

Productivity and Trade Policy Changes: Food Security Impacts in Selected African Countries

Signe Nelgen

Food and Agricultural Organization, Rome

signe.nelgen@fao.org

and

Anna Strutt

University of Waikato, New Zealand

astrutt@waikato.ac.nz

Abstract

Policy measures applied to the agricultural sector in Sub-Saharan Africa (SSA) are often aimed at protecting and assisting vulnerable domestic consumers or producers. However, the impacts of such measures may be complex and may include impacts on other countries' agricultural sectors and food security. Other countries may in turn respond with their own policy changes. The current study addresses the issue of how food security in SSA may be impacted by such trade and agricultural policy actions.

The focus countries in this study are part of the Monitoring and Analysing Food and Agricultural Policies (MAFAP) Program, initiated by the FAO. MAFAP countries include Burkina Faso, Benin, Burundi, Ethiopia, Ghana, Kenya, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, Tanzania and Uganda. MAFAP provides data on policy measures that affect key agricultural value chains operating within and between countries. We model some of these complex interactions, including inter-sectoral and inter-regional linkages, using the GTAP model and version 9 database. Agricultural trade, market and price distortions from individual country data provided by MAFAP are incorporated into the modelling. We also augment the GTAP model with a food security module based on nutrition data from the FAO.

Three main policy scenarios are considered. The first simulation analyses the impact of productivity improvements in the staple food sector. The second scenario considers the impact of quantitative export restrictions on staple foods. Finally we consider the impacts of regional tariff reductions for specific commodities of particular relevance to food security. The focus is on availability of staple foods and changes in nutrition, both in the countries implementing the policies and in other countries of focus.

Our preliminary results suggest that policies which improve agricultural productivity lead to a range of positive food security outcomes. Restrictive trade policies tend to worsen overall outcomes, particularly for the country imposing the policy (e.g. an export ban), while tariff reductions generally lead to overall improvements in Sub Saharan Africa's regional food security situation. However, results differ significantly by region and sector and detailed decomposition is undertaken to explore these.