Budgetary Allocation to the Housing Sector and the Price of Some Building Materials.

D. O. Mac-Barango
Department of Quantity Surveying,
Rivers State University of Science and Technology,
Port Harcourt, Nigeria.
Email: dumomacb@yahoo.com

A. A. Shittu
Department of Quantity Surveying,
Federal University of Technology,
Minna, Nigeria.

Abstract
This research evaluates budgetary allocations to the housing sector and the impact on prices of some building materials. Using data obtained from Lokoja metropolis in (Kogi State) of Nigeria as well as the statistical technique of regression, set at 95% confidence level, it establishes as follows: significant relationships exist between the prices of (blocks, sand and cement) and the budget for housing sector, recording R-square values that were between (64.25-55.31)%. Further linear regression equations between the parameters of (% change in prices of block, sand and cement) and (the % changes in budgets for housing) were not however significant, recording R-square values that were between (0.37-3.27)%. Exponential transpositions of the linear equations were not significantly different from the initial ones. The research concludes that % increases in budgetary allocations to the housing sector do not account for the % increases in the prices of the materials. Other economic factors outside the tested parameters are likely to account for the changes in prices. The research recommends further studies which explore the influence of macro-economic variables on the prices of building materials and budgetary allocations.

Keywords: *Housing sector; budgetary allocations; Building materials; Price determinants.*

INTRODUCTION

The sustenance and survival of public and private organization are based on efficient budgetary systems and allocations. Capital budgets in particular provide the means through which physical infrastructure developments are achieved. Adebayo (1981), has contended that budgets remain the main measure by which the essential resources of men and materials are articulated for the accomplishment of almost all government goals. Perhaps is it no exaggeration to say that budgeting is synonymous with management since both are concerned with systematic intelligent planning and control of resources. According to Umoren (1994), budgets are plans for a given period on a proposed expenditure with clearly defined means for financing the expenditure. Buhari (1993) and Onwusonye (2010), have observed that physical infrastructure development by its nature is capital intensive and that budgetary allocations provide the financial means of meeting the capital intensive demands. Physical infrastructure development is beginning to be understood in terms of the housing stock and quality as well as the place of the housing subsector in national economy and development. Adeniyi (1985) has posited that shelter is second to food, in mans hierarchy of needs. UNDP (2010), has noted that housing is a universal basic need, and constitutes a key component of the economy of nations and that lack of it, is one of the worst forms of poverty. Aribigbola (2009), has opined that conceptual differences exist

between housing and shelter, the concept of housing transcends shelter. Apochi and Achuenu (2002) headings provide an excellent basis for discussion on the constituents that makes up for good housing: water, adequate space, functional layout and the availability of amenities.

The housing subsector is however bedeviled by a plethora of problems. Mosaku (1997) and the National Housing Programme. NHP (1991) have identified acute shortages in stock and unsatisfactory quality conditions. These occurrences are attributable to futility of associated policies on past housing programmes; colonial, post independence (1960-1979), the second republic (1979-1983) and the period (1991-2000). Olutah (2000), has also indicated that there were severe inadequacies in quantitative and qualitative terms. Asiodu (2001), reiterated that there were shortfalls in projected targets for housing units. Alufohai (2011), has observed that the Nigerian housing deficit is about 17 million units. The shortages according to Akumazi (2011) are put at about 16 million units. 720,000 units are required yearly to meet the millennium goal on housing. A gap of N56 million trillion existed for the estimated mortgage financing.

Ghana's statistical service (2000) and the local government desert (1999) cited in Yalley et-al (2010), indicated that Ghana, also suffers from acute shortage of housing and that the problem is not different from other developing countries. Statistics showed that the increases in the housing were unable to keep pace with an increase in population which was at a rate of 2.7 per annum.

The shortages in housing stock, according to Nwuba (2002) are mainly due to escalations in the prices of building materials. Alagidede (2012), has posited that the construction sector is one of the important sectors in any economy. It is a key barometer of the health of the economy because of its strong linkage to cyclical fluctuations in the economy. The construction sector is critical as government's policy of stimulating the economy works through spending on physical infrastructure. The sector can thus be used for governments counter cyclical macroeconomic policy. Increasing the level of capital stock through improving physical assets in a recession would counter the effects of the fall in output, smooth economic cycles and put the economy in a steady state of growth.

Based upon guidance and revelations it would seem reasonable to postulate that distortions in macro-economic stability impacts on prices of goods and services. This in turn influences budgetary allocations by government for physical infrastructure development, the housing sector inclusive. There is therefore a need for these deficiencies that have been observed to be addressed for several reasons: The declarations of the first united nations centre for human settlement conference, habitat I (1976) held in Vancour, Canada and habitat II Istanbul, Turkey gave credence for the commitments of government, world over to address the problems associated with housing sector. There is a need for ambitious housing programme that requires concerted actions by all tiers of government, other public and private towards addressing, the shortages and dilapidated situations of housing (Asiodu, 2001). The housing/construction sector contributes a great to the gross domestic products (GDP), (Mogbo, 2001). Housing requires a great deal of capital outlay which beyond the capacity of the medium/low income groups (Akumazi 2011). There is a need to explore an emerging and prevailing public private initiative for housing procurement (Mogbo 2001 and Ibrahim 2011). The percentage contribution of Building Materials to total cost of building is between 50-60% (National Housing Policy 1991 and Mac-Barango 2003).

There is therefore an urgent need to understand through this research the influence of the prices of building materials on budgetary allocations and subsequently on the housing sector. This research begins to contribute to this agenda by undertaking a review on the elements of macro stability with a view to evaluating its impact on the prices of the selected building materials and consequentially on the budgetary allocations to the housing sector. This it is able to achieve through the appraisals of existing relationships between: Price regimes and budgetary allocation (ii) Percentage increases in the prices of the building materials (cement, sand and blocks) and the percentages in budgets for housing. The scope of the research is as follows: The location, Kogi

State of Nigeria lies between Longitudes 7.56N and Latitudes 6.57E. Lokoja, the administrative headquarters is a conference town between two rivers, Niger and Benue (prominent ones in Africa). The conference status has enhanced its economic potentials. The following scope and assumptions define the limits and bounds within which the results of the research hold: The period of the study is between 2000-2007. The price regimes were obtained for prices of some common building materials (cement, sand and blocks). The assumptions are that prices obtained from vendors of building materials are true representations of prevailing situations. Prices are determined by the forces of demand and supply induced by macroeconomic elements. The structure of the paper is as follows: First it elucidates on issues and factors which influence macro-economic stability, this led to the formulation of other pertinent questions such as: Do fluctuations in prices lead to inflation. (ii) How do changes in prices influence budgetary regime. (iii) To what extent do changes in prices of building materials influence both the total as well as the capital budgetary allocations to the housing sector, under the period of the review. Second, it undertakes a review of related literature on the links and interlinks between elements of macroeconomic stability, price fluctuations and budgetary regimes for the housing sector. It also draws from the results of previous works. Mogbo's research works (2001) on budgets for public utilities in Lagos State, Nigeria and the construction sector and economic growth of Nigeria (1981-1995) serve as relevant examples. Wali's (2005) research, establishes that there were significant relationships between, (i) the cost of sand as well as that of cement and budgets for housing. (ii) There were no significant relationships between annual variations in the cost of sand as well as that of cement and annual variations in budgets for housing in Niger state of Nigeria, within the period (1994-2004). Idiake's (2011) research establishes that increases in the pump of diesel (Ago), could be used to predict the prices of building materials and its effect on the construction industry. Third the paper summarizes methodology. Finally the research draws conclusion and offers recommendations.

BUDGETARY ALLOCATION AND PHYSICAL INFRASTRUCTURE DEVELOPMENT

Financing of physical infrastructure for public housing sector is substantially through budgetary allocations. The budget is a management and analytic tool that aids in financial appropriations. The budget is a planned statement of expenditure and revenue as well a means of control within a period. According to Bozemann and Strauss man (1982) budgeting is an economic analytic process, which is between competing and often countervailing forces on issues of centralization and decentralization, autonomy and independence, macro and micro politics. Adetola (1999), reveals that at the micro economic level, the analytic process of budgeting is about converting of a company's plans and objectives into quantitative and monetary terms, which aids in the planning and control of income and expenditure. The analytic process of budgeting according to umoren (1994) ensures that actual spending generally coincide quite closely with budgetary appropriations that is achieved through a plan of financial operations. Dikko (1999), elucidates that the analytic process of budgeting at the macro-economic level involves reviews of the impact of macro-economic variables of exchange rate, interest rates, duties and taxes, location peculiarities, population, land constraints, equipments' etc on the preparation of a proper realistic and useful capital estimates. According to Mogbo (2001), wrong appraisals of the constituents' during a budgeting exercise for infrastructure in the public sector, is a major cause of poor performance that arises from inadequate budgeting and that budgetary financing correlates with physical infrastructure. Anyadike (2002), also articulates reviews emphasizing that budgetary planning is a tool for rational allocation of financial resources and further reiterates that allocation exercise through the adoption of models from a good basis for the selective implementation of competing development programmes to achieve set objectives. Alagidede (2012) has observed that government can through its policies, either retard or stimulate the economy. This it is able to achieve through spending on physical infrastructure.

The pace and pattern of business investment in the construction sector is critical, the sector establishes a number of inter sectoral linkages of the economy and produces multiplier effects.

BUDGETARY ALLOCATION, BUILDING PRICE DETERMINANTS AND THE HOUSING SECTOR

Budgetary allocations involve an analytic review process that translates the requirements and needs of the housing sector to financial and economic terms: Alagidede (2012), posits that the needs and requirement of the physical construction sector are labour, material and equipment which translate the techno-economic specifications produced, by the architectural, engineering and design services into concrete physical entities. Anyadike (2000), posits that a thorough analysis of constituents' of projects and their resources requirements form a good basis for budgetary allocation and also cautions that budgetary allocation should not be undertaken without appropriate plans for continuous funding to completion. Mogbo (2001), links inadequate budgeting by the public sector to the low level of implementation of infrastructural development and emphases that the poor performance is caused by budget deficit, there is therefore a need for the citizens to avoid unplanned spending especially those knowledgeable enough in the art of budgetary allocations. Ofereh (2006), asserts that uncompleted projects and alright abandonment are some of consequential effects which the lack of connectivity between the budget sizes and projects, they are expected to finance can cause. Issues on prices, quantity supplied, demand of materials, monetary and exchange rates policies on prices and their impact on budgets for future requirements are extensively reviewed by (Ayeni 1986, cited in Jagboro 1992). Mogbo's assertion (1992), forms an excellent basis for discussion on economic and financial issues and variables that should be considered as useful parameters that influence budgetary allocations and capital funding to the housing sector: Derived revenue, anticipated revenue, gross national product (GNP) and gross domestic product (GDP), the final cost/m2 of previous project cost, past final and initial construction cost and time trends, the population to be served, the percent and past trends of the population for housing stock. The National housing policy (1991), highlights an array of factors: which included the following: high demand for building materials, massive importation of building materials and scarcity of building materials as the causative factors that are responsible for the escalations and the upward trends in the price mechanism of building materials and construction cost. Nwuba (2002), articulates literature on the issues that led to the escalation in the continuous upward trends in prices of building materials. There is an excellent basis for undertaking a literature review in Ajanlekoko (1990), Nwuba (1994) and federal office of statistics FOS (1997) cited in Nwuba (2002), on issues connected with the impact of the structure adjustment (SAP), on the escalating costs of construction. Onibokun, 1990 cited in Nwuba (2002), observes that it is the high cost of building materials and other inputs that slow down the rate of housing supply. Lilly and Wai's (2001) headings form an excellent basis for discussion of some other factors that are responsible for the upward trends in materials cost and their impact on economy: High demand for building materials relative to supply, instability of the economy and the regular increase in inflation. Yalley et-al (2010), have revealed from a survey on housing values conducted in Sekondi-takoradi metropolis, that population and prices of buildings, especially cement are factors affecting housing delivery. Issues concerning the interrelation between the economic variables, of prices of building materials and budgetary allocations are extensively reviewed elsewhere. See, for example, the assertion of Okongwu 1986 cited in Mogbo's (2001), on the budget as a fiscal instrument for the management and planning of an economy, and the inherent influence of oil market and foreign exchange regimes on budgeting. Wong (2008), Simonson (2008) and the bureau for labour statistics USA (2008) cited in Idiake (2011), also provide an excellent basis for review of the impact of the increases in the price of diesel (Ago) on the prices of building materials and by extension its effect of the Malaysian economy. Reasonable inferences could be drawn from Idiake's (2011), caution and advice to the Nigerian Government that fuel price hike

policies should be implemented with restrain as to prevent rises in the prices of building materials. The advice draws from the Malaysian experience and the results of his research work which establishes significant correlations between increases in prices of diesel (Ago) and the prices of building materials in Nigeria (1990-2009). Mosaku, (1997), provides headings that explain the occurrence and consequences of inflationary trends: cost overrun, inability to meet output targets and reduction in effective demands. According to Nwuba (2004), shortages in housing supply, difficulties in forecasting and planning, frequent variations in contract prices are some of the consequent impacts of the upward trends in prices of building materials. Government can either stimulate the economy to growth or retardation through macro-economic policies. This it is able to achieve, according to Alagidele (2012), through policies which increase the level of capital stock in a recession or reduce spending on physical infrastructure to maintain smooth economic cycles. Hendershott et-al (2007) have stressed that lending at high interests, short payback period, inflation, multiple taxation and the escalating costs of materials and labour are impediments to the facilitation of access to decent affordable housing.

PUBLIC PRIVATE INITIATIVES & BUDGETARY ALLOCATIONS

The adoption of public private initiatives provides an alternative option for infrastructure procurement. Mogbo (2001), has suggested that public private procurement models will minimize the burden of financial stress government face, arising from demands for increased budgetary allocations. Apochi and Achuenu's headings (2001), provide an excellent basis for review of the various kinds of partnership that can be used in the provision of housing: Financial, site and service franching/concession (provision of services) partnership and build own operate partnerships. Public private initiatives provide alternative and comprehensive means of housing procurement. Kiwumulo 1996 cited in Lawal and Sanusi (2002), provides an excellent guidance of the components of a housing strategy in Uganda. These acts as an enabler for sustainable provision of housing following the government's inability to continualling meet the housing requirement. The procurement process for PPP projects varies according to the model that is used. Cartlidge (2009), provides headings for the current PPP models, and further reiterates that the private finance initiative, is the most widely used, most controversial and best known form of ppp, currently accounting for approximately 80% of all expenditure on ppp's in the UK construction sector. The attempts to contain the infrastructure deficits by immediate past and present governments at various levels/tiers in Nigeria encouraged the introduction of public-private partnerships (ppps) as a way of promoting active sector involvement in the provision of public infrastructure and services. (Ibrahim 2011).

RESEARCH METHODS

The research analyzed data, that is collected through field survey it used statistical technique which forms the basis for inferential as well as descriptive analysis of parameters. The research adopts the technique of regression for the testing of the parameters of the established relationship which were between budgetary allocations to the housing sector as dependent (variables) and the prices of building materials of cement sand and blocks as independent (variables). Considerable research works interms of literature review have been done on infrastructural development, however limited studies have adopted the same techniques for exploring relationships between resource allocations (budgetary) and economic trends, as this one. See, for example, the assertions of Mogbo (2001), Frank (2003) and Oforeh 2006 cited in Akintayo et-al (2011), on paucity of the researched field, as well as findings on the subject of budgetary financings which links infrastructural development to level of execution. Idiake (2003), adopts the technique of regression in establishing relationships between the Gross domestic product (GDP) and the rising prices of material and labour. Mac-Barango (2011), adopts it in establishing relationships between demographics and the prices of cement. A common observation of the parameters of the relationships of both studies is the existence of

natural linearity between and amongst them. This condition provides an excellent basis in generic terms for the applicability of regression as an analytic technique. See, [Koutsonyiannis (1977), Lipsey (1983) and Cartlidge (2009)]. This research work however adopts regression technique as applied in previous ones which explored relationships of resources allocations of budgetary parameters and economic variables, which affected the level of infrastructural development, have direct bearing on the housing sector. See, for example. Mogbo's research (1992), suggested parameters for allocating funds to the construction of housing unit also Madaki's work (2011) on mortgage funding for housing loans and the determinant demographic variables. This research work, therefore considers the technique very appropriate.

The research adopts both primary and secondary sources for the collection of data. The primary source was used to obtain data for the prices of the sampled building materials (cement, sand and blocks) from vendors in Lokoja, metropolis, Kogi State of Nigeria; for the period 1994-2004. Secondary source was used to collect data for the period (1994-2004), for the parameters of the budgetary allocations which included the total budget for the State, the total budget for the housing sector and the total capital budget, these were obtained from the ministry of planning and budget, Lokoja. The mean values of the parameters obtained for the period (1994-2004) for both the budgetary and the prices formed the basis for the analysis of the data. The research employs the statistical package for social sciences SPSS version 17.0, for the classification and analysis of data. Linear relationships were established from the tested parameters, which show the degree of correlation between the variables. Transpositions of the linear equations derived forms tested the parameters to their exponential formats. Quadratic and cubic were also made.

PRESENTATION OF RESEARCH DATA, RESULTS AND DISCUSSION
Table 1: Raw data values of the budgetary allocations and the prices of the building materials.

	TOTAL BUDGET	HOUSING BUDGET	PERCENTAGE (%)	cost of 225mm block	cost of sand per M^3	cost of cement per 50kg
1994	307,775,400.00	25,000,000.00	8.12	20	650	265
1995	679,704,615.00	40,300,000.00	5.93	25	680	390
1996	923,949,037.00	45,000,000.00	4.87	25	850	445
1997	943,196,298.00	54,750,000.00	7.10	28	945	460
1998	1,538,900,415.00	109,256,224.00	7.10	30	1200	480
1999	1,707,534,000.00	136,750,000.00	8.00	30	1450	500
2000	11,090,419,263.00	796,500,000.00	7.19	35	1750	550
2001	13,294,565,030.00	624,027,886.00	4.69	45	1800	700
2002	15,498,710,803.00	451,555,772.00	2.91	55	1950	950
2003	0,490,126,623.00	320,620,000.00	3.06	65	2250	1100
2004	5,336,534,305.00		10.71	70	2400	1500

1,642,000,000.00

SOURCE: MINISTRY OF BUDGET AND PLANNIG,LOKOJA, KOGI STATE AND MARKET SURVEY

Table 2: Presents the results of linear equations of the tested parameters. (the budgetary values and prices of building materials).

EXP	VARIABLES		RESULTS						
	X-AXIS	Y-AXIS	REGRESSION EQUATION	R-SQ %	FTAB	Pvalve	FCAL	RMK	STRENGTH
1	price of block	housing budget	$y= 28.14 + 0.025x$	55.31	11.14	0.09	5.12	sig	strong
2	price of sand	housing budget	$y= 1051.73 + 1.00x$	59.95	13.47	0.05	5.12	sig	strong
3	price of cement	housing budget	$y= 441.30 + 0.56x$	64.25	16.17	0.00	5.12	sig	strong
4	% change in p.block	% change in h.bud.	$y= 12.43 - 0.005x$	1.00	0.07	0.55	5.12	not sig.	weak
5	% change in p.sand.	% change in h.bud	$y= 12.81 + 0.0086x$	3.27	0.30	0.60	5.12	not sig.	weak
6	% change in p.cem.	% change in h.bud	$y= 17.01 + 0.0059x$	0.37	0.03	0.86	5.12	not sig	weak

Source: Authors field survey and the ministry of budget and planning. Lokoja, Kogi State (Nigeria)

Tables 3: below shows the results of the established relationships between the tested parameters. Equations in Exponential formats.

S/No	Model	Variable Y	X	Regression equation	R-Sq	Fcal	Ftab	Pvalve	Strength	Remark
1.	Quadratic	Price of block	Housing budget	$Y= 25.60 +0.04x -1.13x^2 \times 10^{-5}$	58.21	5.57	4.46	0.03	Strong	significant
2.	Cubic	Price of block	Housing budget	$Y= 12.86 + 0.24x - 0.0004x^2 - 1.69x^3 x 10^{-7}$	92.96	30.82	4.35	0.00	very strong	significant

S/No	Model	Variable		Regression equation	R^2 % Value	F Cal	F Tab	P value	Strength	Remarks
3.	Quadratic	Price of sand	Housing budget	$Y= 838.55 +2.46x - 0.000948x^2$	73.65	11.18	4.46	0.01	Very Strong	significant
4.	Cubic	Price of sand	Housing budget	$Y= 444.35 + 8.54x - 0.013x^2 +5.23x^3$ x 10^{-6}	96.08	57.11	4.35	0.00	very strong	significant
5.	Quadratic	Price of cement	Housing budget	$Y= 426.15 +0.66x -6.7x^2$ x 10^{-6}	64.49	7.26	4.46	0.02	Strong	significant
6.	Cubic	Price of cement	Housing budget	$Y= 180.84 + 4.44x - 0.0076x^2 +3.25x^2$ x 10^{-6}	94.66	41.35	4.35	0.00	very strong	significant

Source: Values of raw data from Field survey and ministry of budget and planning.

Table 4: below shows The results of the regression analysis between the percentage changes in the prices of block/No, sand/m3 and cement/50kg versus the percentage changes in budgetary allocations to housing.

S/No	Model	Variable Y	X	Regression equation	R^2 % Value	F Cal	F Tab	P value	Strength	Remarks
1.	Linear	% change in Price of block	% change in Housing budget	$Y= 12.43 -0.005x$	1.00	0.07	5.12	0.85	weak	not significant
2.	Quadratic	% change in Price of block	% change in Housing budget	$Y= 13.34 -0.108x +0.00023x^2$	14.63	0.69	4.46	0.53	weak	not significant
3.	Cubic	% change in Price of block	% change in Housing budget	$Y= 13.04 -0.159x + 0.00079x - 9.75$ x $10x^{-7}$	20.30	0.59	4.35	0.64	weak	not significant
4.	Linear	% change in Price of	% change in Housin g	$Y= 12.81 + 0.0086x$	3.27	0.30	5.12	0.60	weak	not significant

		sand	budget							
5.	Quadratic	% change in Price of sand	% change in Housing budget	$Y= 12.38 + 0.0576x$	7.89	0.34	4.46	0.72	weak	not significant
6.	Cubic	% change in Price of sand	% change in Housing budget	$Y= 12.91 + 0.15 - 0.0011 + 1.75x^3$ x 10^{-6}	35.00	1.27	4.35	0.36	weak	not significant
7.	Linear	% change in Price of cement	% change in Housing budget	$Y= 17.01 + 0.0059x$	0.37	0.03	5.12	0.86	Weak	not significant
8.	Quadratic	% change in Price of cement	% change in Housing budget	$Y= 16.66 + 0.0458 - 8.95$ x 10^{-5}	1.12	0.05	4.46	1.00	Weak	not significant
9.	Cubic	% change in Price of cement	% change in Housing budget	$Y= 15.95 - 0.078 + 0.0013x^2 - 2.34x^3$ x 10^{-6}	12.76	0.34	4.35	0.80	Weak	not significant

DESCRIPTIVE ANALYSIS

Figures (1-2) show the interrelationships between the parameters tested (i) The percentage contribution of housing budget to the total state budget and (ii) the budgetary allocation to the housing sector and the price trends of block, sand and cement over the research period (1994-2004). The charts indicate that years 2004 and 2002 recorded the highest and lowest budgetary allocation to the housing sector respectively. The interrelationship between the price trends of the building materials (block, sand and cement) and the budgetary allocation to the housing sector established the same trends; a gradual and steady trend from the year 1994 to 2000. The prices maintained sharper increases from the years 2000 to 2004, the budgetary allocations however dropped from 2000, and had a sharp decrease until 2003 and a sharp increase in 2004.

DISCUSSIONS OF THE RESEARCH FINDINGS

The research establishes (1) equations of relationships between (a) the budgetary allocations to housing sector and the prices of block, sand and cement within the research period. (b) Relationships between the percentage (%) changes in budgetary allocations to the housing sector

and the percentage (%) changes in the prices of block, sand and cement within the research period.   (2)The linear equations of GROUP A relationships (see table 1) are in the form: (a) y = 28.14 + 0.025x, (b) y = 1051.73 + 1.00x, (c) y = 441.30 + 0.56x for budgetary allocation to the housing sector and the prices of block, sand and cement respectively. (3)   The   linear equations of the Group B relationships (see table 4) are in the form: (a) y = 12.43 – 0.005x, (b) y = 12.81 + 0.008x, (c) y = 17.01 + 0.0059x for % changes in budgetary allocations to housing sector and % changes in the prices of block, sand and cement respectively. (4) All the Group (A) equations indicated positive relationships between the parameters, whilst group (B), equations indicated either positive or negative relationships between the parameters. (5)The R-sqaure values of the equations indicated values that were between (0.37-64.25), for Group A, equations all indicated positive correlations between the parameters. All Group B equations indicated negative correlation between the parameters. The equations derived from Group A relationships (that is between the parameters of budgetary allocations and (the prices of the block, sand and cement) were all strong & significant, while the equations of Group B, relationships, between the parameters of % changes in the prices of block, sand and cement and % changes in budgetary allocations, were weak and not significant. (6) The transpositions of the linear regressions equations to exponential formats, quadratic and cubic did not yield results that showed significant departure from the linear equations. (7) The derived linear equations, of the Group A, relationships (i.e. between the prices of block, cement, sand and budgetary allocations) have good predictive functions. The budgetary allocations to the housing sector can be predicted using values of the prices of the building materials. The predictive functions of the Group B, relationships were however all weak. Percentage changes (%), in prices of block, sand and cement cannot be used to predict budgetary allocations to the housing sector. Generally the values of the observed relationships from fig (1), see appendices maintained upward and downward trends in same directions, these trends were intandem with the inferential statistics of tested parameters. Increases in prices should ordinarily have corresponding increases in budgetary allocations. The interrelationship between the % changes in the budgetary allocations in the prices of the materials and % changes in the budgetary allocations for the housing sector, from fig (2), see appendices however showed haphazard trends, recording sharp falls and rises over the years. Generally, the rise and fall trends of the parameters were in the opposite directions this trend is intandem with the results of the established inferential linear equations of these parameters, which established that there were no significant relationships between % changes in prices of the building materials and % changes in budgetary allocations.

CONCLUSION

The research concludes that housing plays a pivotal role in physical infrastructure development of an economy. There exist inadequacies in the quantity and quality of housing relative to demand. Research concluded that budgetary allocation to housing does not affect the prices of the building materials (block, sand and cement); increases in budgetary allocations to the housing sector are not responsible for the observed increases in prices and consequent shortages in housing stock. % changes in housing budgetary allocations are not likely to lead to % changes in prices of the building materials. Other economic variables (rather than increases in budgetary allocations) could be responsible for such increases in prices of these materials. Based on the results and conclusions drawn, the research recommends further exploratory study on relationships between (i) budgetary allocations to other sectors and the prices of building materials (ii) Budgetary allocations to the housing sector, demographics and other economic variables. The results of this research are in agreement with those of Wali (2005), which also established that increases in prices of sand and cement, should ordinarily lead to increases in budgetary allocation. The results of Idiake's research (2011), is also suggestive that increases in prices irrespective of the causative factors could lead to distortions in macroeconomic stability and consequently increases in budgetary construction.

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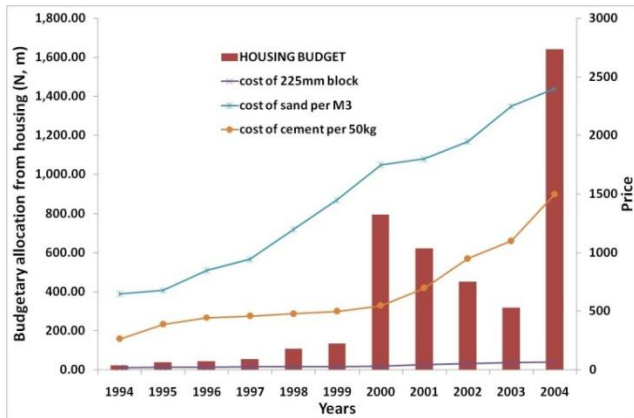
APPENDICES

Fig. 1: Budgetary allocations for housing and the prices of building materials in Kogi State (Nigeria)
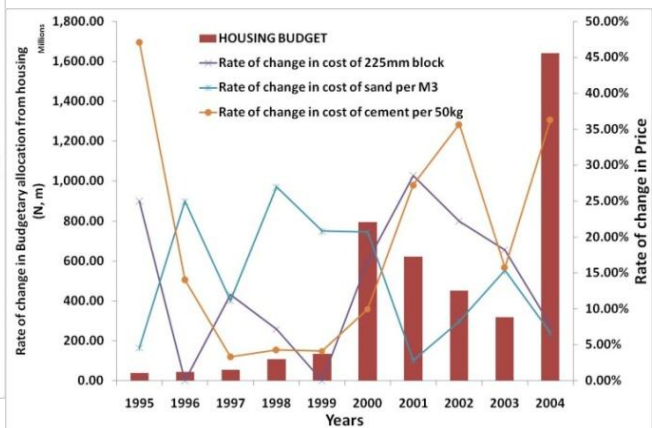

Fig. 2: Percentage changes in housing budgetary allocations and the prices of building materials in Kogi State (Nigeria)