IOSR Journal Of Humanities And Social Science (IOSR-JHSS)
Volume 23, Issue 5, Ver. 8 (May. 2018) PP 85-89
e-ISSN: 2279-0837, p-ISSN: 2279-0845.
www.iosrjournals.org

Causes and Effects of Inadequate Facilities for Building Production in Nigeria.

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Abstract: This study identified the causes and effects of inadequate facilities on building production in Nigeria. Data for the study were collected through well-structured questionnaire administered to building construction professionals. Data collected were analysed using percentages, mean and relative significance index. The findings reveal that the causes of inadequate of facilities of building production includes inadequate access to land ranked first (0.93), high cost of building materials ranked second with (0.83) and building finance problem ranked third with (0.81). Effects of inadequate facilities in building production includes high rate of insecurity with RSI value of 0.61, overcrowding ranked second with an RSI value of 0.608 and improper planning of building ranked third with an RSI value of 0.605. Prevention of material wastage and efficient resources ranked first with RSI value of 0.695, access to land ranked second with RSI value of 0.685 and provision of finance ranked third with an RSI value of 0.673. The proper management of the project should be done by the contractor in order to avoid the causes of inadequate facilities in the building

Keywords: Causes, effects, inadequate, facilities, building production

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Date of Submission: 09-05-2018 Date of acceptance: 25-05-2018

I INTRODUCTION

Facilities is a building or place that provides a particular service or is used for a particular industry and facilities are something designed and created to serve a particular function to afford a particular convenience or service such as catering, toilets and educational facilities. Decaying environmental conditions such as peeling paint, crumbling plaster, non-functioning toilets, poor lighting, inadequate ventilation, and inoperative heating and cooling systems can affect the living as well as the health and the morale of people.

Many are probably the least equipped of all mammals to protect him naturally from inclement weather. It has to seek means, beyond natural endowment to ensure his survival that is why building has become so critical to his physical survivals. Over the year, the spate at which building projects get actualized have been seriously hampered and reduced as serious causes of inadequate facilities on building production [1]. The concept of building has varied overtime from narrow historical views as merely shelter' to the contemporary views as the total environment.''

According to [2] cited by [1] building is not shelter or household facilities alone but comprises a number of facilities service and utilities which link the individual and his family to the community and the community to the region in which it grows, and progress it plays an indispensable role in ensuring human dignity building is essential for normal healthy living. It fulfil depended and psychological needs of privacy and personal space, physical needs for security and protection from indented weather and social needs of basic gathering where important relationship are formed and nurtured.

In many societies a house serves to important functions of an economic centre where essential commercial activities are performed. Essentially one of the parameter by which the performance of any government can be measured is the degree of its contributions building productions. The nature, scale and the dimension of building problems differ across national boundaries that is why one off approach to solving building problems cannot suffice, these problems are not new '' what keep the issue is the rising scale enormity and complexity of these problems.

Productivity is an area that determines the output of a building contact for a given assignments and it related to planning and one wished that the contractor could produce within the time span given regardless of other deleterious circumstances that his way. Therefore the concentration of the project is to spell out the causes of inadequate facilities on building production and it effects in Nigeria.

II LITERATURE REVIEW

Building production or housing delivery as a subject has a long and complicated history in relation to human settlement. This is perhaps borne out of the fact that in their search for means of survival, the second priority of the early humans after food was shelter- a place of abode free from attack by predators and the inclement wealther [3]. Housing is paramount to human existence as it ranks among the top three needs of man. Its provision has always been of great necessity to man. As a unit of the environment housing has profound influence on the health, efficiency, social behaviour, satisfaction and general welfare of the community. [4], in their review of housing/building production efforts in Nigeria, defined housing as buildings or other shelters in which people live, a place to live, a dwellingIt is a reflection of the cultural, social and economic values of a society and one of the best historical evidences of the civilization of a country [5]. The provision of adequate housing in any country is very vital as housing is a stimulant of the national economy. Housing is a set of durable assets, which accounts for a high proportion of a country's wealth and on which households spend a substantial part of their income. It is for these reasons that housing has become a regular feature in economic, social and political debates often with highly charged emotional contents[6].

According to[7], a house is the physical structure which human beings use for shelter. A house is also seen as the direct expressions of changing values, images, perceptions and ways of life as well s of certain constancy. The house is, thus, an institution, not just a structure, created for complex set of purposes. [8] described housing as the totality of the immediate physical environment, largely man-made, in which families live, grow and decline.

As the population of the early humans increased and the structure called shelter transformed from the cave to weak or temporary sheds, simple and isolated semi-permanent and later permanent structures, shelter-centred issues started to manifest. There were such issues that are causing the inadequacies in building/housing production such as qualitative shortage, quantitative shortage, uneven distribution of accommodation, high cost of building materials, inadequate access to land, transportation of building materials problem, high cost of labour and building finance problems. The effects of inadequate facilities includes among others high rate of insecurity, overcrowding, improper planning of building, poor hygiene/health hazard, inadequate access to clean water.

The rapid development in Nigeria has brought about building shortages both qualitatively and quantitatively, illegal settlements squatting and in overcrowded and deteriorating tenements. The qualities of the environment in the most urban centres in Nigeria are not so much dependent on the materials characterized of building but on their organizations as spatial units. Buildings are poorly land out with inadequate roads between them and inadequate drainage and provision for refuse emanation.

Overcrowded environments are a serious problem in many facilities systems, particularly in the inner cities, where space for new construction is at a premium and funding for such construction is limited.The crowding of large numbers of people into those building, lacks of space for open air living between in houses poor health, sub- standard building and cute environment problem.[9] found that overcrowding created stressful working conditions and led to higher absenteeism.

III METHODOLOGY

The questionnaire was administered to building construction professionals (Architects, Builders, Quantity Surveyors, Engineers and other related disciplines). About one hundred (100) questionnaires was distributed, eighty (80) were collected back for analysis. The statistical tools used for this study include percentage, mean, and relative significance index (RSI) to determine which of the causes and effects of inadequate facilities for building production in Nigerian.

The relative significance index ranking (RSI) was used for ranking of the factors studied. These methods had been used in construction research by authors such as, [10], [11], [12], [13] and [[14] among others.

[15] gave an equation that could be useful for determining Relative Significance Index (RSI) in prevalence data as:

$$RSI = \frac{\sum \mu}{AN}$$

Where μ is the weighting given to each factor by respondents;

A is the highest weight (i.e. 5 in this case);

N is the total number of respondents

But for this type of research work where a 5-point scale was used, the RSI shall be calculated via the equation:

$$RSI = \frac{5a + 4b + 3c + 2d + 1e}{jN} \qquad (0 \leq \text{index} \leq 1)$$

Where: a = number of respondents ''extremely important'',

b = number of respondents ''very important''

c = number of respondents ''somewhat important''

d = number of respondents ‘‘not very important’’
e = number of respondents ‘‘not important’’
N = sample size = 80
j = number of response categories = 5

For instance for item 4 on the original questionnaire, High cost of building materials, 32 respondents gave “extremely important”, 33 respondents gave “very important”, 9 respondents gave “somewhat important”, 6 respondents gave “not very important” and 0 respondents gave “not important”. The relative significance index is given as:

RSI = $\frac{(32 \times 5) + (33 \times 4) + (9 \times 3) + (6 \times 2) + (0 \times 1)}{(5 \times 80)} = 0.83$

The results off other computations are as shown in table 5

IV DATA ANALYSIS AND RESULTS

The data obtained are hereby analysed and the results presented.

4.1 Respondents profile

Table 1 shows the respondents profile such as male and female in the construction industry.

Table 1: Sex

Sex	**Frequency**	**Percentage**
Male	65	81.25
Female	15	18.75
Total	80	100.0

Table 1 showed the gender of the respondents. It showed that sixty five (81.25%) are male and fifteen (18.75%) are female. The result shows the representation of genders in the construction industry in the study area.
Table 2 shows the respondents professional qualifications.

Table 2: Professional qualifications

Research subjects	**Descriptions**	**Frequency**	**Percent**
Qualifications	NITP	13	16.25
	NIOB	22	27.50
	NIA	17	21.25
	NIQS	15	18.75
	OTHERS	13	16.25
	TOTAL	80	100

Table 2 showed the professional qualifications of respondents. The respondents cut across the professionals within the building construction sub-sector of the construction industry.

Table 3: Years of service

Years	**Midpoint (x)**	**Frequency (f)**	**fx**	**Percentage**
1-5	6	10	60	12.50
6-10	8	9	72	11.25
11-15	13	17	221	21.25
16-20	18	9	162	11.25
above 21	21	35	735	43.75
Total		**80**	**1250**	**100.0**

Mean = ∑fx/∑f= 1250/80 = 15.63

Table 3 shows the respondents mean year of experience estimated at approximately sixteen years (16yrs). With this average working experience of sixteen years, respondents are deemed experienced enough to supply reliable data for the research.

Table 4: Personnel involved in building productions

Educational Qualification	**Frequency**	**Percentage (%)**
ND	15	18.75
HND	24	30
BSc/BEng/BTech	19	23.75
MSc//MEng/MTech	13	16.25

PhD	9	11.25
Total	**80**	**100**

Table 4 shows the representation of personnel involved in carrying out health and safety on construction sites. 18.75% represent National Diplomas, 30% represent the Higher National Diplomas, 23.75% for the BSc/BEng/BTech holders, 16.25% for the MSc/MEng/MTech and 11.25% for the PhD holders. The result expressed the generation of adequate opinion of the construction industry in the study area as some of the construction professionals are represented.

4.2 Basic causes of building production

Table5 shows basic causes of inadequate facilities in building production

Table 5: Causes of inadequate facilities in building production

S/N	Original	Causes of inadequate facilities in building productions	RSI	Ranking
1	5	Inadequate access to land	0.93	1
2	4	High cost of building materials	0.83	2
3	8	Building finance problem	0.81	3
4	7	High cost of labour	0.79	4
5	3	Uneven distribution of accommodation	0.69	5
6	6	Transport problem	0.65	6
7	1	Qualitative shortage	0.43	7
8	2	Quantitative shortage	0.42	8

The inadequate access to land is the most significant causes of inadequate facilities in building production with an RSI of 0.93. High cost of building materials ranked second with an RSI value of 0.83, Building finance problem ranked third with an RSI value of 0.81. Among the causes considered, the quantitative shortage and qualitative shortage contribute the least to the causes of inadequate facilities in building production with an RSI 0.42 and 0.43

4.3 Effects of inadequate facilities in the building production

Table 6 identifies some effects of inadequate facilities in building production

Table 6: Effects of inadequate facilities in the building production

S/N	**Original**	**Effects of inadequate facilities in the building production**	**RSI**	**Ranking**
1	2	High rates of insecurity	0.610	1
2	5	Overcrowding	0.608	2
3	1	Improper planning of building	0.605	3
4	4	Poor hygiene/health hazard	0.563	4
5	3	Inadequate access to clean water	0.525	5

High rate of insecurity is the most significant effects of inadequate facilities in building production with an RSI of 0.60. Overcrowding ranked second with an RSI value of 0.608 and improper planning of building ranked third with an RSI value of 0.605. Followed by inadequate access to clean water and poor hygiene/health hazard contribute the least to the effects of inadequate facilities in building production with an RSI value of 0.525 and 0.563.

V DISCUSSION OF FINDINGS

The causes of inadequate facilities in building productions consist of eight factors. The inadequate access to land is the most significant causes of inadequate facilities in building production, high cost of building materials, building finance problem. Among the causes considered, the quantitative shortage and qualitative shortage contribute the least to the causes of inadequate facilities in building production. High rate of insecurity is the most significant effects of inadequate facilities in building production. Overcrowding ranked second with an RSI value of 0.608 and improper planning of building ranked third with an RSI value of 0.605. Followed by inadequate access to clean water and poor hygiene/health hazard contribute the least to the effects of inadequate facilities in building production with an RSI value of 0.525 and 0.563.

VI CONCLUSION

Inadequate access to land was discovered as the prevalent problem that is facing adequate facilities in building production. There should be a relationship between land, building materials and the availability of men, money and good management. Decaying environmental conditions such as peeling paint, crumbling plaster, non-functioning toilets, poor lighting, inadequate ventilation, and inoperative heating and cooling systems can affect the living as well as the health and the morale of people.

VII RECOMMENDATIONS

The following recommendations are hereby made:

i Prevention of wastage of building materials
ii There must be provision and access to land
iii Provision of finance
iv Proper utilization of interim payment
v Good management and employment of professionals
vi Control of labour cost
vii There must be adequate construction supervision and detailing of working drawings

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IOSR Journal Of Humanities And Social Science (IOSR-JHSS) is UGC approved Journal with Sl. No. 5070, Journal no. 49323.

Ajetomobi Oludare Olayinka.'' Causes And Effects of Inadequate Facilities For Building Production In Nigeria.." IOSR Journal Of Humanities And Social Science (IOSR-JHSS). vol. 23 no. 05, 2018, pp. 85-89.