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Achieving food security and industrial development in Malawi: Are export restrictions the solution?

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ABSTRACT

Restrictions on staple or cash crop exports are frequently imposed in developing countries to promote food security or industrial development. By diverting production to local markets, these policies tend to reduce prices and increase domestic supply of food or intermediate inputs in the short term, to the benefit of consumers or manufacturers, which make them attractive to policymakers. However, in the long term, export restrictions discourage agricultural production, which may ultimately negate the short-term gains. This study assesses the economy-wide effects of Malawi's long-term maize export ban, which was only recently lifted, and a proposed oilseed export levy intended to improve food security and support local processing industries, respectively. We find that maize export bans only benefit the urban non-poor, while poor farmers' incomes and maize consumption levels decline in the longer run. The oilseed export levy also fails to achieve its long run objectives: even when tax revenues are used to further subsidize food processors, their gains in value-addition are outweighed by declining agricultural value-addition. More generally, these results show that while export restrictions may have the desired outcomes in the short run, production responses may render the policies ineffective in the medium to long run. Ultimately, such restrictive policies reinforce a subsistence approach to agriculture, which is inconsistent with the stated economic transformation goals of many Sub-Saharan African countries.

1. Introduction

Whereas policies that promote exports or limit imports are considered acceptable development strategies, the frequent use of policies that restrict exports, such as export bans or export taxes, have left economists puzzled (Bouët and Laborde, 2017; Porteous, 2017). By restricting exports, production is diverted to the domestic market, which raises supply and suppresses prices. In the short run, this benefits consumers or downstream industrial users at the expense of producers of those goods. However, theoretical and applied models show that producer welfare losses generally outweigh gains in consumer welfare, leading to a net decline in welfare (Mitra and Josling, 2009; Diao and Kennedy, 2016). Moreover, when these policies remain in place for an extended period, producers respond by altering supply, which, as we demonstrate in this paper, could either reduce welfare further and/or make the policies ineffective.

Despite their negative welfare effects, the distributional properties of export bans make them attractive to policymakers. Increased food availability at lower prices is most commonly the justification for export restrictions on staples (Mitra and Josling, 2009). Another is that the policy shields domestic markets from price spikes in world markets, which protects consumers, and explains why many countries banned exports during the 2007/08 global food price crisis. However, export bans are likely to be ineffective if some trade takes place informally across porous borders—as is often the case in developing countries—or where bullish traders hoard stocks in anticipation of an eventual domestic price recovery (Porteous, 2017).

Export restrictions can also form part of an industrial strategy. Fledgling agroprocessing sectors receive an implicit subsidy when export restrictions are imposed on raw commodities used as intermediate inputs (Laborde, Estrades, & Bouët, 2013). This allows processors to better compete with imported goods, which means the policy is essentially a variant of infant industry protectionist policies that traditionally restrict competing imports through tariffs or quotas. An important rationale for such policies is to retain

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processing margins locally and to create manufacturing sector jobs (Mitra and Josling, 2009).

There are several other justifications for export restrictions: export levies may be a source of government revenue; a retaliation to trade restrictions imposed by trading partners; or used to protect scarce natural resource or restrict trade in illicit goods (see Karapinar, 2011). While these are all legitimate justifications for export restrictions, the focus in this study is on trade restrictions imposed on agricultural products and their implications for food security and industrial development in a developing country context.

Since export restrictions transfer benefits from producers to consumers or industrial users, political economy considerations are pertinent (Abbott, 2011; Anderson and Nelgen, 2012). Consumers, including net-consuming farm households, typically represent a larger share of the electorate than net-producers; hence politicians have an incentive to adopt policies that favor consumers over producers. Industrialists, in turn, are often better organized or possess stronger lobbying power than smallholders, which may explain the existence of protectionist industrial policies at the expense of the smallholders.

Unfortunately, given their short-term view, politicians may overlook the fact that policies that persistently discriminate against farmers or create market uncertainty may become self-defeating in the longer run. When export restrictions remain in place for too long, or when the decision-making process around imposing or lifting export restrictions is highly discretionary, they suppress prices or create market uncertainty for producers. Risk-averse farmers' rational response to low prices or market uncertainty is to shift productive resources towards more profitable crops or to revert to self-sufficiency (Fafchamps, 1992), which could have negative long-term consequences for agricultural production, growth and food security. Therefore, farmers' behavioral responses in the long run may ultimately undermine the food security and industrial development objectives of export restrictions.

While the impacts of export restrictions at sector-level are well understood, few studies have considered the broader economy-wide effects. Thus, in addition to highlighting the important differences in policy impact in the short versus medium to longer run, our study also emphasizes the spillover effects the policy may have on other sectors, factor and commodity markets, and household incomes, both in rural (farm) or urban settings. We particularly consider the case of Malawi, a country which until very recently had a long-standing export ban on the main staple maize with the objective of promoting food security. For several years now Malawian policymakers have also debated the option of an oilseed export levy to increase domestic value-addition of oilseeds, which have been identified as priority intermediate inputs for its emerging food processing sector.

Using a general equilibrium model, we simulate the impact of export restrictions under various scenarios designed around assumptions about policy implementation modalities, policy timeframe, and the fundamental macroeconomic relationships in the economy. In the case of the export levy, we also explore options for utilizing revenue generated by the levy to enhance the intended policy effect. While the results generated are specific to Malawi, and are influenced by this country's trade patterns, inter-industry linkages, and consumer preferences, as observed during a particular period, we believe the simulated behavioral responses have implications for other developing countries, especially in Sub-Saharan Africa where many economies, like Malawi, are reliant on a large agricultural sector, face significant food security challenges, and have ambitions of diversifying their economies and developing their industrial base.

2. Trade restrictions in theory and practice

2.1. Malawian context

Malawi is a small economy where a large majority of the workforce is engaged in agricultural production. Yet, it faces persistent food security challenges. It also has an underdeveloped industrial sector which has proved to be a major stumbling block to economic transformation. For these reasons, Malawi represents an interesting case study of a country that has frequently used or proposed to use temporary or long-term export restrictions to attain its food security and industrial development goals.

In this Malawi is not alone: in the past decade, more than 30 countries, including virtually all the world's top grain producers and several southern and eastern African countries have imposed grain export restrictions (Porteous, 2017). The detrimental effects of such restrictions are confirmed by several studies. For example, Porteous (2017) shows that both the levels and volatility of prices is higher during periods of export bans in Ethiopia, Kenya, Malawi, Tanzania and Zambia. In Tanzania, maize export bans reduce producer prices and cause significant market uncertainty for farmers and the private sector, ultimately making these actors less responsive to future supply and trade opportunities (Diao and Kennedy, 2016; Ahmed, Diffenbaugh, Hertel, & Martin, 2012). Moreover, by lowering low-skilled wages and returns to land, export bans disproportionately harm poor rural households (Diao and Kennedy, 2016). At a global level, it is now commonly agreed that the collective action of several countries banning exports during 2007/08 exacerbated the food price crisis through reducing global supply (Bouët and Laborde, 2017; Anderson, Ivanic, & Martin, 2014).

With respect to maize in Malawi, the key staple crop, export bans are imposed to maintain a perception of food sufficiency (Chirwa and Chinsinga, 2015). Government has also cited protection of its investment in the Farm Input Subsidy Program (FISP), a large fertilizer subsidy program in place since 2005/06 and designed to boost smallholder maize production, as a reason for banning maize exports (Face of Malawi, 2013). Following intermittent bans on maize exports since the 2005/06 cropping season, an export ban was in place, uninterrupted, from 2011/12 until the end of 2017. The government regulates international trade of so-called "strategic crops" through its *Control of Goods Act* (2015). Commodities listed in the act, such as maize, require an export license. Export bans are therefore enforced by withholding licenses, which in practice means formal exports through recognized border posts are affected.

Given the political and socioeconomic importance of maize in Malawi, the export ban has always been a highly sensitive topic, and any advocacy on the matter was done discreetly. By contrast, the proposed restriction on oilseed exports has been openly debated. The context is the National Export Strategy (NES) 2013–2018, which prioritizes development of three product clusters: oilseeds, sugar, and manufactures. These were selected based on their global competitiveness, linkages to other sectors, and potential for increased value-addition (GoM, 2012b). The oilseed cluster is prominent among these, and the product strategy for oilseeds entails promotion of sunflower, groundnut, soya, and cotton production and exports in the short term (five years), followed by increased diversification and domestic value-addition (e.g., production of cooking oil, lubricants, biofuels, and so on) in the medium to longer term (ten to fifteen years).

In line with these provisions, oilseed producers enjoyed a policy environment conducive to free trade for several years. However, in 2015, under pressure from cooking oil processors, government proposed the imposition of oilseed export levies purportedly to