. All the institutes have insurance policy on their buildings, viz- burglary, fire, wind, thunderstorms and other associated perils. The t-Test carried out shows that there is no significant difference between the maintenance policy of the two groups of the organization examined because  $t\text{-Critical}_1 = 6.31$ ,  $t\text{-Critical}_2 = 12.71$ ,  $t\text{-Stat} = 2.34$  ( $t\text{-Critical} > t\text{-Stat}$ ). It is further recommended to use competent professionals in the building industry to head maintenance department and provide adequate budget and cash backing for sustaining and improving the current trend of maintenance practices in the organization.

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### Introduction

Assets such as buildings are important resources for all types of organizations, including the financial institutions. In the past decade, the effect of recapitalization of banks in Nigeria has increased attention as the stock of new buildings costing billions of Naira are being put into operation. This attention is due largely to the recognition of the significant contribution property makes to the ultimate success or failure of a business and recognition of strategic importance of property to a company's financial structure. However, in spite of millions of Naira spent to erect all these buildings, they are left as soon as commissioned to face premature but steady and rapid deterioration, decay and dilapidation [1]. Although much can be done at the design stage to reduce the amount of subsequent maintenance work as most maintenance problem arise from defective designs, moreso, all elements of buildings deteriorate at a greater or lesser rate depending on materials, method of construction, age, environmental conditions, usage of building, and method of design and maintenance management of the building [2].

However, owing to the different types of maintenance and their attendant importance; preventive maintenance has been known to reduce the incidence of breakdown or mal-function of facility or equipment making it usable at a reduced cost than corrective maintenance in buildings of financial institutions [3]. The importance of maintenance cannot be overemphasized as adequate

maintenance result in the decrease of depreciation cost (leading to longer economic life) and consequently leads to increased profitability [4]. Building maintenance should be carried out to correct defects or prevent and avert such defects in order to minimize cost that would have been incurred should such defects occur [5].

### Literature Review

#### Maintenance Definition

Maintenance definition According to Seeley, maintenance is defined as 'work undertaken in order to keep, restore or improve every part of a building, its services and surrounds, to a currently acceptable standard, and to sustain the utility and value of the building [6]. Maintenance is defined as the combination of all technical and administration actions, including supervision actions, intended to retain an item in, or restore it to a state in which it can perform a required function'. Maintenance according to BS 38110 is defined as "the combination of all technical and associated administrative actions to keep a physical asset, or restore it to a condition where it can perform a required function. However, maintenance, according to [7] is "the processes and services to preserve, repair, protect and care for a building fabric and engineering services after completion, repair, refurbishment or replacement to current standards to enable it to serve its intended

function throughout its entire lifespan without drastically upsetting its basic features and use”. From the definitions, it can be seen that maintenance is a vital component of an organization’s existence in relation to its asset management. In the same vein, the engineering definition of maintenance by the Business Dictionary, (2016) terms it as ‘an actions necessary for retaining or restoring a piece of equipment, machine, or system to the specified operable condition to achieve its maximum useful life. This includes corrective maintenance and preventive maintenance.

*Maintenance Procurements*

According to [8] and [9], procurement is defined as “an organizational system that assigns specific responsibilities and authorities to people and organizations”. Meanwhile, maintenance procurement is defined as the process on how maintenance works are carried out [10].The types of procurement method identified through literature review for building maintenance were listed as below [10-15]:-

- i. Direct Labour or In-house
- ii. Outsourcing - Outsourcing can trade of service under several types of contracts which include: -
  - (a) Lump Sum Contract
  - (b) Term Contract
  - (c) Repair and Maintenance Contract (RMC)
  - (d) Cost Reimbursement Contract
  - (e) Service Level Agreement
- iii. Out-tasking
- iv. Public Private Partnership (PPP)
- v. Total Facilities Management (TFM)
- vi. Traditional
- vii. Partnering.

**Research Methodology**

*Study Area*

The study was grouped in to two parts, group A covers the bank financial institutions (BFIs) which are coded with letter A-T. While group B represent the Non-Bank Financial institutions (NBFIs) which are represented with letter A-H. This study was carried out in the Northern part of Nigeria covering Abuja, Jos and Maiduguri.

*Questionnaire Design*

Three methods were employed in the collection of data for this research work which are -questionnaire, oral interview and observation method. The questionnaire was designed to collect data on the maintenance policies of financial institutions’ buildings. The questionnaires were administered and thoroughly reviewed. Responses from the administered questionnaires to the various financial institutions were collected. A total of 40 questionnaires were administered to various financial institutions of which 28 were

returned. 40 of this financial institutions were served each with a questionnaire to elicit responses.

**Results and Discussion**

*Staff Strength of Maintenance Department*

From the Bar Chart below Group A for Banking financial institution have a staff strength between 31-40, while 64.3% of the same group have a staff strength that is above 40 years.

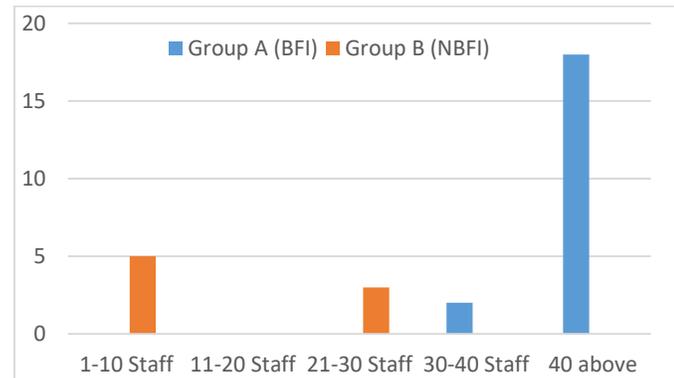


Fig. 1: Maintenance staff strength.

*Maintenance Strategies Used.*

From the survey, two types of maintenance strategies are mostly used in the organization. 42.9% of the organization use conditioned based maintenance strategy, they replace building parts or materials when there is clear indication that failure would occur. 57.1% of the organizations use preventive (fixed time) maintenance strategy. The following results were obtained from t-Test: t-Stat=0.80, t-Critical<sub>1</sub>= 2.02, t- Critical<sub>2</sub> = 2.57; there is no significant difference between the various types of maintenance strategies used since t- criticals are greater than t-Stat

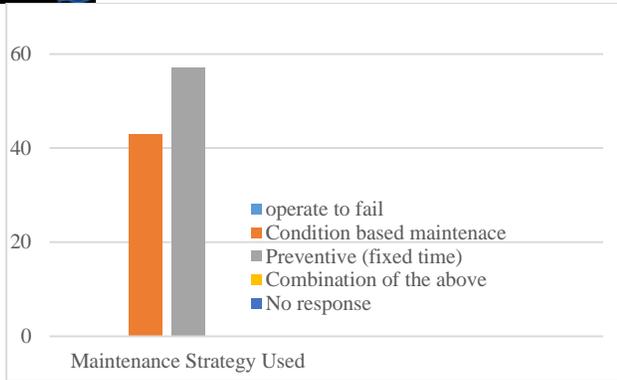


Fig. 2: Types of Maintenance strategy used

#### Maintenance overview of (BFI) and (NBFi).

Table 1 below indicates that 89.3% of the population studied comprising of 71.4% NBFIs and have maintenance department while 10.7% have no maintenance department but operate under the general administration department. 89.3% of organizations comprising of 71.4% BFIs and 17.8% NBFIs have a centralized maintenance department, while 10.7% have no maintenance department. All organizations visited have maintenance policy. This account for satisfactory of maintenance management recorded by various organizations. A total of 53.6% of the organizations make use of log book for recording checks, 25% do not use log book, where as 21.4% gave to no response as to use of log book for recording regular checks and maintenance works carried out. 57.1% of the organization use maintenance manual for guiding their operative for the effective delivery of maintenance work, 42.9% of the organization are not sure whether their maintenance operative use maintenance manual therefore gave no response. 67.9% of the organization make use of computer for their maintenance management functions, 14.2% do not use computer in this regard while 17.9% did not respond. 85.7% of the organizations use special material in terms of quality in the construction of their building to minimize the cost of maintenance, 14.3% of the organization did not respond to this. 57.1% organizations go for highest quality of material to be used on their buildings, 7.1% go for any material that satisfy their need within their budget while 35.7% of the organizations gave no response. For specification all the organizations have agreed that they do not compromise with standard of material specified for buildings. 100% of the organization have insurance policy on their buildings.

#### Budgetary overview of maintenance works for BFIs and NBFIs.

Table 2 shows that 25% of the organization have a total annual budget of between ₦1000 to ₦ 5,000,000 while 75% of the

organization have a total annual budget of above ₦ 20,000,000. For cash backing 10.7% of the organization have cash backing to their budget between 21-40%, 39.3% between 31-60%, 46.4% have a maximum of 80% cash backing. 3.6% of the organizations have cash backing between 81% to 100%. On percentage satisfaction of maintenance works the table below shows that 3.6% of the organization have satisfaction between 21 – 40%, 32.1% of the organization have between 41% - 60% satisfaction, while 64.3% of the organizations have a satisfaction percentage of between 61 – 80%. The above figures show that percentage satisfaction is more than 65% on the average. Various organizations use different words in grading the performance of their maintenance department as follows: High, Great, Good, satisfactory, Adequate, averagely doing well. This indicates that they are all not doing badly in terms of performance.

Table 1: Maintenance overview for Bank Financial Institution (BFI) and Non-Banking Financial Institution (NBFi).

Variables	Group A (BFIs)		Group A (NBFIs)		Total
	Freq.	Per.	Freq.	Per.	
Availability of maintenance department					
Yes	20	71.4%	5	17.1%	89.3%
No	-	-	3	10.7%	10.7%
Centralization of Maintenance department					
Yes	20	71.4%	5	17.8%	89.3%
No	-	-	3	10.7%	10.7%
Availability of maintenance Policy					
Yes	20	71.4%	8	28.6%	100%
No	-	-	-	-	-
Maintenance management structure					
In house staff	12	42.9%	3	10.7%	53.6%
Out sourced	8	28.6%	5	17.8%	46.4%
Use of log book for recording regular checks					
Yes	13	46.4%	2	7.1%	53.6%
No	2	7.1%	5	17.1%	25.0%
No response	5	17.9%	1	3.6%	21.4%
Use of maintenance					



manual for guiding operatives for the effective delivery of maintenance work

Yes	15	53.6%	1	3.6%	57.1%
No	-	-	-	-	-
No response	5	17.9%	7	25.0%	42.9%
Use of computer for maintenance management function					
Yes	16	57.1%	3	10.9%	67.9%
No	2	7.1%	2	7.1%	14.2%

Table 1 Continued

Variables	Group A (BFIs)		Group B (NBFIs)		Total
	Freq.	Per.	Freq.	Per.	
Use of Special material in construction to minimize the level of cost of maintenance	20	71.4%	4	14.3%	85.7%
Yes	20	71.4%	4	14.3%	85.7%
No	-	-	-	-	-
No response	-	-	3	14.3%	14.3%
Are the materials used different from those used in other buildings in terms of quality					
Yes	16	57.1%	-	-	57.1%
No	-	-	2	7.1%	7.4%
No response	4	14.3%	6	21.4%	35.7%
Strict adherence to specification					
Yes	20	71.4%	8	28.6%	100%
No	-	-	-	-	-
No response	-	-	-	-	-
Use of insurance policy	20	71.4%	8	28.6%	100%
Yes	-	-	-	-	-
No	-	-	-	-	-

### Conclusion and Recommendations

It is worthy to note that about 80% of the buildings used by the financial institutions are owned by them while 20% are acquired by them through leasing and renting, and maintenance problems in the financial institutions are generated through pressure resulting from day – to – day activities of customers and staff, degeneration due to time leading to leakages, wearing and removing of tiles and terrazzo. It was also discovered that financial organizations employed two maintenance strategies – conditioned based maintenance (42.9%) and preventive (fixed time) maintenance strategy (57.1%). Most organizations have cash backing in their annual budget between 41 to 80%.

It is therefore recommended that proper attention be given to elements of the building structure that are prone to wearing and depreciation. Building maintenance unit be created in any branch where none exist and all maintenance department be headed by a trained professional in the construction industry.

Table 2: Budgetary overview of maintenance works

Variables	Group A (BFIs)	Group B (NBFIs)	Total
Annual Budget (₦)			
1000 – 5,000,000	1(3.6%)	6(21.4%)	7(25%)
5,000,000 – 10,000,000	-	-	-
10,000,000 – 15,000,000	-	-	-
15,000,000 – 20,000,000	-	-	-
20,000,001 and Above	19(67.9%)	2(7.1%)	21(75%)
<b>Total</b>	<b>20(71.4%)</b>	<b>8(28.6%)</b>	<b>28(100%)</b>
Average cash backing to budget (%)			
1 - 20	-	-	-
21 - 40	1(3.6%)	2(7.1%)	3(10.7%)
41 – 60	7(25%)	4(14.2%)	11(39.3%)
61 – 80	11(39%)	2(7.1%)	13(46.4%)
81 -100	1(3.6%)	-	1(3.6%)
<b>Total</b>	<b>20(71.4%)</b>	<b>8(28.6%)</b>	<b>28(100%)</b>
Percentage satisfaction of the budget on the average maintenance work (%)			
1 - 20	-	-	-
21 - 40	-	1(3.6%)	1(3.6%)
41 – 60	6(21.4%)	3(10.7%)	9(32.1%)
61 – 80	14(50%)	4(14.3%)	18(64.3%)
81 -100	-	-	-
<b>Total</b>	<b>20(71.4%)</b>	<b>8(28.6%)</b>	<b>28(100%)</b>

It is also advocated that insurance policy for long term maintenance be embraced by the various organizations, lastly there should be



continuous provision of adequate budget and cash backing that would be highly in tune with the organizations maintenance policies.

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