Policy Note: Agricultural Policy in Mozambique and Vietnam[1]

Introduction

World commodity prices rose rapidly in late 2007 and peaked in mid 2008. Food and energy prices rose particularly fast, leading to global political and economic instability. The onset of the financial crisis in late 2008 and the subsequent global recession reversed these increases, with world prices returning to 2007 levels. Crude oil prices were especially impacted by the downturn, first declining below 2007 levels, before climbing back by late 2009. By contrast, food prices remained similar to or even above 2007 levels throughout the financial crisis.

This note summarizes two recent studies exploring the household effects of the commodity and financial crisis in two developing countries by isolating impacts on income, its distribution, and poverty. Thurlow et al (2011) look specifically at how the commodity and financial crisis affected poor households in Vietnam, a country that had experienced dramatic poverty reductions before the crises. Arndt et al (2012) examine why poverty rates in Mozambique stagnated from 2002 to 2009 by decomposing the factors that drive the evolution of poverty.

Vietnam and Mozambique have similar recent economic histories. Both experienced high growth rates over the last decade and a broadly similar growth composition, with per capita GDP growing at 4.9 and 5.9 percent in Mozambique and Vietnam, respectively. Although about 70% of both nations' populations live in rural areas, the more urban industrial and service sectors have had the biggest impact on growth.

Both countries have successfully reduced poverty, with Vietnam markedly more successful. Between 1998 and 2008 Vietnam's poverty rate dropped by 24 percentage points, to 13 percent. Mozambique's results are more mixed, with poverty falling by14 percentage points to 55 percent from 1997 to 2003 and then stagnating until 2009.

Despite these similarities, the global economic crises affected Vietnam and Mozambique quite differently. From a macroeconomic perspective, Vietnam weathered the two crises fairly well with the financial crisis being the principal negative shock. In Mozambique, the commodity price crisis caused far greater difficulties. This note examines these differences in impacts and provides quantitative evidence of the welfare/poverty effects of the fuel, food, and financial crises.

---

[1] This policy note summarises original research undertaken as part of the project *Economic Governance and Development in Vietnam and Mozambique* and involving researchers from Vietnam, Mozambique and affiliated with the University of Copenhagen. Financial support for the project from Danida is gratefully acknowledged. Further details, including original research produced by the project, are available from http://www.econ.ku.dk/derg/activities/ffu/.

Impact Channels

In order to understand the impact of global crises on poverty, it is important to look closely at a nation's economic structure. In particular, some population segments might be especially vulnerable to an external price shock, either because it directly affects their income, the costs of consumption, or both. In both Vietnam and Mozambique, agriculture plays a crucial role in households' livelihoods, especially for the poor. Poverty rates are typically higher in rural areas. In Vietnam, about 90% of the poor live in rural areas, while in Mozambique it is approximately 75%. Additionally, Vietnam's poorer urban households spend half of their incomes on food while in Mozambique food consumption accounts for around two-thirds of the total consumption of all poor households. Therefore, careful attention to agriculture and food prices is essential in evaluating the impact of the two crises on poverty.

In contrast to many developing countries, Vietnam is a net-seller of food, as are many of its poorer rural households. Large parts of the agriculture sector were transformed from subsistence to export-orientation, and Vietnam became a major exporter of grains and other foods. Home production accounts for about a third of total consumption in Vietnam. In Mozambique domestic agricultural production strongly outweighs trade in food products. However, the country suffered a decline in per capita food crop production between 2002 and 2008 due to weak productivity growth and adverse regional weather impacts. Not surprisingly, food imports rose as domestic food production stagnated. Although food imports remained a relatively small share of total food production, Mozambique became more vulnerable to global food price increases.

The global volatility of crude oil and fuel prices in the mid and late 2000s had important implications for both countries. Vietnam is a major exporter of crude oil but also an importer of processed fuels. In contrast, Mozambique relies almost completely on fuel imports, with fuel and its derived products accounting for 18% of net imports in 2003.[2] Because the country's distribution network is underdeveloped, transportation costs (of which fuel costs are a major element) are also an important factor in food prices.

Vietnam and Mozambique's positions in global commodity markets were significant drivers of each country's economic performance during the commodity crisis. Its export orientation meant rising food and fuel prices improved Vietnam's terms of trade. Conversely, as a net importer of food and fuel, Mozambique saw its trade terms deteriorate. The subsequent financial crisis brought little change to Vietnam's terms of trade but the drop in fuel prices relieved pressure on Mozambique's economy.

[2] Recent discoveries of coal and natural gas are expected to make Mozambique a net hydrocarbon exporter in the next five to ten years.

Finally, foreign direct investment (FDI) has been an important contributor to recent economic growth in Vietnam. The financial crisis caused a sharp contraction in global capital markets in late 2008, including foreign capital inflows to Vietnam. By early 2009, FDI had fallen below 2007 levels. This slowdown in investment helped stabilize consumer prices, with inflation returning to pre-2007 trends. One positive outcome of the financial crisis was that it cooled the overheating Vietnamese economy.

Models

Thurlow et al (2011) and Arndt et al (2012) use country-specific dynamic computable general equilibrium (DCGE) models to isolate factors driving poverty during the commodity and financial crises. DCGE models simulate the functioning of a market economy, including labor, capital and commodity markets, and provide a useful perspective on how changes in economic conditions are mediated through prices. An important feature of DCGE models are detailed sector breakdowns, providing a "simulation laboratory" for quantitatively examining how various impact channels influence economic structure and performance. By linking production sectors with households, DCGE models are especially helpful for understanding how household income and distribution are impacted by external shocks.

The Vietnam DCGE uses data from 2007 to simulate the impacts on poverty of the commodity crisis, the financial crisis, foreign direct investment outflows, remittances, and a government stimulus plan over the period of 2007 to 2011. The Mozambique DCGE uses data from 2003 to simulate how education, agricultural productivity, weather shocks, food prices, and fuel prices affect poverty over the period of 2003 to 2009. Both models begin with baseline analysis to simulate the path the economies would have taken in the absence the crises and the other scenarios.

Results

Although Vietnam weathered the recent global crises relatively well overall, gains from the commodity crises were largely offset by losses from the financial crisis. The 2008 commodity crisis improved Vietnam's terms of trade, raising aggregate welfare and reducing poverty, mainly by expanding exports in labor-intensive sectors.

The 2009 financial crisis reversed these welfare gains. Even though world price shifts in 2009 improved Vietnamese terms of trade beyond the gains observed in 2008, reductions in export demand, FDI, and remittances contracted economic activity. Because Vietnam's agricultural sector has a strong export orientation, it is vulnerable to world market conditions. The financial crisis pushed three million people—mostly living in rural areas--below the US$2-a-day poverty line relative to the commodity crisis simulation. Agriculture and the rural nonfarm economy were unable to cushion the effects of the financial crisis completely.

A simulation of the government's proposed stimulus package shows that it offset some of the welfare losses caused by the financial crisis and substantially reduced the impact on poor households. Compared to the baseline simulation, the combined net effect of the two crises had little effect on poverty. Assuming an effective stimulus package, poverty rates are actually lower than the baseline path.

In Mozambique, estimated GDP per capita grew at a rate of 4.2% per annum from 2003 to 2009. Nonetheless, the incidence of simulated consumption-based poverty in Mozambique was essentially stagnant according to household surveys conducted in 2002-03 and 2008-09.

Model results suggest several key factors drive poverty in Mozambique. Weak growth in food crop production reflects very slow or zero growth in agricultural productivity. The sector's poor performance was further compounded by weather shocks in 2008. Large increases in international food and fuel prices, led to declining terms of trade. The effects are lower real household incomes for many rural Mozambique households.

Increases in fuel prices had the largest estimated impact on poverty. In addition to the impact on terms of trade, rising fuel costs increased relative prices throughout the economy. In particular, they led to lower returns to farmers, increased consumer food prices, increased costs of distributing imported goods such as food, and a rise in direct transportation costs. Paradoxically, the financial crisis relieved economic pressure due to reductions in fuel prices while leaving export demand mainly intact.

Conclusions

With its strong export orientation, Vietnam is vulnerable to sudden changes in global conditions. The simulated stimulus policy demonstrates that an effectively formulated plan can help cushion the economy from exogenous shocks. In particular, government policy can help offset welfare losses of global changes and help protect the poorest populations.

With respect to Mozambique (as elsewhere in sub-Saharan Africa), an important policy implication is that sustained productivity growth in smallholder family agriculture is a principal missing element in the current development process. Without growth in the agricultural sector, and the family sector in particular, widespread poverty among large numbers of food-producing small and medium-sized farmers is likely to persist for a considerable period. This is especially so given the vulnerable nature of sub-Saharan African economies, where exogenous shocks can have substantial real impacts on the livelihoods of the poorest.