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SERA Policy Brief

*Time to Re-think the Food Crops Export Ban**

Tanzania has a unique opportunity to become a major exporter of food crops, especially maize and rice, to the eastern Africa region. It has fertile and abundant crop land to expand production, a transport advantage over countries to the south, and the region has growing import demand. This export opportunity has been hampered in the past by the periodic use of export bans to address food security concerns. However, new research done under the SERA Project of the USAID Feed the Future Initiative has shown that the export bans are not effective at ensuring food security, controlling food prices, or preventing exports. It is now time to re-think the food crops export ban as a way of dealing with food security concerns and to focus on expanding exports to raise incomes of farmers. New programs will also be needed to deal with food security.

Regional Food Deficits are Expected to Grow

The countries of the East Africa Region currently import about 1.4 million tons of maize and 1.2 million tons of rice per year. By 2020, annual imports of maize are projected to rise to almost 8 million tons and rice to 2.8 million tons (Stryker, et al., 2012) which is well beyond what Tanzania can possibly supply. That means that Tanzania's exports will be limited only by its ability to produce surpluses of food crops such as maize and rice. Beyond 2020, climate change may even provide Tanzania larger opportunities for food crop exports within the region as neighboring countries experience more frequent droughts and greater weather variability than Tanzania (Ahmed, et al., 2012).

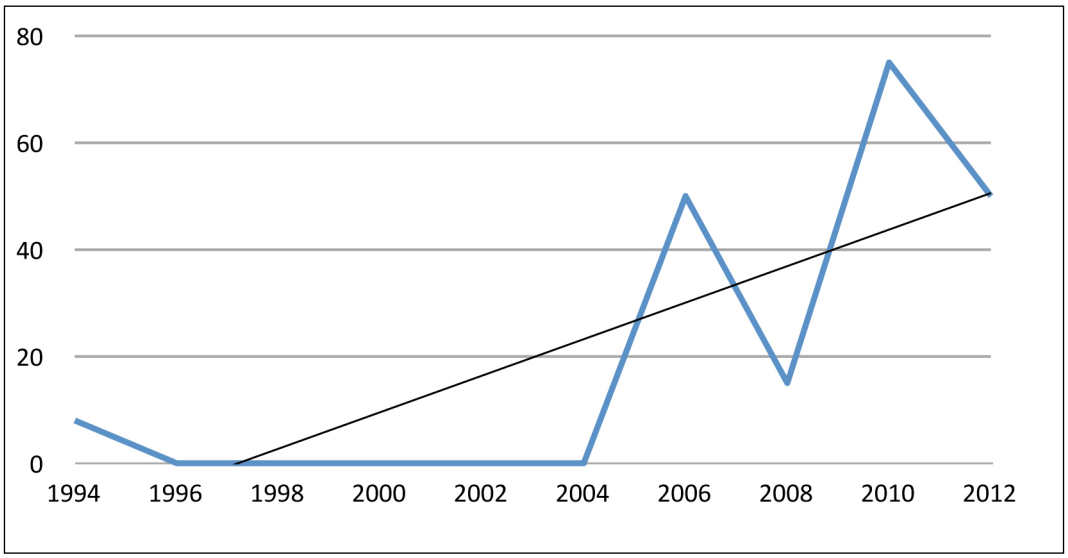
Exports are Rising

Tanzania has already become a large maize (Figure 1) and rice exporter and probably exported more than 100,000 tons of maize and more than 70,000 tons of rice in 2011. However, official government customs records report exports of less than 3,000 tons of maize and 36,000 tons of rice in 2011. The large difference results mostly from unreported exports through official border posts and also to exports through informal 'panya routes' that are not recorded.

**Based on research conducted for the SERA Policy Project of USAID's Feed the Future initiative by the International Food Policy Research Institute (IFPRI), U.S. Department of Agriculture (USDA), Associates for International Resources and Development (AIRD), and the World Bank.*

SERA is a USAID funded project that focuses on agriculture policy reform as part of the USAID's Feed the Future Initiative. The project is implemented by Booz Allen Hamilton.

Figure 1: Tanzania's Maize Exports, 1994 - 2012 (000 tons)



Source: Martin, 2012, based on U.S. Department of Agriculture data.
Note: Trend line is regression estimate from 1990-2012.

One way to better measure actual exports is to look at 'mirror' trade data which shows what was reported as imported instead of what was reported as exported (Table 1 and 2). When this is done, neighboring countries report much larger imports than are reported as exported by Tanzanian customs. For example, maize imports from Tanzania in calendar year 2011 were reported as 95,089 tons by neighboring countries compared to exports of 2,873 tons reported by Tanzanian customs. Informal border trade can also be estimated based on interviews with traders, transporters, and informal freight forwarders. Using these measures, total exports of maize in 2011 were estimated to be 114 thousand tons compared to officially reported exports of less than 3 thousand tons. Rice exports were also underreported and were probably twice as large as Tanzanian customs data reported.

Table 1: Tanzania's Maize Exports, 2011 (tons)

Country	Formal Trade		Informal Trade	Overall Trade
	Tanzania Export Data	Importing Country Data		
Kenya	1,012	79,073	15,815	94,888
Rwanda	1,830	11,042	2,208	13,250
Burundi	-	4,719	944	5,663
Uganda	30	254	51	305
DRC	1	1	0	1
Total	**2,873**	**95,089**	**19,018**	**114,107**

Source: Stryker, et al., 2012.
Note: informal trade is determined by adding 20% to neighboring countries import data.

Table 2: Tanzania's Rice Exports, 2011 (tons)

Country	Formal Trade		Informal Trade	Overall Trade
	Tanzania Export Data	Importing Country Data		
Uganda	7,743	27,338	2,734	30,072
Rwanda	23,985	24,228	2,423	26,651
Kenya	2,622	10,475	1,048	11,523
Burundi	155	5,877	588	6,465
DRC	1,409	1,409	141	1,550
Total	**35,914**	**69,327**	**6,934**	**76,261**

Source: Stryker, et al., 2012.
Note: informal trade is determined by adding 20% to neighboring countries import data.

Production of Maize has been Seriously Underestimated

If maize and rice exports are larger than officially reported, then what about production estimates? Based on several alternative measures of production, it is very likely that production is much larger than official government estimates show. That means that Tanzania produces more food crops than officially recorded and that reduces the concern over food availability and allows Tanzania to follow policies to encourage exports.

Official production estimates from the Ministry of Agriculture, Food Security and Cooperatives (MAFSC) are based on village extension agent's estimates of production of 10 basic food crops monthly, quarterly, and annually (Christensen, et al., 2012). However, these extension agents are not always well trained in how to measure crop production and often lack resources to travel to survey farmers in their designated areas. These estimates may also be biased since district and regional officials must approve the estimates and may adjust them to meet targets established for their areas or to qualify for food aid provided by the Government of Tanzania.

MAFSC's production estimates can be checked by other measures, including household consumption surveys, agricultural census and survey results, and simulated consumption and production estimates based on population and income growth. These data are not always available until several years after the MAFSC makes its production estimates, but provide a later check on MAFSC production estimates.

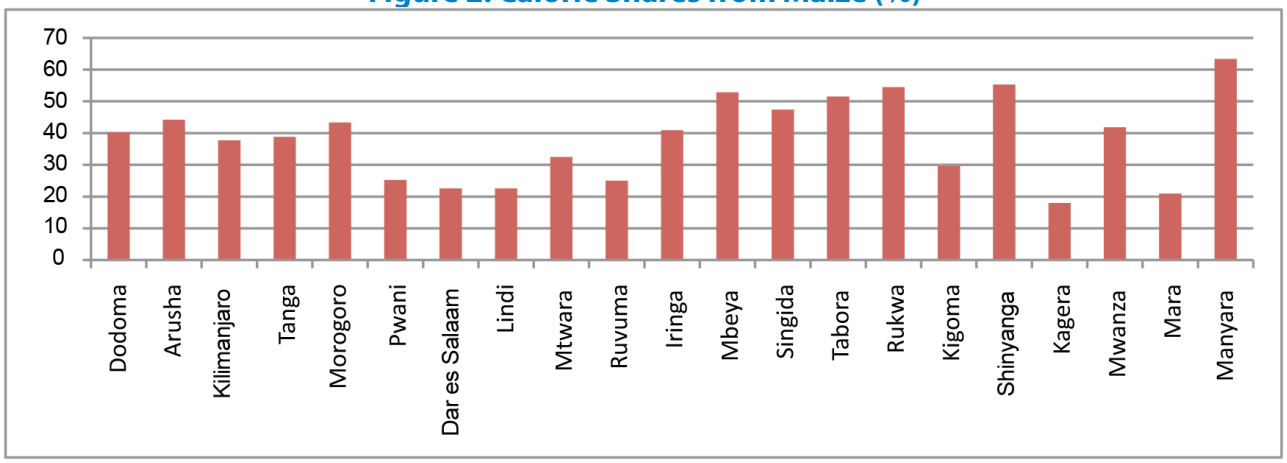
One such check, the agricultural census/surveys of 2002/03 and 2007/08 suggest that official maize and rice production estimates began to lag actual production during the mid-2000s and by 2007/08 were about 50% lower than actual production. This is confirmed by the more than doubling of official rice production estimates in 2009 in order to 'catch-up' with actual production. That seemed to put official rice production estimates in line with actual production, but official maize production estimates still appear to seriously underestimate actual production.

Since maize is the most important food crop in Tanzania and has special political significance as the 'measure' of food supplies, production estimates may be overly conservative. But, since these estimates are also used as an important input into the Government's decision to ban exports, this conservative approach may have led to export bans when they were not justified based on production estimates. Better procedures for estimating food production are needed, and better early warning systems that rely on crop prices and rainfall could improve the Government's ability to monitor food security.

Food Consumption Patterns Vary Greatly

Maize is the most important food crop in Tanzania, accounting for about 40% of total calories and 16% of household food expenditures. However, the share of maize in diets varies greatly across regions (Figure 2); from about 20% in urban areas such as Dar es Salaam to more than 60% in Manyara and more than 50% in large maize producing regions (Christensen, et al., 2012).

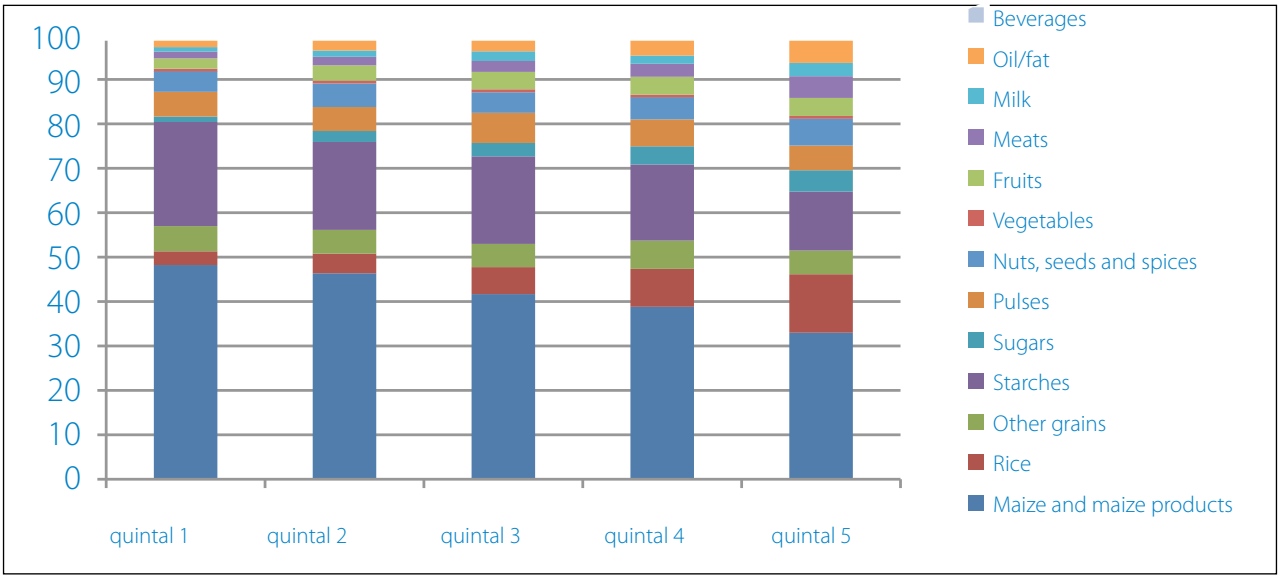
Figure 2: Calorie Shares from Maize (%)



Source: Chistensen, et al., 2012 based on the 2007 National Panel Survey.

The share of maize in diets declines as incomes rise, with maize accounting for almost 50% of the average household diet among the lowest income quintal but less than 30% for the highest income quintal (Figure 3) . As incomes rise, other cereals such as rice and wheat account for larger shares of the diet but the share of total cereals remains high across all income levels at 50-60% of total calories.

Figure 3: Food Consumption Shares (%)



Source: Chistensen, et al., 2012 based on the 2007 National Panel Survey.

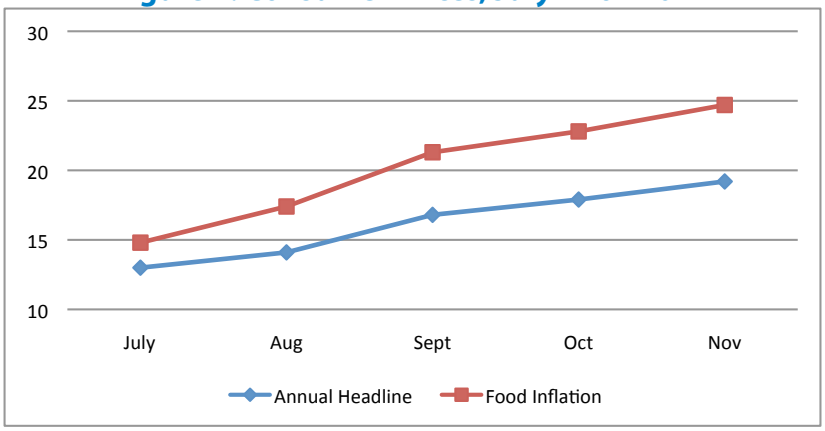
Starches, such as cassava, are a large share of diets for lower income households but are replaced by other foods as incomes rise. Animal products remain a small share of the diet even among higher income groups. With dietary diversity across regions and income groups, the Government of Tanzania will need to broaden its food security focus to include other food in addition to maize.

The Export Ban is Not Effective

The Government of Tanzania has periodically used food crops export bans to ensure food security, control food prices, and prevent exports of important staples such as maize. However, the export ban is not effective at meeting these objectives, but it does reduce producer incentives.

The maize export ban reduces consumer food prices by less than one-half of one percent and overall consumer prices by even less according to recent research (Diao, et al., 2012) because maize is only 16% of average household food expenditures and 8% of total expenditures. This research finding is consistent with actual consumer price changes during the latter half of 2011 when food prices continued to rise despite the maize export ban (Figure 4).

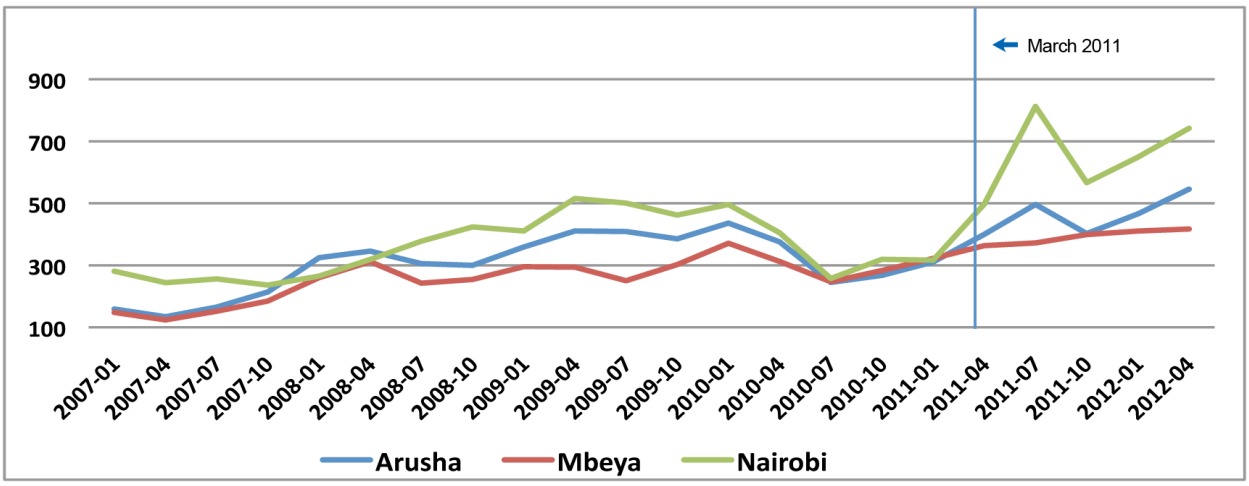
Figure 4: Consumer Prices, July - Nov 2011



Source: Bank of Tanzania, 2012.

The export ban raises the cost of exporting by raising handling and transport costs and encourages bribes. Producer prices decline due to higher exporting costs and most of the benefits go to traders, transporters, and corrupt officials. There are substantial regional effects also as traders can no longer afford to travel to more distant regions to buy crops. These effects were apparent in maize prices in Nairobi, Arusha, and Mbeya in 2011 when the maize export ban was imposed (Figure 5). Price margins between Nairobi and Arusha widened compared to the period before the ban began in March as costs and risks increased. And, maize prices in Mbeya in the southern highlands were no longer closely linked to Arusha prices as the costs and risks of transporting maize within the country increased and traders stopped traveling to the southern highlands to buy maize.

Figure 5: Maize Prices in Arusha, Mbeya, and Nairobi, Tsh/Kg, 2007 - 2012

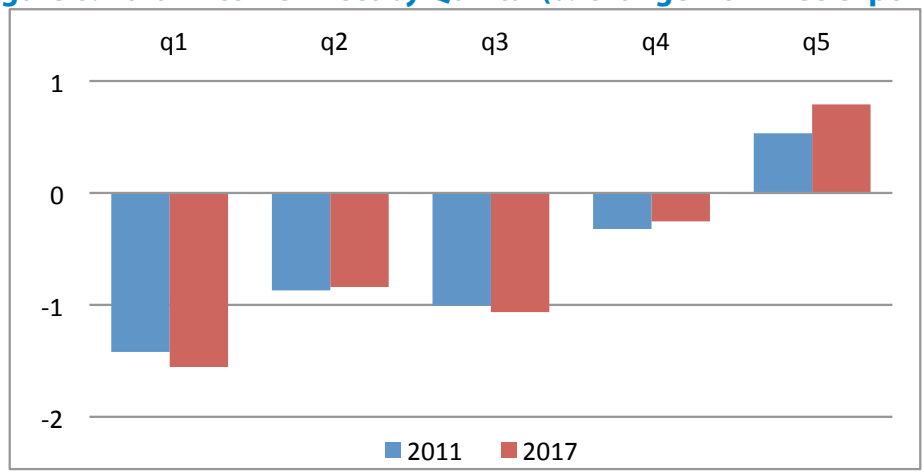


Source: Stryker, et al., 2012.

Maize export bans hurt the rural poor …

The poorest rural households are hurt the most by the maize export ban, because the export ban lowers wages for low-skilled labor and reduces returns to farmland, which more than offsets gains from lower purchased food prices. The poor in maize surplus regions suffer more than those in maize deficit regions because of the larger declines in returns to farmland. Based on results from the International Food Policy Research Institute (IFPRI) Dynamic CGE Model of Tanzania.

Figure 6: Rural Income Effect by Quintal (% change from free exports)



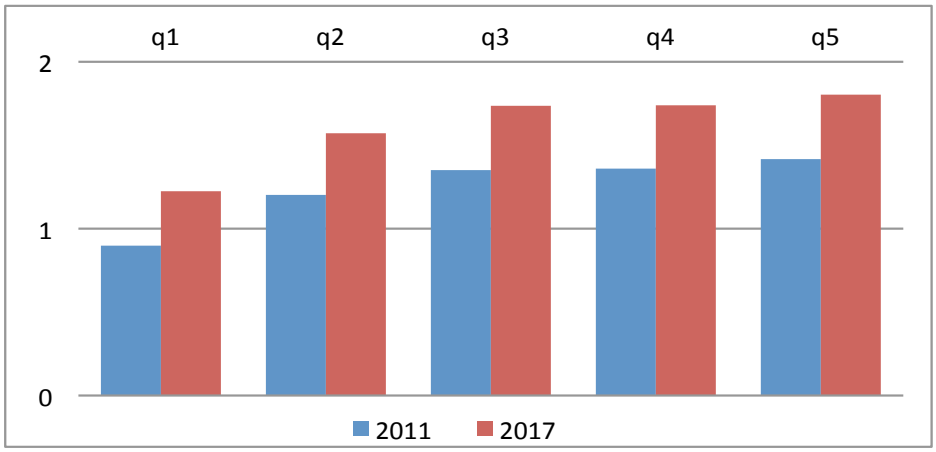
Source: Diao, et al., 2012.

Note: q1-q5 are income quintals of household income, with q1 the lowest and q5 the highest. Estimated impacts are for a single year export ban in 2011, and for 2017 assuming the export ban remains from 2011-2017.

…and benefit the urban rich…

The urban rich benefit most from the maize export ban because of lower food prices, higher returns to non-agricultural capital, and higher wages for skilled labor.

Figure 7: Urban Income Effect by Quintal (% change from free exports)



Source: Diao, et al., 2012.

Note: q1-q5 are income quintals of household income, with q1 the lowest and q5 the highest. Estimated impacts are for a single year export ban in 2011, and for 2017 assuming the export ban remains from 2011-2017.

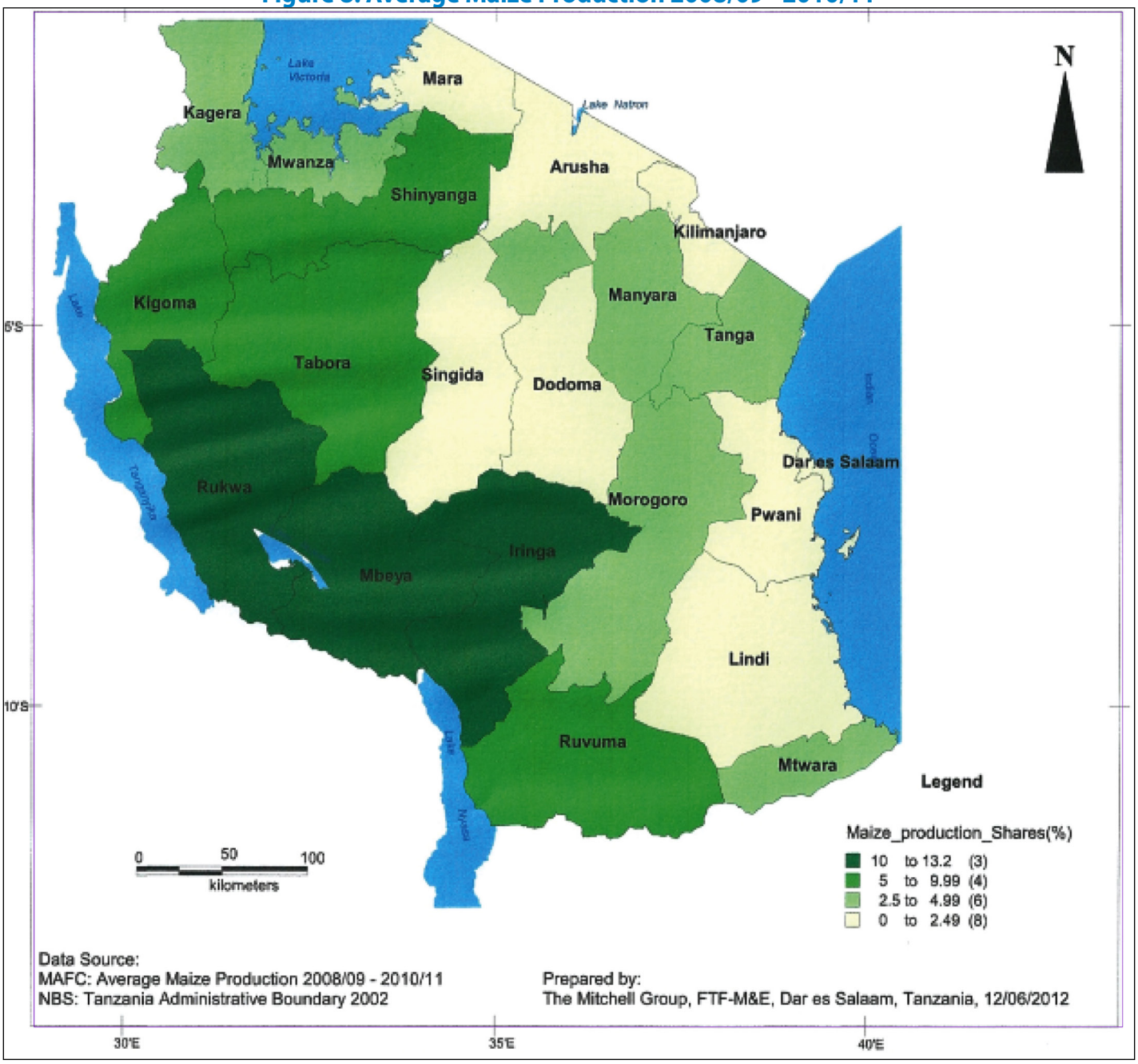
…while increasing national poverty rates

The maize export ban raises national poverty because poverty among the rural poor increases to more than offset the decline in urban poor.

Regional Effects of the Maize Export Ban

The maize export ban has substantial regional effects, with maize surplus regions seeing maize price declines of 20% while deficit regions have declines of 10% (Diao, et al., 2012). This affects the major producing regions in the south and west more than regions closer to the northern border because most of the maize is produced in the southern and western region (Figure 8). Just three regions in the southern highlands: Mbeya, Iringa, and Rukwa account for more than one-third of Tanzanian maize production, while Shinyanga, Kigoma and Tabora in the western region account for almost 17% of total production.

Figure 8: Average Maize Production 2008/09 - 2010/11



Conclusions

The food crops export ban is not effective at ensuring food security, controlling food prices, or preventing exports; but it reduces producer prices. It is now time to re-think the food crops export ban as a way of dealing with food security concerns and focus on expanding exports to raise incomes of farmers. The need for export permits should also be reconsidered because they do not provide useful information on exports, and they burden the private sector with an approval process that involves five different letters. That leads to widespread efforts to circumvent the permits through bribes of customs officials or payments to clearing agents who obtain permits and sell or "rent" them to exporters. By doing away with the export bans and export permits, Tanzania will allow farmers, traders, and exporters to focus on meeting the growing regional demand for food crops.

A more comprehensive approach to dealing with food security is also needed. Tanzania has relied on the export ban and the delivery of maize to regions affected by drought or other disasters to address food insecurity. However, a more comprehensive approach is needed that provides support to the chronically food insecure as well as those with transitory food insecurity. The wide diversity of diets across regions also means that the delivery of maize to some food insecure regions does not meet their food needs and often leads to selling of maize in order to purchase preferred foods. A food basket approach that reflects regional food demand preferences should be used to measure food availability and requirements in each region. Among the alternative approaches to food security that could be considered is expanded use of conditional cash transfers, such as planned under the Government's New Productive Social Safety Net Program (PSSN).

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