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# Empirical analysis of agricultural and non-agricultural exports'impact on infrastructural investment in Nigeria

***The purpose of the article*** *is to estimate the impact of agricultural and non-agricultural exports on infrastructural investment in Nigeria.*

***Research methods.*** *In the research process, the following scientific methods have been used: The study adopted the Autoregressive Distributed Lag - Unrestricted Error Correction Model (ARDL-UECM) to estimate the impact of agricultural and non-agricultural exports on infrastructural investment in Nigeria. The ARDL model was estimated using Eviews 9.*

***Research results.*** *The regression results showed that agricultural export has a significant positive relationship with infrastructural investment while non-agricultural export was found to have an insignificant relationship with the dependent variable.*

***Scientific novelty.*** *This paper adds to the body of literature on this subject for the economy of Nigeria and other related economies because this is the first paper investigating the joint impact of agricultural and non-agricultural exports on infrastructural investment in Nigeria. The study makes some innovative findings and recommendations that the government should invest more in mechanised farming and as well ensure that the agricultural sector is made more viable and productive since the country has a comparative advantage in agriculture.*

***Practical significance.*** *Practically, this study is significant in many ways. Following the empirical results it has become practically clear that agricultural produce should not only be exported in its primary form but there should be value added in order to make Nigeria's exports more competitive in the international market. Income generated from agricultural and non-agricultural exports by government should be properly accounted for and invested into more capital projects to boost the level of infrastructure in the Nigerian economy. Tabl.: 4. Figs.: 2. Refs.: 15.*

***Keywords:*** *analysis; agriculture; agriculture and non-agriculture exports; infrastructure; investment.*

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**Scientific problem.** Nigeria, with a population of about 200 million people, a Gross Domestic Product of US$398 billion and a per capita income of about US$2,028.18, abundant natural resources, over 700,000 square kilometres of arable land and large deposits of untapped minerals, is, seen by many scholars and observers as a Nation that is yet to fully harness her potential and is yet to attain better heights of development, especially in infrastructure and in core and real sectors of the economy, as well as better GDP per capita (CBN, 2019). Being a largely import-dependent country, Nigeria's currency encounters a downward pressure, thus making imports cheaper than exports. The government's revenue (of which oil revenues previously contributed about 60-75%) has also declined hugely due to the crash in oil prices from a high of US$115/barrel in August 2014 to almost US$30/barrel in 2020 owing to the global lockdown occasioned by the Covid-19 pandemic (World Bank, 2020). The decline in government's revenue was largely due to two reasons: the overdependence on oil revenues, and limited investments in infrastructure when there was a boom in oil prices, thus, creating significant pressures on the country's currency. This calls for the diversification of the economy, more particularly exports.

Infrastructure in Nigeria has taken a slow pace over the years despite the revenues gotten from oil before the crash in oil prices. It is imperative to note that with Nigeria's growing population and level of economic growth, there is desperate need for infrastructural investment in Nigeria. Investing in infrastructure would increase employment, increase capital inflows, increase economic growth, reduce urban/rural migration, increase export, increase balance of payments, reduce mortality rate, spur growth in the real sectors, advance the existing technology, and will indirectly, but more importantly, increase per capita income. Infrastructure investment is needed in different core and social sectors such as energy, transport, and urban development/real estate, healthcare, water, agriculture, waste management, and Information Communication Technology (ICT).

The World Economic Forum estimates that every dollar spent on capital projects (in utilities, energy, transport, waste management, flood, defence, and telecommunications) generates an economic return of 5% to 25%. That multiplier effect accounts for the rapid economic growth of emerging markets that have made infrastructure spending a priority. This readily translates to opportunities for sponsors or investors that are keen on developing infrastructure projects in their local economies (Abadie, 2014).

Significant gaps exist in both rural and urban areas across Nigeria ranging from availability of basic infrastructure such as housing, healthcare, water, and waste management, to other enabler infrastructure like ICT, hospitality, and industrial / commercial real estate. Hence, the dire need of investment in infrastructure by both the private and public sectors of the country (World Bank, 2016).

Nigeria, being an import-dependent and a monolithic-export country has its exports-potential sectors such as agricultural and manufacturing sectors handicapped, producing far less than their potential. The crash in oil prices has greatly affected the country's economy and the exchange rate system, thus, leading to the fall in the demand of the naira in the international market. Also, the adoption of an import-restrictive policy (ban on certain import goods) led to increased cost of production and, as well, increased prices for goods and services (cost-push inflation). In 2015, the manufacturing sector and agricultural sector's contribution to the GDP were about 9.53% and 20.86% respectively, while oil rents shockingly contributed 3.03% (NBS, 2017). The situation has even worsened during the current surge of the global pandemic known as COVID-19, where oil price has reduced to almost negative values according to OPEC (2020).

**Analysis of recent research and publications.** This notwithstanding, Nigeria has made some efforts recently on how to revamp the economy through the Economic Recovery and Growth Plan (ERGP). However, despite the effort of the government in revamping agricultural and non-agricultural exports, their con-

Nigeria remain an empirical question. Empirically no study has been conducted in Nigeria on Agricultural Exports and Infrastructural Investment but studies such as Gilbert, Linyong, and Divine (2013), Ijirshar (2015) and Verter and Becvárová (2016), among others have been done to investigate the relationship between agricultural export and economic growth in different economies. Specifically, Ijirshar (2015) carried out an empirical analysis of agricultural export and economic growth in Nigeria using data that spanned from 1970 to 2012. He employed the Error Correction Model (ECM) in his analysis and found out that Agricultural export contributed positively to the growth of the Nigerian economy. In another study, Nahanga and Věra (2016) investigated the impact of agricultural exports on economic growth in Nigeria using OLS regression, Granger causality, and other methodologies. Both the OLS regression and Granger causality results show that agricultural exports is directly related to economic growth, while agricultural degree of openness