

# **Kenya County Poverty & Population Analysis (Excel Project)**

**Reported by:** Rita Akumu

**Tools Used:** Microsoft Excel / Google Sheets

**Date:** 16 January 2026

**Scope:** County-level poverty rates (2015/16) with population context (2019)

## **1. Executive Summary**

This report analyzes poverty rates across Kenya's 47 counties and compares them with county population and population density. The goal is to highlight high-priority counties and identify basic patterns that can support decision-making.

Key findings show strong differences in poverty across counties and a weak-to-moderate negative relationship between poverty rate and population density (more urban/dense counties generally show lower poverty rates).

## **2. Objectives**

1. Identify counties with the highest and lowest poverty rates
2. Estimate the number of people living in poverty per county
3. Compare poverty rate against population size and population density
4. Summarize insights using charts and a simple dashboard

## **3. Data Overview**

### **Key fields used**

- Poverty rate (%) — 2015/16
- Population — 2019
- Population density (persons per km<sup>2</sup>) — 2019

### **Calculated fields**

- Estimated people in poverty = Population × Poverty Rate
- Poverty band: Low / Medium / High / Very High

## **4. Methodology (Excel / Google Sheets Workflow)**

- Imported poverty and population datasets
- Standardized county names for consistency
- Merged datasets using county as the key identifier

- Created calculated columns and summary KPIs
- Built visualizations (bar charts, histogram, scatter plot)

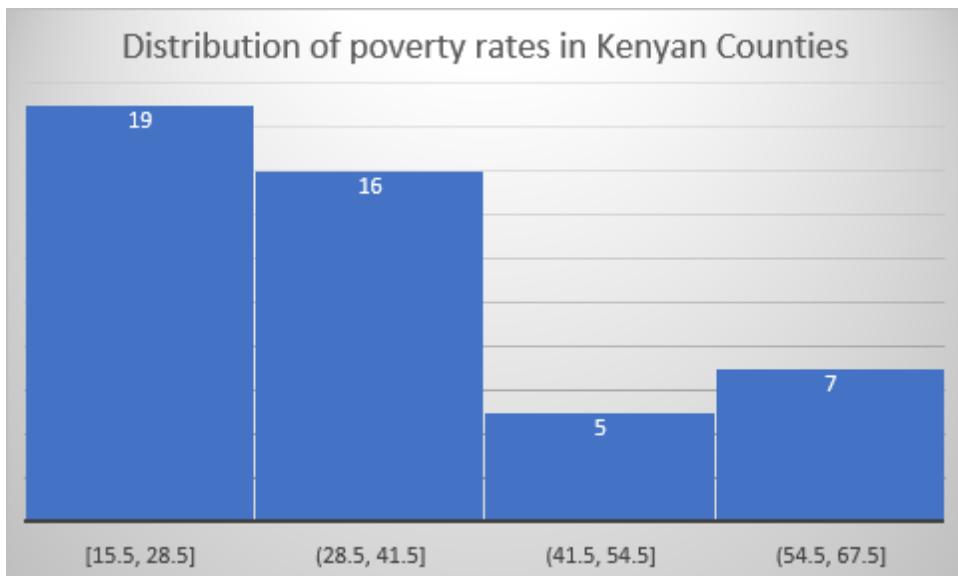
## 5. Key Results (KPIs)

- Counties analyzed: **47**
- Average poverty rate: **35.4%**
- Median poverty rate: **32.8%**
- Lowest poverty rate: **15.5%**
- Highest poverty rate: **66.1%**
- Total population (2019): **47,564,296**
- Estimated people in poverty (approx.): **15,288,758**

### Correlation insights

- Poverty rate vs density: **-0.305**
- Poverty rate vs population: **-0.368**

**Interpretation:** Counties with higher population density tend to show lower poverty rates, but density alone does not fully explain poverty differences.



**Figure 1:** Distribution of County Poverty Rates in Kenya (2015/16)

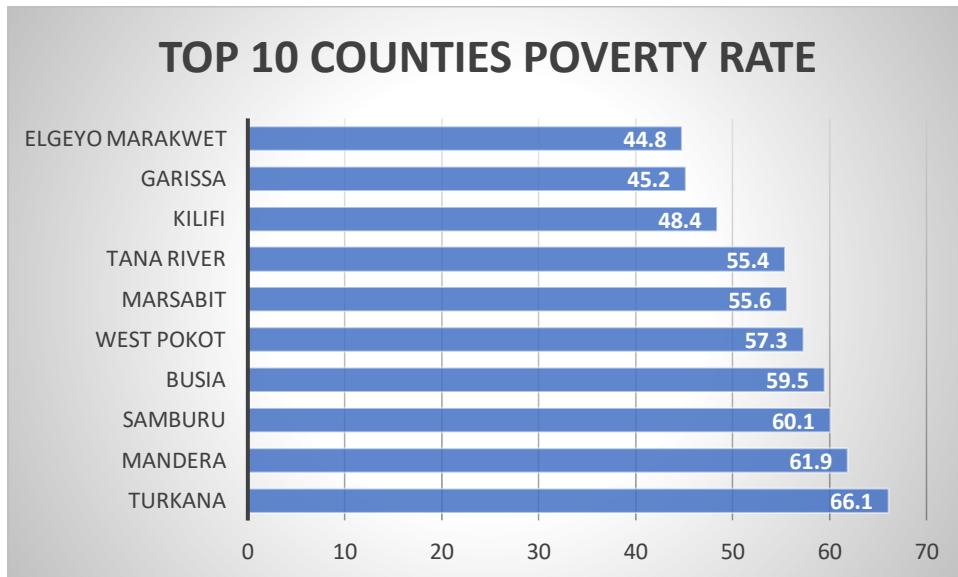
## 6. Findings

### 6.1 Counties with the Highest Poverty Rates

The counties with the highest poverty rates are mostly in arid and semi-arid regions, where access to services and economic opportunities is often limited.

Top 5 counties by poverty rate:

- Turkana (66.1%)
- Mandera (61.9%)
- Samburu (60.1%)
- Busia (59.5%)
- West Pokot (57.3%)



**Figure 2:** Top 10 Counties by Poverty Rate (2015/16)

## 6.2 Counties with the Lowest Poverty Rates

Counties with the lowest poverty rates include Nairobi and several central Kenya counties.

Bottom 5 counties by poverty rate:

- Nyeri (15.5%)
- Meru (15.5%)
- Nairobi (16.1%)
- Kirinyaga (18.8%)
- Nakuru (19.6%)

## 6.3 Where the Most People in Poverty Live (Estimated)

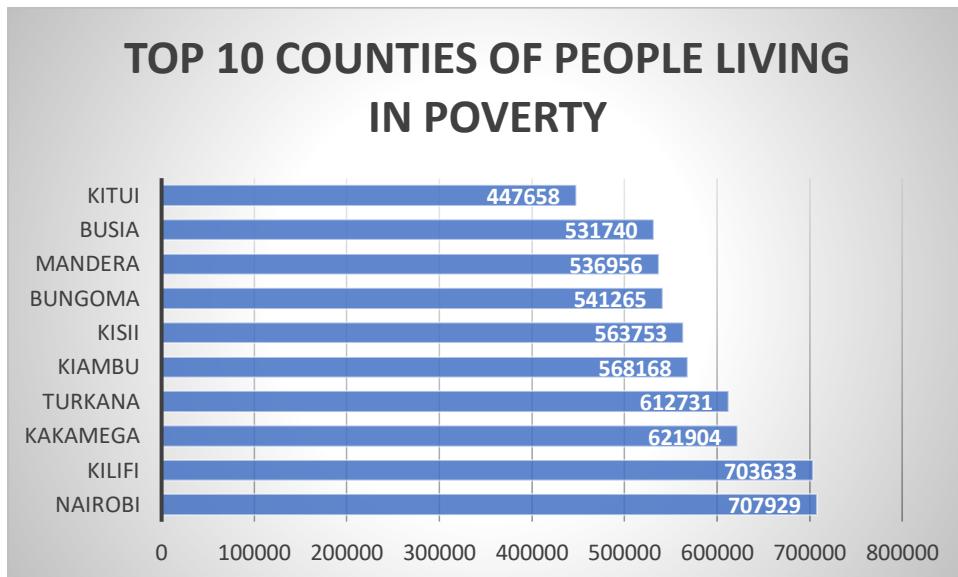
When combining poverty rates with population size, counties with large populations contribute a high number of people in poverty even if the poverty rate is not the highest.

Top counties by estimated number of people in poverty:

- Nairobi (~707,929)

- Kilifi (~703,633)
- Kakamega (~621,904)
- Turkana (~612,731)

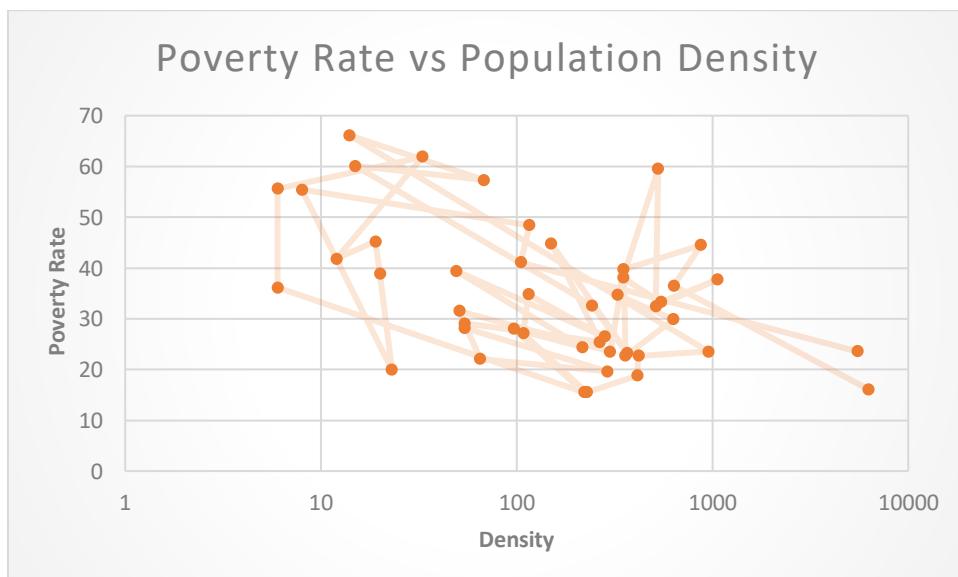
**Insight:** Nairobi has a low poverty rate compared to other counties, but due to its high population, the estimated number of people in poverty remains high.



**Figure 3:** Top 10 Counties by Estimated People in Poverty (Approx.)

#### 6.4 Poverty Rate vs Population Density

A scatter plot comparison shows a generally negative relationship: higher-density counties tend to show lower poverty rates, likely reflecting stronger urban economic activity and access to services. However, exceptions exist.



**Figure 4:** Poverty Rate vs Population Density (County Level)

## 7. Recommendations

1. Counties with very high poverty rates should be prioritized for targeted social support programs
2. High-population counties with many people in poverty require scalable interventions (urban poverty focus)
3. Future studies should include education, health access, employment, and infrastructure variables for deeper insights

## 8. Limitations

1. Poverty data (2015/16) and population data (2019) are from different years
2. County-level data hides differences within counties (subcounty variations)
3. Correlation does not imply causation; density alone does not determine poverty