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Guiding Investments in Sustainable Agricultural Markets in Africa

Common Market for Eastern and Southern Africa Alliance
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OPPORTUNITIES AND CHALLENGES FOR STRENGTHENING STAPLE FOOD MARKETS IN EASTERN AND SOUTHERN AFRICA

This study highlights the major challenges facing governments and international agencies in their efforts to strengthen the performance of staple food markets in Eastern and Southern Africa. The [full report](#) highlights ten major issues:

1. A smallholder-led agricultural strategy is necessary to rapidly reduce rural poverty, but inadequate access to land is increasingly constraining the potential for a broad-based smallholder-led agricultural development strategy: Farm sizes are declining over time as rural populations grow and families sub-divide their land to the next generation (Table 1). In the four countries examined in Figure 1, over 50% of the farms are below one hectare in size. As average farm size falls below one hectare, a staple food-based agricultural system under a primarily rain-fed system with one growing season using low-input technology is in most areas not going to provide a viable pathway out of poverty. The potential remains for successful smallholder-

led agricultural development, and this is indeed necessary to achieve meaningful reductions in rural poverty. There are three ways to address this problem and probably all three will be required. First, support productivity growth of staple food cultivation with improved access to inputs and management knowledge, so smallholders can produce a surplus on farm sizes that are currently too small to do so. However, this strategy is viable only in areas well suited to intensified staple food cultivation where response to fertilizer application is favorable. Second, support crop diversification to higher-return activities, such as fresh fruits and vegetables, dairy, and other activities. To some extent this is already happening naturally, but facilitating it will require supportive government investments and reliable markets for food in rural areas to enable households to purchase staple grains with the income they earn from cash crops.

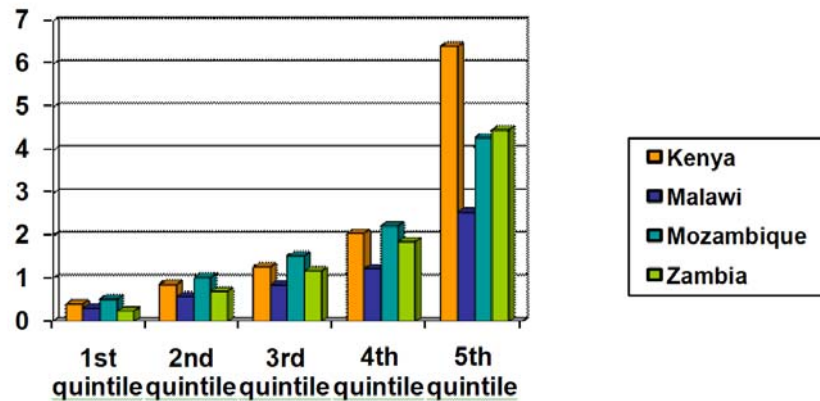
Table 1. Ratio of Cultivated Land to Agricultural Population

	1960-69	1970-79	1980-89	1990-99	2000-07
Cultivated hectares per agricultural person					
Ethiopia	0.508	0.450	0.363	0.252	0.223
Kenya	0.459	0.350	0.280	0.229	0.207
Malawi	0.628	0.492	0.361	0.305	0.298
Mozambique	0.389	0.367	0.298	0.249	0.246
Rwanda	0.215	0.211	0.197	0.161	0.144
Zambia	1.367	1.073	0.896	0.779	0.781
Zimbabwe	0.726	0.664	0.583	0.525	0.480

Note: Land to person ratio = (land cultivated to annual and permanent crops) / (population in agriculture).

Source: FAOStat website: FAOStat database: www.faostat.fao.org/

Figure 1. Landholding Size of Smallholder Farms, Hectares per Household

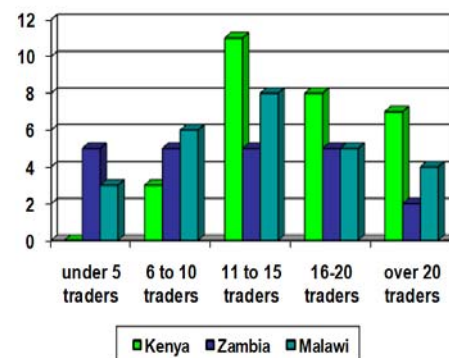


The third pathway for overcoming the land-related constraints on a successful smallholder-led agricultural development strategy is for governments to invest in infrastructure and services to open up new areas that are currently underutilized to encourage settlement in productive new areas. There remains ample scope for such a strategy in many, but not all countries in the region. But the recent transfer of massive amounts of land for large-scale commercial investment and the massive amounts of public resources that have in some cases accompanied these commercial land investments may impede needed access to land for future generations of smallholder farmers (Jayne et al. 2009).

2. Smallholder farmers are less isolated from markets than commonly thought: Smallholders selling maize report improvements in their access to buyers. The number of private traders coming into the village to buy maize from farmers after the harvest is usually more than 10 and in many cases more than 20 (Figure 2). According to national surveys of smallholder farmers, the median distance travelled by farmer to sell their maize in Malawi, Zambia, and Kenya is zero, indicating that most farmers sell their maize to traders who come right into their villages, even in inaccessible and remote areas.

This points to evidence of steady investment in grain assembly and transport over the 20 years since private grain trade was legalized. These observations call for a re-examination of the meaning of “access to markets”, “isolated area” and similar phrases. Access to markets at a remunerative price is more likely to be the main issue.

Figure 2. Farmer Focus Group Responses to the Question: How Many Traders Came into this Village to Buy Maize from Farmers in the 4 Months after Harvest, 2009.



It remains true that a minority of smallholders are able to produce a food surplus to sell. However, their lack of market participation is driven more by inadequate land and productive assets than by isolation from markets. This puts the main burden on the generation of improved farm technology, management practices, and access to land and other productive resources so that more farmers are capable of relating to markets as sellers.

3. Farmers receive about 60% to 90% of the price of maize grain observed in the district retail markets: By matching farm-gate prices received by interviewed farmers with prices observed in regional markets during the same period, it is found that farm prices are roughly 60% to 90% of retail prices in Zambia, Kenya, and Malawi. Yet farmers in the same villages obtained widely varying prices for their maize in the same month, indicating major differences among farmers in negotiation ability and understanding of their marketing options. These findings indicate potentially high returns to farmer marketing training to raise their incomes from surplus grain production.

4. By contrast, farm-gate maize prices over the period 2000-2008 accounted for only 35% to 45% of the total value of commercial maize meal in these countries. Marketing and processing costs account for the lion's share, 55% to 65%, of the cost that consumers pay for commercial maize meal. This implies that new marketing technologies or institutional innovation within the marketing system that would reduce marketing costs by 10%, for example, would benefit consumers more than a 10% reduction in farm production costs brought on by new farm technology. Efforts to improve farm-level productivity are absolutely critical to achieve broad-based rural income growth and food security. Yet the potential for future farm-level income and productivity growth in the region are likely to be intimately tied to future cost-reduction in the marketing system.

5. There is very limited grain storage in rural areas. Traders frequently indicate constraints on availability of storage facilities and disincentives to engage in intra-seasonal storage. There are six main causes of disincentives to store grain and invest in storage facilities:

- i) *Staggered harvest seasons in some areas:* In regions with multiple harvests per year, such as Kenya, Uganda, and northern Tanzania, there is relatively small intra-seasonal price rises. Maize production is hitting the market at various times throughout the year. This shifts the emphasis of marketing from intra-seasonal storage to spatial arbitrage, shifting grain from places where the harvest is hitting the market to areas experiencing demand at that time.
- ii) *Unpredictable government operations in grain markets:* Highly discretionary government policies create major risks for grain storage. Export bans, sudden modifications or removal of import tariff rates, and stock releases from government silos at concessionary prices are all examples of how government activity can undermine the returns to intra-seasonal storage. Growing concerns over manipulation of national crop production estimates and food balance sheets also further erodes confidence in publicly provided information that plays an important role in encouraging storage activity in other parts of the world.
- iii) *The resulting grain price uncertainty inhibits commercial bank investment in grain storage and makes investing in government instruments relatively attractive:* Most governments in the region are running deficits, which they finance by offering high-interest bills and bonds. Local banks naturally

are content to earn a safe return investing in these government bonds rather than make loans to highly risky investments in grain arbitrage. Reducing the policy risk in markets will encourage bank investment in African agriculture.

- iv) *Uncertainty over disposition of current marketing board storage facilities:* Most of the silo capacity in countries such as Kenya, Malawi, and Zambia remains in public sector hands. The potential for selling parastatal storage facilities at concessionary prices as part of some future privatization plan acts as a deterrent to new commercial investment in storage. This pattern of bank investment also shifts major investible liquidity in a country into government operations and programs rather than private sector investment.
- v) *Threat of grain confiscation:* Recent events in Malawi, Ethiopia, and Kenya demonstrate that there is some risk of stored commodities being confiscated or destroyed.
- vi) *Lack of quality standards with respect to moisture content:* Assembly traders and wholesalers make little effort to discourage the buying of wet maize or to separate it from higher quality dry maize. If anything, the tendency is to combine wet and dry maize in order to mask the ability to detect wet maize by the next buyer. The storage of high-moisture content maize results in rotting and high storage losses.

6. Disincentives to store grain also exacerbate the flow of grain out of informal markets and contribute to a circuitous flow of grain from surplus-producing farmers in grain deficit areas to urban areas, only to be milled by large-scale processors and then re-distributed back to the grain-deficit rural areas in the form of expensive commercially milled meal. This problem contributes to redundant transport costs and higher food costs for consumers.

7. Informal grain markets tend to become very thin in the hunger season after the majority of smallholders' surplus production has been bought up and fed into formal marketing channels. Once in the hands of formal sector marketing agents, grain rarely gets back into informal channels. This market segmentation would not necessarily be a problem if it were not for the fact that the formal sector tends to charge much higher marketing margins than informal traders, and hence formal sector retail prices for maize meal and other finished staple products are almost always substantially higher than the retail goods processed and sold by informal traders and millers. The problem of segmented markets – a

competitive and agile informal sector which is starved for capital, and a more highly-capitalized formal trading sector which is competitive in some cases and oligopolistic in others – leads to a common situation during the hungry season in which informal markets dry up and are unable to acquire grain due to barriers to regional trade and selective channeling of imports to a few formal trading firms. As a result, consumers pay considerably higher prices for their staple food than would be the case if informal markets were not discriminated against.

8. The staple grains policy environment in many countries in the region is highly unpredictable. It is sometimes assumed that policy reforms were implemented and hence the policy environment poses no special challenges. We strongly disagree with this view. In fact, policy uncertainty, vacillation, and institutional vacuums are the norm in much of the region, which lead to problems of credible commitment with the private sector. Policy reforms have been implemented in a *de jure* sense but the potential benefits of such reforms are eroded by *ad hoc* policy interventions in both external trade and domestic marketing which exposes the private sector to huge risks and financial losses. All this uncertainty stifles private investment in the development of agricultural markets, which in turn continue to deprive African smallholders of services and markets that would otherwise allow them to raise their crop productivity set in motion a number of virtuous cycles.

9. Staple food marketing systems are characterized by weak coordination among the players in the value chain/marketing system: Transporters are unable to coordinate well with traders in the potential use of cost-reducing marketing and transport technology. Large traders in one country are often prohibited from linking with millers seeking grain in other countries. The SAFEX price discovery process, which could be so useful to governments, marketing firms and contribute to the development of more structured markets throughout the region, is frequently lost due to highly discretionary state operations in markets.

10. Many “market failures” commonly observed in the region reflect chronic underinvestment in productivity-enhancing

public goods. The costs of participation in markets are unusually high in most of Africa due to limited investment in transport infrastructure, ports, rail, road, and electricity. The ports in eastern Africa are in a state of decay and the high

costs involved in importing fertilizer and other goods acts as a tax on farmers as well as the entire economy. Farmer participation in staple food markets is also constrained by weak commitments to crop science, especially relevant for semi-arid conditions, and effective extension services for farmers. Ironically, while reviews of the Asian green revolution experience underscore the very high payoffs to public investment in R&D and physical infrastructure in terms of agricultural growth and poverty reduction (Fan, Gulati, and Thorat 2007; Economist Intelligence Unit 2008), these public goods investments account for a very low percentage of national budgets among most African nations and in some cases are crowded out by large-scale input promotion programs with uncertain long-term effects.

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