

Food Price Shocks and their Impacts on Ethiopia: Policy Options to Lessen the Impacts on the Poor

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Abstract

This paper provides.

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Introduction

Despite the growth in GDP of Ethiopia over the last decade, the increases in the relative prices of food since 2007/8 have had substantial negative effects on welfare, especially among poorer households. Many of the factors driving these increases in real prices are external to Ethiopia, in particular the rising world prices of food, driven in part by increases in global demand associated with rising real incomes, population growth and biofuel programmes and in part by fluctuations in global supply consequent, inter alia, upon weather induced reductions in yields. By way of contrast Ethiopia has experienced relatively normal agricultural productivity in recent years although growing incomes and population have produced increases in domestic demand. In an economy like Ethiopia's, where a large proportion of the population are dependent on agriculture for their livelihoods increasing food prices can produce effects that differ widely by household: increase in output prices can have large positive impacts on the incomes of agricultural producer households while having negative impacts on food consumers. However in Ethiopia the positive implications are likely to be muted because the very high trade and transport margins associated with domestic agricultural production inhibit the extent to which producer/farmgate prices increase.

This study explores how global food price shocks impact upon production incentives and welfare in Ethiopia. The study uses a variant of the GLOBE model that has been extended to include multiple households and a richer specification of the current account, which includes aid transfers and remittances. Both of these categories of current account transaction are important for Ethiopia where aid is a substantial component of government income and remittances from the Ethiopian diaspora are important income sources for households. The standard linear expenditure system (LES) has been developed into a nested CES/LES utility function.

The database used is an augmented form of GTAP 8 presented in a social accounting matrix (SAM) format. The enhanced current account transactions are from an augmented version of the GTAP database that has been developed to support the MyGTAP research programme and which applies to all 129 regions in GTAP 8; these data will in due course be made public. The SAM for Ethiopia has also been augmented. This extension to the database disaggregates the private household's income and expenditure accounts by using data on

household income and expenditure patterns extract from the Ethiopian Household Income and Expenditure Survey. Since this research has had access to the raw survey data it has been possible to explore different criteria for disaggregating the households. The final criteria adopted distinguish between urban and rural households, rural households that ‘control’ the use of land and rural landless households and then, within these groups, by income bands; the choice to have fewer urban households and more rural households reflects the population structure and the focus of this study on poorer households.

The simulations include shocks that reduce global production of different agricultural products – cereals, crops and livestock – in different regions and increases in global demand through population and income growth in the OECD, China, India, Brazil and other large and dynamic economies. The preliminary results indicate that the most important pathway for these global shocks to impact on Ethiopia is through the domestic constraints on production capacity – land and water. The welfare effects are most severe for poor urban households, which derives from their dependence on food purchases; the adverse implications are less severe for landless rural households for whom the impacts are mitigated by increases in income; landholding households do surprisingly poorly because the potential income effects are largely outweighed by increases in the cost of living; and while richer urban households experience small welfare losses food is a sufficiently small share of their expenditures so that the consequences are relative small.

Policy Context

The world economy has become highly interconnected. As a result, crisis in a country is felt immediately in another, contagion effect. A shock which born in a country will generally transmit into the rest of the world in various ways including the flow of trade, investment, finance and loans and external assistance.

According to literature, the soaring energy prices, improved standard of living in rapidly growing developing countries and bad weather conditions take the blame for the rise in global food prices. The increase in oil prices led to the burgeoning of interest in bio-fuel crop cultivation instead of food crops or diversion of crops from food to energy generation. These measures gave rise to the reduction in the global food supply and consequently food price rose.

Evidently, food price rise has impacts on an economy. The impacts, however, may differ from a household to the other. For instance, net food-selling households are likely to benefit from rising food prices. These generally better-off farming households will see an increase in income that will more than off-set the rise in the price of any food they purchase. Net food-buying households, however, are likely to be adversely affected by the food crisis. Their purchasing power will be eroded resulting in a shift to cheaper sources of calories, a reduction in non-food spending, sale of assets to cope up with the situation, or a combination of these measures could be taken. In addition to the potential adverse effects on the net-food buyers, the welfare loss of landless rural households and the urban poor will be significant.

Besides the above measures, households may also cope-up with the adverse impacts of a food crisis by disinvesting in the human capital of individual members of the households, particularly the young. They may, for example, withdraw children from school to reduce costs or to generate income from their labour, reduce expenditures on preventive health care, and change the household diet away from protein- and micronutrient-rich foods (meat and vegetables) to less expensive staples. Through such pathways, the negative impact of a global food crisis on vulnerable households may extend into the next generation.

Ethiopia is no exception to the global food price rise. The urban poor and net-food buyers of rural households have been negatively impacted. Indeed, the degree to which food price rise affect a household's welfare depends on the share of food expenditure in the total household budget/income. According to the 2004/05 Household Income and Consumption Expenditure (HHICE) Survey, the shares of food and non-food expense in the total consumption basket at the country level are 57 percent and 43 percent, respectively. The share of food in urban household's expenditure is lower than in rural ones indicating the existence of differential expenditure pattern between the urban and rural households.

In Ethiopia, food price shocks mainly emanates from two sources: from crop failure which, in turn, is due to unfavourable weather condition and from the direct and indirect effects of the rise in international food prices. Trends in the food price used to mimic the performances witnessed in food growing rain-fed agricultural sector. That is, good harvest pushes food prices downwards while bad harvest drives upwards. These days, nevertheless, the trend seems to have started taking different courses, food prices increasing with the

increasing agricultural output since 2005 manifesting paradoxical relationship. This strange behaviour has remained difficult to explain. A number of likely factors have been attributed to explain the positive relationship between the food price rise and the increase in agriculture output supply.

So as to lessen the continued pressure of rising food prices on the urban poor, the government has taken a number of measures including the rationing of wheat in urban centres by importing wheat from overseas. This has not resulted in containing of the inflationary pressure to a manageable level.

This is partly because policy makers often lack sufficient information to gauge the likely causes and effects of food price rise on the economy and to identify, design and implement policy actions that can best avoid the risks. Information deficiencies and paucity of research work can lead to over and under reactions. Hence, it is indispensable to undertake impact assessment of food price shock on the economy and take appropriate measures to mitigate its effects. The finding will also help to avoid the negative coping mechanism adopted by the poor and encourage the positive coping mechanisms.

Data

The core data used in this study are drawn from the standard GTAP database, version 8 for 2007. The core GTAP data have been augmented as part of the BNPP project for Africa and then further extended by using the Ethiopian household survey data to disaggregate the (single) private household account identified in the GTAP database. The data used have been in the form of a global Social Accounting Matrix (SAM).

GTAP Database

Core GTAP Aggregation

Augmentation of the GTAP Database

Household Accounts

Classification Scheme

Data Compilation

Model Adaptation

Scenarios

Results

Concluding Comments

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