EDUCATION REFORMS FOR AGRICULTURAL PROSPERITY AND WEALTH ACCUMULATION: COMMERCIALISATION POTENTIAL OF SELECT CROP AND RESOURCE ECONOMICS AUDITING CONCERNS

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Abstract
Even though Nigeria has a high poverty rate, it still has a higher GDP in comparison to other countries of Africa despite the country Nigeria till now, trailing behind Western economies. Today, almost after more than fifty years post-gaining independence, Nigeria – giant of Africa should, compete with economies of the world rather than just continental economies of Africa. The country is rich in natural resources and has identified the fact that taking appropriate measures can speed its economic development. In lieu and with this foresight, it crafted the vision 20-20-20 program. This program aims to make Nigeria one of the twenty largest world economies by the year 2020. The seven points in the 20-20-20 program are: power and energy, food security and agriculture, wealth creation and employment, mass transportation, land reforms security and functional education. Post 20-20-20 program, Nigeria is yet to become a developed nation. The purpose of this paper is to provide detailed review of literature and careful analysis of historical data and current data for the need in speeding up Nigeria's economic growth through agricultural investment, education reforms and resource economics auditing. This study recommends

Nigeria's successful linking of agricultural output and the growth in GDP over periods of time whilst engaging stakeholders for the realization of a sustainably developed Africa, critical agricultural development and expansion.

Keywords: *Agricultural prosperity; education reforms; commercialisation; agricultural investment*

Introduction

To become a developed nation, Nigeria needs to speed up its economic growth by focussing on vital economic sectors like education, energy, agriculture and manufacturing. The country through the seven points in the vision 20-20-20 program seeks to become a leading economy in Africa and a major player in the world's economic and political affairs and the 20-20-20 plan was set as the guideline. However, at this point in Nigeria's development, the best approach is to focus on the agricultural sector. By focusing on agricultural development, Nigeria can speed up its economic growth in the coming decade. Currently, Nigeria has 75 percent of its land suitable for agriculture, but only 40% is cultivated. That indicates there is much room for the county to focus on. This addresses the food security and agriculture component of the expanding and growing demands and needs, circumvents the demand-supply gaps in industrial raw materials and food safety and security, improve nutritional quality security especially in protein security along with the focus on employment for all. However, to move forward, the country must increase the low productivity of current agricultural companies, engage competition within the agricultural sector, develop domestic policies and increase funding (Ayodele, Obafemi and Ebong, 2013).

In terms of development for agriculture, growth promotion is the first and sine qua none goal for Nigeria. There are also issues and concerns in the areas of livelihoods improvement, sustainable development and policy and institutional reforms. This involves conducting agricultural

surveys, and establishing smallholder fattening schemes for livestock. It also includes the rehabilitation of irrigation infrastructures and expansion of those structures as well. There is also a call for; a multi-versed capacity community farm center; increasing the effectiveness of fish hatcheries by establishing parent stock programs; vaccination programs for livestock; revision of the guaranteed minimum price system for crops and livestock; as well as government training for existing and potential agricultural workers (Ayoola, 2009).

One component in determining how to use agriculture to improve economic fortune in Nigeria is to evaluate the historical efforts in terms of agriculture that Nigeria has engaged in since its independence. This will ensure that the country does not repeat past mistakes. In addition, this evidence will demonstrate whether or not it is feasible for agriculture to be a primary factor in Nigerian economic development. Along with historical factors, there must be an evaluation of both internal and external factors that could impact the Nigerian agriculture market. In addition, it is important to identify the strategies needed to enhance economic growth through the use of agriculture. The purpose of this paper will be to provide and address these fore-going issues via a detailed review of literature and careful analysis of historical data and current data.

The need for agricultural investment in Nigeria: resource economics auditing concerns of rice

The global demand for rice is continually increasing (MohdHanafiah et al., 2020). Rice (*Oryza sativa*) is one of the most consumed staple food worldwide (Antle et al., 2018). In Nigeria, rice is one of the few food items whose consumption has no cultural, religious, ethnic or geographical boundary (Salami et al., 2017). It is consumed across all geo-political zones and socioeconomic classes in Nigeria. Only about 57% of the 6.7 million metric tonnes of rice consumed in Nigeria annually is locally produced (KPMG International, 2019). Nigeria is the largest producer of rice in West

Africa, sub-Saharan Africa and the overall African continent consuming on average, $4.0 billion worth of parboiled rice each year (International Trade Administration, 2023; KPMG, 2019). In 2021, the production of milled rice in Nigeria was estimated to amount to five million metric tons. Between 2010 and 2021, the milled rice crop in the country increased overall. In lieu between the same period, the largest growth in the rice production agricultural sub-sector was registered in 2010 when, the crop volume experienced an increase by 26 percent compared to the previous year. In 2013, on the other hand, the production volume of milled rice dropped remarkably against 2012 (BPDPCO, 2023).

The average yield in the country is approximately 1.8 metric tonnes per hectare. Over 70% of rice production in Nigeria is from rain-fed lowlands and irrigated land systems (KPMG International, 2019). Despite been the highest producer of rice in West Africa, Nigeria is still struggling to bridge the gap between supply and the ever-growing demand. The annual consumption rate of rice estimates by Kosemani & Bamgboye (2020) stood at 7.9 million metric tonnes articulating the gap of about 2.1 million metric tonnes filled through importation. However, according to International Trade Administration (2023), Nigeria remains one of the world's largest markets for parboiled rice — consuming on average $4.0 billion worth of parboiled rice each year with Thailand-origin rice accounting for 65% of all rice imports, followed by India at 20% and other origins including Brazil and China. This figure of consumption and importation means rice milling companies across the country operate below 50% milling capacity due to the high cost of rough paddy rice and, high operational costs that continue to hamper integrated large-scale rice mills from producing at competitive prices. Thus, imports continue to meet approximately half of the country's rice demand (International Trade Administration, 2023). In essence, Nigeria still depends on approximately 1.7 million metric tons of imported parboiled rice to meet its domestic rice consumption demand and, Thai and Indian rice (long-grain varieties) dominating and accounting for the bulk of imports of

parboiled rice (also known as converted rice and easy-cook rice) imports (International Trade Administration, 2023).

On the other hand, Nigerian rice milling capacity increased from 350,000 metric tons per year (mtpy) in 2015 to more than 3 million mtpy in 2021. The number of integrated rice mills jumped up from 10 to above 60 mills during the same period. Dangote Rice industries began the construction of its flagship rice mill plant in Jigawa State in 2021. The rice mill has a capacity to produce 70,000 mtpy. In addition, Dangote Rice is also installing processing mills in several states, including Kebbi, Sokoto, Zamfara, Kano and Niger States. These mills are forecasted to produce 700,000 mtpy. In 2022 Lagos completed the construction of the millon dollar Imota rice mill expected to produce 32 metric tons of grains per hour and a gross capacity to produce 2.8 million 50 kg bags of rice annually (International Trade Administration, 2023). This milling capacity operating at a hampering 50% capacity is attributed to the local or traditional methods of processing rice still practiced by most farmers and processors. Again too, harvesting is done basically manually when 80% of the grain has turned to straw colour (Okunola et al., 2019; Lusiba et al., 2017).

Rice processing requires special skills since large percentages of broken rice are not desirable in commercial packages (Okunola et al., 2019). As noted by Lusiba et al. (2017), rice postharvest handling activities are manual, labour intensive, tedious, slow and time consuming compared to other crops such as maize. The underlying premise is that markets allow household to increase their incomes by producing that which provides the highest returns to land and other inputs of production and then use the proceeds to buy household consumption items, instead of being limited to producing all the form of various goods that household needs to consume such to produce at market-oriented level in order to enhance food sufficiency in rice production. Improvement of production of rice in the country, Nigeria, can however be achieved when the factors influencing

market-oriented production of the crop are identified and the constraints addressed.

Factors which determine growth, production systems and markets for rice crop production

Nigeria population has increased from 88.5 million to a recent estimated figure of over 184 million in 2016 (NPC, 2016) and estimated 300 million in 2020 (NBS, 2023). This scenario (1991-2016) increase in population, shows that population has double in 25 years with about 107% increase which has raised fundamental question: Is the misery or vice versa envisaged by Malthus manifesting in Nigeria's economy? This 'misery' or event, called a Malthusian catastrophe (also known as a Malthusian trap, population trap, Malthusian check, Malthusian crisis, Malthusian spectre, or Malthusian crunch) occurs when population growth outpaces agricultural production, causing famine or war, resulting in poverty and depopulation (Agarwal, 2022).

The trend of rice production and consumption in Nigeria vis-à-vis Malthusian population theory and remarks on long run possible effects of continuous importation of rice into the Nigerian economy over which the country has comparative advantages, due to its potential in possible high rice production and exportation given its fertile and expanse land natural wealth is ironical (Agarwal, 2022). The production level of rice in Nigeria is insignificant to the demand for rice in Nigeria based on the large population of about 191 million people with an average annual population growth of 2.4% and available though not unlimited resources amongst issues which impedes rice production and thereby supply-demand gaps for agricultural produce unmet particularly, the increasing demand of rice for consumption (KPMG, 2019).

In a bid to address demand-supply gap, government at various times has come up with different programmes as well as its constructs drive for economic diversification which has given rise to policies such as: import

substitution policies, the promotion of exportation of agricultural produce from Nigeria, state and federal agricultural initiatives such as lending schemes, grants, etc. These measures have created an enabling environment, increasing participation in rice production sector (KPMG, 2019). Higher standards of living for rice farmers can only be sustained if farmers are able to produce more rice per unit of input. This higher productivity leads to higher profits from farming and a reduction in poverty. Thus, one way that rice production helps alleviate poverty is by increasing the productivity of farmers (Sattler, 2021; Badawi, 2023). This is the "direct" contribution to poverty alleviation. Rice is a major crop for poverty reduction in Nigeria, it has emerged as one of the fastest-growing agricultural sub-sectors; moved from a ceremonial to a staple food such that some families cannot do without rice in a day. Across Nigeria, rice is one of the highly consumed crops. However, most of the producers are subsistence and small-scale farmers producing little or no marketable surplus due to unavailability and inaccessibility to arable land in the area, high cost of mechanized farming and internal conflict within the north-eastern and central regions which has displaced farmers within the region, reducing production (KPMG, 2019). To assist small holder farmers raise their productive capacities, efforts to increase the production must focus not only on increased productivity but also on level of income generated. But, government inability to fund massive rice production resulted to low rice production in Nigeria.

Location and levels of production

The statistic of rice production in Nigeria shows that almost all the states in Nigeria are engaged in rice production with a 5% increase every year overall rough estimate that can rise or decline in several instances. For instance, in the first half of year 2016, rice production stood at 2.67% rise year-on-year in lieu of previous year production estimate. The import rates given increased demand have also increased year-on-year dis-proportionately annually too, rising to about 5,850 metric tons from 4,800 metric tons during

the same period of time in lieu (2015-2015). Unfortunately, however, Nigeria, over the years is estimated to supply about 49% of domestic demand through domestic or internal or local production (International Trade Administration, 2023; Schramm, 2006) and, imported rice entering the market informally through Nigeria's porous borders. Consequently, instead of shipments for economic tax and tariff usually, shipments are destined for seaports located in neighboring countries and transported to Nigerian markets through land border routes (International Trade Administration, 2023).

Out of the thirty six states in Nigeria, only eight states of: Anambra, Nasarawa, Ebonyi, Kaduna, Niger, Kano, Kaduna and Benue can produce rice in a large scale probably due to and identified challenge factors of commercial production of rice such as, educational level, farming experience, farm size and use of modern technology (Afolami et al., 2012; Khattack & Hussain, 2008; Ugwuja et al., 2011; Yusuf et al., 2012; Alam et al., 2010; Onumadu & Osahon, 2014; Siriwardana & Jayawardena, 2014). Thus, a commercialization index function for rice according to Falola, Animashaun & Olorunfemi (2014) in their study in Kwara State, Nigeria indicates commercialization index of rice production at 62% implying that there is a gap of 38% for the farmers to attain full commercialization level.

However, Anambra state is said to be one of the engine houses of rice production in Nigeria and rice farms and industrial rice production in the said state pushing the rice production of the state from 90,000 metric tons to 210, 00 metric tons with capacity of production estimations predicting 320,000 metric tons in coming years. This means the state Anambra, may reach and surpass the rates of production cum consumption of rice estimates for Adamawa state in coming years when this number is reached and accordingly, the Nigeria rice production statistics on, Nigerian rice importations will be less than 50% given estimated present local production rates (Schramm, 2006).

Despite Nasarawa state – leader when it comes to rice production in Nigeria with over 10,000 fully irrigated rice hectares, global rice production statistics show that top five importers of rice to the country Nigeria of, the USA, Vietnam, India, Thailand, and Brazil help, Nigeria to overcome the shortfall of more than 4.3 million metric tons valued at over 365 billion naira (West Africa Rice Development Association (WARDA), 2004).

Live Rice Index (LRI)-United States Department of Agriculture (USDA) (2016) collaboration estimates revealed that of 6.4 million MT domestic demand of milled rice in Nigeria, only 2.84 million MT was produced locally. This increase is attributed to the Central Bank of Nigeria (CBN)'s Anchor borrower intervention fund for rice farmers which had boosted local production of rice and saved the country about $800 million in foreign exchange (Emejo, 2018). In 2019, the prices of rice have yet doubled again despite considerable improvements in local production indicating that a demand-supply gap still exists. Local rice is majorly produced by small-scale resource poor farmers that use traditional technology for their production activities significantly influencing commercialization of rice production. Alarming too and may be due to consistent import supply, research has shown that most Nigerians prefer to consume imported rice brands as compared to local rice varieties amidst rice consumption, in Nigeria, rising tremendously at about 10% per annum due to changing consumer preferences (Olanrewaju, 2010).

Different systems used to produce rice crop: **types and purposes of rice crop systems and structures**

Nigeria rice production systems include: upland rice, lowland rice, irrigated rice and mangrove/deep water rice production systems (Iqbal, 2007). Further described by Longtau (2003) as adapted from Mohammed et al. (2019) is the rice production system summary of Nigeria (Table 1) that identify and critically evaluate types and purposes of a range of crop systems and structures.

Table 1: Rice production system summary of Nigeria

Type	Characteristics	Geographical spread
Upland	Rainfed rice grown on free-draining fertile soils. This is also called dry uplands.	Widespread, except coasts, high rain forests and Sahel.
Hydromorphic	Rainfed rice grown on soils with shallow ground water table or an impermeable layer. This is also called wet uplands.	Very widespread at the fringes of streams and intermediate zone between upland and swamps of rivers in the Savannah.
Lowland	Rainfed or irrigated rice in aquatic conditions or medium ground water table. Water covers the soil completely at some stage during the cropping season. These are called shallow swamps or Fadama.	Very widespread from high rain forest to Sahel. Deep inland water rain-fed rice grown on soils with deep water tables. The rice crop floats at some stage and harvesting may be done from a canoe. These are also called deep Fadamas or floodplains found in the Sokoto-rima basin and Chad basin, floodplains of the Niger, Benue, Kaduna, Gbako, Hadejia and Komadugu-Yobe.
Mangrove swamps	Rice grown at the coast or swamps of the high rain forest.	Coastal areas and Warri area in Delta state.

Natural and human determinants and limitations of rice production

Rice is cultivated on roughly 3.7 million hectares of arable land in Nigeria (Cherati, Bahrami, and Asakereh, 2011). Rice crop production requires energy in various forms, such as direct form (human labour, animal power, fuels and electricity), indirect form (machinery, fertilizer and herbicide) and renewable or non-renewable form. Resource consumption, Natural and human determinants and limitations of production in rice crop production over the years, due to, increasing demand for food products (Dalgaard, Halberg, & Porter, 2001) calls for studies and development of resource use determinants and resource efficient agricultural production possibilities with low and/or no limitation both in energy resource, input resource compared to the output amidst need for reducing greenhouse gas emissions produced from agricultural activity (Mohammadshirazi et al., 2012). This is Natural and human determinants and limitations of production auditing.

On average, Nigerian farmers cultivates rice using family labour as one system for production on small fragmented land holdings to produce a little surplus or sell to earn cash income to meet other family needs. Accordingly, the agricultural sector in Nigeria is characterized by subsistence farmers whose output levels are not enough to meet the demand (Alteri & Bisari, 2003). Chinin (1976) noted that marketable surplus is important especially for commercial quantity of rice in the market and, research on marketed surplus that is mostly concerned with its determinants, not only price and output cannot, be over emphasized vis-à-vis limitations of rice crop production. Thus, Sadiq et al. (2019) empirical evidence showed economic active labour force for production as important for rice commercialization among rice farmers in Niger State of Nigeria involved in rice farming not only as a way of evoking improvements in rice crop production but for the improvement of living and living standards of farmers aside instructive as an ingredient and panacea to the natural and human

determinants and limitations of production of rice, rice business enterprise and rice market surplus.

Natural and human determinants and limitations of production according to Ohen, Etuk & Onoja (2013) study of rice farmers in Southern Nigeria relative to the level of crop produced include, total land size, use of improved seeds, group participation, market information and contractual agreement. These limitation factors were also statistically positive and significant. On the other hand, natural and human determinants and limitations of production of, lack of timely market information, transport and restricted access to extension agents were identified but not statistically significant with the rice farmers in the study area.

Corroborating, Abdullah, et al.'s, (2017) study indicates that gender of the household head, age, number of family members who assist in farming, household size, vocational training, and the farmer being landlord and farm size were the major natural and human determinants and limitations of production. The welfare of the farmer depends in part on whether the farmer's rice output year-on-year market-increased. The result also indicated that rice output, off-farm income, access to credit, and income from the sale of rice were important factors influencing the welfare of the household. These limitations can be decreased and vice versa by providing subsidized prices for rice production inputs, cold storage houses for storage and processing, vocational training, innovative new technology, increased contact with extension agent and providing genetically modified seeds.

In other words, price adjustment, fertilizer unit price, and non-price factors: non-effective extension visit owing to capital paucity, unproductive large household size, non-diversification of the income stream, technological improvement are critical and important for increasing output supply, marketed surplus and minimizing natural and human limitations of production.

Need for new technologies sustainability of production

Also, intensive use of resource energy from non-renewable energies such as agricultural machinery, fossil fuel, chemical fertilizers and pesticides has led to some environmental problems such as natural resources depletion and climate change (Hatirli, Ozkan, Fert, 2006) thus, the need for sustainable production technologies – to make rice production both environmentally and market sustainable cum cost-efficient. In view therefore, it is important to reduce the energy resources input in an efficient-rice-agricultural production approach to ease environmental problems (Jekayinfa et al., 2012). This efficient use of energy resources in rice crop production can mitigate some environmental problems, prevent the destruction of natural resources, and help achieve rice sustainable production system (Banaeian & Zangeneh, 2011).

That is, sustainability of production in rice agricultural sub-sector requires both the development of energy efficient agricultural production systems with low energy input compared to the output as a means of reducing the greenhouse gas emissions produced from agricultural activity (Mohammadshirazi et al., 2012), possibly, genetically modified seeds and also, low-polluting but fertility-loaded fertilizers. This requires natural and human determinants and limitations of production auditing – a common method of examining sustainability, efficiency and environmental impact of a production system.

Productivity in the agricultural sector: addressing market and non-market factors

Oil resource factor

To prevent the decline in the agricultural sector, it is crucial that government plays a very significant role in deciding the course of the oil revenue movement throughout the economy of Nigeria and raise and channel oil revenue via an appropriate strategy to the development initiatives crafted for the agricultural sector. These decisions (monetary or others), taken by government, will impact the quick achievement of economic growth within

a decade or less or otherwise; have a major impact on the development of the overall sectors of the economy, no matter what that sector may be. Therefore, the goal to grow or of growth in Nigeria should be to increase her productivity and the productivity of her worker's (Ray, 1989).

Budget spending action plan

For investment in production-agriculture, agricultural stability and growth, the government needs to invest a significant amount of the total spending budget into the agricultural sector comparable to countries that have all dealt with the challenge of "Dutch Disease" (Scherr, 1989) and, explainable strategies that have proved to be successful in agriculture investment. This wise spending strategies that will be used to utilize sufficient resources abounding in Nigeria to produce its own food taking, into consideration the huge amounts of food imported from the international market into the country although it has sufficient resources to produce its own food.

Import-substitution action plan

Conservatively, Nigeria spend no mean budget on importing agricultural produce into the country. In 2010, Nigeria spent an enormous amount of USD $635 billion on wheat imports and USD $356 billion on rice imports. She also spent USD $217 billion on the import of sugar and USD $97 billion on fish imports even though Nigeria is rich in marine resources. Over the years, and as has been heavily criticised by internal and external organizations, Nigeria has been depleting the foreign exchange reserves of Nigeria by using strategic initiatives of investing immensely in its exports rather the initiatives of domestic production which seems as a more favourable option for Nigeria (Muhammad-Laval & Atte, 2006).

By implementing the import substitution policy, and either of providing subsidies, grants and/or finance to domestic farmers government, can trap the advantages of trade to give Nigeria's economy a boost. Such trade policies will make Nigeria economically, fiscally and politically

sustainable. Moreover, the import-substitution policy is no better needed than now especially with, the concerns that Nigerian farmers are sinking into poverty since they cannot get better prices for their produce as their crop is undermined by cheap imports (Scherr, 1989; 2006).

Importation-substitution strategy ensures food is produced in sufficient amounts for domestic consumption cost-effectively for further production and competitively for heralding export. Thus, import-substitution becomes an inward bound strategy that safeguards domestic producers from competition posed by imported products using trade and tariff barriers while, on the other hand an, outward bound strategy that connects the domestic economy of Nigeria to the world market by encouraging export of domestically manufactured goods (Carbaugh, 2009).

Value addition led policy

Value addition to agricultural produce should also be considered to get a better price for exports. This will not only add value to raw materials, but will create large-scale employment opportunities for Nigerian youths. This is a positive aspect of import substitution as agro-allied industries will be setup to process primary products given the already existing market in Nigeria for agro-allied and manufactured goods. This also beholds the federal government to stop the strategies of excessive importation rather import-substitution. Excessive importation means domestic producers may not be competitive, increasing the risks of setting up a home industry in the country to replace imports (Omorogiuwa, Zivkovic, Ademoh, 2014).

When investors recognize that a potential market for their goods exist in Nigeria, it will entice them to setup manufacturing facilities in the country. This will create abundant employment opportunities for locals. On the other hand, oil export may decline as Nigeria is running out of its oil reserves and needs to preserve its oil resources. Thus overall, Nigeria needs to plan well for the future (Scherr, 1989; 2006).

Changing to an agriculturally based economy will help Nigerian economy grow and prosper. It may be difficult for the country and competitive initially, but in the long-run this will help in eventually attracting foreign direct investment into the country especially given issues that Nigeria has been importing inflation through excessive import which, is resulting in a declining standard of living for rural and urban households that spend 70-80 percent of their income on food items (Muhammad-Lawal, & Atte, 2006).

Need for Education-Agriculture reforms

Agriculture was the mainstay of Nigeria's economy in the 1960s when the first five indigenous universities emerged, albeit regionally owned and funded. The "groundnut pyramid" of the North, "cocoa" of the West and the "palm produce" of the East were supplemented by mineral products, such as coal in Enugu and tin ore in Jos, to keep the nation's economy buoyant in the 1960s. The First Republic (1960-1966) regional governments showed appreciation of the link between education and national development, when they funded the regional universities adequately. The University of Nigeria, Nsukka, for example, which received adequate funding from the Eastern Regional Government, proved its mettle in contributing to rapid economic development of the region. Thus, the Eastern Region was rated one of the fastest growing economies in the world (Eneh, 2005).

As Eneh & Owo (2009) pointed out any, nation whose educational sector is in crisis can never grow economically. Thus, wealth accumulation action plan should include continued comprehensive reforms of the nation's educational system expected to, generate positive influence on the levels of education, namely, primary, secondary and tertiary, in Nigeria. This comprehensive education reform has the potentials of enhancing and sustaining standards in teaching, learning, examination and research activities in the overall institutions of learning especially with the delivery

of functional education – education for wealth. It also has good emphasis on the employability of products of educational institutions from Nigeria, which in turn, will help to curb the growing rate of unemployment and the corresponding rise in crime rate in the country (FGN, 2007a, b). Thus, ignoring this role of education in the drive for development of any nation is taking the risk of producing citizens who "could become weapons of mass destruction'' (Eneh & Owo, 2009).

In tandem with the observations and submissions from Eneh & Owo (2009), the Federal Ministry of Education, the Nigeria Association of Petroleum Explorationists (NAPE), posit that education reforms should form part of Nigeria's vision for global development. This will produce Nigerian graduates equipped with skills required in the agricultural investment sector and bridge the observed gap in knowledge and skills in order to meet the expectations of agricultural public and private business holders, employers, maximise self-business proprietorship in the agricultural investment industry (FGN, 2007a, b).

It is the opines of Eneh (2007a, b), Daily Sun (2007) that industry skills may be with personalities that are ageing and that there needs be investment in human capital development through education institutions – home and abroad by government, corporate organizations to produce graduates with functional and utility-based skills. This reforms besides the fore-going may also reduce the excess on dilapidated education facilities in the country's tertiary institutions. In a similar development, the fact that each year Nigerian higher institutions of learning produce no fewer than 130,000 graduates, out of which only 13,000 (10%) get employed and others roam the streets (Makinde, 2007; Saturday Sun, 2007; Eneh, 2007a) probably demonstrates Manufacturers Association of Nigeria (MAN) protest that Nigerian universities were not providing workers to meet their needs (FGN, 2007a, b).

Conclusion and recommendation

Nigeria needs to determine how it can grow its productivity and how much it needs to grow to reach its target of becoming one of the next twenty developed economies by the nearest future. Nigeria also needs to determine what it will require to achieve its target if it plans to concentrate mainly on agriculture for economic growth. To be successful, there needs to be a relation between agricultural output and the growth in GDP over periods of time. Nigeria must also identify factors that are critical to agricultural development and expansion whilst engaging stakeholders for the realization of a sustainably developed Africa.

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