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Assessing The Impact of Rising Cost of Materials On Construction Activities in Enugu, Enugu State, Nigeria

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ABSTRACT: *This study focused on assessing the impact of rising cost of building materials on construction activities in Enugu, Enugu state, Nigeria. The aim of this study is to assess the impact of rising cost of materials on construction activities in Enugu, Nigeria in order to proffer a solution to the rise in the cost of these materials used in everyday construction in Enugu state. With the following objectives; to identify the factors that lead to increasing cost of material in Enugu State, Nigeria; to assess the impact of rising cost of materials on construction activities in Enugu; to proffer solutions to the rise in the cost of building materials. The research design employed was primary and secondary which encompasses descriptions and quantitative analysis on a randomly selected sample of receipt of building materials from the suppliers over the years. The population of the study is 223 professionals in the field and sample size of 143 which was gotten using Taro Yamane formula. The findings of the study reveals that the factors that lead to increasing cost on the building construction activities in Enugu State are; fluctuations in material costs, design changes and scope creep, regulatory compliance and permitting, project delays, weather and environmental factors, technology and innovation costs, interest rates and financing costs, and others. Finally, the study recommends that there will be need for relevant authorities in the building industry to re-examine and educate the people on its existence and equally generate the possible ways of reducing the increasing cost of building materials so as to enhance the building construction industry in Nigeria.*

KEY WORDS: construction materials, building, construction activities, Nigeria

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INTRODUCTION

The importance of construction is so clear and obvious in any economic developing nation especially a country like in Nigeria (Ibironke, 2003). Building materials are one of the fundamentals of a building and they play a pivotal role in determining the quality and final cost of a project. Construction works varies in its scope and nature, from the execution of simple bungalows to the erection of large high-rise blocks, massive engineering works like refineries, dams, wharves and airports. The construction industry includes the constructors of both building and civil engineering works and there are no considerable numbers of contractors who undertake both functions (Seeley, 2004). With the population of Nigeria estimated to be over 200 million today, there is need for a built environment to accommodate and improve the standard of living of this increasing population. The world health organization (WHO, 2012) considers urban development as one of the most effective phenomena on human health in this 21st century. It is predicted that by 2050 about 64% of Africa and Asia and 86% of the developed world will be urbanized (Economist, 2012).

Furthermore, like all other activities construction have both positive and negative impacts on the society. On the positive side, Construction initiatives such as the development of new infrastructure and buildings, not only stimulate local economic activity but also foster community pride, prompting residents to invest time and money, potentially reducing crime rates and enhancing mental health, ultimately leading to further infrastructure enhancements like road construction and improved utilities (Holdrite, 2023). The construction industry in Nigeria is considered an emerging sector with its role viewed as a catalyst for economic growth. (Akanni, Oke, and Akpomiemie, 2014).It is also a labor-intensive sector, which employs a large number of workers which consist of construction activities with several negative effects on the society, disruption of daily life for residents in the vicinity, potential damage to the environment, including increased noise pollution, traffic congestion, safety concerns in affected areas and changes in the local economy i.e., cost of the things in market. These impacts occur from initial work on-site through the construction period, operational period and to the final demolition when a building comes to the end of its life as asserted by (Akanni, Oke, and Akpomiemie, 2014). Remember, many of these materials are naturally occurring substances such as: clay; rocks; sand; wood; branches; and greeneries while others are non-naturally occurring (man-made) materials/products (FMLHUD, 2011). Obviously, the rapid growth in the construction sector have become a raft in the prices of building material and labor because of the increase in the construction activities as cited by (Ibironke, 2003).

Consequently, The cost of building materials have posed a significant threat to both the construction industry and people aspiring to own houses (Anosike, 2009; Mekson, 2008; Mohammed, 2008 and Njoku, 2007); for example, a bag of cement, which is valued at N1,350.00 in 2006, goes as high as N1,850.00 in 2009 (Anosike, 2009) depicting about 37% increment; the bag goes as high as N2,000.00 in 2012 during peak season (field survey 2012).Supporting this view, Jagboro and Owoeye (2004) earlier established that increase in the prices of building materials has multiplier effects on the industry while Idoro and Jolaiya (2010) affirmed that many projects were not completed on time due to the cost of materials, which have been on the increase since ten (10) years ago then till now, as it stands it will be

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difficult for a civil servant to build or to own a building in Nigeria because of escalation of construction materials. Since, there is no consistence on cost, untimely completion, cost overrun, abandonment, collapse and many negative results were seen in our today's construction. Idoro and Jolaiya 2010; Oladipo (2009); Anosike, (2009); Eshofonie (2008); Alintah-Abel, Iheama and Okeke (2022).

Moreover, In spite of the past studies on the cost of building materials in Nigeria, little were publicized about the implications of the rising in cost on the construction industry in different study area; like (Jagboro and Owoeye, 2004; Mekson, 2008; Njoku, 2007; Oladipo andOni, (2012) and Akanni, Oke and Omotilewa (2014) and they have concentrated more on identifying the causes with little emphasis on its implications; hence, this research tends to provide a gap on assessing the impact of cost rising of materials on construction activities in Enugu, Enugu state, Nigeria in order to proffer solution to the rise in the cost of these materials used in everyday construction in Enugu state. With the following objectives are; to identify the factors that lead to increasing cost of material in Enugu State, Nigeria; to assess the impact of rising cost of materials on construction activities in Enugu and finally to proffer solutions to the rise in the cost of building materials

LITERATURE REVIEW

Construction Activities in Nigeria

In Nigeria, the construction industry is characterized by small and medium-sized local contractors who in most cases engage in residential projects for private clients (Dantata, 2008). These construction projects are driven by both the government and private investors. The government provides key infrastructure such as roads, bridges, dredged waterways and ports, and railways. These projects are pursued via government financing, public-private partnerships (PPPs), multilateral development banks (MDBs), and bilateral creditors. Due to the increasing cost of key infrastructure projects in the country and shrinking government coffers, the government has made use of PPPs as a tool to finance projects where the government was not able to secure debt financing. The Senate approved about $22 billion in external loans for key infrastructure projects in the National Infrastructure Master Plan. The housing sector is expected to account for 11% of this fund while transportation may account for around 25%. Nigeria's construction market is expected to grow by an annual average growth of 3.2% between 2022 and 2026. This is an improvement from 3.1% growth in 2021. The country saw a 7.7% decline in 2020 due to COVID-19 restrictions and a drop in demand for oil and gas – the main source of government earnings. The World Bank estimates that Nigeria will need to invest $3 trillion in infrastructure to reduce the infrastructure deficit in the country. The government of Nigeria has begun to take steps towards reducing the infrastructure deficit through increased spending as part of a 30-year infrastructure plan (National Integrated Infrastructure Master Plan), which aims to bring Nigeria's infrastructure stock to the 70% of GDP level by 2043.

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Construction Material Cost

Construction materials are those materials put together in erecting or constructing structures, no field of engineering is imaginable without their use (Udisen and Akanni, 2010). The historical significance of building materials in the construction industry is underscored by their pivotal role. In ancient times, materials such as stone, wood, straws, clay, lime, and brick were predominant, occurring naturally (Akanni, 2006; Taylor, 2013). As building techniques evolved, so did the development of composite materials, where the mixing and/or heat treatment process played a crucial role. Concrete, a notable example, was pioneered by the Roman Empire (Everett and Barritt, 1994). The early 20th century witnessed a transformative phase in science and technology, ushering in materials characterized by improved performance and durability. Reinforced concrete, steel, plastics, and metal stand out as exemplars of this technological progression (Taylor, 2013). This historical trajectory highlights the continuous evolution of building materials, shaping the construction industry into what it is today. Adedeji (2018) noted that approximately sixty percent (60%) of the overall housing expenditure is allocated to the acquisition of building materials. In a similar vein, Arayela (2005) asserted that the expenses related to Construction materials make up around 65 percent of the total construction cost. Adedeji (2018) accurately pointed out that a primary obstacle hindering the achievement of effective housing in Nigeria, as evidenced by successive government initiatives, has been the high cost of housing in the country.

As per Ibn-Homaid (2002) and the UNCHS report (1993), it is emphasized that building materials stand out as the most significant input in project development, holding a paramount role in ensuring the successful delivery of construction projects. Expanding on this notion, Jagboro and Owoeye (2004) along with Idoro and Jolaiya (2010) further affirm that building materials alone constitute a substantial portion, ranging from 50% to 60%, of overall project costs, and exert a significant influence, controlling approximately 80% of the project's schedule. This underscores the critical importance of strategic management and cost control measures related to building materials in the context of construction project planning and execution.

Factors Contributing to Cost of Material Increment

The continual increases in building material costs can be attributed to national macro-economic factors, as acknowledged by FMLHUD (2011), contributing to elevated residential property development expenses. This, in turn, results in high rents for developed properties, as highlighted by FMLHUD (2011) and Dappa (2010). Furthermore, these factors may also be influenced by various elements such as the quality of available building materials, proximity to the development site, local demand and supply dynamics, network systems, inflation and the accessibility and availability of finance to support the production and acquisition of required building materials, particularly in the context of residential building development (Dappa, 2010).

The study by Akanni et al., (2014); Kwak et al., (2018) and Ayodele and Alabi's (2011) identifies the exchange rate of the Naira, cost of fuel and power supply, as well as changes in

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government policies and legislations as the primary factors contributing to the upward trajectory in construction costs. Simultaneously, fluctuations in construction costs, reduced volume of construction output, and the risk of project abandonment emerge as the top implications resulting from these factors.

Federal Ministry of Lands, Housing and Urban Development listed the following as the factors that causes rise in the building material cost:

1 Overdependence on imported building materials
2 Inadequate and inefficient infrastructural facilities (roads and rail system, etc.)
3 Shortage of locally manufactured building materials
4 Lack of knowledgeable technical expertise
5 Lack of consistent government policy and implementation
6 Lack or absence of indigenous technology for the production of building materials
7 Rapid depreciation of the national currency
8 Over pricing of building material costs of production
9 Lack of finance for new building material production factories
10 Increases in the labor costs of production of building materials
11 Over pricing of the contracts for the production of the building materials
12 Safety and Quality Standards

The building material price trends in 2021 are harder to anticipate than ever. If you're planning a construction project this 2022, or you're about to start one, it will likely cost you more than it would have a year ago due to the COVID-19 pandemic as asserted by Alintah-Abel, et.al (2022). Windapo and Cattell (2013) found out that on the key issue affecting the development of the construction industry in Nigeria that increase in costs of building materials was a significant factor affecting development of the construction industry. No single factor drives construction pricing. Numerous economic forces have varying degrees of influence, and this makes predictions about pricing somewhat challenging. Further, there will be lot more uncertainty in the post-COVID-19 market of materials supply. Windapo and Cattell (2013) found out that on the key issue affecting the development of the construction industry in Nigeria that increase in costs of building materials was a significant factor affecting development of the construction industry. The construction material prices change so quickly that the initial budget figures become completely unrealistic. In addition, an upward review of contract sum leads to conflicts between contractors and clients, likely leading to cases of abandonment where investments are tied down, since such project will not be put to use at the expected time.

Different studies by researchers all over the world such as Oladipo and Oni's (2012), Akanni and Oke (2012), Mansur, Abdul and Yusof (2016); Oluwunmi and Opoko, (2020) Ademiluyi and Adegun, 2019); (Ogunsote et al., 2017) and Bisiriyu (2018); (Giwa et al., 2019);(Ogunsote et al., 2017);Oni and Ajayi (2016). Federal Ministry of Lands, Housing and Urban Development and others all stated in their findings on the causes of the rise in the cost of building materials and they all have some factors in common. These factors they have in

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common are inflation, exchange rate, government policies, technological advancement, and transportation.

The Impact of Rising Cost of Materials on Construction Activities in Enugu

The continuous and daily escalation of building material prices in Nigeria especially in Enugu, has driven by many factors like high interest rates, substantial devaluation of the naira, inflation, and a flawed distribution network for these materials, collectively or individually, poses significant challenges to the provision of housing for Nigerians and the development of essential infrastructure crucial for industrial progress as highlighted by Olabopo in 1992, hinders the nation's advancement from a developing status. Oladipo and Oni's (2012) also examined the building materials cost trend and its impact on construction industries in generally both the potential threats to the national economy. Instances of conflicts between building contractors and clients arose due to upward reviews in contract sums likely leading to cases of abandonment where investments are tied down, since such project will not be put to use at the expected time.

Moreover, in order to avoid such conflicts and sustain their businesses, some contractors turned to the utilization of substandard or insufficient materials for construction projects, contributing to incidents of building collapse in the nationals asserted by Oluwunmi and Opoko, (2020). Akanni and Oke (2012) discussed that the annual average percentage increase for all building materials indicates that, relative to the base year 2000, the composite percentage rise fluctuated from a decline of 2% in 2001 to 1.02% in 2002, 2.02% in 2003, surging significantly to 77.23% in 2004, followed by 12.85% in 2005, 4.95% in 2006, 2.83% in 2007, 18.81% in 2008, and 23.93% in 2009. This aligns with the findings of a market survey reported by Vanguard Newspaper (2007), as cited in Njoku (2007), indicating that prices of nearly all building materials in major markets in Lagos state experienced an increase of at least 20 percent. Consequently, this limited average Nigerians to choosing between obtaining additional funds, typically from banks with exorbitant interest rates, scaling down the original project design, or, in extreme cases, abandoning such projects altogether.

Mansur, Abdul and Yusof (2016) concluded that the escalation in material prices particularly evident since 2008, has been characterized by both substantial increases and heightened unpredictability. This phenomenon coincided with the government's decision to remove these construction materials from the list of price-controlled items. The average price of materials has demonstrated the potential to increase by more than 10% annually, contributing to a landscape of significant unpredictability where prices can surge by more than 50% within a relatively short span. It is equally asserted that on average cost of building material increases at the rate of 133.33% annually in Nigeria far back 2000, presently the price has risen to 620% using selling price per bag of cement in 1990(#500) and #3600 in 2021 as indicators. Similarly, Achuenu and Ujene (2016) observed that price of building material is not uniform across Nigeria. This shift has introduced challenges in cost estimation and budgeting for construction projects, requiring stakeholders to navigate a dynamic and volatile pricing environment (Olusegun and Micheal, 2011). According to Ayodele and Alabi (as cited by Okafor et al.2018)

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the effect of abandonment includes disappointment of the populace, low living standard, wastage of resources, reduction in employment opportunities, decrease in tempo of construction activities, decrease in revenue accruing to government and difficulty in attracting foreign loans.

Finally, rate of employment is also affected; the construction industry boasts a diverse workforce comprising unskilled laborers, skilled workers, craftsmen, managerial staff, and administrative professionals. Research underscores the significance of attracting and retaining the right talent in the construction sector, given the scarcity of both skilled individuals and experienced managers. Many contractors struggle to accurately forecast expected profits on projects, leading to workforce layoffs and, in extreme cases, the closure of firms.

Proffer Solutions to High Building Material Cost in Construction Activities

Addressing the high cost of construction materials requires a multifaceted approach. The literatures reviewed had these solutions to high cost of building materials in common. Here are several potential solutions as cited by some of the scholars like (Okafor et al.2018; Olusegun and Micheal, 2011; Akanni and Oke 2012) and others.

Local Sourcing and Production: Encourage and invest in local production of key construction materials to reduce dependence on imports. Develop policies that support local industries, ensuring they have the capacity to meet demand.

Government Intervention and Support: Implement policies that stabilize inflation rates and exchange rates to create a more predictable economic environment. Provide subsidies or incentives for the production and purchase of essential construction materials.

Infrastructure Development: Invest in transportation and logistics infrastructure to reduce the cost of moving materials from production sites to construction sites. Improve energy infrastructure to lower energy costs associated with manufacturing building materials.

Research and Development: Invest in research and development to discover innovative and cost-effective construction materials and methods. Promote the use of sustainable and eco-friendly materials that may become more cost-competitive over time.

Regulatory Reforms: Streamline regulations and reduce bureaucratic hurdles in the production and distribution of construction materials. Ensure that building codes and standards are transparent and do not unnecessarily increase costs.

Skill Development: Invest in training programs to enhance the skills of the construction workforce, potentially increasing efficiency and reducing labor costs.

Waste Reduction and Recycling: Implement practices that reduce waste in construction processes and encourage recycling of materials. Promote circular economy principles to extend the life cycle of construction materials.

Financial Support Mechanisms: Explore financing options or loans with favorable terms for construction projects to ease the financial burden on developers and contractors.

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Collaboration and Partnerships: Foster collaboration between the government, industry stakeholders, and research institutions to collectively address challenges and find sustainable solutions.

Market Transparency: Improve transparency in the building materials market to ensure fair competition and prevent price manipulation. Facilitate information exchange to enable informed decision-making by industry players.

Community Engagement: Engage with local communities to understand their needs and incorporate local materials and techniques where applicable. Therefore**,** implementing a combination of these solutions, tailored to the specific challenges of the region, can contribute to mitigating the high cost of construction materials in Enugu State.

3.0 METHODOLOGY

Considering the nature of the research, quantitative analysis on a simple random sampling was adopted for this study. Data was obtained through primary and secondary sources. The population for this study comprises of some of registered construction professionals in Enugu State and was distributed through a structured questionnaire survey approach. Data generated were analysed with the of aid of statistical package known as (SPSS).The data collected was presented using tabular form and charts while mean item score was applied appropriately and results were later discussed. The research design employed in this study primarily encompasses comprehensive and informative descriptions and selected sample of receipt of building materials from the suppliers within 2010-2022.A total of one hundred and forty-three (143) questionnaires were distributed to some registered construction professionals in Enugu State and one hundred and forty-three (143) were returned.

PRESENTATION AND ANALYSIS OF DATA/FINDINGS

The data collected for this study were statistically analyzed and presented based on the research questions that guided the study in this chapter. Out of the one hundred and forty-three (143) questionnaires distributed, one hundred and thirty-five questionnaires were correctly filled and returned, while eight (8) were mutilated. The researcher worked with 135 valid returned questionnaires.

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Table 4.1: Identify those factors that lead to increasing cost of material in Enugu State, Nigeria.

	Factors	VGI	GE	UD	LE	VLE	∑F*x*	$\bar{x}$	RESULT
1	Overdependence on imported building materials	45	40	10	23	17	135		
		225	160	30	46	17	478	3.5	ACCEPT
2	Inadequate and inefficient infrastructural facilities	50	49	15	15	6	135		
		250	196	45	30	6	500	3.7	ACCEPT
3	Shortage of locally manufactured building materials	47	45	8	33	2	135		
		235	180	24	66	2	507	3.7	ACCEPT
4	Lack of knowledgeable technical expertise	40	50	5	30	10	135		
		200	200	15	60	10	485	3.5	ACCEPT
5	Lack of consistent government policy and implementation	51	30	12	32	10	135		
		255	120	26	64	10	475	3.5	ACCEPT
6	Lack or absence of indigenous technology for the production of building materials	55	50	6	21	3	135		
		275	200	18	42	3	538	3.9	ACCEPT
7	Rapid depreciation of the national currency	51	40	2	29	13	135		
		255	160	6	58	13	492	3.6	ACCEPT
8	Over pricing of building material costs of production	40	30	13	21	31	135		
		200	120	39	42	31	432	3.2	ACCEPT
9	Lack of finance for new building material production factories	39	40	10	36	10	135		
		195	160	30	72	10	467	3.4	ACCEPT
10	Increases in the labor costs of production of building materials	55	35	5	22	18	135		
		275	140	15	44	18	492	3.6	ACCEPT
11	Over pricing of the contracts for the production of the building materials	40	40	10	30	15	135		
12	Safety and Quality Standards	44	50	5	22	14	135		
		220	200	15	44	14	493	3.6	ACCEPT
	Grand Total							3.55	ACCEPT

Source: Researchers fieldwork (2024).

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All the items had mean ratings above 2.5. The grand mean rating was 3.0 which is also above the criterion mean. Based on this, the researcher concludes that the listed items are the factors that led to increasing cost on the construction activities in Enugu.

Table 4.2: The impact of rising cost of materials on construction activities in Enugu State, Nigeria
Source: Researchers field Survey (2024)

S/N	**Responses on the level of violation of building code**	**VGE**	**GE**	**UD**	**LE**	**VLE**	**∑F*x***	$\bar{x}$	**RESULT**
		40	50	6	20	19	135		
1	Project Viability and Budget Overruns								
		200	200	18	40	19	477	3.5	ACCEPT
		40	30	9	42	14	135		
2	Construction Delays								
		200	120	27	84	14	445	3.2	ACCEPT
		40	43	6	20	26	135		
3	Material Substitutions								
		200	172	18	40	26	456	3.3	ACCEPT
		41	30	9	34	21	135		
4	Housing Affordability								
		205	120	27	68	21	441	3.2	ACCEPT
5	Import/Export Dynamics	44	40	5	22	24	135		
		220	160	15	44	24	463	3.4	ACCEPT
6	Risk of Project Abandonment	52	40	1	18	24	135		
		260	160	3	36	24	483	3.5	ACCEPT
7	Contractual Disputes	39	40	5	39	12	135		
		195	160	15	78	12	460	3.4	ACCEPT
8	Impact on Economic Growth	45	41	5	39	5	135		
		225	164	15	78	5	487	3.6	ACCEPT
9	Employment and Labor Market	45	30	8	29	23	135		
		225	120	24	58	23	450	3.3	ACCEPT
10	Market Competition	51	30	5	45	4	135		
		255	120	15	90	4	454	3.3	ACCEPT
	Grand total							3.37	ACCEPT

Table 4.2 shows that they are some significant impacts on the rising of cost of materials on construction activities in Enugu State, Nigeria such as Impact on Economic Growth 3.6 which scored a highest, Project Viability and Budget Overruns which scored 3.5; Risk of Project Abandonment scored 3.5; while Import/Export Dynamics scored 3.4 and finally whose scores were between 3.3 and

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3.2 are Employment and Labor Market, Market Competition and Housing Affordability. Stating that all the items had mean ratings above 3.0. The grand mean rating was 3.35 which is also above the criterion mean. Based on this, the researcher concludes that the identified items are the impact of cost implications on the construction activities in Enugu state.

THE TREND OF SINGLE ROOM APARTMENT, CEMENT, REINFORCEMENT, SAND, STONE AND BLOCK WITHIN THE TIME FRAME 2010-2022

Regression Result indicating the impact of cement, reinforcement, sand, stone and block on the construction cost of single room apartment

Dependent Variable: Single room
Method: Least Squares
Date: 02/24/23 Time: 14:52
Sample: 2010 2022
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12514.69	31003.37	0.403656	0.7255
CEMENT	49.66126	23.33170	2.128488	0.1671
16MM	37.45888	11.18113	3.350187	0.0787
12MM	17.92864	19.00342	0.943443	0.4450
10MM	31.68770	21.63234	1.464830	0.2806
8MM	60.16442	34.15108	1.761714	0.2202
RIVER SAND	14.85954	9.893615	1.501932	0.2720
PLASTER SAND	9.110531	10.85694	0.839144	0.4897
12MM-19MM AGG	4.607121	1.578300	2.919040	0.1001
25MM AGG	6.069692	1.860753	3.261955	0.0825
BLOCK	921.7548	484.5172	1.902419	0.1975

R-squared	0.994335	Mean dependent var	92000.00
Adjusted R-squared	0.966008	S.D. dependent var	35090.36
S.E. of regression	6469.591	Akaike info criterion	20.20812
Sum squared resid	83711208	Schwarz criterion	20.68615
Log likelihood	-120.3528	Hannan-Quinn criter.	20.10986
F-statistic	35.10232	Durbin-Watson stat	3.197982
Prob(F-statistic)	0.028008		

The result of regression in table 4.3 indicates that cement, 16mm, 12mm, 10mm, 8mm, river sand, plaster sand, 12mm-19mm, 25mm Agg. and Block has a positive relationship on the construction cost of single room apartment such that an increase in 16mm, 12mm, 10mm, 8mm, river sand, plaster sand, 12mm-19mm, 25mm Agg. and Block cost will lead to increase in the construction cost of single room apartment at average of 49.66, 37.45, 17.92, 31.68, 60.16, 14.85, 9.11, 4.60, 6.06 and 921.75 respectively. More so, the result further indicates that the rate at which the independent variables explain what happens on the dependent variable is 99.43% which is believed to be high by the researcher.

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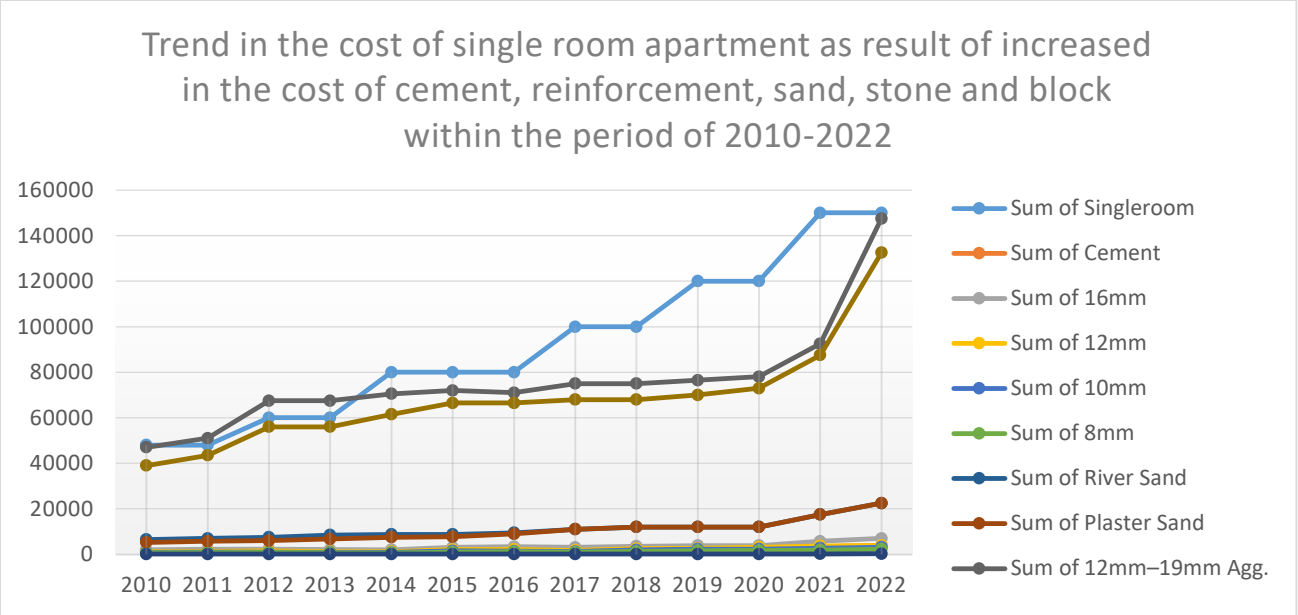
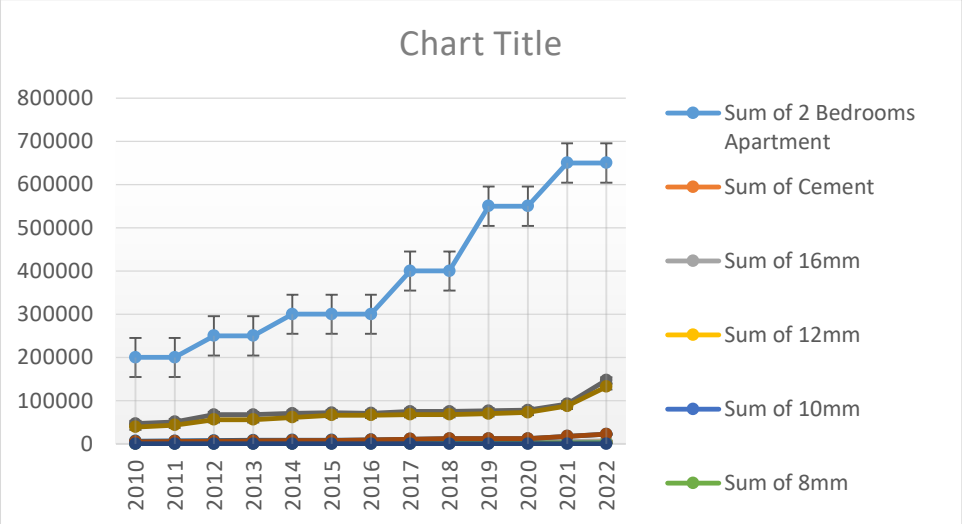


Fig. 1 ***Trend in the cost of single room apartment as result of increased in the cost of cement, reinforcement, sand, stone and block within the period of 2010-2022.***

More so, the chart further strengthens the conviction that increase in the 16mm, 12mm, 10mm, 8mm, river sand, plaster sand, 12mm-19mm, 25mm Agg and Block cost has a positive and significant influence on the construction cost of building a single room apartment as the trend is seen to be moving positively high at the right hand direction.



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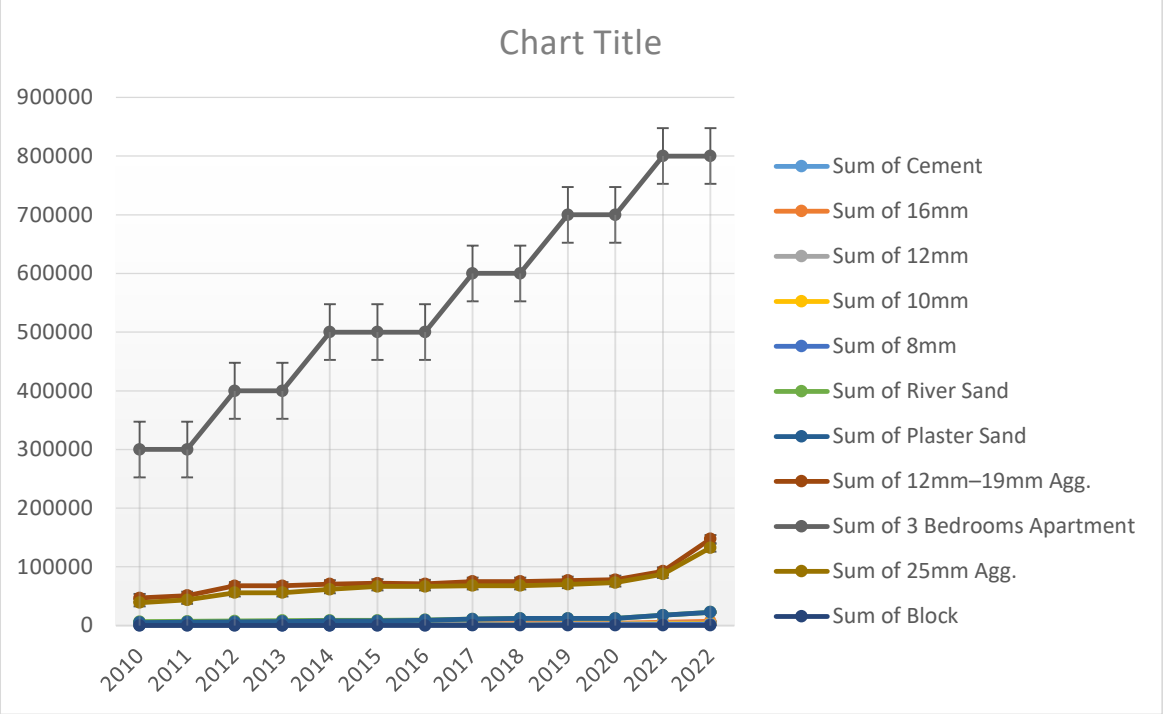

However, the chart also proved that cement, 10mm, 8mm, river sand and 25mm Agg has a positive relationship on the construction cost of single room en-suite apartment whereas 16mm, 12mm, plaster sand, 12mm-19mm and block has a negative relationship on the construction cost of building single room ensuite apartment.

CONCLUSION

From the findings of the study, the study concludes that there are identified factors that can impact the rising cost of materials on construction activities in Enugu, following the certain review done by various scholars; Oladipo and Oni (2012) as cited by Danso and Obeng-Ahenkora, 2018) established that inflation, exchange rate, import, interest rate, money supply and demand for money have a significant effect on the prices of building materials in Nigeria. Another study conducted in Nigeria by Amos et al. (2018) found that import duties and exchange rate of the Nigeria Naira have influence on the prices of materials in the market. Note that numerous economic forces have varying degrees of influence, and this makes predictions about pricing somewhat challenging. Moreover, the high cost of building materials poses a significant threat to both the building sector and people aspiring to build their houses and as such, therefore there is need to provide lasting solutions, bring about steady building material prices, and avoid circumstances of persistent and continual price increase on construction activities.

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Recommendation

Government should ensure a steady supply of power from the power sector as against the epileptic power supply, repair the local refineries, and discard the idea of removing subsidy on PMS but focus more on encouraging the local refining of petroleum products instead of importing them in order to reduce constant increase on our domestic prices for petroleum products and consequently inflation on the materials too.

For this will foster and caution the effect on the impact of the result and improve both our industry and generate more avenue for country progress in generally

Lastly, the study recommends for promoting and adopting sustainable construction practices such local construction company, local production of materials that will address the challenges associated with building material costs and effective government intervention.

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