



NATIONAL BUREAU OF STATISTICS

# Snapshot of Inequality in Nigeria

(2004, 2013, 2016)

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# Executive Summary

Inequality in Nigeria worsened between 2004 and 2013 but improved in 2016 using either the Gini coefficient or Theil. Inequality as measured by the Gini worsened from 0.356 in 2004 to 0.41 in 2013 but improves to 0.391 in 2016. Using Thiel, inequality worsened from 0.217 in 2003 to 0.395 in 2013 but improved to 0.31 in 2016.

With respect to consumption shares (and using consumption as a proxy for income), in 2004, the bottom 10% (poorest of the poor) of the population consumed 2.56% of goods and services, while the top 10% (super rich) consumed 26.59% of all goods and services. The richest 10% were responsible for 26.59% of national expenditure or income in 2016. This increased to 33.72% in 2013 but decreased to 31.09% in 2016.

The top 20% were responsible for 42.40% of national income/expenditure in 2004. This increased to 48.28% in 2013 but declined to 46.63% in 2016.

While no agreed standard definition of the Nigerian Middle class exists, for the purpose of this report we have classified Decile 01-03 as the lower class, Decile 04-07 as the middle class and Decile 08-10 as the upper class. Accordingly, the upper class was responsible for 58.39% of national income/expenditure down from 59.42% in 2013. The share of the upper class in national income had been rising between 2004 and 2013 before reducing in 2016. The middle class on the other hand accounted for 30.26% of national income/expenditure in 2016, higher than 29.14% in 2013. The share of the middle class had been declining between 2004 and 2013 in favor of the higher class but that reversed in 2016. Finally, the lower class accounted for 11.35% of national income/expenditure in 2016 lower than 11.43% in 2013. The biggest gainers of income/expenditure shares between 2013 and 2016 has therefore been the middle class, while the lower-class share remained constant while the high-class shares reduced.



### YEAR 2004



Gini

0.356

Theil

0.217

### YEAR 2013



Gini

0.41

Theil

0.395

### YEAR 2016



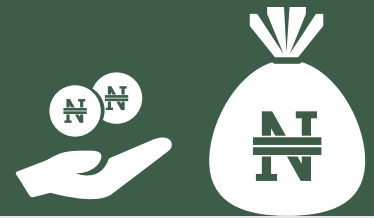
Gini

0.391

Theil

0.31





### Lower Class



			Shares of classes 2013		Shares of classes 2016		Diff between 2016 and 2013		Gain/Loss per classes
Decile_01	2.56%	2.71%		↓	2.67%	↓	-0.04%	↓	
Decile_02	4.10%	3.93%		↓	3.90%	↓	-0.03%	↓	
Decile_03	5.25%	4.79%	11.43%		4.78%	11.35%	-0.01%		-0.08%

### Middle Class



			Shares of classes 2013		Shares of classes 2016		Diff between 2016 and 2013		Gain/Loss per classes
Decile_04	6.36%	5.70%		↓	5.72%	↓	0.02%	↓	
Decile_05	7.53%	6.69%		↓	6.83%	↓	0.14%	↓	
Decile_06	8.85%	7.65%		↓	7.96%	↓	0.31%	↓	
Decile_07	10.43%	9.10%	29.14%		9.75%	30.26%	0.65%		1.12%

### Upper Class



			Shares of classes 2013		Shares of classes 2016		Diff between 2016 and 2013		Gain/Loss per classes
Decile_08	12.52%	11.14%		↓	11.76%	↓	0.62%	↓	
Decile_09	15.81%	14.56%		↓	15.54%	↓	0.98%	↓	
Decile_10	26.59%	33.72%	59.42%		31.09%	58.39%	-2.63%		-1.03%

# Brief notes on Methodology

Consumption shares represents what each tenth of the population consumes. Decile\_01 is the very bottom 10% of the population; Decile\_10 represents the very top 10% of the population

The Gini coefficient measures the inequality among values of a frequency distribution. The Theil index measures an entropic "distance" the population is away from the egalitarian state of everyone having the same income. The numerical result is in terms of negative entropy so that a higher number indicates more order that is further away from the complete equality.

The Gini coefficient satisfies the following criteria as a good measure of income inequality

- Mean independence. This means that if all incomes were doubled, the measure would not change. The Gini satisfies this.
- Population size independence. If the population were to change, the measure of inequality should not change, ceteris paribus. The Gini satisfies this too.
- Symmetry. If you and I swap incomes, there should be no change in the measure of inequality. The Gini satisfies this.
- Pigou-Dalton Transfer sensitivity. Under this criterion, the transfer of income from rich to poor reduces measured inequality. The Gini satisfies this too.

However, Theil satisfies the above and the following which are desirable to have as well:

- Decomposability. This means that inequality may be broken down by population groups or income sources or in other dimensions. The Gini index is not easily decomposable or additive across groups. That is, the total Gini of society is not equal to the sum of the Gini coefficients of its subgroups.
- Statistical testability. One should be able to test for the significance of changes in the index over time.

This is less of a problem than it used to be because confidence intervals can typically be generated using bootstrap techniques.

**The data used here were derived from the NBS/World Bank General Household Surveys (panel) of 2013 and 2016 as well as the Harmonized National Living Standard Survey 2004.**

The Gini, the Theil, and Decile Distribution, Nigeria, 2004, 2013, 2016

	2004	2013	2016
Gini	0.356	0.41	0.391
Theil	0.217	0.395	0.31

		Consumption shares				Diff between 2016 and 2013	Gain/Loss per classes
		Shares of classes 2013		Shares of classes 2016			
lower class	Decile_01	2.56%	2.71%		2.67%	-0.04%	
lower class	Decile_02	4.10%	3.93%		3.90%	-0.03%	
lower class	Decile_03	5.25%	4.79%	11.43%	4.78%	-0.01%	-0.08%
middle class	Decile_04	6.36%	5.70%		5.72%	0.02%	
middle class	Decile_05	7.53%	6.69%		6.83%	0.14%	
middle class	Decile_06	8.85%	7.65%		7.96%	0.31%	
middle class	Decile_07	10.43%	9.10%	29.14%	9.75%	0.65%	1.12%
upper class	Decile_08	12.52%	11.14%		11.76%	0.62%	
upper class	Decile_09	15.81%	14.56%		15.54%	0.98%	
upper class	Decile_10	26.59%	33.72%	59.42%	31.09%	-2.63%	-1.03%

# Acknowledgements/Contacts

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