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ABSTRACT

The dream of becoming one of the world's largest economies by the year 2020 is what Nigeria is aspiring for. In this paper, the researchers have identified countries like the USA, UK, Germany, Japan, China, which have larger economies than Nigeria. Poor education system, especially science education coupled with poor infrastructure and lack of a good health care system are some of the factors dragging Nigeria behind. Government's intensification of efforts on science, technical and vocational educational system is strongly recommended, particularly when laudable plans are implemented.

INTRODUCTION

The fact that Nigeria as a country is often referred to as a developing nation is enough to buttress the fact that it is lagging behind in terms of industrialization when compared to some other nations. This is because majority of her citizens are very poor, there is high rate of unemployment and the economy is poorly managed (Achor, et al, 2010). Like other developing nations, efforts are being made by the Government of Nigeria to move up the ladder of development.

Understanding the importance of economic development, the government of late President Umaru Musa Yar'adua inaugurated a "National Steering Committee" to oversee Nigeria's march towards becoming one of the top 20 economies of the world by the year 2020 (Akin, 2008). The President's statement came shortly after Goldman Sachs forecast it and it was published by the US finance house in December, 2005 (Anon, 2008) that by the year 2025, based on their parameters for growth and development, the 20 largest economies in the world would most likely include Nigeria and the BRIC- (Brazil, Russia, India and China). More significantly, Nigeria would have overtaken countries like Spain, Belgium,

Poland, and the NORDIC countries, Israel, Romania not to talk of South Africa or Egypt (Oyebode, 2008). Based on this, the former Governor of the Central Bank, Professor Charles C. Soludo decided, without any research or empirical study to shorten the prescribed time frame by 5 years. He came up with another vision20-2020 built around a specifically- designed delivery vehicle, the Financial System Strategy (FSS, 2020). At the Nigerian Economic Summit Group held in Abuja, September 5th-7th, 2007, the vision 20-2020 formed the proceedings. Presentations were made by Goldman Sachs, the President, Federal Ministry of Finance, Central Bank, the Organized Private Sector (OPS) and numerous other stakeholders (Oyebode, 2008).

According to a report, "Doing Business in Nigeria" (Anon, 2008) Nigeria was ranked 125th out of 183rd economies of the world. That was probably a signal to the Federal Government to expedite action in its pursuit of creating an enabling environment for attracting foreign investors and ease the conduct of doing business for Nigeria to achieve its vision20-2020 objectives.

The implication of this is that there must be massive investments and infrastructural

development programmes, else the attainment of vision20-2020 would be a mirage. The former CBN boss stated it well in his 2008 convocation lecture at the University of Agriculture, Abeokuta, that to catch up with the world economy that is moving at 100 kilometres per hour, the Nigerian economy must be driven at 1,000 kilometers per hour to rank among the first 20 economies of the world" (The Nation, 2008).

Global Gross Domestic Product (GDP): Nigeria versus Developed Countries

Consideration is here given to countries with GDP larger than Nigeria's. Some selection criteria will be used for comparison. Economic criteria have tended to dominate discussions. One of them is income per capita: Countries with high gross domestic product (GDP) per capita are usually considered developed. Another economic criterion is industrialization: countries in which the tertiary and quaternary sectors of industry dominate would also be described as developed. More recently another measure, the Human Development Index (HDI), came to the force. It combines economic measure, national income with other indices for life expectancy, and education. This criterion would define those countries as those with a very high (HDI) rating as developed.

While there is a strong correlation between a high HDI score and prosperous economy, the UN emphasizes that HDI counts beyond income or productivity takes into account how income is turned " into education and health opportunities and therefore into higher levels of human development". For example, Italy and the United States have a relatively large difference in their GDP per capita but both countries rank roughly equal in term of overall human development (UN, 2006).

Nigeria's dream is to achieve a GDP of not less than \$900billion and a per capita income of not less than \$4000/annum by the year 2020 (Rwehera, 2009). India has a lower per capita GDP

than Nigeria but a much higher GDP, because of her population size. In reality, where an economy places emphasis on transformational activity, it is much harder to increase per capita GDP than GDP. But, in some sense, it is precisely this that point economic development hinges on.

Table1 below shows countries with GDP larger than Nigeria. The data is the United Nations Development program report on Human Development for 2007/2008. It is based on 2005 economic data (the latest available in detail). There are 46 such countries ranging from US producing 12,556 billion dollars, down to New Zealand with a total GDP of 109 billion dollars. Nigeria then had a GDP of 106 billion dollars. These countries differ tremendously with some displaying a low per capita GDP, as is the case with India (NO.10, \$736 as against \$752 for Nigeria, NO.47) and others with a very high per capita GDP. Norway (NO.25) for example had a per capita GDP of \$63,918, much larger than that of the US but a total GDP of only \$294billion, a third of that of India.

Table 1: Economies larger than Nigeria in ranking order

HDI Rank	Country	GDP/pc 2005(\$)	Total population 200S(mn)	Rank in economic population	Total GDP (\$bn)
12	United States	41890	299.8	1	12558.6
8	Japan	35484	127.9	2	4538.4
22	Germany	33890	82.7	3	2802.7
81	China	1713	1313.0	4	2249.2
16	United Kingdom	36509	60.2	5	2197.8
10	France	34936	61.0	6	2131.1
20	Italy	30073	58.6	7	1762.3
13	Spain	25914	43.4	8	1124.7
4	Canada	34484	32.3	9	1113.8
128	India	736	1134.4	10	834.9
70	Brazil	4271	186.8	11	797.8
26	Korea(Republic of)	16309	47.9	12	781.2
52	Mexico	7454	104.3	13	777.5
67	Russia	5336	144.0	14	768.4
	Federation				
3	Australia	36032	20.3	15	731.4
9	Netherland	38248	16.3	16	623.4

	Belgium	35389	10.4	17	368.0
84	Turkey	5030	73.0	18	367.2
7	Switzerland	49351	7.4	19	365.2
6	Sweden	39637	9.0	20	356.7
61	Saudi Arabia	13 399	23.6	21	316.2
15	Austria	37175	8.3	22	308.6
37	Poland	7945	38.2	23	308.2
107	Indonesia	1302	226.1	24	294.4
2	Norway	63918	4.6	25	294.0
14	Denmark	47769	5.4	26	258.0
121	South Africa	5109	47.9	27	244.7
24	Greece	20282	11.1	28	225.1
5	Ireland	48524	4.1	29	198.9
94	Iran	2781	69.4	30	193.0
11	Finland	36820	5.2	31	191.5
38	Argentina	4728	38.7	32	183.0
29	Portugal	17376	10.5	33	182.4
21	Hong Kong,	25592	7.1	34	181.7
	China(SAR)				
78	Thailand	2750	63.0	35	173.3
	Venezuela	5275	26.7	36	140.8
63	Malaysia	5142	25.7	37	132.1
32	Czech	12152	10.2	38	124.0
	Republic				
75	Colombia	2682	44.9	39	120.4
23	Israel	17828	6.7	40	119.4
39	United Arab	28612	4.1	41	117.3
	Emirates				
25	Singapore	26893	4.3	42	115.6
40	Chile	7073	16.3	43	115.3
136	Pakistan	711	158.1	44	112.4
36	Hungary	10830	10.1	45	109.4
19	New Zealand	26664	4.1	46	109.3
158	Nigeria	752	141.4	47	106.3

Source: United Nation's Human Development Program Report 2007/2008

In Table1, we first selected 30 largest economies (as taking only 20 would leave very few countries) and then applied the per capita GDP limits. That leaves us with a pool of seven countries listed in the table below. Interestingly four of them (Saudi Arabia, Iran, Russia, Indonesia) are oil producing countries just like Nigeria and two (Saudi Arabia and Indonesia) of them also run a federal system of government like Nigeria. However all these countries have a vastly greater per capita GDP than Nigeria; the closest country from that perspective is Indonesia with a pc GDP twice higher than Nigeria's. That is where the challenge lies. Attitudinal changes towards productive work, entrepreneurship, community participation increase people's productivity, are precisely what science education can contribute.

Table2: Population and Economic size of the "target" Countries (2005)

Country	GDP pc 2005	Total population 2005(mn)	Total GDP (\$bn)	Rank in total GDP	HDI Rank
China	1713	1313.0	2249.2	4	81
Brazil	4272	186.8	797.8	11	70
Russia	5336	144.0	768.4	14	67
Turkey	5030	73.0	367.2	18	84
Indonesia	1302	226.1	294.4	24	107
South Africa	5109	47.9	244.7	27	121
Iran	2781	69.4	193.0	30	94
Nigeria	752	141.4	106.3	47	158

Source: UNN Report 2007/2008

Factors Militating against Nigeria's Vision 20-2020

In this paper, major factors capable of hindering Nigeria in her developmental strides are identified. Poor educational system, especially in

science education, inadequate infrastructure, lack of good health care system and low industrialization are some. Focus is being made on educational system and a health care system. It is our belief that a sound educational system and a good health care system will tremendously improve infrastructure, industries, energy and security.

Table 3a to 3c below show basic indicators comparing the Nigerian situation to those of "target"(that is countries with GDP higher than Nigeria). Table3a, show all the related to various aspects of access into different levels of education. In pre- primary participation, Nigerian has a gross enrolment ratio (GER) of 14%, which is almost three times less than in most "target" countries, not to comparable with Russia (87%) or Brazil (69%). Only Turkey is in a similar situation with Nigeria 13%. The same is true for other levels from JS to SS to tertiary. The GER in senior secondary education is everywhere higher than 50%, reaching 70% in two countries and 90% in three others. In the meantime it is only reported as 30% in Nigeria. In tertiary education the Nigerian GER is behind all of the "target" countries.

Table3a: Enrolment ratio into various levels of education in Nigeria and the "target" countries (% 2006).

Country	GER pre-school (2006)	NER primary (2006)	GER Junior school (2006)	GER SS (2006)	NER secondary (2006)	GER tertiary (2006)
China	39		98	55		22
Brazil	69	94	114	95	79	25
Russia	87	91	80	91		72
Turkey	13	91	88	72	69	35
Indonesia	37	96	78	51	59	17
South Africa	38	88	98	92		25
Iran	53	94	86	77	77	10
Nigeria	14	63	35	30	26	

Source: Global Monitoring Report (GMR)

Table 3b shows access to science and engineering education in Nigeria. The proportion of secondary pupils enrolled in technical and vocational schools is close to zero. Meanwhile the proportion in all "target" is quite encouraging with Brazil being an exception with 3%. There is also the proportion of tertiary students engaged in engineering where Nigeria shows all of 0.2% compared to 41% in Iran, 20% in South Africa, and Turkey while Brazil has 16%.

Table3b: access to science, technical and engineering in Nigeria and "target" countries

Country	% in secondary TVE (2006)	%Science and Engineering (2006)
China	15	
Brazil	3	15.8
Russia	17	
Turkey	21	20.8
Indonesia	14	
South Africa	6	19.9
Iran	9	41.3
Nigeria	-	0.2

Table 3c shows that government expenditure on education. What appears to be the situation in Nigeria is the conspicuous absence of information. That is a very big gap in procedures, monitoring and evaluation of education.

In Nigeria, public education is decentralized, with all three tiers of government (Federal, States and Local government areas) concurrently responsible for financing and delivering educational services. This complexity renders management very difficult and yet crucial.

A USAID- sponsored report pointed out serious weaknesses in this area (Rwehera, 2009). That "State and Local government lack tools, mechanism and procedures for meaningful oversight of classroom and school activity"

Table3c: Expenditure in "target" countries and absence of information on such in Nigeria (2006)

Country	Expenditure on education as % of GDP	Recurrent expenditure as % of total expenditure	Recurrent expenditure per pupil in 2005 ppp as \$		Primary teachers salary as % recurrent public expenditure
			Primary	secondary	
China					78
Brazil	4.1		1005	926	
Russia	3.9				
Turkey	4.1		1059	1313	
Indonesia	13.8	18			
South Africa	5.5	18	1383	1726	
Iran	2.7	19	927	720	
Nigeria		-	-		-

Source: GMR

Table4 shows government expenditure on health care delivery and "target" countries. Nigeria with an estimated population of 141.4million people spends 4.6 % of her GDP compared with South Africa with a population of 69.4million spending 8.7% of GDP on health care.

In Nigeria, the health care provision is a concurrent responsibility of the three tiers of government just like the funding of education. Nigeria operates a mixed economy; Private providers of health care have a visible role in health care delivery. The Federal Government's role is mostly limited to coordinating affairs of the University Teaching Hospitals, while state governments manage State Government hospitals and the Local Governments focus on dispensaries,

or Primary health centers.

Table4: Access to health care in Nigeria and "target" countries

Country	% of GDP (2005)	Population size (mn) (2005)
China		1313.0
Brazil	9.0	186.8
Russia		144.0
Turkey		73.0
Indonesia	3.7	226.1
South Africa	8.7	47.9
Iran		69.4
Nigeria	4.6	141.4

The way Forward

It is normal for a country or an individual to dream and also to dream big. For someone's dream to come true, however, hard work is necessary. It is obvious too that, one sure way of solving problems is to identify them. Having enumerated many problems responsible for Nigeria's lag behind the industrialized world, we believe that a sound educational system focused on science, technical and vocational skills can contribute immensely to solving the problems of infrastructure, energy, security, industries and health. Without a sound knowledge of Physics, Chemistry, Biology for instance, we do not expect to have good engineers and medical personnel (Trisma et al, 2010). Furthermore, a country with security threats such as Nigeria does not attract foreign investors. Most security problems in Nigeria border on land disputes, politics or religion. We believe that if knowledge is the focus of generating national income instead of natural resources, problems such as kidnapping, land disputes will be abated to a large extent.

CONCLUSION

In conclusion, if vision 20-2020 is to be realized, then government should intensify its efforts in improving the quality of science education with emphasis on the practical skills acquisition.

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