



IMPACT OF INFLATION ON COMPENSATION FOR CROPS AND ECONOMIC TREES ON LAND COMPULSORILY ACQUIRED FOR PUBLIC PURPOSES IN NIGER STATE OF NIGERIA

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ABSTRACT

This paper examines the impact of inflation on compensation for crops and economic trees on land compulsorily acquired for public purposes in Niger State of Nigeria. The study utilised secondary data obtained from the Niger State Ministry of Lands and the Central Bank of Nigeria (CBN). These include the current compensation rates for crops in the State, applicable since 2018 and food inflation rates in the country from 2018 when the compensation rates for crops and economic trees in the state were last reviewed till date. It argues that the current compensation rates payable by the government for crops in the State do not incorporate the impact of inflation in its computation and as such cannot adequately compensate the claimants (farmers) in the present inflationary economy. It found that the overall proportion of compensation for crops lost to inflation by farmers in the State is about 148.56% of the actual compensation approved by the government. The variation between the approved compensation and inflation – adjusted compensation was also found to be statistically significant for crops ($F = 29.95552, p < 0.05$) and economic trees ($F = 64.76883, p < 0.05$) respectively. It concludes that compensation for crops and economic trees on farmlands in the State compulsorily acquired by the government for overriding public purposes should be computed based on inflation – adjusted compensation rates (IACR) so as to adequately compensate the farmers for the compulsory acquisition of their crops and economic trees in an inflationary economy and to enable them reinvest their capital in alternative agricultural investments elsewhere.

Keywords: Acquisition, Compensation, Compulsory, Crops and Nigeria

INTRODUCTION

Every government the world over requires land for public purposes. The government acquires such land through the exercise of its power of eminent domain (Mangionii, 2010; Alemu, 2013). Eminent domain refers to the power possessed by the state over all properties within the state, specifically the power to expropriate private property for public use (Grover, 2014). In other words, governments have the right to compulsorily acquire land for public use (Chai *et al.*, 2019; Museleku, 2021 and Yacim *et al.*, 2022). The power of compulsory acquisition is a deeply rooted consequence of the inalienable right of every state or corresponding socio-political authority to exercise the power of eminent domain. Driven by the demand for economic development and improvement of the well-being of citizens, governments in every country maintain and exercise the power to expropriate private properties for public purposes (Alemu, 2013; Museleku, 2021; Amponsah *et al.*, 2023). In Nigeria, land owners hold various estates and interests in land under two broad systems of ownership, namely; private property, comprising individual principle and communal principle and state ownership. While land held under state ownership can be directly used for public purposes, land held under private ownership whether individual or communal in nature must be converted



into State ownership before such land can be used for public purposes (Egbenta and Udoudoh, 2018).

Compulsory acquisition is the power of government to acquire private rights in land without the willing consent of its owner or occupant in order to benefit society (FAO, 2008). It is one of the ways of converting private land into state ownership (Rao, 2018). The owners of such private land are entitled to an adequate compensation (Qu *et al.*, 2018) based on impeccable valuation of the property (Museleku, 2021 and Yacim *et al.*, 2022). Since 1978, the compensation valuation of unexhausted improvements on land compulsorily acquired in Nigeria is based on the provisions of Section 29(4) of the Land Use Act. The Act was specifically enacted to unify land practices in the country as well as guarantee stronger government control over land (Ogbuabor *et al.*, 2021). It is a global best practice that compensation payable for compulsory acquisition of land should be fair, just and adequate (Chai *et al.*, 2019), based on current economic realities in the locality. The inflationary nature of the Nigerian economy has affected the pricing of agricultural produce in the country (Mbah, 2022), and by extension the monetary amount of compensation payable for crops and economic trees on land compulsorily acquired for public purposes.

Inflation generally affects the farm economy most directly through the cost of inputs, leading to loss of incomes and profits by farmers (Ukoha, 2007). Ukoha (2007) also established that the effect of inflation on relative price variability is non-neutral for both food crops and cash crops and that the impact of inflation on price variability in the short and long runs is significantly positive. Akpan and Udoh (2009) assessed the relative price variability of grain and inflation rate movements in different agricultural policy regimes in the country. The study found that inflation exerted positive significant impact on relative price variability of grains in the agricultural policy regimes under study. Thus, agricultural households usually feel the effects of inflation through the increase in food prices (Mawejje and Lwanga, 2015; Omotunde *et al.*, 2023). Olatunji *et al.* (2012) analysed the linkage between agricultural productivity and inflation rate in Nigeria using time series data from 1970 to 2006 and found that there is a direct relationship between agricultural output change and inflation rate in the country. Similarly, Oyinbo and Rekwot (2014) investigated the relationships of inflationary trend, agricultural productivity and economic growth in Nigeria using time series data from 1970 to 2011. The study found a unidirectional causality from inflationary trend and agricultural productivity with no causality between inflationary trend and economic growth. The study recommended that policies that will ensure single digit inflation rate in the country should be vigorously pursued by the Central Bank of Nigeria. Mbah (2022) examined the nexus between agricultural productivity, food prices and inflation in Nigeria and found that increased agricultural productivity induces a positive change in food prices in the country. In Niger State of Nigeria, the real value of the compensation payable for crops and economic trees by the government has been eroded by inflation over the years. It is in this context that this study was carried out to evaluate the impact of inflation on compensation for crops and economic trees on land compulsorily acquired for public purposes in the State.

METHODOLOGY

The study area

The study utilised secondary data obtained from the Niger State Ministry of Lands and the Central Bank of Nigeria (CBN). These include the current compensation rates for crops and economic trees in the State, applicable since 2018 and food inflation rates in the country from 2018 when the compensation rates for crops and economic trees in the state was last reviewed till date. The data on food inflation was used to compute the food inflation index for the period.



Thereafter, the food inflation index was employed to determine the inflation – adjusted compensation rates (IACR) for all crops and economic trees recognised by Niger State government for the purpose of compulsory acquisition and compensation. The IACR is compensation rate for a crop (per hectare) or economic tree (per stand), taking into consideration the full impact of inflation. Quantitatively, the IACR was computed as follows:

$$IACR = \text{Compensation Rate since 2018} \times \frac{\text{Inflation Index in 2023}}{\text{Inflation Index in 2018}} \quad \dots (1)$$

The current compensation rates in the state payable since 2018 were compared with the IACR to determine the variation in compensation caused by inflation during the period as well as the overall proportion of compensation lost to inflation. The statistical significance of the variation was measured using the single factor analysis of variance statistical technique.

RESULTS AND DISCUSSION

Data obtained from the CBN and analysed for the study indicates a significant rise in food inflation from 13.36% in 2018 when the current compensation rates for crops in Niger State came into force to 24.82% in 2023 as shown in Figure 1. This suggests that there is progressive increase in the prices of agricultural produce in the Nigerian economy in the past five years. These rates were then used to determine the food inflation index for each year throughout the period as presented in Table 1.

Table 1: Food Inflation Index (2018 -2023)

Year	Food Inflation Rate (%) ^a	Food Inflation Index ^b
2018	13.36	1.0000
2019	14.67	1.1467
2020	19.56	1.370995
2021	17.37	1.609137
2022	23.75	1.991307
2023*	24.82	2.485549

*As of May, 2023

a Data from the Central Bank of Nigeria (2023)

b Computed from a

The food inflation index confirmed the steady growth of food inflation in the Nigerian economy within the period as shown in Figure 2. This ought to be reflected in the compensation payable by the government to farmers whose farmlands (with crops and economic trees) have been compulsorily acquired for public purposes.

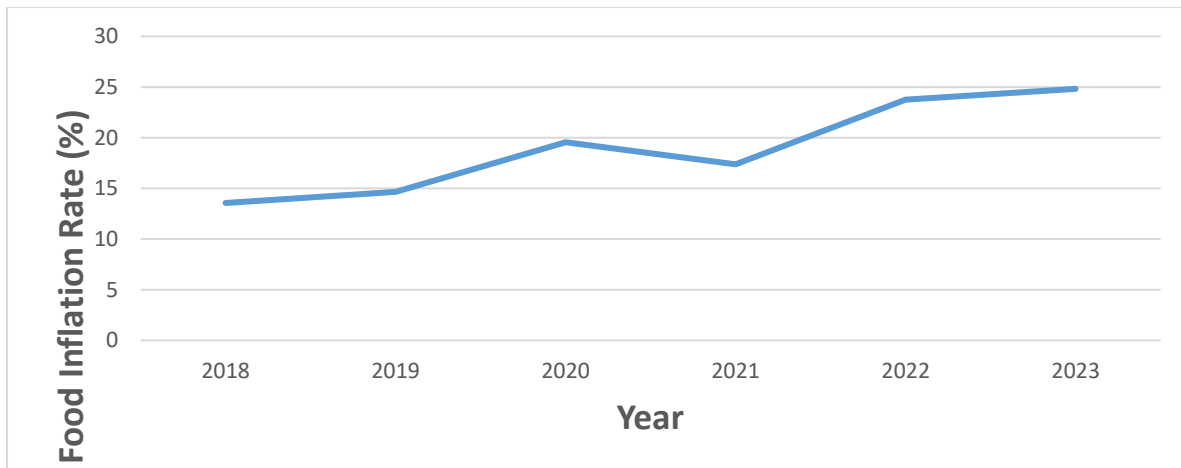


Figure 1: Food Inflation rate (%) in Nigeria (2018 – 2023)

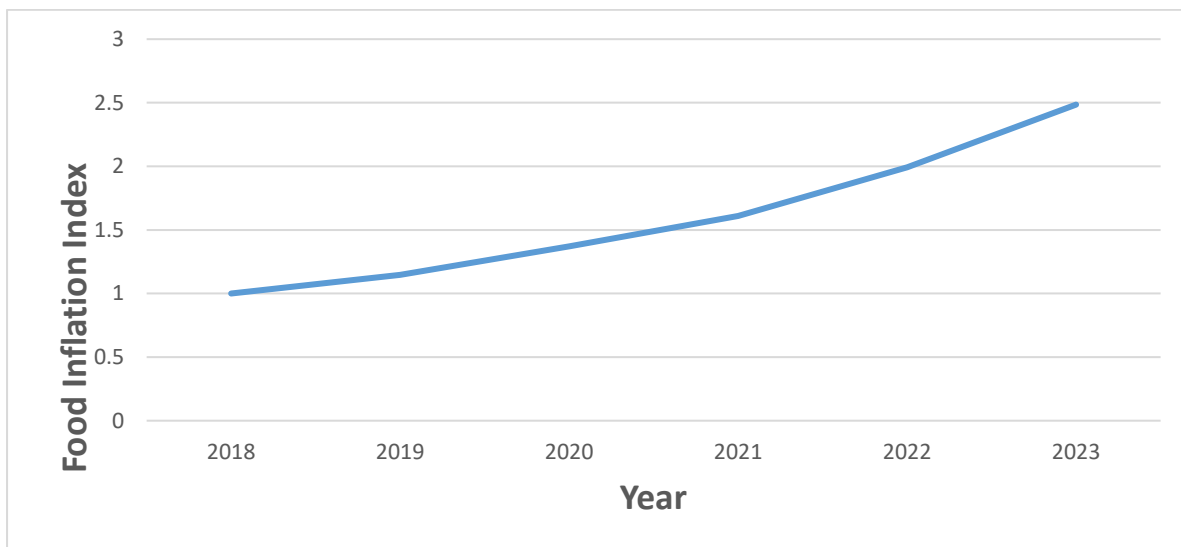


Figure 2: Food Inflation Index in Nigeria (2018 – 2023)

Based on Equation 1, inflation – adjusted compensation rates were determined for all crops and economic trees recognised by Niger State government for the purpose of compulsory acquisition and compensation. These were compared with the current compensation rates in the state payable since 2018 to determine the variation in compensation caused by inflation during the period as well as the overall proportion of compensation lost to inflation and the results are presented in Tables 2 and 3.

The result in Table 2 shows that there is variation between the compensation payable per hectare for crops in Niger State and inflation – adjusted compensation that is required to justly, fairly and adequately compensate the farmers whose lands have been compulsorily acquired by the government for overriding public purposes, considering the trend of inflation in the economy. It ranges from ₦66,850 per hectare (for melon) to ₦713,064 per hectare (for pepper, ginger and tobacco). This variation is the amount of compensation per hectare of crops lost to inflation and represents about 148.555% of the actual compensation approved by the government. A similar outcome was obtained for economic trees as presented in Table 3.



Table 2: Variation in Compensation Rates for Matured Crops in Niger State, caused by Food Inflation

Crops	Approved Compensation Rate Per Hectare (since 2018) ^a (₦)	Inflation – Adjusted Compensation Rates (₦) ^b	Variation (₦) ^c
Millet	100,000	248,555	148,555
Guinea Corn	100,000	248,555	148,555
Soya Beans	350,000	869,942	519,942
Irish Potatoes	350,000	869,942	519,942
Accah	100,000	248,555	148,555
Baba	40,000	99,422	59,422
Duma	110,000	273,410	163,410
Wheat	220,000	546,821	326,821
Risgu	220,000	546,821	326,821
Beniseed	220,000	546,821	326,821
Maize	100,000	248,555	148,555
Rice	250,000	621,387	371,387
Beans	280,000	695,954	415,954
Groundnut	240,000	596,532	356,532
Cotton	280,000	695,954	415,954
Yam	500/heap	1,243/heap	743/heap
Coco-yam	500/heap	1,243/heap	743/heap
Cassava	200/stand	497/stand	297/stand
Sugar cane	280,000	695,954	415,954
Pepper	480,000	1,193,064	713,064
Ginger	480,000	1,193,064	713,064
Kenaf (Jute)	380,000	944,509	564,509
Tobacco	480,000	1,193,064	713,064
Sweet Potatoes	250,000	621,387	371,387
Carbage	250,000	621,387	371,387
Lettuce	250,000	621,387	371,387
Okro	250,000	621,387	371,387
Other vegetables	250,000	621,387	371,387
Onion and Carrot	450,000	1,118,497	668,497
Garden Eggs	250,000	621,387	371,387
Tobitoes (Atarugu)	45,000	111,850	66,850
Melon (Egusi)	45,000	111,850	66,850
Overall proportion of compensation lost to inflation			148.56%

Note: Immature crops and economic trees attract 50% of rates while seedlings attract 25% of rates

a Data from Niger State Ministry of Lands (2018)

b Computed from *a*, using Equation 1

c Computed from *a* and *b*



Table 3: Variation in Compensation Rates for Matured Economic Trees in Niger State, caused by Food Inflation

Economic Trees	Approved Compensation Rate Per Stand (since 2018) ^a (₦)	Inflation – Adjusted Compensation Rates (₦) ^b	Variation (₦) ^c
Mango	20,000	49.711	29.711
Coconut	20,000	49.711	29.711
Guava	12,000	29.827	17.827
Pawpaw	8,000	19.884	11.884
Locus Beans	20,000	49.711	29.711
Shear Nut	20,000	49.711	29.711
Raphia	8,000	19.884	11.884
Cashew	10,000	24.855	14.855
Banana	8,000	19.884	11.884
Plantain	10,000	24.855	14.855
Pineapple	6,000	14.913	8.913
Bamboo	10,000	24.855	14.855
Palm Tree	20,000	49.711	29.711
Citrus Orange (Lime)	20,000	49.711	29.711
Coffee	10,000	24.855	14.855
Bagarwa	10,000	24.855	14.855
Kolanut	20,000	49.711	29.711
Raphia Palm	10,000	24.855	14.855
Rubber	10,000	24.855	14.855
Ogbono	10,000	24.855	14.855
Star apple	8,000	19.884	11.884
Oha	8,000	19.884	11.884
Baobab (Kuka)	20,000	49.711	29.711
Mahogany	20,000	49.711	29.711
Iroko	20,000	49.711	29.711
Softwoods chestnut	16,000	39.769	23.769
Date Palm	8,000	19.884	11.884
Giginya	20,000	49.711	29.711
Sisal	20,000	49.711	29.711
Silk Cotton	10,000	24.855	14.855
Goriba	10,000	24.855	14.855
Tsamiya	10,000	24.855	14.855
Pear	10,000	24.855	14.855
Dinya (Bread Fruit)	10,000	24.855	14.855
Zogalle	10,000	24.855	14.855
Lalle	6,000	14.913	8.913
Neem	6,000	14.913	8.913
Gmeline Mulaina	6,000	14.913	8.913
Overall proportion of compensation lost to inflation			148.56%

a Data from Niger State Ministry of Lands (2018), *b* Computed from *a*, using Equation 1
c Computed from *a* and *b*

The variation between the approved compensation and inflation – adjusted compensation was also found to be statistically significant ($F = 29.95552, p < 0.05$) for crops and ($F = 64.76883, p < 0.05$) for economic trees respectively as presented in Table 4.



Table 4: Statistical significance of the variation between the approved compensation and inflation – adjusted compensation for crops and economic trees under study

	Source of Variation	SS	df	MS	F	P-value	F crit
Crops	Between Groups	1885469	1	1885469	29.95552	1.07E-06	4.012973
	Within Groups	3524768	56	62942.29			
	Total	5410238	57				
Economic Trees	Between Groups	6690.079	1	6690.079	64.76883	1.05E-11	3.97023
	Within Groups	7643.581	74	103.2916			
	Total	14333.66	75				

Source: Computed from Tables 2 and 3

CONCLUSION AND RECOMMENDATIONS

Compensation for crops and economic trees on lands in Niger State compulsorily acquired by the government for overriding public purposes should be computed based on inflation – adjusted compensation rates (IACR). This is necessary in order not to place the farmers in an economically-disadvantaged position after their farmlands have been compulsorily acquired for overriding public purposes. The current compensation rates payable by the government does not incorporate the impact of inflation in its computation and therefore cannot adequately compensate the claimants (farmers) in the present inflationary economy. However, if the current approved compensation rates are to be reviewed to accommodate the rising trend of inflation, the new rates should be 148.56% higher or more than the current rates so as to adequately compensate the farmers for the compulsory acquisition of their crops and economic trees in an inflationary economy, to enable them reinvest their capital in alternative agricultural investments elsewhere.

Finally, the Land Use Act requires amendment. With respect to compulsory acquisition, Section 1 of the Act should be amended to vest freehold ownership of land on the people and not their Governor while the government retains its power of eminent domain over all lands in the country. Under such arrangement, compensation for compulsory acquisition should be based on the value to the owner of the unexhausted improvement as at the date of acquisition, together with other losses suffered by the claimant such as severance and injurious affection unlike the current provisions of the Act in which compensation payable on revocation of rights of occupancy by the Governor is limited to unexhausted improvements only.

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