



Beyond households: Measuring market responses to cash transfers in Sierra Leone

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- Large injections like cash transfers and economic inclusion programs can influence not only households but also the local markets where beneficiaries purchase and sell products.
- This study incorporates a market price survey to examine how cash transfers and an economic inclusion package affect extremely poor households as well as local market dynamics in Sierra Leone.
- Baseline data show that beneficiary households face severe economic constraints, including widespread food insecurity, low asset ownership, and limited income sources.
- Integrating household and market-level data strengthens policymakers' ability to anticipate inflationary pressures, supply responses, and broader local economic effects of social protection programs.

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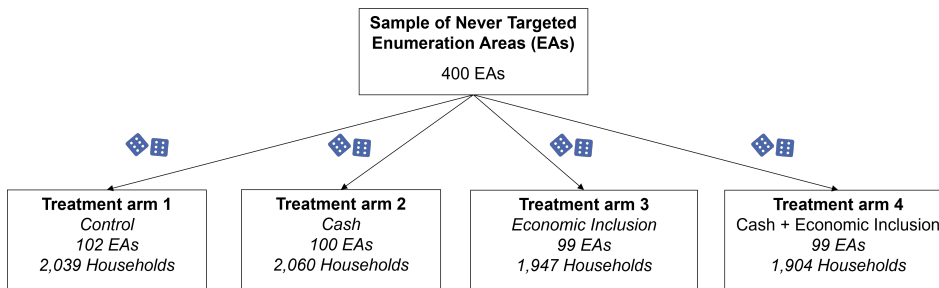
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Introduction

Impact evaluations of economic inclusion programs typically focus on household outcomes such as consumption, income and food security (Crosta et al., 2024). Yet, large-scale economic inclusion interventions inject significant amounts of resources into local economies, affecting either aggregate demand or the local supply of goods in poorly connected markets. The Productive Social Safety Net and Youth Employment (PSSNYE) project, a flagship social protection program implemented by the Government of Sierra Leone (GoSL) through the National Commission for Social Action (NaCSA) and supported by the World Bank, provides an ideal setting to examine how these equilibrium effects extend to local markets. As part of its impact evaluation, we are estimating the impact of cash transfers and an economic inclusion program (combining business training with a one-time capital grant) on extremely poor households in five districts: Falaba, Kenema, Karene, Pujehun, and Western Area Rural. In this randomised controlled trial, enumeration areas (EAs) are randomised into four groups: a control group, a cash transfer group, an economic inclusion group, and a group receiving both interventions. The study tracks household welfare outcomes, including food security, consumption, asset accumulation, savings, and income diversification.

Figure 1: Research Design



Baseline results confirm a well-balanced sample across treatment arms, with no systematic pre-intervention differences. Households are predominantly female-headed (94%), reflecting the program's gender focus, and have an average size of 5.5 members. Agriculture is the primary livelihood for most households, often supplemented by small-scale non-farm enterprises.

Economic vulnerability at baseline is substantial. Average monthly income is approximately SLL 92,000 (USD 3,740), and savings are minimal. Asset ownership is limited: only 16% of households own livestock, and 51% report owning a mobile phone. Food insecurity is severe. The mean Food Insecurity Experience Scale (FIES) score is 7.5 out of eight, indicating widespread difficulty accessing food, and the average Household Dietary Diversity Score (HDDS) is below two, reflecting extremely limited diet diversity. Overall,

households enter the program with low income, limited assets, and high exposure to food insecurity.

While these household-level indicators establish baseline welfare conditions, they do not capture how cash transfers may influence local prices, vendor behaviour, or market supply. To address this, the evaluation includes a market price survey that systematically collects information on three core dimensions: market characteristics (including type, size, layout, and infrastructure), vendor characteristics (such as demographics, experience, and revenue), and the types of food items¹ sold and their prices.

Methodology

Survey Design and Sampling Methodology

Designing a market price survey in Sierra Leone presented several operational and methodological challenges. Unlike households, vendors are not centrally listed, and their presence in markets can vary depending on the day and time of data collection. Markets themselves vary in size and can be spatially organised environments, often segmented by product categories. We, thus, developed a survey instrument that was not just a questionnaire, but a real-time decision system embedded with a sampling logic that followed movement through physical space rather than relying on pre-existing lists or fixed sampling frames. Enumerators first conducted a sequential tally of vendors as they moved through the market along a predefined route. The survey tool automatically generated a random start point and a fixed sampling interval, flagging vendors to be interviewed while tracking category quotas in real time. The tool ensured balanced representation across three key product categories: livestock, fresh produce, and dry produce.

Findings

The market survey collected rich information across 81 community markets and 674 vendors, revealing a heterogeneous market landscape, particularly regarding frequency and accessibility. While 68% of the surveyed markets operate daily, there is a sharp divide between Western Area Rural (WAR) - where all markets are daily - and districts like Pujehun, where 50% of markets operate only once a week. Infrastructure remains a primary constraint to market integration: nearly 70% of market sites are only accessible via dirt tracks, and formal utilities are almost non-existent, with only 9% of sites having access to electricity. Yet, digital connectivity is high, with 88% cell phone coverage across

¹ This study focuses on food items, as they are the most important expenditure category for beneficiaries of the program.

all sites, suggesting a potential entry point for mobile-based market information systems or digital financial services.

The vendor population is overwhelmingly female (96%) and characterised by high levels of ownership and local integration. Approximately 98% of the traders are the owners of their businesses; they are about 40 years of age, and 94% are Sierra Leonean nationals. This profile underscores the central role of women in the country's informal economy and food distribution networks. However, we observe limited geographic diversification among traders; the majority operate out of a single market site, possibly reflecting high transport costs.

Economically, the survey highlights the thin margins and regional income disparities inherent in rural trade. The mean daily revenue across all districts stands at SLE 1,250.22, yielding a mean profit of SLE 187.23. By district, these figures reveal stark differences in market vitality. Vendors in Karene reported the highest mean daily revenue at SLE 1,894.12, nearly triple the revenue of SLE 748.60 recorded in Falaba. These differences likely reflect variations in catchment area size and proximity to major trade corridors. When compared to the national annual per capita income of roughly SLE 13,885 (approx. SLE 38 per day)². These daily profit margins suggest that while market trade is a viable livelihood, it remains vulnerable to price shocks and seasonal fluctuations.

Finally, the collection of granular data on commodity prices and quantities establishes a robust baseline for monitoring the impact of the PSSNYE project's cash transfers on local markets. Imported long-grain rice serves as a key price anchor, with a mean price of SLE 237.38 per kilogram. We also observed significant data on perishables and proteins; for example, dried herring was traded in mean quantities of 1.2 kg at SLE 12.14 per kg, while fresh okra averaged SLE 19.42 per kg. Monitoring these specific price-quantity pairs is essential for identifying potential inflationary pressures or supply chain bottlenecks that may arise as household purchasing power increases due to project interventions.

Key takeaways

- Cash injections may influence local economies through price changes, supply responses, and shifts in vendor behaviour.
- Market surveys require different sampling strategies than household surveys due to their spatial and dynamic nature. Embedding sampling logic directly into digital survey tools can improve methodological rigour in low-data environments.

² World Development Indicator, 2021

- Collecting market-level data allows policymakers to anticipate potential inflationary pressures and better design large-scale social protection programs.

References

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