



## **EFFECT OF RISING COST OF BUILDING MATERIALS ON PROPERTY DEVELOPMENT IN BARIGA LAGOS STATE, NIGERIA.**

**\*ABDULAKEEM O. OTUNOLA; \*\*HADIZA ABDULKADIR MUSA & \*\*\*YUSUF GAMBO LUKMAN**

*\*Department of Estate Management and Valuation, Federal Polytechnic, Offa, Offa, Kwara State. \*\*Department of Estate Management, College of Environmental Studies, Kaduna Polytechnic, Kaduna. \*\*\*Department of Estate Management, School of Environmental Studies, College of Science and Technology, Niger State Polytechnic, Zungeru, Niger State.*

### **Abstract**

Building materials played an important role in the Property development. It includes those materials put together in erecting or constructing structures, development is not conceivable without their use. The cost of building materials poses a significant threat to both the construction industry and people aspiring to own houses and that many projects were not completed on time due to the cost of materials, which have been on the increase. This study examined the effect of rising in the cost of building material on real property development in Bariga area of Lagos state, Nigeria. A field survey research design was adopted for collection of primary data on the subject of study. The target population comprises of forty (40) property developers, forty (40) contractors and 40 building materials dealers operating in Bariga area of Lagos state. The sample size of this project is 120; this comprises property developers, contractors and building materials dealers operating within Bariga area of Lagos state which were targeted for administration of questionnaire. Random sampling technique was used as appropriate sampling technique. The questionnaires were complimented by oral interview. Descriptive statistics was used in analyzing the collected data such as cross tabulation, frequency table. The paper revealed that cost of land acquisition, cost of building materials, professional charges and lack of capital are militating against property development in the study area. It is indeed unfortunate that the alarming increase

in cost of building materials and labour does not only affect the rent passing on prospective tenant nor the market value of such property but also on the individual dream to build and owned a home in the study area. Besides timely completion, high prices of building materials form a crucial constraint to improving housing conditions in the low-income earning countries like Nigeria. Over dependent on imported materials and lack of instability in government policies and programme among other factors has a drastic effect on cost of building materials. Inhibited innovations in construction methods, quality of workmanship is affected, quality of workmanship is affected, project abandonment, volume of construction output is affected. The study recommends that incessant rising in cost of building materials be remediable through the development/use of alternative building materials, among others.

**Keywords:** *Cost, Building Material, Property Development, Lagos, Nigeria*

---

## **INTRODUCTION**

The increasing commercial and industrial activities have a substantial potential to attract many people (jobseekers, businessmen and others) into the community with the attendant consequences of increasing the problem of shelter access for all (Ihuah, 2015). This is important as more residential accommodation are demanded by relocating people. Hence, the government rationale to urgently and adequately improve residential property supply so that the envisage demand can be met (Ihuah, 2015). However, the current incessant rising costs of building materials in this specific context facilitates the quest of investigating its effect on property development (Residential housing estate project). The exceptionally high increases in costs of building materials has affected the efforts to progress the number of residential units' provision to an extent that the current demand may not be or reduced to a minimum (Magutu, 2015).

In Nigeria as a whole, the construction industry still facing the challenges of low levels of working capital, high rates of inflation and increasing costs of development/construction (Umar, 2017). Most of these situations are currently not properly attended to; subsequently, it leads to some development projects being abandoned, uncompleted and vandalized (Ihuah, 2015). The repercussions of not tackling these issues, especially the increasing costs of developments as a result of the increasing costs of building/construction

materials means that current demand outweighs the available supply (Kolo, Rahimian, & Goulding, 2014).

The building industry in Nigeria is encapsulated with shortage of affordable and sustainable building materials; people have difficulties building houses of their own because the cost of building materials is astronomically high. It was for this reason that the Nigerian building and road research institute (NBRRI) was established in 1978 to map out strategies for alternative building materials that will be affordable and sustainable, (Saba, 2018). The NBRRI laid emphasis on development of suitable local building materials from minerals deposits and agro industrial waste that are abundantly available at little or no cost.

The cost of building materials are increasing in leaps and bounds leading to abandoned project by some landlords as they are not sure of what will be the value of their property on completion. Obviously, it is indeed unfortunate that the alarming increase in cost of building materials and labour does not only affect the rent passed on prospective tenant or the market value of such property or the individual dream to build and own a home in Bariga area of Lagos state but also the construction industry to a large extent, such that the cost of construction, cost of materials is said to have increase by 133.33% within the last two and a half decades. Most literature had concentrated on identifying the causes with little emphasis on the effect; hence, this research seeks to provide information on effect of the rising cost of building materials on property development in Bariga area of Lagos state with special emphasis on residential real estate development. This study, therefore, examines and assesses how incessant increase in building material cost can affect the sustainability of residential real estate development. It will also bring to the knowledge of the various investors issues that may together cause the incessant increase in building materials costs. This study will also provide the strategies and recommendations that may be employed to optimize property development by developers; owners; institutions; and other relevant investors engaged in residential property developments in the study area. The study attempts to contribute towards providing and improving sustainable residential housing estates development.

### **1.3 AIM AND OBJECTIVES OF THE STUDY**

The aim of this study is to critically examine the effect of rising cost of building materials on property development with special focus on residential property development, to achieve the above aim; the following objectives were setup;

1. To ascertain the factors responsible for the increasing cost of building materials in the Bariga area of Lagos State.
2. To examine factors militating against property development in the study area.
3. To examine the effect of rising cost of building materials on property development in the study area

#### **1.4 RESEARCH QUESTIONS**

1. What are the factors responsible for the increasing cost of building materials in Bariga, Lagos State?
2. What are the factors militating against property development in the study area?
3. What are the effects of rising cost of building materials on property development in the study area.

#### **1.5 SCOPE OF THE STUDY**

This research is confined to a careful examination of the effects of cost of building materials on property development with special emphasis on residential real estate development in Bariga area of Lagos state. The study also put into consideration the various factors that are responsible for the incessant increase in the cost of building materials in the study area.

#### **1.6 SIGNIFICANCE OF THE STUDY**

The study shall be an avenue of revealing the effect of rising cost of building materials on property development. It will reveal whether the effect is positive or negative. Infract, the study shall give an insight to factors responsible for the incessant cost of building materials and also factors militating against property development in the study area and the country in general. It shall go a long way in aiding prospective investor who may wish to exploit the development potential of the fast growing state in determining the viability of their investment within the study area. The study shall provide a comprehensive picture and update information that prevails situation in the study area. Finally, the study will be of immense benefit to construction industry, private developers, government organization and corporate bodies. It shall also serve

as a guide and reference material for other students who may undertake research work on similar subject.

## **2.0 LITERATURE REVIEW**

### **2.1 CONCEPT OF BUILDING MATERIALS**

Shyllon (2004), Observed that building materials can be classified into three (3) main groups. Traditional, modern or conventional and innovative building materials. The traditional building materials include laterite, bamboo thatch, which are produced with rudimentary technology in small scale and are characterized by low quality performance. The low quality performance may have led to the development of conventional building materials which include cement, blocks, rod, steel, glass and corrugated roofing sheets, which are characterized by expensiveness, scarcity, and high import inputs. The third category which he refers to as innovative, represent the combine effort to improve on both traditional and conventional building material through research development aimed at improving alternatives to import based materials.

Aliyu, Kasim, and Martin, (2011) acknowledged that development of local building materials could resolve most of Nigeria's shelter problems Brian (2015), maintained that the cost is rather too high compared to the united nation approved 25%. This problem according to Opara (2003), ranges from spiraling cost of building materials and stated that it is quite clear that the building construction sector is reset by serious difficulties as a result of the deregulation in the economy. The most among it are import dependency and inadequate product of local building materials. This increases the cost of construction because of high exchange rate, transportation cost, among other problems. This consequently led to inadequate and unaffordable housing unit in Nigeria, as conventional building materials are beyond the reach of an average Nigerian.

Arayela (2002), Opined that it is imperative to seek ways in which to bring down the cost of construction and make it attractive. He further added that, currently in Nigeria, stabilized laterite bricks are being used to reduce the cost of construction. Opara (2003) further asserted that, intensification of research and development of locally sourced building materials will go a long way in solving this problem of spiraling cost of building materials. Furthermore, building materials has been undergoing a lot of transformation in the past two decades, The Nigerian economy has been tendering further towards capitalism.

With the introduction of Structural Adjustment Programmed (SAP) and subsequent privatization and commercialization. The effect of this problem cannot be negative or positive. Most of our building materials even construction technology have high foreign compound (Olowo 1988).

Presently less, developed nation is growing very fast three times as industrialize nation. In the future we can expect that some of the poorest nations in production of building materials will grow row at even faster rate, as far there is availability of raw materials to the benefit of a common Man.Hussein (1998) observed that at all stages of construction, over 80% Of the construction materials used in the country are imported as finished product when the foreign exchange is scarce consequently material shortage occur since their demand outstrip restricted supply. Fos (1997) further describes the rise in building material cost as uncontrolled- hyper- inflation; However, according to Abiola (2000), cost is a common phenomenon in the construction industry, besides the rising costs, inflation is not peculiar to Nigeria.

Olatunji (2010), agreed that, there is indication of a surging wave of increase in contract prices of construction projects executed or being executed all over the world, what may have been identified as being responsible for the upward trends in the cost of construction. Abiola (2000), acknowledged that it can be attributed to government policy, inflation and designed variable. The united nation global report on human settlement suggested that in the next two to four years there will be availability of building materials in Nigeria. Currently, a lot of raw materials for construction is found in Nigeria (Hussein, 1998), some states where building materials are produced are listed in the table 1.

**Table:1 STATE THAT PRODUCE BUILDING MATERIALS**

STATE	BUILDING	TONE/YEAR
<b>Gombe</b>	Cement	1,600
<b>Kaduna</b>	Zinc	10,000
<b>Bauchi</b>	Gravel	10,000
<b>Lagos</b>	Zinc	8,000
	Timber	5,000

Source: Matakah, Alomari, & Soroushian, (2020).

In the future, we can expect that some of materials for building can be found in other state for easy benefit of common man. The factors that increases cost of



building materials is characterized into four (4) groups demand and supply, geographical and socio-political region (Cao, Dai, & Liu, 2016). Demand is subjected to considerable fluctuation which can have serious repercussion on the utilisation of resources. Secondly, road and geographical settlement will reduced the supply which will increase the cost of materials, if the demand of building materials is very high. Nearness to the building materials manufacturing industry.

## **COMPONENTS OF PROPERTY DEVELOPMENT**

**BUILDING MATERIALS:** This is defined by the penguin dictionary of building as materials of which building elements are made for example cement, sand timber. Building materials are the single largest input in the construction industry which account for over 50% of the total value of construction output (Grmela, 2020). The industry uses a range of building materials including cement, timber, roofing sheet, gravels, and steel rods amongst others. The worldwide demand for materials such as cement, steel and roofing sheet etc, have increase substantially during the past several years. Even before the devastation of Hurrricanes Katrina, Rita and Wilma, cost of construction had been significantly outpacing the overall rate of inflation. In recent time, the following building materials increased as noted: copper pipe and wire +125% structural steel +66%, Dry wall +26%, Reedy mix +10%, concrete block +8%

**Labour:** Labour is often a separate item in a bill, although one item may contain several labours. It constitute the second largest single component of resources, input required by the construction industry (Jarkas, 2015). The industry required and utilizes a mix of labour. The different level of labour use in construction include unskilled workers example labourers, Masons, Plumbers and Carpenters; Professional example Architects, Builders, Quantity Surveyors, Civil engineers and managers example contractors.

**CONSTRUCTION COST:** This refers to the overall cost of the project from the inception to the completion of such project. It includes cost of labour; this refers to the expenditure on the workmen either skilled or unskilled for carrying out the work (Munano, 2014). Cost of labour has drastically increased; a workman who earns N900/day in 1998, N1200/day in 2005 and N2000/day in 2010 is currently earning N3000/day. This sector of the economy employs foreign firms to a greater extend and sector account for the major revenue of the

nation. For instance, in Lagos state, foreign company take 95% of the market, leaving a pathetic 5% to indigenous companies.

### **FACTORS AFFECTING COST OF BUILDING MATERIALS**

Building materials had been playing an important role in the construction industry. They were all naturally occurring in the ancient times, for example, stone, wood, straws, clay, lime, and brick (Lucas, & Harris, 2012). As the building techniques were improving, simple composite materials, combined by means of mixing and/or heat treatment, were developed. A typical example is concrete, which was developed by the Roman Empire (Lucas, & Harris, 2012). Due to advances in science and technology at the beginning of the 20th century, materials with better performance and durability were introduced, for example, reinforced concrete, steel, plastics, and metal (Lucas, & Harris, 2012). Akanni, Oke and Omotilewa ((2014), found that building materials remain the most significant input in project development and play a very important role in the delivery of construction projects. Buttressing this view, Allen, and Iano, (2019), found out that building materials alone account for 50% to 60% of project cost and control about 80% of its schedule.

One of the major constraints in the Nigerian construction industry today has been the rapid inflation in the cost of the building materials. Windapo, and Iyagba (2004) observed that the situations arising from the rapid increase in the cost of building materials may degenerate to acute shortages of housing with the millions of middle- and low-income families being priced out of the market for home ownership all across Nigeria.

Akanni, Oke, and Omotilewa (2014), identified government fiscal policies as one of the factors affecting the cost of building materials in the Nigerian construction industry. However, findings of other researchers: Stanley, Ogbuagu, and Okechukwu (2014). concluded that factors such as the change in government policies and legislations; scarcity of building raw materials; Overdependence on imported building materials; Inadequate and inefficient infrastructural facilities (roads and rail system, etc.); Shortage of locally manufactured building materials; Lack of knowledgeable technical expertise; fluctuation in the cost of fuel and power supply; corruption; fluctuation in the cost of plant and labour; seasonal changes; fluctuation in the cost of transportation and distribution; political interference; local taxes and



charges; fluctuation on cost of raw materials; Lack of finance for new building material production factories; Increases in the labour costs of production of building materials; Over pricing of the contracts for the production of the building materials; fluctuation in the interest rates and the cost of finance; inflation and fluctuation in the exchange rate of Naira, were many of the recipes for the rising cost of building materials in Nigeria.

### **EFFECTS OF RISING IN THE COST OF BUILDING MATERIAL ON PROPERTY DEVELOPMENT.**

The general direction at which prices of building materials are increasing in Nigeria was as the result of the combined effects of high interest rates, devaluation of the Naira, inflation, and non-effective distribution network of the materials (Oladipo & Oni, 2012). According to Akanni, Oke, and Omotilewa (2014), the Nigerian Government curtailed activities in cement business when it banned the importation of Portland cement in the country between 2003 and 2007. However, Ibrahim (2014) noticed that increase in the prices of building materials has multiplier effects on the industry as it leads to fluctuation in construction costs and the eventual abandonment of projects. Other effects of rising cost of materials are completion at the expense of other projects, delay in progress of project works, other valuable projects not being commissioned, rate of employment of construction workers, poor workmanship as a result of the use of low-quality local materials, and inhibited innovations in construction methods were identified by Hwang, and Tan (2012), as the possible effects of the rising cost.

#### **Inhibited Innovations in Construction Methods and Material Research**

Curtis and Low (2016), report found that the very low and unreliable rate of profitability within construction which is an obstacle to sustainable healthy development. The report was of the opinion that increasing financial pressure are bound to be on contractors when initial budget figures become completely unrealistic and concluded that the situation will damage the industry and jeopardize its existence. Harris, McCaffer, Baldwin, and Edum-Fotwe (2021), also argued that construction companies have a social responsibility to provide staff training, maintain a high level of health and safety of its workers, and invest in research and development to facilitate

continuous improvement in technology and management. However, inflation in the cost of building materials had resulted in low and unreliable rate of profitability, and this has affected the performance of the industry in the area of innovations in construction methods and material research.

### **Fluctuation in Construction Costs**

Maintaining steady cost projection on construction projects had been an issue of serious concern both to the client and project contractors. Azhar, Farooqui, and Ahmed (2008) noticed that the basic reason for cost overruns is that most contractors quote prices based on their projected estimates; unfortunately, the prices change so quickly that the initial budget figures become completely unrealistic. On the Nigerian scene, Awoyemi, Aje, and Olanipekun, (2014) found that one of the most serious problems in the Nigeria construction industry is the project cost overrun, with attendant consequences of completing projects at sum higher than the initial sum and concluded that it resulted to project abandonment issues in most cases.

### **Quality of Workmanship is affected**

According to Alabi, and Fapohunda (2021), one of the hallmarks of a developed construction industry is in the output of quality buildings and structures. The quality of workmanship in construction work is assessed according to the requirement of the relevant standard, and marks are awarded if the workmanship complies with the standard. The study of Ashworth, and Perera (2015), which reported the trend in the cost of building materials, has envisaged great danger for the construction industry and the nation's economy in that there were instances of conflicts between buildings contractors and their clients over upward review in contract sums, and in an attempt to avert such conflicts and remain in the business, some contractors resorted to the use of substandard or insufficient materials for construction projects, which had contributed to cases of building collapse in the nation.

### **Risk of Project Abandonment**

Abandonment of projects has become a national menace in Nigeria's infrastructural development as most clients are not adequately advised about the financial implications of the project to be embarked on (Gbahabo, & Samuel,

2017). According to these authors, the predominance of many uncompleted and substandard buildings was connected to the inflation and high cost of building materials. Their studies also affirmed that the situation may have a multiplier effect on the industry and may lead to fluctuation in the construction cost.

### **Volume of construction output is affected**

According to Odediran, Adeyinka, Opatunji, and Morakinyo (2012), the output of the construction industry in Nigeria is quite low when compared with construction industry of many developed countries. Congruent to this assertion, Ibem, Aduwo, and Onyemaechi, (2017) observed that situations arising from the rapid increase in the cost of building materials may degenerate to acute shortages of housing with millions of middle- and low-income families being priced out of the market for home ownership all across Nigeria.

### **Rate of employment is affected**

The construction industry's workforce is extremely diverse and includes different types of individuals working within construction such as unskilled workers, skilled workers, craft, managerial roles, and administrative workers. Employing the right people within the construction industry is a priority due to the scarcity of both skilled people and experienced managers. Alabi, (2017) found that inflation in the costs of building material is killing the construction industry as many contractors are unable to forecast accurately the expected profit on the project, and the situation had contributed to laying-off of the workers and closure of firms in some extreme cases.

## **RESEARCH METHODOLOGY**

For the purpose of this work, study method was used for this research. This method facilitates the effective gathering of data through sampling of a small size of the population and generalizing the findings on the entire population. This method is considered appropriate for this study because it will help the researcher to discover relative incidence and distribution on the population. However, for this research work the study population comprises of forty (40) property developers, forty (40) contractors and 40 building materials

dealers operating in Bariga area of Lagos state. The sample size of this project is 120; this comprises property developers, Contractors and Building materials dealers operating within Bariga area of Lagos state which were targeted for administration of questionnaire. Random sampling technique was used as appropriate sampling technique because it is more objective in the selection of sample. Self-administered questionnaire was the main instrument used for the study.

### **STUDY AREA**

Bariga is Located in Lagos state Nigeria. It is a local council development area under Shomolu L GA of Lagos state with its headquarter/ secretariat at No19 Bawala street, Pedro Gbagada, Lagos State. It shares a boundary with Somolu Local Government at Ikorodu road through Pedro down to Bajulaiye. It is a small but highly populated area, It is located geographically within Latitude:  $6,535/6^0 32' 6.0''$  N, and longitude:  $3, 3947222/3^0 23'40.9986''$  E. According to the year 2006 national population census, the area has an estimated population of about 1.2 million people living in the area. It has a land mass area of about 3,412 sqkm. Its terrain is rather plainland and it usually experience serious drainage problems especially during the rainy season.

### **DATA ANALYSIS DISCUSSION OF RESULTS**

The data obtained from the respondents through field survey, interview, and administration of questionnaire were analyzed using descriptive survey method. Raw scores were converted to simple percentages, tables and diagrams form and consolidated with bar chart table for clarity and ease of description.

### **QUESTIONNAIRES ADMINISTRATION AND RETRIEVAL**

A total of 120 questionnaires were designed for this work. A total of 60 were administered to real property developers and 48 retrieved whereas 12 questionnaires were unretrieved which represent 55% Of the total administered questionnaires for the study. Similarly, a total of 60 questionnaires were administered to building materials dealers and retrieved 35 but 25 were unretrieved which also represent 45% of the total questionnaires administered for this work.

**Table 1 Analysis of questionnaires administered to real property developers and Building materials dealers in the area**

Respondent	Total no of questionnaires administered	No. of questionnaires retrieved	No of non retrieved questionnaires	Percentage of questionnaires retrieved
Real Property Developers/ Investors	60	48	12	55%
Building Materials dealers	60	35	25	45%
<b>Total</b>	120	83	37	100

**Source: Field survey, 2020**

The above table shows that two set of questionnaires were administered for real estate investors/developers, and for Building materials dealers in the study area.

**Table 2: Opinions of respondents on trend in selected building materials cost in the area.**

Item	Frequency	Percentage
Fair	5	7
High	78	93
<b>Total</b>	83	100

**Source: Field survey, 2020**

A look at the table 2 revealed that 78 (93%) of the total respondents, are of the opinion that the trend in cost of building materials observed in table 2 is astronomically high. As these cost keeps fluctuating over the years this scenario has affected the ability of individual developers to increase the unit of residential accommodation to met the demand of people for home ownership and better shelter.

**Research Objective 1: Factors responsible for the increasing cost of building materials in the Bariga, Lagos State.**

**Table 3 Respondents Opinions on the factors responsible for the incessant cost of building materials**

Item	Frequency	Percentage
Over dependent on imported materials	27	30
Government policy	25	28
Inflation/Fluctuation in the exchange rate of naira	15	20
Cost of Transportation and distribution	10	
Local tax and charges	6	7.5
<b>Total</b>	<b>83</b>	<b>100</b>

Source: Field survey, 2020.

Judging from the above table 3, 27 respondents representing 30% of the total respondents agree that over dependent on imported materials is one of the major factor responsible for the incessant cost of building materials. Similarly, 25 representing (28%) of the total population are of the opinion that instability in government policy and program me among other factors has a drastic effect on cost of building material.

**Research Objective 2: Factors militating against property development in the study area.**

**TABLE 4: SHOWING RESPONDENTS' OPINION ON THE FACTORS AFFECTING PROPERTY DEVELOPMENT IN BARIGA AREA OF LAGOS STATE AND STEPS TO BE TAKEN TO CURTAILS THE SPIRALING COST OF BUILDING MATERIALS**

NO.OF	ITEMS	SA	A	UD	D	SD
12.	Does increase in the cost of building materials affect property development in the area	50	25	5	3	0
13.	Do you agree that factors such as cost of land acquisition cost of building	40	25	5	6	7



	materials, professional charges and lack of capital are militating against property development in the area					
14.	Do you think that using locally produced building materials together with government subsidy on imported material can reduced the spiraling cost of building materials	40	30	5	5	3
<b>Total</b>		<b>130</b>	<b>80</b>	<b>15</b>	<b>14</b>	<b>10</b>

**Source:** Field survey, 2020

**TABLE 5: Does increase in the cost of building materials affect property development in the area?**

<b>Strongly Agreed</b>	<b>Agreed</b>	<b>Undecided</b>	<b>Disagreed</b>	<b>Strongly Disagreed</b>
<b>50</b>	25	5	3	0

**Source:** Field Survey, 2020

Table 5 indicates that 50 respondents representing 70% were strongly agreed that increase in cost of building materials affect property development in the area.

**TABLE 6: Do you agree that factors such as cost of land acquisition cost of building materials, professional charges and lack of capital are militating against property development in the area?**

<b>Strongly Agreed</b>	<b>Agreed</b>	<b>Undecided</b>	<b>Disagreed</b>	<b>Strongly Disagreed</b>
<b>40</b>	25	5	6	7

**Source:** Field Survey, 2020

Table 6 shows that 40 which represent (50%) strongly agreed that the above mentioned factors among other things are militating against property development in Bariga area of Lagos state while (7%) strongly disagreed.

**Research Objective 3:** Examine the need for local sourcing and development/use of alternative building materials to solve the problems of incessant cost of building materials in the study area.

**TABLE 7: Do you think that using locally produced building materials together with government subsidy on imported material can reduced the spiraling cost of building materials?**

Strongly Agreed	Agreed	Undecided	Disagreed	Strongly Disagreed
40	30	5	5	3

**Source: Field Survey, 2020**

**Table 7** shows that 40 respondents which represent 50% strongly agreed that with development, encouragement and use of locally made building material with sustainable quality alongside with government subsidy of some percentage on imported materials, the issue of spiraling cost of building materials will be a thing of the past. While (3%) Strongly disagree.

**TABLE 8: Which of these do you regarded as the effect of rising cost of building materials on property development in the study area**

Statement	Very High Extent	High Extent	Average Extent	Low Extent	No Extent
<b>Inhibited Innovations in Construction Methods</b>	30 %	10 %	10 %	25 %	8 %
<b>Fluctuation in Construction Costs</b>	40	15	15	10	3
<b>Quality of Workmanship is affected</b>	50	10	15	5	3

<b>Project Abandonment</b>	50	8	8	10	7
<b>Volume of construction output is affected</b>	35	15	10	15	3
<b>Rate of employment is affected</b>	50	10	5	5	3

**Source: Field Survey, 2020**

**Table 8** shows that 50 respondents which represent 50% strongly agreed that the major effects of rising cost of building materials on property development in the study area are that quality of workmanship, Project abandonment and escalating rate of unemployment. However other effects are volume of construction output is affected, fluctuation in construction, and Inhibited Innovations in construction methods.

### **CONCLUSION AND RECOMMENDATION**

From the foregoing analysis, it is evident to conclude that building materials prices being the single largest element in the total cost of building project has drastically affected the volume of property development in Bariga area of Lagos state in particular and indeed the whole country. Numerous factors are responsible for incessant increase in building materials such as price. This price movement has affected the standard of living, the expectation and people's aspiration to own a home and the livelihood of individual occupant in the area. The cost of building materials can be reduced by government through lifting of ban and established new industries to enhance the importation and manufacture of the building materials like cement, roofing sheet and paint. Government should liaise with professionals in the building industry to organize seminar/workshop that will aim at encouraging research effort on the development /use of more local manufactured industries for building materials

using the local contents. Government should serve as a model for local building materials utilization in housing development through building of more accommodation using such materials.

## REFERENCES

- Abiola (2000); "Cost Fluctuation a common Phenomenon in Construction Industry", Nigeria's Experience.
- Alabi, B. O. (2017). *Effect of building materials cost on housing delivery towards sustainability* (Doctoral dissertation, Cape Peninsula University of Technology)
- Alabi, B., & Fapohunda, J. (2021). Effects of Increase in the Cost of Building Materials on the Delivery of Affordable Housing in South Africa. *Sustainability*, 13(4), 1772
- Aliyu, A. A., Kasim, R., & Martin, D. (2011). Factors affecting housing development in MakamaJahun area of Bauchi Metropolis, Nigeria. *International Journal of Trade, Economics and Finance*, 2(4), 263.
- Allen, E., & Iano, J. (2019). *Fundamentals of building construction: materials and methods*. John Wiley & Sons.
- Arayela (2002); "Ways of bringing down cost of construction and make it attractive"
- Aribisala, A (1990); "Nigerian Quantity Surveyor, impact of local raw materials in Building as a means of reducing cost of construction". Vol. 10 p
- Ashworth, A., & Perera, S. (2015). *Cost studies of buildings*. Routledge
- Awoyemi, T., Aje, O., & Olanipekun, A. (2014). Quantity surveyor's experience and construction project performance. *Proceedings of the CIB: International Council for Research and Innovation in Building and Construction, Lagos*, 295-307. *Science*, 4(8), 34-45
- Brian, K. (2015). *OECD insights income inequality the gap between rich and poor: The gap between rich and poor*. oecd Publishing
- Azhar, N., Farooqui, R. U., & Ahmed, S. M. (2008,). Cost overrun factors in construction industry of Pakistan. In *First International Conference on Construction in Developing Countries (ICCIDC-I), Advancing and Integrating Construction Education, Research & Practice* (pp. 499-508).
- Builders Magazine August 1996 vol.1 "Construction cost and cost of materials increases by 133.33% for the past two decades"
- Builders Magazine vol.1 (1990); Nigerian Dream for Shelter shattered as a result of increase in cost of building materials"
- Cao, X., Dai, X., & Liu, J. (2016). Building energy-consumption status worldwide and the state-of-the-art technologies for zero-energy buildings during the past decade. *Energy and buildings*, 128, 198-213.
- Collier, K. (1984); "Estimating Construction cost a conceptual approach" Reston publishing co. inc Virginia
- Curtis, C., & Low, N. (2016). *Institutional barriers to sustainable transport*. Routledge
- Fos (1997); Rise in Price of Building Materials an uncontrolled- hyperinflation"

- Gbahabo, P., & Samuel, A. O. (2017, January). Effects of Infrastructure Project Cost Overruns and Schedule Delays in Sub-Saharan Africa. In *11th International Conference on Social Sciences Helsinki* (pp. 20-21)
- Grmela, V. (2020). Towards zero-waste buildings-Building design for reuse and disassembly
- Harris, F., McCaffer, R., Baldwin, A., & Edum-Fotwe, F. (2021). *Modern construction management*. John Wiley & Sons.
- Hussenini (1998); "Over 80% of Materials used in the Country are imported"
- Hwang, B. G., & Tan, J. S. (2012). Green building project management: obstacles and solutions for sustainable development. *Sustainable development*, 20(5), 335-349
- Ibem, E. O., Aduwo, B. E., & Onyemaechi, P. (2017). Challenges and Opportunities in Public-Private Partnerships (PPPs) for Housing Low-Income Earners in Nigeria
- Ibrahim, T. M. (2014). *PUBLIC INVESTMENT AND OUTPUT PERFORMANCE IN NIGERIA* (Doctoral dissertation)
- Ihuah, P. W. (2015). Building materials costs increases and sustainability in real estate development in Nigeria. *African Journal of Economic and Sustainable Development*, 4(3), 218-233.
- Jarkas, A. M. (2015). Factors influencing labour productivity in Bahrain's construction industry. *International Journal of Construction Management*, 15(1), 94-108
- Kolo, S. J., Rahimian, F. P., & Goulding, J. S. (2014). Offsite manufacturing construction: a big opportunity for housing delivery in Nigeria. *Procedia Engineering*, 85, 319-327
- Magutu, J. (2015). Towards populization of low cost building materials and technologies for urban housing in developing countries.
- Lucas, A., & Harris, J. (2012). *Ancient Egyptian materials and industries*. Courier Corporation
- Lufedeju (2004); "Development of Local Building Materials, for reducing Nigerian Shelter Problems"
- Mataalkah, F., Alomari, A. H., & Soroushian, P. (2020). Case Studies in Construction Materials
- Munano, A. N. (2014). *Preconstruction planning: exploring the factors that influence timeliness of project completion for public sector buildings in Kenya* (Doctoral dissertation)
- Odediran, S. J., Adeyinka, B. F., Opatunji, O. A., & Morakinyo, K. O. (2012). Business structure of indigenous firms in the Nigerian construction industry. *International Journal of Business Research and Management*, 3(5), 255-264
- Ofoegu, O. (1998); Challenges of Local Construction Materials and Materials Construction Policy".
- Okupe (2000); "Cost of Building Materials Constitute 75% of the total cost of construction", Nigeria's experience.
- Olowo (1988); "Our Building Materials and Construction Technology have high Foreign Compound"
- Opara (2003); Intensification of Research and Development of Locally Sourced Building Materials", a means of Solving spiraling cost of Building Materials
- Shyllon (2004); "Classification of building fourth edition" The Chaucer press London

Stanley, C. U., Ogbuagu, G. O., & Okechukwu, F. E. (2014). An Appraisal of the Sources, Quantities and Prices of Imported Building Materials in Nigeria. *International Journal*, 2(9), 871-889

Udegbe (2005); "Cost of Building materials an hindrances for people inability to owned a house"

Umar, T. I. (2017). An Analysis of the degree of Quality of Indigenous Building Materials used in Lapai Local Government Area of Niger State, Nigeria. *International Journal in Physical and Applied*

Windapo, and Iyagba (2004); "The Important of Housing in Human's Life"