

Consumer Attitude towards the Increment of Rice in Ebonyi State on COVID-19

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Abstract: *Rice has become a predominantly staple food in Nigeria and other developing countries, having emerged from being a “festivity food”. Over the years, Nigeria has become the largest consumer of rice in Africa, which Ebonyi Rice is number one. This paper centered on consumer attitude towards the increment of rice in Ebonyi state in covid-19. Rice production in Nigeria has been unable to keep up with increases in demand over the years. Marketing ought to provide all that is required (access to irrigated land, appropriate farm inputs and market information including agricultural best practices and pricing need) to transform the Nigerian rice market. With the increasing spread of COVID-19 and different restriction measures, both traditional and upgraded domestic value chains are likely to be affected in the short, medium and long term. The researchers recommended that Governments should avoid lockdowns of milling plants. Instead, they should impose strict sanitary measures in milling facilities and provide special clearance passes to mill staff to enable uninterrupted processing of rice. With disruptions in the intermediate input market, governments should organize local production of fertilizers and subsidize key intermediate inputs such as quality seeds, fertilizers and pesticides to compensate farmers for productivity losses, not even by politics were some will benefits others will be snap without any benefits from either the Federal, state or Local Government.*

Keywords: Rice, Covid-19, Domestic rice, pandemic.

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INTRODUCTION

Ebonyi State was created out of former Abia and Enugu states on October 1st 1996 by the then General Sanni Abacha regime. Its capital and largest city is Abakaliki. Afikpo is the second largest city. Other major towns are EDDA, Onueke, Nkalagu, Uburu, Onicha, Ishiagu, Amasiri and Okposi. Ebonyi was created from the of old Abakaliki division of Enugu State and old Afikpo division of Abia State. Ebonyi State is bounded to the north by Benue State, the west by Enugu State, to the south by Imo and Abia States and to the east by Cross River State.

Rice has become a predominantly staple food in Nigeria and other developing countries, having emerged from being a “festivity food” as in few previous decades. Rice provides 20% of

the world's dietary energy supplies and it is a good source of thiamine, riboflavin and niacin (Odusina, 2008). An average Nigerian now consumes 24.8 kg of rice per year representing nine percent of total calories in take, giving the fact that the status of rice in the average Nigerian diet has been transformed from being a luxury food item to that of staple (Odularu, 2010). As food production grows at the rate of 2.3% annually. Nigerian population increases at 3.2% (FAO, 2006).

Rice has become the most important staple food and the most common cereal food crop in Nigeria (Akpokodje et al., 2001; NCRI, 2004). It is the fastest growing commodity in Nigeria's food basket (Akande, 2003) with an annual consumption growth rate of 4.4% (IFDC, 2008). In West Africa sub-region, Nigeria is the largest producer of rice (Oyinbo et al., 2013). About 5.4 million metric tons of rice is consumed annually in Nigeria. However, local production accounts for only 2.3 million metric tons per annum while the remaining 3.1 million metric tons is imported. Increasing rice production could therefore, contribute to domestic food security and foreign exchange earnings for the nation. Rice marketing entails all the activities involved in moving rice from the point of production to where it is needed by the final consumer (Bassey et al., 2013), in the desired form and at the appropriate time. Rao et al. (2012) stated that agricultural marketing plays an important role in stimulating production and consumption and in accelerating economic development. According to Onu and Okunmadewa (2001), market performance includes the relative efficiency of production (that is, price relative to the average cost of production).

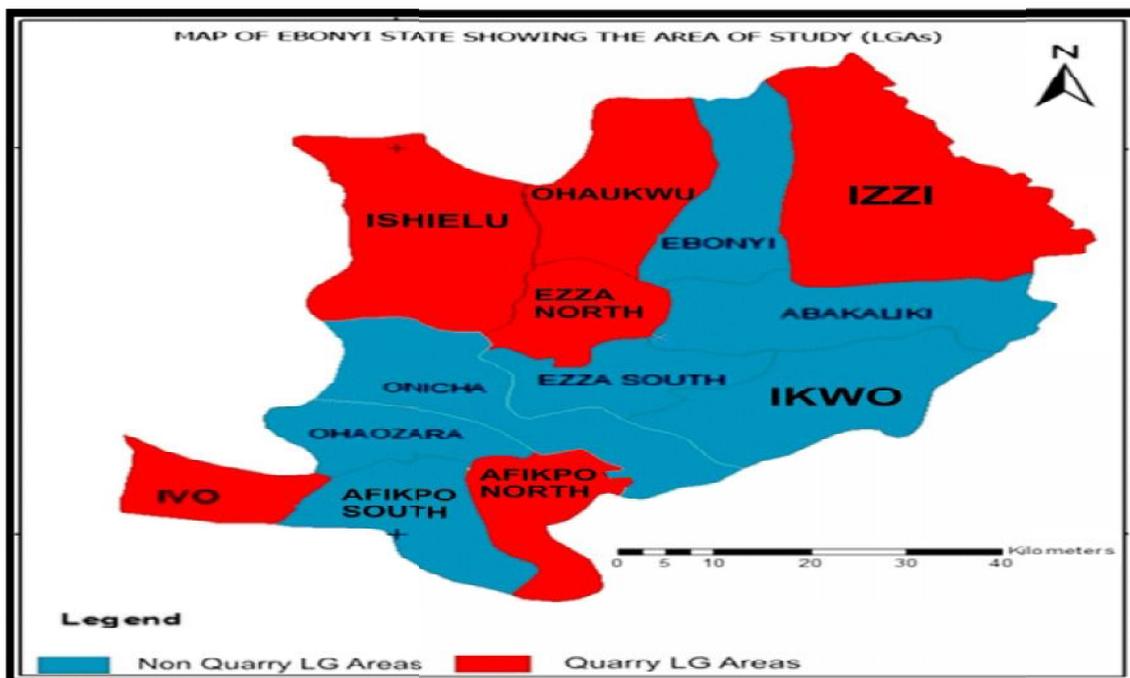
Global food prices continued rising for the second consecutive month in July (latest analysis), led by vegetable oils and dairy products. However, cost of rice in Ebonyi state is extremely high. In Afikpo Ebonyi State, bushel off rice that was #4000 before the covid-19, is now 11,500 in markets, the city is already affected by hunger, and yet there is no money in the economy. Some Food Commodity Prices are increasing mainly because of local logistical problems or import difficulties.



Source:<https://images.app.goo.gl>



Rice production in Nigeria has been unable to keep up with increases in demand over the years. Marketing ought to provide all that is required (access to irrigated land, appropriate farm inputs and market information including agricultural best practices and pricing need etc) to transform the Nigerian rice market. The inability of Nigeria to achieve self-sufficiency in rice production is therefore, due to inefficiency of rice marketing in the nation. Due to population growth and urbanization, though there is growing demand for rice in Nigeria, corresponding increase in supply is lacking thereby leading to persistent demand - supply gap. Market performance is a reflection of the impact of structure and conduct on product prices, costs, volume and quality of output (Hill, 1997). Efficient marketing system promotes economic development by encouraging specialization and leading to output enhancement (Olukosi and Isitor, 1990; Tura et al., 2010).



Source: www.researchgate.net/ Map of Ebonyi State showing the Study Area (LGA)

In Ebonyi state and its **ECONOMY**, Agriculture is the major occupation of the people of the state. The crops produced are yam, cassava, plantain, banana, maize, cocoyam. Others are palm produce, cocoa and rubber. It is a leading producer of rice, yams, potatoes, maize, beans and cassava. Rice and Yams are predominantly cultivated in EDDA. Ebonyi also has several solid mineral resources, but little large-scale commercial mining. The state government has however given several incentives to investors in the agro-allied sector. Ebonyi is called "the salt of the nation" for its huge salt deposit at the Okposi and Uburu Salt Lakes. Mineral resources in the state include salt which is mined locally in the Uburu/Okposi salt lakes of Ohaozara. There are some industries in the state which engage in production of plastic and block and food processing (<https://www.nigeriagallery.com>)

REVIEW OF RELATED LITERATURE

Potential impacts of COVID-19 on rice value chains

With the increasing spread of COVID-19 and different restriction measures, both traditional and upgraded domestic value chains are likely to be affected in the short, medium and long term. To assess the potential impact of the COVID-19 pandemic on domestic rice value chains' resilience and their capacity to sustain food security in the region, Porter (1985) business model assessment on six fundamental value chain operations can be apply:

1. Procurement. The spread of COVID-19 may affect the procurement of paddy for traditional and upgraded mills. Modern mills that directly coordinate with farmers through contract farming (vertical coordination) or directly organize own rice growing (vertical integration) would depend less on informal trade. Soullier et al. (2020) found that the supply of paddy is the most important driver of private investment in modern milling infrastructure. However, the adoption of contract farming by mills in West African rice value chains is only marginal, therefore, modern mills can be affected by supply disruptions as well. Furthermore, the crisis creates other disruptions in modern rice value chains, e.g., by providing incentives for contracted farmers to side-sell paddy. As price volatility is high in the crisis period, farmers may default on contracts because differences between contract and spot market prices may be even greater than in periods of relative stability. In such crisis context, relational and geographical proximity is often the most efficient institution to enforce contracts. Again, if the pandemic persists, local rice production may decrease due to labor shortage, input shortage and costs, high death rate due to disease, etc. This might lead to procurement issues for both traditional and upgraded mills in all countries. Alternatively, it is also possible that in the midterm, under high world prices, producers respond by increasing area and input use (if input channels are not disturbed), expecting that this price trend will persist. This may increase the quantity of paddy that traditional and upgraded mills can procure and relieve pressure on prices. This will negatively affect producers, because prices will decrease in the midterm, but it may increase millers' margins. However, inflated prices are likely to be short-lived. Since May 2020, there were some early signs of price stabilization or even a downward trend. In the coming months when new crops from Asia will begin to arrive on export markets, prices are expected to fall due to oversupply of rice and a possible decline of world demand due to decrease of purchasing power of consumers. This suggests that a possible 2020 rice crisis will likely be caused by a drop in demand, rather than supply (which was the main factor during the 2007–2008 crisis).

2. Logistics. In many West African countries, governments have allowed free movement within the country of "essential goods" such as food, contrarily to human movement. Therefore, both

inbound and outbound logistics should not be significantly affected by the current COVID-19 spread. In fact, in Nigeria we observed massive movement of rice seedlings from Cross River State all the way to Kano (i.e. about 911 km), despite the COVID-19 inflicted restrictions on mobility. However, movement of goods is not completely independent from movement of people.

3. *Finance.* This is a major constraint hampering domestic rice value chain upgrading. Financing rice growing is a common constraint among family farmers. However, small-scale millers face similar constraints. They rarely have access to formal credit from banks and rely on their own savings. This is also the case for upgraded mills, particularly when they are domestic actors. The spread of COVID-19 has substantially increased uncertainty surrounding economic activities and therefore will increase financial institutions' reluctance to provide loans. Therefore, commercial financial institutions may reduce their credit lines. This will particularly affect upgraded mills, which require high amounts of credit to maintain operational funds to pre-finance rice producers and to collect sufficient volumes of paddy to fill their capacity and reach profitability.

4. *Processing.* The spread of COVID-19 will not alter processing activities in both traditional and upgraded mills. The use of face masks is already a recommended practice in rice mills. However, the application of social distancing can reduce labor productivity and efficiency to some extent, especially in large milling facilities. The major risk is that a single case of COVID-19 contaminated staff may lead to a complete lockdown of the facilities and temporary unemployment. On the other hand, traditional mills may gain from the drastic decrease in oil prices on the world market.

5. *Human resources and labor.* Due to restrictions of mobility and lockdown measures, milling facilities may experience shortage of labor. This may affect traditional mills to a lesser extent since they are usually operated by a single person or family. In the case of upgraded mills, workers may have travelled to other regions or may not have free mobility to travel from and to the mill. This may lead to severe labor shortages and significantly impact upgraded mills' operations, which rely more on specialized labor.

6. *Marketing and sales.* The massive loss of jobs resulting from lockdowns will reduce purchasing power of consumers, reduce demand and jeopardize food security of households. West Africa imports about 46% of its rice consumption mainly from Asia. With many rice export countries in Asia being heavily affected by COVID-19, further reductions of rice imports into West Africa are not excluded in the short term. Until May 2020, when Vietnam resumed exports. Whether rice prices will now increase again, stabilize at the current higher level or decline is uncertain and will largely depend on the upcoming actions of major players in the rice world market (e.g., China, India and Thailand). Panic buying due to uncertainty related to the pandemic may further contribute to price increases. In the short term, price increases of paddy and milled rice were already observed in Ghana, Cote d'Ivoire, Nigeria and Niger in March 2020. Price increases will benefit value chain actors such as producers, traders, traditional millers and upgraded mills. However, considering a global value chain approach, export supply chains are currently being disrupted due to logistical reasons, but not due to global rice shortages and world prices may not remain high. An increase in export supply and decrease of world prices may negatively affect demand for local rice *vis-à-vis* imported rice and decrease sales of domestic rice.

In reviewing the impact of trade on domestic rice production and challenges of self sufficiency in Nigeria, it was commented that Rice is generally graded by quality, using factors like percentage of broken rice, sortexed or non sortexed long grain or short grain e.g., the better (less percentage of broken grains) the quality, the higher the price, in essence, quality determines the price that any particular brand of rice is sold (Ezedinma, 2003). With this in mind, it will be important to determine the quality of the locally produced rice in Nigeria i.e. what percentage of the produced rice is broken, this will help determine if it is a factor that is affecting its competitiveness and if it is, what can be done to change this and if locally processed rice are produced to the standard and quality of imported rice, will it have the ability to compete in terms of price.

Over the years, Nigeria has become the largest consumer of rice in Africa; the country produces 4.2 million metric tons and consumes 6 million metric tones per annum, the country lags in its production compared to consumption. Nigeria meanwhile is making visible efforts under the government's stated policies to increase local production and eliminate the need for imports in the medium term, the government is promoting the adoption of new hybrid rice varieties to help boost rice production. These new varieties are high yielding, early maturing, disease resistant, and high in protein content. Based on the goal that was set with these new strategies for Nigeria to be increase local production and eliminate the need for import, still shows a trend of continued increase in importation between 2008/2009 1.4 million metric tons and 2009/2010 1.6 million metric tons. In an article titled making Nigeria rice exporter it was commented that "the growth in consumption of rice can only be met either by increased production or by increased import (Business Day, 2009), which gives hope that it is indeed possible to meet the country's rice demand locally if the factors to help domestic production are put in place and steps to increase these demands are implemented, however these factors and steps are not further expanded on.

With a population of over 150 million, Nigeria is the most populous country in Africa. Its domestic economy is dominated by agriculture, which accounts for about 40% of the Gross Domestic Products (GDP) and two thirds of labour force (Akande, 2001), which makes the agricultural sector very important in the Nigerian economy. In the food sub-sector of Nigerian agriculture, rice has risen to a prominent place as its consumption continues to rise at approximately 10% per annum since the 1970's to the point that domestic production of rice appears not to be able to meet the current consumption demands prompting the country to import rice from other parts of the world. In spite of the consistently high rate of import, Daramola, 2005 points out that Nigeria has the potential to increase her domestic share of the rice market in a medium to long-term investment strategy that can develop into a self-sufficient industry locally over the next three year.

Despite the fact that there is currently local production of rice and potential for cultivating rice in more areas of Nigeria, the country's rice production still lags behind and remains one of the world's largest importer of foreign rice. In an overview of rice production in Nigeria by the Overseas Development Institute (<http://www.odi.org.uk/resources/download/3044.pdf>, p1), Britain's leading independent think tank on international development and humanitarian issues, it is commented that "Nigerian rice faces competition from imported rice which is considered by some as mentioned in the above referenced document, to be less tasty less."

Even with the rise in imported rice, over the years, the Nigerian domestic rice Industry has seen growth in both supply and demand, Erenstein *et al.* (2003) commented that: "The Nigerian rice sector has seen some remarkable developments over the last quarter-century. Both

rice production and consumption in Nigeria has vastly increased during the aforementioned period.”

This development though, does not seem to hinder and/or thwart rice importation as it continues to grow and the country still thrives in importation of rice giving an indication that rice production has still not developed to such a sustainable level that it is sufficient to meet the demands of local consumers and capable of competing with foreign milled rice, as local production of rice has grown, so has rice importation into the country. Daramola, 2004 commented that “Nigeria has the potential to increase her domestic share of the rice market in a medium- to long-term investment strategy that can develop into a self-sufficient industry locally over the next three years, with almost four fold increase in the industry’s employment level, moving from a position of rice import to rice export”.

Previous studies on rice consumption in Nigeria have been limited to explaining quality differentials as the reason for consumers’ preference for imported rice brands (Adeyeye et al. 2010; Alfred & Adekayode 2014; Bamidele, Abayomi & Esther 2010; Gyimah-Brempong et al. 2012; Johnson et al. 2013; Kassali et al. 2010; PROPCOM 2007). However, several studies have found that, when making purchase decisions, consumers do not consider product quality in isolation, but in comparison to its price (Akdeniz, Calantone & Voorhees 2013; Bornemann & Homburg 2011; Sahay & Sharma 2010; Thanasuta & Metharom 2015). It therefore seems that previous studies have not adequately explained the underlying reason on how consumers with a brand preference mindset make purchasing decisions when faced with two or more brands of food products with almost similar quality attributes but different market prices. This has left a knowledge gap in consumer behaviour literature, which this study aims to fill by determining how consumers’ comparative analyses of price and quality differentials of local and imported rice brands influence their choice behaviour. This is with a view to providing some insight useful for rice marketing managers and government in designing appropriate marketing policy measures for breaking the current consumers’ inertia against preference for imported rice brands. Specifically, this study seeks to:

- determine the factors influencing consumer’s preference for imported rice brands and provide empirical evidence of this choice behavior
- assess how market price and consumers’ perceived quality differentials determine consumers’ inertia against preference for imported rice brands in Nigeria.

Domestic rice production has been stimulated and has been on the increase annually by more than 5% (Seck et al. 2010). In the last 5 years, rice production, processing, polishing and packaging in Nigeria have tremendously improved and there are many local rice brands with improved quality attributes (Africa Rice 2012) Despite improvements in the physio-chemical quality attributes of local rice, there is still a steady increase in the quantity of imported rice consumed in Nigeria because of the burgeoning population, increased consumer incomes, changes in tastes and preferences, rapid urbanisation, ease of preparation that fits easily into urban lifestyle of workers and better physical attributes (Erhabor & Ojogho 2011). Consumers still prefer imported rice brands based on their already established perception that imported rice brands possess better after-cook physical attributes such as a bright-white colour and separate, neat and even long grains. (Adeyeye et al. 2010; Johnson et al. 2013; Lancon et al. 2003). According to Erenstein et al. (2003), the fundamental cause of this preference for imported rice is the intrinsic nature and pedigree of the paddy grain found in Nigeria.

Soullier et al. (2020) in *Global Food Security* Volume 26, September 2020, 100405 recently compiled evidence indicating that upgrading of domestic rice value chains has progressed in West Africa in the decade following the 2008 food crisis. In 2019, 57 modern mills were operating in the region, some of them sourcing paddy directly from farmers through contract farming, and others directly managing production of rice through vertical integration. Depending on the progress in the modernization of their rice value chains, West African countries were classified into three groups:

- Group 1 includes the countries with the highest rice import bills and paddy production, and where the modernization of rice value chains is most advanced, i.e. Nigeria and Senegal.
- Group 2 features countries with lower rice import bills and paddy production, and where the modernization of rice value chains is slowly emerging, i.e. Ghana, Mali, Côte d'Ivoire, Burkina Faso, Liberia, Niger, Sierra Leone, Benin and Togo.
- Group 3 is composed of countries where little investment in rice value chain upgrading is observed, i.e. Guinea, Mauritania, The Gambia and Guinea-Bissau.

The evidence also suggests that most farmers remain connected to final rice markets through traders and small and medium scale millers. Indeed, among the estimated four million rice growers in West Africa in 2019, 99.74% marketed paddy through spot or interlinked transactions without any formal coordination between millers and farmers (Soullier et al., 2020). Traditional value chains therefore remain the core providers of food security in West Africa.

COVID-19 has emerged in December 2019 in China and in a period of three months, about 188 countries around the world were contaminated, including every single country in Africa. To slow down the speed of contamination, movement restrictions, curfews and complete lockdowns were imposed in many parts of the world. The economic impact is already visible after three months of the pandemic. The COVID-19 pandemic may further create disruptions in domestic rice value chains, and exacerbate West Africa's dependency on rice imports. On the other hand, the pandemic could also offer an opportunity to domestic rice value chains if African states are forced to limit imports due to a fall in foreign exchange linked to the reduction in exports of agricultural and mining products.

CONCLUSION

Under a lockdown, a collapse of local food supply systems is likely. Indeed, farmers may not be allowed to go to the market for selling their products and may not have access to alternative marketing strategies (e.g., digital marketing). Although rice paddy is less perishable compared to other food items, farmers' challenge to timely sell paddy may increase their liquidity constraints and jeopardize their food security. With increasing partial unemployment and decreasing overall purchasing power, continuous engagement with millers is necessary to keep marketing margins at acceptable levels to avoid surges in local rice prices.

RECOMMENDATIONS

The researchers recommend the following in this covid-19 pandemic

1. Governments can buy local, milled rice from millers and maintain rice stocks to provide social safety nets to poor and vulnerable populations.

2. Governments should avoid lockdowns of milling plants. Instead, they should impose strict sanitary measures in milling facilities and provide special clearance passes to mill staff to enable uninterrupted processing of rice.
3. With disruptions in the intermediate input market, governments should organize local production of fertilizers and subsidize key intermediate inputs such as quality seeds, fertilizers and pesticides to compensate farmers for productivity losses, not even by politics were some will benefits others will be snap without any benefits from either the Federal, state or Local Government.

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