Regional Market Integration and Household Welfare: Spatial Evidence from the East African Community

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1 Motivation
The distributional consequences of trade liberalization in Africa are under-researched. Only recently has literature started to investigate these issues, relying either on theoretical or historical evidence. Using a variety of approaches, we estimate the impact of a customs union on household welfare in the East African Community (EAC) in 2001 – and the consequences for households depending on their geo-spatial location within the union.

2 Theory
We derive the differential impact of the EAC across households from a New Economic Geography (NEG) model with heterogeneous intra-national space.

- A four-region economy
  - Region 1 is the core (agglomeration)
  - Region 2 is the border region
  - Region 3 is the core border region
  - Region 4 is the core region
- 2 Sectors: Manufacturing and agriculture
- Iceberg trade costs
- Taxes and trade costs between domestic regions
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- The NEG model provides a framework to analyze the following question: What happens to the internal distribution of economic activity in response to external trade liberalization?

\[ X_{ij} = \begin{cases} 1 & \text{if } i < j \text{ border region,} \\ 0 & \text{otherwise.} \end{cases} \]

The comparative statics we (empirically) test track the changes in household welfare across regions (as given by real wages w in the model) following a change in foreign trade costs $T_{ij}$ from a former prohibitive level down to levels of trade costs that mirror those of the type within the home country $T_{ii}$.

Assuming labor migrates between regions in the fashion $\lambda = \lambda(w)$, dispersion wages by geographical concentration $X$.

For dispersion, we expect $\beta_0 > 0$ and $\beta_1 > \beta_0$.

For concentration, we expect $\beta_0 > 0$ and $\beta_1 < \beta_0$.

3 Intra-EAC-Trade

We employ a difference-in-differences specification with treatment intensity given by household distance to EAC border crossings. We compare DID estimates for households situated relatively closer to borders, with those relatively distant to “core” agglomeration.

\[ \Delta \ln Y_{it} = \alpha + \beta_0 D_{it} + \beta_1 D_{it} \cdot D_{t} + \epsilon_{iit} \]

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4 Empirical Strategy

We analyze three repeated household-level surveys from Kenya, Uganda and Tanzania.

**Kagera Health and Development Survey (KHDs)**
- Panel dataset
- 4 survey waves between 1991-94
- A total of 21,696 individuals across 2,029 households
- 12 survey waves between 1999-2020
- A total of 3,848 fully re-interviewed respondent households

We measure household welfare, as encapsulated by indirect utility (real wages) $w$, with a set of income (work, employment, pay) and consumption (food, durable and non-durable) indicators.

5 Data

6 Results from the AFB & DHS

7 Results from the KHDs

8 Temporal Evolution

We test for differential effects across the EAC’s deepening, i.e. compare outcomes before the EAC with outcomes in the three integration periods: the initial free trade regime (EAC between 2001-2004), the customs union (CU) between 2005-2009, and the common market era (CM) after 2010.

9 Conclusion

- We do not observe positive welfare effects of households living closer to the border.
- Rather, our results hint at the concentration of economic activity in preexisting agglomerations.
- The estimated effects are persistent over time, albeit non-increasing, which is potentially indicative of a stable agglomerated equilibrium. This is at odds with Krugman & Elizondo (1996), who predicted a dispersion of spatially concentrated developing economies in response to liberalization.

References


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