

# An overview of the contribution of construction sector to sustainable development in Nigeria

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## ABSTRACT

Sustainable development is normally attained through critical assessment and harnessing of all growth indices. This paper is aimed at assessing the contribution of construction sector to Nigeria economy towards sustainable development. The work was conceptual based on historical data obtained from the Central Bank of Nigeria (CBN) and Nigeria Bureau of Statistics (NBS), which brought to the fore the contributions of construction sector over the years in the nation's Gross Domestic Products (GDP) and its multi-sectoral outcomes. Construction contribution to the GDP ranges between 3 and 6% from independence to the 80's before crumbling to about 1% over the last decades. The last four years saw an upward progression in its actual contribution, which stood at about 3% in 2012, due to an improved budgetary implementation and private sector participation. It is noted, that the all-inclusive effects of this sector, and especially its employment generating potentials, makes it a veritable platform for sustainable development especially if proper mechanisms are put in place for the growth of the sector to be stimulated.

**Keywords:** Construction sector, economy, GDP, Nigeria, sustainable development.

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## INTRODUCTION

The Nigerian government and policy makers have come up with various strategies over the years on how the nation's social and economic potentials can be harnessed. The resources at Nigeria's disposal offered a solid base for ensuring rapid growth and sustainable development, but in the contrary, the nation has failed to attain its potentials. In 2009, based on the massive potentials of the country, in order to fast track the nation's economy into one of the top twenty largest economies of the world by the year 2020, vision 2020 (NV20:2020) was crafted by the Federal Government. The Vision Document addresses structural weaknesses in the economy and outlines strategies for harnessing the country's resources to realise the vision goals and targets (CBN, 2011). Nigerian Institute of Social and Economic Research (NISER), 2012 asserted that for Nigeria to overcome its developmental challenges and achieved its aspiration in the nation's NV20:2020, all sectors that contribute significantly to the nation Gross Domestic Products (GDP) must be evaluated with the aim of sustainably meeting their potentials and contributing their

quota to the development of the nation's economy.

World Bank Report (2009) suggested the need for developing countries to concentrate efforts in diversifying their economies from mono product and natural resources based, towards more sustainable human resources that can also create jobs for the fast population. To achieve this, human and infrastructure developments must be enhanced for growth and development of small scale industries and internal micro economic development. Building and construction sector is one of the top five sectors used in measuring the National Gross Capital Formation (NGCF) and the GDP of any country and its effect on every other sectors, makes it a significant front for sustainable development (Mosaku et al., 2006). The industry's size, the nature of its operation, the job creation potentials and its presence in every developmental activity have made construction an attractive area for experimentation in enhancing the effectiveness of governance and cooperative works towards sustainable economic development. Therefore, the overview of the contribution of construction sector to

sustainable development in Nigeria is imperative.

## THE NIGERIAN ECONOMIC BACKGROUND

Since Independence in 1960, the Nigerian economy remains weak, narrow and externally-oriented with primary production activities of agriculture and mining and quarrying (including crude oil and gas) accounting for about 65% of the GDP and over 80% of government revenues. In addition, the primary production activities account for over 90% of foreign exchange earnings and 75% of employment (NBS, 2011). In contrast, secondary activities comprising manufacturing and building and construction, which traditionally have greater potential for employment generation, broadening the productive base of the economy and generating sustainable foreign exchange earnings and government revenues account for a mere 4.14 and 2.0% of gross output, respectively. Over the last seven years, certain changes have taken place in the structure of output in the economy; prominent among these changes is the entry of the telecommunications sector which has witnessed explosive and sustained real GDP growth. The Nigerian economy continues to grapple with a number of challenges that has hampered efforts at economic transformation. The economy is yet to achieve the necessary structural changes required to jump-start rapid and sustainable growth and development, aside disarticulated and narrow productive base, while the sectoral linkages in the economy are also weak (Oluwakiyesi, 2011).

Although the economy experienced respectable GDP growth rates, averaging over 6.5% per annum between 2006 and 2012 (CBN, 2012), this growth neither brings commensurate employment nor reduce the poverty level experienced in the country. The economy is confronted with challenges in the form of dilapidated and chronically non-functional infrastructure and ever increasing securities problems. However, AllAfrica.com (2010) and Oluwakiyesi (2011) highlighted the following in the Nigeria's economy as a pointer to the fact that the construction industry can be spurred towards sustainable development:

- 1. Strong growth and economic diversification:** Nigeria has been growing at an average of 7.4%, over the last 2 years, attributed to growth in agricultural and other non-oil sector.
- 2. Rapid urbanisation:** Nigeria is undoubtedly one of the fastest urbanising countries in sub-Saharan Africa. Close to 50% of Nigeria's population now live in urban areas that heralds more demand for infrastructure.
- 3. Demographic and housing demand:** With a median age of 19 years and approximately 55% of the population in working age, Nigeria's population distribution portends strong potential for continuing growth.

**4. Relatively strong commodity prices in the long term:** Notwithstanding the gradual de-emphasis of oil and the need to shift to alternative fuels. The authors opined that oil prices would still remain strong, even in the long term.

**5. Increasing capacity in cement production:** A major militating factor to significant growth in construction activities in Nigeria before 2013 has historically been the local shortage of building materials, especially cement and steel.

**6. Public-private partnership (PPP):** Developed and developing countries are now utilising the Public-Private Partnerships (PPP) medium in delivering physical and social infrastructure to people by bridging the gap from public funding.

## THE NIGERIAN CONSTRUCTION INDUSTRY

Organized construction contracting in Nigeria began in the 1940s with few foreign companies coming into operation (Olowo-Okere, 1985). Nigeria's Independence in 1960 bolstered by the "oil boom" of the 1970s brought an upward trend in the construction activities and up to the end of the second Republic in 1983, the construction industry in Nigeria has witnessed an overwhelming upsurge in construction contracting dominated by expatriate companies with few indigenous companies (Idoro, 2009). Unfortunately, the period also exposed the country's indigenous companies low level of human resources development required for; planning, designing, constructing and maintaining the magnitude (in size and number) of projects conceived by the government. However, with improved training institutions, engagement of expatriates, collaborations between indigenous and foreign entrepreneurs, political stability and improved government policies, the apparent resources gap needed for successful completion of complex projects between indigenous companies and their foreign counterparts are now closer compared to the pre-independence era (Mbamali and Okotie, 2012).

The major source of capital formation in the construction sector that can spur growth and development in Nigeria is from the public sector, with the traditional approach in the major infrastructure procurement process of funding through annual capital budgetary provision. This large correlation of government participation with the level of construction industry was due to minimal private involvement in capital formation and formal infrastructure procurement that limits the potential of the sector. However, with the rising emphasis and growing interest of stakeholders on bridging Nigeria's infrastructure gap, the future growth of construction as a tool for sustainable economic development is somewhat optimistic. Major milestone over the last decade which includes self-sufficiency in cement production that guaranties materials price stability and the growing

emphasis on PPPs to supplement the capital expenditure in the construction industry are cases for optimism. However, peculiar problems common to sub-Saharan Africa (SSA) countries, such as project financing, dearth of technical expertise, corrupt government and poor implementation of policies and programmes are challenges mitigating the development and growth of the sector and hence the contribution to the sustainable development (Anonymous, 1969).

In a related development, Nigeria as a developing country and her construction industry is still struggling with a lot of intrinsic challenges, ranging from inadequate technical and managerial know-how to insufficient financial, material and equipment capital base (Ofori, 2001). However, the industry is also full of inherent potentials, such as self-sufficiency in cement production that will stabilise the materials sector and the huge deficit in physical infrastructure (road, rail, airport and sea port) that will be key to creating opportunities for sustainable development (International Council for Building (CIB), 2004; Oluwakiyesi, 2011).

## **THE ROLE OF CONSTRUCTION SECTOR IN ECONOMIC DEVELOPMENT**

The construction industry in both developed and developing countries may be viewed as that sector of the economy which, through planning, design, construction, maintenance and repair, and operation, transforms various resources into constructed facilities. The types of public and private facilities produced range from residential and non-residential buildings to heavy construction, and these physical facilities play a critical and highly visible role in the process of development (Kheni et al., 2008). The major participants from the construction industry include the architects, engineers, management consultants, general contractors, heavy construction contractors, special trade contractors or subcontractors, and construction workers, along with the owners, operators, and users of the constructed facility. Building finance and insurance agencies, land developers, real estate brokers, and material and equipment suppliers and manufacturers, among others, are also involved in construction but are generally considered as distinct from but ancillary to the construction industry. The government interacts with the industry as purchaser, financier, regulator, and adjudicator. The regulatory environment within which the construction industry operates is also important and includes, for example, building and related codes, licensing requirements, safety legislation, and financial institution operating rules (Anonymous, 2005). Olowo-Okere (1985), Anonymous (2005) and Olaloku (cited in Eshofonie, 2008) asserted that most countries put over 55% of their gross domestic investment into the creation of physical facilities, including infrastructure that is necessary for development. The construction sector's

level of manpower ranges from highly skilled professionals to completely unskilled labourers. In developing countries, physical construction activities alone provide between 2 and 6% of the employment demands of the nation and the subsidiary activities provide an additional 2 to 4%, while in the developed countries the figure rises to between 6 to 10% and 4 to 6% (Cockburn and Charles, 1970; Anonymous, 2005; Okeola, 2009). Ibironke (2004) and Shittu and Shehu (2010) stated that the construction industry plays a key role in satisfying a wide range of physical, economic and social needs and contributes significantly to the fulfilment of various major national goals.

## **Economic significance of construction sector**

The building and construction sector registered strong growth, standing at 12.09% in 2010, compared to 11.97% in 2009, reflecting greater investments in both residential and non-residential buildings and other construction activities. Growth in construction related activities rose by 12.24% in 2010 as against 11.97% in 2009. Some major projects that were executed in 2010 impacted the sector's performance, these include: national roads rehabilitation totalling 1,975 km; Presidential Initiative Projects adding up to 853.82 km of roads; PPP projects; several housing unit types, dredging of River Niger and railway lines (NPC, 2011; Oluwakiyesi, 2011). The nominal value of activities in the sector stood at ₦456.04 billion in 2011 as against ₦394.67 billion in 2010 and ₦347.69 billion in 2009 while the sector's share of GDP growth improved from 2.86% in 2010 to 3.22% in 2011. Going forward, the execution of several infrastructural projects outlined in NV20:2020 will likely improve the sector's performance in the future (NPC, 2012).

Tables 1 and 2 show the contributions of industrial sector to the nation's economic growth, therefore the comparison of the building and construction industry with the other major sectors of the economy can be inferred. From the tables, it can be seen that the Building and Construction sector sustained its strong growth momentum in 2010 when compared with other sectors. The growth rate slowed down from 12.8% in 2008 to 11.97 and 11.85% in 2009 and 2010, respectively. The sector's contribution to overall GDP stepped down repeatedly to 2.86% in 2010 and 3.16% in 2009 from 3.76% achieved in 2008. The contribution of the sector to the total growth rate decreased slightly from 3.76% in 2008 and 3.16% in 2009 to 2.86% in 2010, which could be attributed to the low implementation of capital budget by the Federal Government (NBS, 2011).

## **Nigeria and other oil producing States**

The boom in construction sector in major oil producing states has been attributed to the money derived from oil

**Table 1.** Industrial sector value-added in Nigeria economy, 2009-2010.

Activity	Real GDP (₦ Billion)		Nominal GDP (₦ Billion)		% annual change		Contribution to growth (%)	
	2009	2010	2009	2010	2009	2010	2009	2010
Sector								
Other industries	187.03	197.91	8,480.91	10,904.90	2.85	5.81	11.09	19.23
Petroleum and natural gas	117.12	122.96	7,418.15	9,747.36	0.45	4.98	1.13	10.32
Manufacturing	29.99	32.28	612.31	647.82	7.85	7.64	4.67	4.05
Utility	23.73	24.52	62.15	70.54	3.23	3.32	1.59	1.39
Building and construction	13.82	15.48	347.69	393.53	11.97	12.08	3.16	2.95

Source: Derived by National Planning Commission (NPC, 2011) from NBS' Data on National Account.

**Table 2.** Value-added in the industrial sector, 2010-2011.

Activity sector	Nominal GDP (Naira billion)		Real GDP (Naira billion)		Growth rate (%)		Contribution to growth		% of GDP	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
Industry	15,194.56	16,022.83	158.19	160.3	5.95	2.41	19.39	8.38	25.52	24.4
Coal mining	0.00	0.00	0.00	0.00	8.80	8.74	0.00	0.00	0.00	0.00
Crude petroleum and natural	14505.76	15275.68	123.27	122.57	5.25	-0.57	10.72	-1.22	15.88	14.71
Metal ores	0.04	0.05	0.01	0.01	11.59	11.35	0.00	0.00	0.00	0.00
Quarrying and other mining	45.69	52.38	2.65	2.95	12.08	11.48	0.50	0.53	0.34	0.35
Manufacturing	643.07	694.72	32.26	34.71	7.57	7.60	3.96	4.29	4.16	4.16
Oil refining	61.31	70.65	1.05	1.12	7.28	6.25	0.12	0.11	0.14	0.13
Cement	22.23	25.79	0.68	0.75	10.56	10.72	0.11	0.13	0.09	0.09
Other manufacturing	559.53	598.28	30.53	32.84	7.51	7.57	3.72	4.05	3.93	3.94
Electricity	67.43	77.43	23.35	24.07	2.96	3.05	1.17	1.25	3.01	2.89
Water	2.86	3.28	1.15	1.27	10.20	10.18	0.19	0.21	0.15	0.15
Building and construction	394.67	456.04	15.45	17.35	11.85	12.26	2.86	3.32	1.99	2.08

Sources: NBS/NPC, 2012.

wealth. In this regard, comparable less diversified OPEC's countries like the United Arab Emirates (UAE's), Saudi Arabia, and more diversified oil producers like Russia, saw substantial increase in construction at various peaks of oil booms in the previous decades. Despite low crude oil prices in the 80s, key Middle East economies managed to maintain its infrastructural development, and by

2009, UAE's construction sector has grown very rapidly with construction accounting for 11% of its GDP (almost sustaining the 10% average in the late 1970s) as reported by Oluwakiyesi (2011). These resultant construction boom in these economies over the last decade, are all pointers to the high correlation between strong economic growth and the construction industry. The

question Oluwakiyesi (2011) asked was when Nigeria – OPEC's sixth largest crude oil exporter would have the same correlation?

### Nigeria and other developing nations

World resources for construction are very

**Table 3.** Contribution of manufacturing and construction to GDP in selected Countries, 1970-80.

Country	GPN Per capital (U.S. dollars)		Manufacturing value added/GDP (%)		Construction value added/GDP (%)	
	1970	1980	1970	1980	1970	1980
Kenya	139	398	12.0	13.3	5.1	3.2
Uganda	243	335	9.2	5.9	1.8	0.2
Cameroon	253	668	10.5	9.3	3.8	5.2
Nigeria	331	868	4.3	5.4	6.5	8.5
Indonesia	145	443	9.3	8.8	3.0	5.8
Malaysia	493	1,593	13.4	22.5	3.9	4.8
Egypt	197	609	22.0	28.1	4.7	5.5
Brazil	617	2,150	26.7	26.6	5.9	5.8
Mexico	802	1,974	22.9	23.2	5.1	6.7
Yugoslavia	741	2,534	25.7	30.2	12.4	11.0

Source: World Bank Report, 1984.

**Table 3.** (continued).

Country	Value added/output (U. S. dollars)		Annual growth rate, 1960 – 70 (%)		
	Manufacturing	Construction	GDP	Manufacturing	Construction
Kenya	19.0 (80)	32.6 (79)	5.9	6.5	6.7
Uganda	22.3 (70)	-	5.6	6.5	3.0
Cameroon	40.2 (72)	-	3.7	8.1	1.5
Nigeria	41.9 (76)	56.0 (68)	3.1	9.1	6.0
Indonesia	32.1 (78)	40.4 (68)	3.9	3.3	4.3
Malaysia	22.6 (76)	46.5 (75)	6.5	9.9	9.5
Egypt	27.8 (76)	39.9 (77)	5.3	4.8	6.7
Brazil	39.7 (74)	-	5.4	9.7	8.5
Mexico	42.5 (76)	47.4 (70)	7.6	10.1	9.7
Yugoslavia	30.3 (79)	43.6 (79)	5.9	5.7	6.9

Source: World Bank Report, 1984.

unevenly distributed among countries at different economic levels. World Bank Report (1984) showed that in developing countries, construction usually accounts for between 3 and 8% of the gross domestic product (GDP) in the 70's. There are considerable variations, however, in some low-income countries (e.g. Nepal and Uganda). In general, construction activities tend to increase with increase of a country's resource base and level off only after a high degree of economic development has been achieved (Table 3). A similar relationship seems to hold for per gross domestic capital formation (GDCF) in construction and per capital GDP, although total GDCF which increases with increase in per capital GDP and not construction's share in total GDCF (Anonymous, 1969, 2005). It can also be affirmed that construction's share in GDP tend to increase with increasing per capital GDP. Nigeria construction's share of the GDP fell afterwards, after the oil boom, hovering around 1.3 to 1.9% over the years before the near recovery since 2011 (CBN, 2011).

## CONCLUSION

It is obvious that construction's role in economic growth is a significant one in both developing and developed countries. Nigeria's economic growth over the last decade is high and the contribution of construction sector, along agriculture and manufacturing has been on a steady raise, and construction sector plays an increasingly important role in the nation's drive for diversified economy that can lead to true sustainability. Apart from the industry's social-economic potentials, its employment generation capabilities and the multi-sectoral dimensions made it an area that a nation with vision can look into for sustainable development.

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