

## Impact analysis of interventions in feed the future countries in Africa

The papers in this issue examine the impact of a variety of Feed the Future efforts in North Africa. The first paper (Nagarajan, Naseem and Pray) examines the impact of maize development policies in Kenya. Maize yields in Kenya have been stagnant since the 1980s. While a variety of issues from macroeconomic considerations to shifts in the importance of trade liberalization has been identified, a large portion of the stagnation can be attributed to the slow adoption of new varieties. Nagarajan, Naseem and Pray examine the extent to which the slow adoption of new varieties of maize can be attributed to changes in government policy. They find that past R&D efforts have made marginal contributions to increase the yield. In fact, the largest impact appears to be the introduction of plant breeder rights. Based on these findings, they suggest that the R&D efforts in Kenya be directed to the adoption of new varieties that target the replacement of old varieties. In particular, the focus should be on traits that manage biotic and abiotic stresses.

Franklin and Oehmke develop a model of trust in building agribusiness channels in Africa. The “hold-up” models found in Oliver Williamson’s research are well known in a developed economy context. In these models, the uncertainty of valuation in a vertical marketing channel can be overcome by one firm purchasing ownership in the next firm in the marketing channel. However, in a development context as developed in the models of Elinor Ostrom, the firms in the vertical channel lack access to capital so vertical integration is not an option. As a result, some other social convention – such as trust – must be used in place of integration. Franklin and Oehmke examine the use of trust, accountability and mutual accountability and the implementation of each factor to establish a marketing channel in African agribusiness. As a case study, they analyze the quality channel for Rwandan coffee. In general, the coffee channel developed within the context of two USAID efforts – the Partnership to Enhance Agriculture in Rwanda through Linkages and Sustainable Partnerships to Enhance Rural Enterprises and Agricultural Development. During the active intervention by USAID, trust and accountability were easier to maintain. However, the study finds that after the termination of the programs, the international market price for higher valued coffee softened and the gains in trust and accountability were more difficult to maintain.

The paper by Raile *et al.* takes a somewhat different approach to impact analysis. Specifically, this paper examines both the political and public will required to make a policy commitment in a developing economy. Specifically, Raile *et al.* examine whether the political or public will is sufficient in Senegal to make the policy commitment for Climate Smart Agriculture (CSA). From a political will perspective, Senegal has a well-defined system of leadership and that leadership has a common understanding of the problem. However, there may be a disconnect between the state problem – adoption of agricultural technologies that are resistant to climate variations and will not contribute to further climatic degradation – and the perceived political program which is the need for Senegal to be self-sufficient in rice. While rice production is a component of CSA, increased production of rice may have an adverse impact on some climate dimensions (i.e. increased production of rice will probably imply increased irrigation which means increased use of energy (and, hence, carbon emissions), and increased use of chemical fertilizers). Similarly, there may be difficulties in defining a small number of policy prescriptions. Raile *et al.* find that there are 200 different efforts led by different donors and other agencies which purport to represent CSA.

Musafili *et al.* examine the willingness of farmers in the area around Rwanda’s Volcanoes National Park to adopt production rules, which benefit the environmental quality of the



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national park. The Volcanoes National Park is located in Northern Rwanda on the border with Uganda. It is probably best known for its Mountain Gorillas. Agriculture in the area of the park yields several different crops from Pyrethrum (a pesticide derived from chrysanthemum), mushrooms, jatropha and honey. The environmental consequences of each production process can be managed to a greater or lesser extent by a variety of production systems. Using a choice experiment, Musafili *et al.* examine the willingness of farmers in the area to adopt these modified production systems.

Moss and Schmitz take a more traditional welfare approach to examine the implications of investments in supply chains in developing countries. Specifically, Moss and Schmitz examine the export vs domestic market scenario to examine the potential benefits and costs of a variety of potential interventions. They begin by examining the costs and gains of cassava improvements in Uganda. First, they assume that cassava is largely consumed as a food stuff in the local market. These results are contrasted with the possibility that improvements in cassava production are used in the production of ethanol. Building on the concept of domestic demand vs export demand, they develop an extensive model of Rwanda coffee. In this framework, high-valued coffee is exported. Hence, the gains within the economy are improved income to coffee producers.

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