Trade Liberalization, Poverty and Inequality in Ethiopia: A CGE Microsimulation Analysis

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Outline of the Presentation

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4) Trade Policy Reforms in Ethiopia;
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1. Introduction

- Countries strive to attain sustainable development;
- Trade is a key element of sustainable development in both developed and developing countries;
- Trade liberalization enhances efficiency of resource allocation, secures economies of scale, market access and expansion.
1. Introduction (cont’d)

- Trade liberalization is known to have an impact on the overall economy in general and on poverty and inequality in particular;
- Trade is linked to poverty through prices, changes in external terms of trade, government taxes and transfers, incentives for investments, (Hertel and Reimer, 2004);
1. Introduction (cont’d)

- The positive impacts of trade liberalization on poverty could be dampened partly due to:
  - Stifling policies;
  - High transaction cost;
  - Missing markets;
  - Factor immobility; and
  - Domestic capacity constraints (especially in SSA).
2. Knowledge gaps and main research questions

- Few studies addressed the impacts of trade liberalization on the Ethiopian economy;

- Philip and Tadele (2005) attempted to capture the impact of acceding to WTO on the main fiscal, economic and social indicators, both at the macro-economic and sectoral level;
2. Knowledge gaps (cont’d)

- Lofgren and Diaz-Bonilla (2005) analyzed the impact of alternative MDG strategies on growth, poverty reduction and human development using MAMS model.

- However, most of these studies fall short of assessing the potential impact of trade liberalization on poverty and inequality at the household level.

- Thus, this study attempts to contribute to the emerging literature on CGE Microsimulation analysis by addressing some of the key questions pertaining to LDCs, such as Ethiopia.
2. Main Research Questions (cont’d)

Therefore, key concerns of the study are:

– How are different categories of households affected by significant tariff cut?

– How does trade liberalization affect inequality in Ethiopia?

– What are the impacts of trade liberalization on domestic production and exports?
2. Main Research Questions (cont’d)

- Objective of the study:
  - What is the likely impact of unilateral trade liberalization on poverty and inequality among different households in Ethiopia?
3. Overview of Ethiopian Economy

- Economic growth in Ethiopia has been highly volatile and unsustainable;
- Ethiopian economy is mainly dependent on the agricultural sector – 45% to GDP
- Agricultural sector uses backward technology with little surplus and is heavily influenced by weather condition
Agriculture is relatively isolated from industry and service sectors which are concentrated in urban areas;

Industrial sector is very weak in Ethiopia contributing only 15% to GDP;

Service sector contributes 40% to GDP

Weak inter-sectoral linkage leads to the perpetuation of inconsistent growth in Ethiopia.
3. Overview (cont’d)

Structure of trade in Ethiopia

- Share of exports in GDP: 7.7% in 2005/06
- Share of imports in GDP: 33.9% in 2005/06
- Trade balance as percentage of GDP is: -26.2% in 2005/06

Ethiopia’s trade is characterized by exports of primary commodities and imports of capital and consumer goods.
3. Overview (cont’d)

- Coffee, followed by oil seeds and *chat*, is a major export item of Ethiopia accounting for 35.4% of total exports.

- Among other commodities; major imports of Ethiopia include capital goods, comprising 33.2% of total imports followed by consumer goods with 29.2% of total imports share.
3. Overview (cont’d)

- Looking at the geographic concentration of trade; Ethiopia mainly trades with Asia especially China while limited trade is observed with other African countries.

- Flows of imports and exports more or less follow similar route:

- In terms of exports,
  - 39.3% of exports go to Asia, followed by Europe, 37.8%;
  - Exports to African countries constitute 16.9% and to America 5.6%
3. Overview (cont’d)

- Regarding Imports,
  - 55% of Ethiopia’s imports come from Asia, followed by Europe, 29%.
  - Imports from America account for 10% while that of Africa is only 6% (National Bank of Ethiopia, 2005/06)

- Ethiopia also exhibited a negative trade balance with almost all trading partners
3. Overview (Cont’d)

Poverty and Inequality

- State of Poverty in Ethiopia is the worst in most social and human development standards;
- In 1999/00, 44% of the population was in absolute poverty;
- Poverty is mainly a rural phenomenon in Ethiopia, though certainly acute for some urban people;
3. Overview (cont’d)

- **Income distribution:**
  - Between 1994 – 1997, income distribution showed a high disparity with an increase in the Gini coefficient from 0.39 to 0.43;
  
  - By the end of the 1990s, income distribution improved relatively with a Gini coefficient of 0.28 in 1999/00.
4. Trade Policy Reforms in Ethiopia

- Efforts of trade liberalization in Ethiopia began in 1992 in line with the implementation of Structural Adjustment Program (SAP);
- Tariff and non-tariff barriers were reduced
- The range of tariff rates reduced from:
  - Before 1992 0-240%
  - 1995 0-80%
  - 2002 0-35%
4. Trade Policy Reforms (cont’d)

- By 2004, the maximum tariff rate has been reduced to 35% with an average rate of 17.5%.
- By 2004, Revenue from trade tax accounts about 2.6% of GDP and 18.4% of total revenue;
- Currently, quantitative import restrictions are applied only to used clothes, harmful drugs and armaments.
4. Trade Policy Reforms (cont’d)

- By a developing country standard, Ethiopia is found to have undertaken significant liberalization efforts since 1992
  - Both tariff levels and dispersion have been significantly reduced and specific tariffs have been converted into advalorem rates

- Thus an interesting research question is: **What are the likely impacts of such and further trade liberalization on poverty and inequality in Ethiopia?**
5. Methodology

- The 2001/2002 SAM is used for the layered CGE-microsimulation exercises.
- The microsimulation model incorporates 17,332 households derived from the 1999/2000 Ethiopian Households Income, Consumption and Expenditure (HICE) Survey.
5.1. The *Social Accounting Matrix (SAM)*

- This paper uses the 2001/2002 Ethiopian SAM constructed by IFPRI.
- The SAM used in this study contains:
  - 10 production sectors;
  - 10 commodities;
  - 4 factors of production;
  - 3 households: FHH, WHH, and EHH;
  - 1 enterprise;
  - 4 tax accounts; and
  - investment-saving account.
5.2. The CGE Model (cont’d)

- The CGE model is based on EXTER model.
- Production sectors in the model utilize a nested production technology tree.
- Factors of production and intermediate inputs are combined with a Leontief technology to constitute output.
5.2. The CGE Model (cont’d)

- Primary factors of production are combined according to a CES functions to constitute value added.
- Aggregate labour is a Cobb-Douglas function of family labour and wage labour
- Leontief technology is used to combine intermediate inputs.
5.2. The CGE Model (Cont’d)

- Consumption demand is specified as a Cobb-Douglas utility function.
- Imperfect substitution between domestically-produced and imported goods is assumed (Armington hypothesis).
- Exports and domestic sales combined using CET function.
5.2. The CGE Model (Cont’d)

- The following macroeconomic balances hold in the model:
  - Goods market equilibrium
  - Labour market equilibrium
  - Saving-investment balance
  - Current account balance

- In addition,
  - The government has a fixed budget for a pre-defined consumption plan
  - A compensatory tax by means of a direct tax is instituted
5.3. The Microsimulation Model

- In this paper, we developed a non-behavioral microsimulation model.
- The macro (CGE) model is linked to microsimulation model in sequential fashion.
- Vector of prices and consumption level are fed into the microsimulation model that are generated from the CGE model.
5.3. The Microsimulation Model (Cont’d)

➢ To compare poverty levels obtained in the post-simulation case with those prevailing in the pre-simulation case, Foster, Greer and Thorbecke’ (FGT) measures is used.

➢ Gini-coefficient and Atkinson indices of inequality are used to measure the change in inequality after the reform.
6. Results

- A total elimination of tariff cut is likely to lead to
  - decline in the domestic production of agro-industries
  - decline in demand for domestically produced goods
  - Decline in import prices of initially protected sectors.
6. Results (Cont’d)

- A tariff cut could lead to decrease in the import of agricultural commodities and to concomitant increases in the domestic prices of agricultural commodities
6. Results (Cont’d)

- Generally, the poverty head count index shows a slight increment after the reform at the national level.
- On the other hand, farm households gain from this reform, while entrepreneurs neither gain nor lose.
- Notably, the head count index of wage earner households shows a significant increment, an increase of 21.43% due to the tariff cut.
Changes of poverty due to trade liberalization

![Bar chart showing changes in poverty due to trade liberalization, with categories P0, P1, and P2, and subcategories FHH, EHH, and WHH, comparing base and after simulation scenarios.](chart_image)
6. Results (Cont’d)

- The variation in inequality before and after the reform is insignificant in all cases implying that openness might not have any significant effect on income distribution in Ethiopia.
7. Conclusion and Policy Implications

- Full liberalization is likely to lead to slow growth of demand for domestic goods and may dampen the growth of investment and production.
- Trade liberalization is likely to affect prices of those commodities which constitute the bulk of the expenditure of the poor.
7. Conclusion and Policy Implications (Cont’d)

- Trade liberalization measure is pro-poor in rural areas
- Poverty increases at national and urban level
- Full liberalization may not have a significant effect on inequality
7. Conclusion and Policy Implications (Cont’d)

- The Government could take advantage of exemptions granted to LDCs (by WTO rules) and further press for protection of industries that provide employment opportunities for the urban poor.
7. Conclusion and Policy Implications (Cont’d)

- Targeted and short-term subsidies may be considered as an option to protect the poor from the adverse effects of complete liberalization measures.
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