Economic Development and Poverty Analysis

Project 2024-2025 AS

Using the 2018 EHCVM dataset, conducting simulations assessing the impact of cash transfer policies on poverty and inequality.

Overview

This project seeks to evaluate the impact of cash transfer programs on poverty and inequality in Senegal, utilizing data from the 2018 Harmonized Survey on Households' Living Conditions (EHCVM).

The objective of this assignment is to analyze how poverty and inequality metrics respond to the implementation of social protection policies. Specifically, the analysis will focus on identifying policies aimed at the most vulnerable populations through cash transfer interventions. Using the Foster-Greer-Thorbecke (FGT) poverty indices and the Gini coefficient, the evaluation will assess the extent to which households' living conditions improve or deteriorate following the implementation of these policies.

To complete this assignment, you will be required to submit the following:

1. A comprehensive write-up of your analysis, spanning 5 to 15 pages, that includes a detailed discussion of your findings.

2. A do-file that reproduces your results using the raw dataset.

Specific Guidance

You are free to organize your write-up as you see fit, provided it includes the following key components:

1. **Data Aging:** Since the dataset originates from a 2018 survey, adjustments must be made to simulate the conditions of 2025. This process, referred to as data aging, will align the dataset with the economic and demographic context of 2025. The following variables should be used to age the data appropriately:
   a. Population: Update population figures to reflect projected growth.
   b. GDP and GDP per Capita: Adjust for anticipated changes in overall economic output and income per individual.
   c. Price Indexes: Incorporate inflationary effects to reflect changes in purchasing power and cost of living over time.
2. **Scenario Analysis:** Provide a comprehensive list of policy scenarios under consideration. For each scenario, include the cost of implementing the policy, presented in absolute monetary terms and the policy's cost share of GDP, indicating its proportional economic cost.

Scenarios	Implementation
Universal Cash transfer	All households receive an annual stipend of 100,000.
Rural Universal Cash Transfer	All rural households receive the stipend.
Households with children under 2	Only households with children aged under 2 receive the stipend
Households with children under 2 in rural area	Only households in the rural area with child aged under 2 receive the stipend
Households with children under 5	Only households with children aged under 5 receive the stipend.
Households with children under 18	Only households with children aged under 18 receive the stipend
Households with elders	Only households with a member aged more than 65 receive the stipend
Households with member with disability	Only households containing at least one disabled member receive the stipend

Additionally, classify these scenarios visually by presenting a graph that ranks the policies from the most expensive to the least expensive. The graph should clearly illustrate the costs of each scenario to facilitate comparison and analysis.

3. After aging the data to simulate the 2025 economic and demographic context, recalculate the FGT and Gini indicators for 2025. Compare the 2018 and 2025 indicators to analyze how poverty and inequality measures evolve over time, providing insights into the potential impacts of cash transfer policies.
4. Calculate the efficiency of each scenario using the formula below then classify them:

$$Efficiency = \frac{Gap_{Baseline} - Gap_{Endline}}{Total\ transfers}$$

5. For each policy scenario, calculate its contribution to reducing the FGT indicators. Disaggregate the results by urban and rural areas to capture geographic disparities.
6. For each policy scenario, evaluate its impact on inequality using the Gini index. Disaggregate the results by urban and rural areas to assess differential effects of policies across geographic regions.

Structure of your write-up
Your report should consist of approximately seven paragraphs, accompanied by relevant tables and figures to support the analysis:

1. **Introduction:** Begin with a comprehensive overview of the project. Highlight the significance of social protection systems in addressing poverty and reducing inequalities.

Discuss their transformative potential in fostering equitable socio-economic outcomes and creating sustainable development opportunities.

2. **Policy Descriptions:** Provide a detailed account of the policies under review. Clearly explain the various scenarios analyzed, outlining their objectives and mechanisms. Include an assessment of the financial implications of each policy by expressing their costs as a percentage of gross domestic product (GDP).

3. **Methodology:** Describe the methodological approach utilized in the analysis. This section should specify the data sources employed, their scope, and relevance. Additionally, outline the formulas and analytical techniques used to compute indicators of poverty and inequality, ensuring methodological transparency.

4. **Results:** Present the findings of the study. Evaluate the performance of each policy scenario in terms of efficiency and effectiveness. Discuss the specific impacts of each policy on poverty reduction and the narrowing of socio-economic inequalities.

5. **Policy Implications and Recommendations:** Interpret the results within the broader policy context. Provide actionable recommendations for policymakers, emphasizing the scenarios that demonstrate the greatest potential to address poverty and inequality sustainably.

6. **Conclusion:** Summarize the key insights gained from the analysis. Reflect on the lessons learned regarding the design and implementation of social protection policies and their role in promoting inclusive development.

Submission

- **Language Preference:** The write-up may be completed in either French or English. However, reports submitted in English will be given preferential consideration.
- **Formatting Tools:** Participants are free to use any word processing tool, including Microsoft Word or LaTeX, for preparing their reports. Notably, reports formatted using LaTeX will be preferred.
- **Submission Deadline:** All materials must be submitted via the designated link provided below. Please note that this link will expire after the deadline on **June 20 2025**. Late submissions will not be accepted.

Link: https://forms.gle/1T75GpTvG3nnWKZn9

Good Luck