Akungba Journal of Economic Thought
Volume 9, Number 2 2017: 28 - 37

ISSN: 2006-9995

EXAMINING THE IMPACT OF ECONOMIC FACTORS ON PRICES OF SELECTED CONSTRUCTION MATERIALS IN NIGERIA

Lawal[1], P.O.; Oyedele[2], A.J.; and Olayemi[3], O.O

[1]Department of Quantity Surveying,
Joseph Ayo Babalola University, Ikeji Arakeji, Nigeria.
E-mail: polawal@jabu.edu.ng
[2]Department of Quantity Surveying,
Osun State Polytechnic, Esa-Oke, Nigeria.
E mail: jumokeoyedele5@gmail.com
[3]Department of Architecture,
Federal Polytechnic, Offa, Nigeria.
E mail: olayemisheun@yahoo.com

ABSTRACT

This paper examined the trend in market prices of some construction materials over a 15-year period in Nigeria and compared the trend with the trends in some economic variables during the same period. The research was aimed at identifying the position of the trend in the prices of construction materials relative to the behaviour of the nation's economic variables. Literature relevant to the cause and effect of material price movements were consulted. Market prices of construction materials were surveyed in 2015 in Osun and Kwara States to compliment the record of material prices that were in the archives of the researchers. Literature was the main source for the selected macroeconomic variables that were employed. Descriptive statistics and percentages were used in analyzing the data. The result shows that the prices of construction materials responded in direct proportion to the changes in price of petrol and in naira exchange rate but in inverse proportion to both the inflation rate and the GDP.

Key words: Construction materials, economic variables, fluctuations and market prices

INTRODUCTION

Construction of buildings involves deployment of various tangible and intangible resources. Cost of construction comprises of many cost elements which are labour costs, material costs, plant and machinery cost, site overhead cost, contractor's head office cost and other expenses. Invariably when any or all of these cost elements are raised, coupled with some other factors, it contributes sensitively to raising the construction cost of the project. Building materials take well over fifty percent of all the tangibles (Akeju, 2007; Oladipo and Oni, 2012).

A lot of researches had been conducted on building materials which showed that cost of materials has the highest relative importance index and has the most important factor affecting cost of construction in Nigeria (Oladipo et al, 2015). The delivery of construction materials, operating cost of construction equipment such as grader, tippers, bulldozers etc increase significantly because the trucks and heavy machinery require a large amount of fuel to transport materials to construction sites. Also, the costs of building materials such as cement, sand, granite, roofing sheet, tiles and so on increase accordingly and all these automatically increase the overall cost of construction. since building materials occupy above 60% of the total cost of construction.

Macroeconomic variables (MVs), are indicators of the overall state of a country's economy. These variables, for the purpose of this research include: gross domestic product, unit price of petrol, foreign exchange value of Naira and inflation rates. This research is aimed at examining the impact the macroeconomic variables have on prices of construction materials

Gross domestic product is often considered the leading indicator of an economy and is a measure of the entirety of goods produced within a nation. The figures for gross domestic product are released quarterly and annually. The consumer price index is one indicator of inflation and measures the rate of increase in the cost of goods and services. Similarly, the producer price index measures the price of wholesale goods.

REVIEW OF RELEVANT LITERATURE

Material Price Fluctuations

The construction industry all over the world has a lot of challenges ranging from land acquisition problems, material and labour cost issues, political problems, project planning deficiencies, design and construction problems to mention but a few. Other parameters include scope, quality, resources and completion time (Subramani et al 2014). However, cost is one of the five main parameters that can sufficiently define a construction project.

The factors that could increase construction costs are numerous, this is because construction is a multidisciplinary industry and its work involves many parties such as the project owner and various professionals, constructors and suppliers (Chan and Park, 2005). Fluctuation of prices of building materials gives rise to high cost of project especially where it is difficult to estimate the materials cost accurately. In a survey conducted by Subramani et al (2014), it showed that increase in cost of materials ranked the most important factor that increases the cost of construction. Also Ismail et al (2004) had a survey of twenty-one factors causing cost overrun it was found out that the prices of materials top the list.

Economic Indicators

Petrol Pump Price

Generally, Nigeria is said to be blessed with abundant natural resources of which petroleum products are important factors in her domestic economy. Until the early 70's, the mainstay of Nigeria economy was agriculture. The discovery of oil in the country in commercial quantities brought about radical changes in the economy of Nigeria (Ocheni, 2015). According to Odularu (2008), Nigeria was the eighth among the world's oil producing countries. The Nigerian economy was/is heavily dependent on petroleum products, which account for over 95 percent of export earnings and about 85 percent of government revenues (World Bank Report, 2010).

Increase in fuel price produces a chain reaction that affects components of basic needs. Indicators such as food, housing, clothing and health were affected as access to them become costly. This has resulted in the direct increase in the prices of building materials to certain degree. It has been noted that a panacea to the problem of housing in Nigeria is the persistent increase in the prices of building materials due to increase in prices of petroleum products which in turn results in variation and fluctuation of market prices in materials for construction projects (Shittu et al, 2015).

Furthermore, the increase in the price of building materials has severe impact on both developers and contractors as the developers have to spend more and the contractor definitely have to renegotiate the contract prices. Contractors are likely to ask for variation orders to cover the rise in material prices. If the contractor is unable to obtain variation orders, especially the small scale contractors who do not have the financial strength to absorb the hike in material prices, the tendency for the project abandonment is high (Shaver, 2011). The unit price movement of fuel over the years 2001 – 2015 was examined in this article.

Devaluation of Naira/ Inflation Rate

Inflation is regarded to be the greatest enemy of both the poor people and the business community. To destroy the poor people of any economy, according to Ezekwesili (2016), all that is required is to keep unchecked unstable price levels. Devaluation of naira is a deliberate attempt to reduce the value of country's currency in relation to the currencies of other countries. Devaluation is used to discourage import and encourage export of goods and services across borders. When a country's currency is devalued, imports become so expensive. The Nigeria construction, industry is heavily import-dependent as a result, it feels the impact of the naira, devaluation. With devaluation of the naira caused by slide in oil prices, it means that importers now pay more naira for each unit of raw materials they import. Secondly manufacturers who borrow from banks to import raw materials now do so at high interest rate between 25-30% ('The Nation', 2015).

Since the official devaluation of the naira in 2014, the value of the naira has continued to decline, the economic tension of 2015 forced the Central Bank of Nigeria to devalue naira two times (Bsmart, 2015). A few years earlier, the continuous down-sliding of the naira against dollar prompted the industry experts to predict an average 27% increase in the cost of housing projects (Juan 2011). Other effects of devaluation of naira include reduction in quantities of government construction project, high cost of housing and properties, rise in interest rate and cost of borrowing and likely increase in construction project abandonment.

Inflation in Nigeria by the year 2015 was double digits and fluctuated at intervals, which has an adverse effect on all the sectors of the economy. Inflation is a measure of how fast a currency loses its value and changing prices typically calculated on a monthly and yearly basis and expressed in percentage.

The construction industry is vulnerable to inflation in prices of materials since materials resources are heart and life wire of any construction system. This inflationary increase in construction material prices is one of the major causes of construction cost over runs in Nigeria. Also, as a result of this incessant and frequent increases give rise to claims, housing supply shortage, construction cost estimate losing usefulness within a short period, difficulty in forecasting and planning and frequent construction prices variation, all of which often lead to project abandonment. (Akewusola 2007).

The high cost of construction these days, is suspected to be a major factor in the malfunction of construction industry in Nigeria. Its manifestation in abandoned projects and low construction activities abound nationwide (Oladipo et al, 2012). This has impacted negatively on the nation's socio-economic and technological advancement. Oladipo et al (2012) further argued that in recent years, the value of the Naira has been depreciating and this directly affect prices of building materials, given that up to 50% of them were imported. The more this two-in-one economic indicator deteriorates, it is presumed that the harder it is for economic growth.

Foreign Exchange Rates

In recent time, Nigeria has experienced the worst foreign exchange rate due to the current fiscal policy to discourage importation and insufficient supply of foreign exchange occasioned among other factors by sharp decline in the global price of oil.

When the foreign exchange rate changes beyond the expected level, then the cost of the project increase and that automatically leads to cost overrun (Kodwo & Seth, 2014).

The prices of materials respond to market situation by economic law of demand and supply. With imported materials such as reinforcement bars, sanitary wares, security doors and windows, roof covering materials and others, prices fluctuate partly as a result of the effect of changing monetary policies and foreign exchange market and partly as a result of changes in the monetary supply (Oladipo and Oni, 2012).

Foreign exchange policy plays a very critical role in the ability of the economy to attain optimal levels in production activities. It is also an important macroeconomic variable used as parameter for determining international competitiveness and an indicator of competitiveness of currency of any country. However, the fluctuation in exchange rate recently in Nigeria has had a great effect on goods and services as there has been a considerable reliance on importation. Whether fixed or floating, exchange rate affects macroeconomic variables such as import, export, output, interest rate etc. In general, when a currency depreciates it will result in higher import prices while lower import prices result from appreciation (Rasaq, 2013).

The main objective of a nation's exchange rate policy is to have a stable and realistic exchange rate that is in consonance with other macroeconomic fundamentals. This is because exchange rate instability can have serious adverse consequences on prices, investments and international trade decisions. Nigeria is drowning in economy retrogression as its currency value to dollars and pounds depreciates. In the recent time the value of the naira has been depreciating and this directly affected the prices of building materials given the fact that up to fifty percent of the materials were imported (Oladipo and Oni, 2012). In 2015, though the dollar went for ₦199 at the official market, it sold for over ₦400 to a dollar in the parallel market, a difference of over ₦200 or 100%.

A high percentage of building materials in Nigeria are either imported or raw materials needed to manufacture them are imported of which the cost of production is dependent on the rate of foreign exchange and how the local currency perform against the dollar (USD). It was stated earlier how the cost of petrol affected the prices of some building materials due to transportation costs. This would not have been so if Nigerian crude was refined in the country. The reverse is the case and this has also contributed to the hike in prices of goods and services across board.

Njoku (2015) in an interview with building construction experts noted that the devaluation of the naira has jerked up the prices of imported construction materials which in turn would enforce an upward review of the contract sums of projects. He also called for an increase in the budgetary allocation to capital projects to boost activity in the sector.

The devaluation of naira would increase cost of production where there was no substitute for imported materials. With imported materials such as cement, reinforcement and sanitary ware, prices fluctuate rapidly as a result of the effect of changing monetary policies. The difficulty in controlling increased importation of raw materials and finished products for project development purposes has increased the cost of construction in Nigeria. Chamberlin (2006) opined that over dependence on importation of goods would cause fall in value of the currency.

This affects construction project delivery as materials acquisition turns unaffordable for project development. This brings about project abandonment or non-completion of projects or completion at the expense of other valuable projects. Jagboro & Owoeye (2004) observed that foreign building components such as ironmongery, raw materials, machinery and equipment used in the production of building materials and in building construction have led to a prohibitive cost of final building product after the devaluation of naira.

Gross Domestic Product

The world bank attributes construction industry to account for between 3 to 8 percent of the gross domestic product in developing countries, Nigeria inclusive (Oladipo & Oni, 2012). The importance of the construction industry stems from its strong linkages with other sectors of the economy. That is, when construction industry booms the economy too booms. In the view of Chan (2001), construction is a sector that is sensitive to changes in both fiscal and monetary disturbances. The gross domestic product is one of the most popular indicators in macroeconomics used by researchers to represent economic conditions and it is also considered to be a popular indicator because of the relationship between the macroeconomic activity and the housing price (Tze, 2013). The gross domestic product is the total market value overall for all final goods and services produced in a country within a given period. Conversely, the demand for houses generates housing industry investment and helps the recovery of the GDP growth rate because housing investment is part of the GDP. (Tze, 2013).

RESEARCH METHOD

The method adopted for data gathering for this research is purely archival and from literature. The methodology is chosen as a means of generating reliable empirical data upon which recommendation and conclusion can be based. The population of the study is made up of all materials normally being used for building construction across Nigeria. Material price list was compiled from both the archives of the researchers and market price survey carried out by the undergraduate students and diploma students of the researchers. This market survey has been part of courses undertaken by the students for the award of their certificates. The data on the Nigerian economic indicators were collected from various published literature viz: The Central Bank of Nigeria, (Nigerian) Federal Bureau of Statistics and other acknowledged authors. The collected data were analyzed using descriptive statistics and percentages.

RESULTS AND DISCUSSION

Over the fifteen-year period that the research covered it could be seen that prices of construction materials increased variously between 71 and 250 per cents. See Table 1. While the price of long span aluminum (0.35mm gauge) roofing sheet went up as much as 250% - the highest increase in price, emulsion paint had the lowest price increase of 71%. There was no material with price decrease.

Through observation, it could be seen that materials whose price increase over the period were less than double (100%) generally have very little importation component. On the other hand, the materials with price changes of double and above are observed to have high proportion of importation components. Materials in this latter category include cement, 150mm hollow sandcrete blocks, water closet, long span aluminum roofing sheet and 16mm steel reinforcement rod. However other items whose prices went above double and the which imported components were very little include the unwashed bush gravel and sawn hardwood timber.

Table 1. Prices of Construction Materials in Osun and Kwara States, Nigeria 2001 – 2015.

Building Material			**Price(~~N~~)**			
Year	2001	2005	2010	2015	Pr 2015-Pr 2001	As%of 2001 price
Cement 50kg(1 bag)	650	1200	1700	1550	900	138.46
150mm (6 inches)	60	80	100	120	60	100
Unwashed Bush Gravel 5T	4500	6500	7000	12000	7500	166.67
Sharp Sand 5T	5000	6500	7000	12000	7000	140
Emulsion Paint-white (4lt)	350	450	600	600	250	71.43
Gloss Paint (4lt)	1600	2100	2600	3000	1400	87.5
Twyford W/C Sanitary fitting	5000	6000	6500	12000	7000	140
Long Span Aluminum Roofing Sheet (0.35)	200	350	500	700	500	250
50 x 100mm Sawn Hardwood	250	350	400	500	250	100
50 x 75mm Sawn Hardwood	150	200	250	300	150	100
75 x 100mm Sawn Hardwood	350	500	650	750	400	114.29
16mm Mild Steel rod 12m long	800	1200	1500	1900	1100	137.5

Source Field Survey 2016

The high increase in the price of the unwashed bush gravel, with its very little importation component, over the period can be attributed to an observation that other alternative gravels (coarse aggregates) had maintained high price levels from the base year, 2001, throughout the period; as construction projects increase in number across the country, especially among the private sector developers, affordability of these alternative coarse aggregates become more difficult, making the individual private developers to opt for the unwashed bush gravel. Consequently, the economic law of supply and demand took over the scene as the demand for the bush gravel was rising high.

The sawn hardwood timber prices had steadily risen over the years and at least doubled in the period. Though this material has little component of importation, the high level of its price change can be attributed to an entirely different factor – various state government laws on timber logging and high tax on logged timbers. Oral interview conducted over the reason for the substandard sizes of timber (length, width and thickness) revealed that government tax imposition on logged timber was so high that it drives a lot of sawyers to resulting to logging timber at night and sawing it to desired sizes right there in the forest. Various state government laws forbid night logging of timber. Timbers that are sawn to size in the forest are usually found to be shorter in length than the standard length of 3.66m (12 feet) prescribed for the market. They are also short of the prescribed width and thickness. Consequently, the sawyers who source their timbers through the official channels have to raise the prices of their products in the market.

From Table 2 below, it can be deduced that the factors; 'Petrol price' and 'Exchange rate' were each increasing over the 15-year period. Petrol price per litre rose by 333% while exchange rate widened in gap by 177%. On the other hand, 'GDP' had steady growth over the years, implying that the Nigerian economy was improving steadily. It also corroborates the IMF statement that Nigerian economy was getting better over the years. The inflation rate was also steadily dropping over the period until 2015 when the inflation figure began to rise from 7.70 in 2014 to 9.60 in 2015. Economic watchers also attribute the rise in inflation in 2015 to the Nigerian Government programme of subsidizing the food (rice) importation.

Table 2 Selected Economic Data of Nigeria (2001 – 2015

Year	Petrol Price (N per liter)	Inflation rate	GDP	Echange Rate N to $
2001	26	18.03	0.33	111.95
2002	30	13.08	0.33	120.98
2003	40	14.02	0.36	129.36
2004	49	15.02	0.46	133.51
2005	52	17.86	0.45	132.15
2006	64	8.23	0.47	128.66
2007	75	5.39	0.48	128.62
2008	75	11.58	0.5	118.2
2009	65	11.96	0.55	137.82
2010	65	11.5	0.57	149.49
2011	86	12.2	0.57	151.95
2012	97	12.1	0.59	162.12

2013	86.5	8.5	0.6	156.89
2014	86.5	7.7	0.62	159.89
2015	86.5	9.6	0.61	198.99
V2015 – V2001	**60.5**	**-8.43**	**0.28**	**87.04**
As % of base year	**333**	**53**	**184**	**177**

While the two factors, 'Inflation rate' and 'GDP' indicated improving economy, the other two factors, 'Petrol price' and 'Exchange rate' showed the economy was depressing. The proportional rise in price of construction materials shown in Table 1 and the rise in pump price of petrol shown in Table 2 are in agreement with the findings of Shittu et al (2015) that persistent rise in prices of building materials is due to increase in prices of petroleum products. The frequent devaluation of naira with the widening gap in its exchange rate with the US dollar validates the arguments of Oladipo et al (2012) and Njoku (2015) that depreciation in naira value directly affect prices of building materials and jerks up the prices of the imported ones.

The values presented by both the GDP and Inflation rate are a misnomer. They indicate an upcoming and booming economy. The reality on ground, as represented by the trend in the prices of construction materials (Table 1) and the other two economic variables (Table 2) is that all is not well with the economy.

The worsening petrol price and the exchange rate indicate that microeconomic capacities of workers in Nigeria are eroded and people are made to become poorer over the years.

It was further understood that there was no wage increase over the period. This scenario showed that the earning capacity of individual workers was kept constant while the spending rate increased significantly. This means that workers had the choice of reducing their spending on various items that they used to consume or cancel some of the items from their budget.

With regards to the construction materials price movement, it can be deduced that it was directly responding to the petrol price and naira exchange rate movements. On the other hand, the GDP and inflation rate movements are in disagreement with the construction materials price movement. It can be concluded that the GDP and inflation rate are not sensitive to the economic reality of the Nigerian nation.

CONCLUSION

Over the 15-year period covered by the research, prices of construction materials rose steadily to double and beyond (with the exception of Emulsion paint whose price increase did not reach double). The steady rise in price of construction materials was supported or justified by the economic variables 'petrol pump price' and the 'naira exchange rate'. The three elements were directly proportional. On the contrary, the variables 'inflation rate' and GDP presented the notion that the macro-economy of the country strongly improved over the years. The notion was not justified by the reality on the ground whereby the value of the national currency (naira) had shrunk to about 25% of its value over the 15 years.

REFERENCES

Akeju, A. (2007). Challenges of providing affordable housing in Nigeria. A Paper Presented at the *2nd Emerging Urban Africa International Conference on Housing Finance in Nigeria*. Abuja. Oct. 17-19.

Akeju, F.K., and Olanipekun, D.B. (2014). Unemployment and Economic Growth in Nigeria. *Journal of Economics and Sustainable Development.* 5(2), 138-144. www.iiste.org

Akewusola, W. (2007). Effect of economic trade cycle on final cost of construction projects in Nigeria. *NIQS quarterly journal*, 55(2), 7-12.

Bert, M. (2010). What are the reasons for cost overruns in project management.

www.bitrix24.com/FreeProjectMGMT

Bsmart, M. (2015). Nigerian foreign exchange market. The impact of recent escalation of dollar rate on the Nigerian Forex market. *Vanguard on line community*, Dec 25.

Chamberlin, S. (2006) Foreign exchange regime key to sustainable economic development in Nigeria. *International Research Journals of Finance and Economics* 16(6) 88-95.

Chan, A.P. (2001). Empirical tests to discern linkages between construction and other economics sectors in Singapore. *Construction management and economics journal* 19(20), 355-365.

Chan, S. and Park, M. (2005).Project cost estimation using principal component regression. *Construction Management and Economics*, 3(23), 295-304.

Ezekwesili, O. (2016). Buhari adamant despite wrong confusing economic policies. *Premium Times Nigeria*. premiumtimes.ng.com/news/top.news

Francois, B. (2015). Five causes of project delay and cost overrun, and their mitigation measures. htts://www.linkedin.com

Hong, X. and David, P. (2009).An investigation into factors influencing construction costs based on Japanese, UK and US contractor practice. *The Australian Journal of Construction Economics and Building*. 2(2), 27-35.

Ismail, A.R., Aftab, H.M., and Ahmad, A.K. (2013). Examining factors affecting budget overrun of construction projects undertaken through management procurement method using PLS – sem approach. *Procedia – social and behavioral Sciences*. 12/2013; 107: 120 – 128.

Ismail A.R., Aftab, H.M., and Ahmad, A.K. (2004), Relationship between factors of construction resources affecting project cost. *Modern Applied Science*: 7(1), 68 – 75.

Jagboro, G. and Owoeye, C. (2004). A model for predicting the price of building materials using the exchange rate in Nigeria. *The Malaysian Surveyor*, 9-14.

Juan R. (2011), Oil prices: How oil prices affect the construction industry. Construction

Caruleabout.com>about money> construction> blog.

Kodwo, A., and Seth, A. (2014).Cost overrun in building construction projects: A case study of a government of Ghana project Accra. *Developing country studies*. 4(24), 54-61. www.iiste.org

Lamudi.(2014). 7 factors that contribute to the high cost of building in Nigeria.

Journal@lamudi.com.ng.

Njoku, N. (2015) Soaring Exchange Rates Unsettles Construction Industry. *Vanguard Newspaper*. www.vanguardngr.com/2015/03/soaring-exchange-rate-unsettles-construction-industry/

Ocheni, S.I. (2015). Impact of fuel price increase on the Nigerian economy. *Mediterranean Journal of Social Sciences.* 6(1), 560 – 569.

Odularu, G.O. (2008). Crude Oil and the Nigerian Economic Performance: Empirical Evidence from Nigeria. *Oil and Gas Business Journal;* https://fara-africa.academia.edu/gbadeboodularu

Ogbodu, R. (2015). Naira devaluation and its effect on real estate. Remax Nigeria.

Remaxnigeria.blogspot.com.ng/2015/05/naira-devaluation-and-its-effect-on.html?m=1

Ogun, O., (2014). An assessment of the impact of on construction materials prices in Nigeria.

PM World Journal 3(4) 1-22.

Oladipo, F. and Oni, O. (2012).A review of selected macro-economic factors impacting building material prices in developing countries. A case of Nigeria. *Ethiopian Journal of Environmental Studies and Management.* 5(2), 131-137.

Oladipo, F., Fatuki, A. and Aluko, A. (2015). An assessment of major factors affecting construction project cost in Nigeria. *International Journal of Sciences: Basic and Applied Research*. 24(4), 308-318.

Omion, E. (2014). More factors that contribute to the high cost of building in Nigeria. htt://www.buildingcontractorsecrets.com

Peters, W. and Madauss, B. (2008).A proposed strategy against cost overruns in the space sector: The 5c approach. *Space Policy*, 24(2), 80-89.

Rasaq, A. D. (2013). The impact of exchange rate volatility on the macroeconomic variables in Nigeria. *European Scientific Journal* 9(7) 152-165.

Sanni, I.M. (2014). The Implications of Price Changes on Petroleum Products Distribution in Gwagwalada Abuja, Nigeria. *Journal of Energy Technologies and Policy* www.iiste.org ISSN 2224-3232 (Paper) ISSN 2225-0573 (Online) 4(7)

Shaver, L. (2011); Petrol Problems. Accessed from

www.multifamilyexecutive.com/design./construction/petrol-problems.

Shittu, A.A; Idiake, J.E., and Akanmu, W.P. (2015). Effect of petroleum price increases on cost of selected building finishing materials in the Nigeria construction industry *(2006-2012). Journal of Economics and Sustainable Development.* 6(8) 141-150.

Songer, A. and Molenaar, K. (1997): *Project characteristics for successful public sector design-build.* Journal of Construction Engineering and Management. 123(1), 34-40.

Subramani, T. Sruthi, P. and Kavitha, M. (2014). Causes of cost overrun in construction. *IOSR Journal of Engineering*. 4(6), 1-7.

'The Nation' newspaper (Feb. 19, 2015). Naira devaluation. The hard times are here.

'This Day' national newspaper (May 18, 2016). Of the exchange rate and devaluation.

Tze, S. (2013); Factors affecting the price of housing in Malaysia. *Journal of Emerging Issues in Economics, Finance and Banking* 1(5), 417-421.

Wallace, I. (1995). *Hudson's building and engineering contracts. (II).* Sweet and Maxwell. London.

Walter E. (2015). 6 ways Nigerian construction companies can survive naira devaluation.

Sapient vendors.com.ng/…construction.naira

Yakubu, A. O. (2013): Cost and time control of construction projects: Inhibiting factors and mitigating measures in practice. Dublin Institute of Technology.

ARROW@DIT.Http://arrow.dit.ie/beschreoth.