

# MAPPING THE EFFECT OF FOOD PRICES, PRODUCTIVITY AND POVERTY IN THE DEVELOPMENT DOMAINS OF NIGERIA

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## ABSTRACT

Poverty remains the major obstacle to economic emancipation and achievement of development agenda in Nigeria. Worse still, rising food prices pose a major threat to feeding the teeming population in Nigeria. Declining food production, high population growth, and negative food trade balance combine to worsen the food and poverty situations in Nigeria. We stand on the premise that surging and volatile food prices could have a hardest hit on those who could not afford it – the poor. This study used spatial data on food prices and poverty levels. We mapped food prices and poverty levels by development domains in Nigeria.

We found that food price has significant effect on poverty levels in the identified development domains. The food price analysis showed high and rising food prices with high food price instability and price spread. The high food price had effect on purchasing power and poverty levels of Nigerians. The food price surge also had a direct impact on overall inflation because the weight of food in the consumption basket is high. Food inflation ranges over 60 percent, and food inflation has reached double digits. The poverty change analysis revealed that some States witnessed improvement in poverty reduction, while others had their poverty situation worsened. The GIS mapping and overlay of food prices and poverty levels by development domains showed critical policy intervention areas in Nigeria. Policy recommendations that are consistent with food price stabilization and poverty reduction strategies were canvassed. There is need for more effective policy to help the poor and farmers to respond to the opportunity posed by the rising demand for food.

**Keywords:** Spatial data, Geographic information system, Food price inflation, poverty map, development domains, Nigeria.

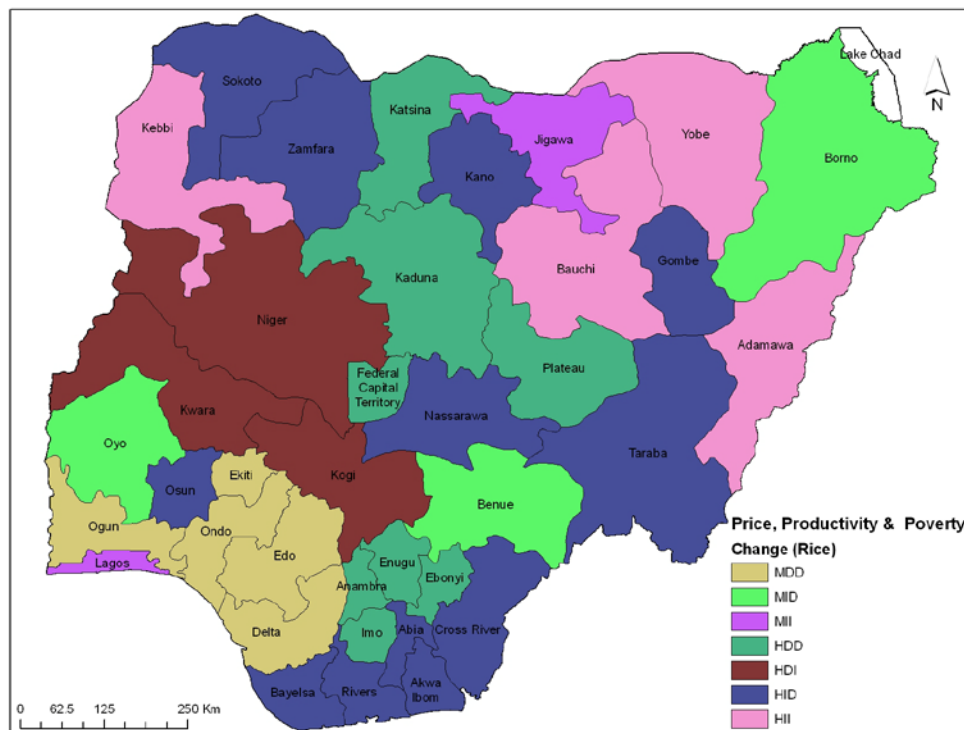
## INTRODUCTION

Poverty remains the major obstacle to economic emancipation and achievement of development agenda in Nigeria. Nigeria's agricultural policy and the Presidential Initiatives support self-sufficiency in rice production (FMAWR, 2008). Also, rice is a strategic staple and constitutes major imports for Nigeria. Besides, rising price of rice pose a major threat to feeding the teeming population

in Nigeria. With agricultural policy interventions by government of Nigeria, it is expedient to analyze the performance of such policies with a view to identifying key areas of development changes as well as other areas of further interventions and priority setting (Kristjanson et al., 2005). We, therefore, analyze and map changes in farm gate price of rice, productivity and poverty by development domains in Nigeria.

## MATERIALS AND METHODS

This study used geographic information system (GIS) to map the changes in rice farm gate price, productivity (yields) and poverty by development domains/States (Manyong et al., 2005). Data on farm gate price, production outputs and land area cultivated as well as poverty incidence data were obtained from the National Bureau of Statistics (NBS, 2005 and 2007). We computed the price change, productivity change and poverty change for the two data points of 1996 and 2004. Overall, we identified two patterns of change for each items. That is, high (H) or moderate (M) price change. The price change is said to be moderate if percentage change in price is less than 100 percent and high if greater than 100 percent. Productivity is said to decrease (D) if percentage change in productivity is negative and increase (I) if productivity change is positive. Poverty decreases (D) if poverty change is negative and increases (I) if poverty change is positive. The geographic mapping and overlay of the three variables of price change, productivity change, and poverty change for rice is given in the map below.



**Map showing price, productivity and poverty changes by development domains**

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## RESULTS AND DISCUSSION

The geographic mapping results (see Map) revealed that only three States – Oyo, Benue and Borno - (8 percent) out of the 36 States and the Federal Capital Territory in Nigeria have the ideal policy expectations of moderate price change, increased productivity and reduced level of poverty (MID) between the period of 1996 and 2004. The other extreme situation or worst scenario is the case of high price change, decrease in productivity and increased level of poverty (HDI). Again, three States are in this category. The States are Kwara, Kogi, and Niger. Incidentally, these States especially Niger State is noted for growing rice. But as it turned out, increased in production as a result of policy intervention in Niger State had been due largely to area land expansion and not productivity increases. In these States (Kwara, Kogi, and Niger), therefore, we found the combination of high food prices and low productivity to have worsen poverty levels and hence efforts at reducing poverty levels in the States. Therefore, there is the need for more proactive policy interventions to increase productivity of rice and stabilize the price of rice specifically in Kwara, Kogi and Niger States, and Nigeria in general.

## CONCLUSION

This study analyzed and mapped changes in farm gate price of rice, productivity of rice and poverty by development domains in Nigeria. We found the combination and overlay of high food prices and low productivity to have influenced the poverty levels in the development domains of Nigeria. It was revealed that the correlates of increased level of poverty in Nigeria are high food prices and low productivity. Policy should, therefore, be directed and targeted at increasing productivity growth and or stabilizing food prices (especially rice) in the identified development domains in Nigeria.

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