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# **POLICY BRIEF**

## **TEGEMEO INSTITUTE FOR AGRICULTURAL POLICY AND DEVELOPMENT**

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### ***Improving Kenya's Domestic Horticultural Marketing System: Competitiveness, Forces of Change and Challenges for the Future***

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*Horticulture in Kenya has frequently been equated in the popular mind with export horticulture. Indeed, the great success of the export sector has led to a relative inattention to the domestic and regional horticultural production and marketing system. This Policy Brief reports on research carried out by Tegemeo Institute to assess the size and scope of this sector, with a special emphasis on marketing. We focus on the major challenges the sector faces and on key investments and programs needed to move forward. More detailed findings may be found in the Research Report of the same title.*

**PROBLEM SETTING:** Kenya's horticultural sector (defined here to include fruit and vegetable production and marketing, but not flowers) has received a great deal of attention over the past decade due to the rapid and sustained growth of its exports to Europe. This impressive growth has undoubtedly contributed to increased rural incomes and reduced rural poverty in Kenya. Yet despite this growth, exports remain a small fraction of Kenya's overall horticultural sector. For the past decade, over 90% of all fruit and vegetable production was consumed domestically, and the domestic market accounted for over 90% of the total growth in quantity of fruit and vegetable production. While over 90% of smallholder farmers in all but the arid regions of Kenya produce horticultural products, fewer than 2% do so directly for export.

This overwhelming dominance of the domestic market, combined with slower growth experienced in the export sector over the past decade, the challenges that smallholders face to continue participating in the export sector, and the possibility of more rapid growth in domestic demand, all argue

for a more active focus on the potentials and constraints of domestic horticulture in Kenya. Such a focus implies also the need to assess the competitiveness of local production and marketing against that of neighboring countries such as Tanzania and Uganda.

#### **HOW DID WE RESEARCH THESE ISSUES?**

We adopted a multi-faceted approach in this study, taking full advantage of existing secondary data on production, yield, and export trends, while collecting a range of original data. These data collection exercises included interviews with 83 wholesale and retail traders of fresh produce, accessing of original border point data on the quantity of imports of fresh produce from regional markets, and a survey of expenditures and incomes among 540 residents of Nairobi.

**WHAT DID WE FIND?** We present findings on international and domestic horticultural market shares, on marketing channels and regional trade patterns, and on regional competitiveness of Kenya horticulture.

**International and Domestic Market Shares** Using data from various sources for 1997-2001, we estimate that at least four- to five times more horticultural produce, by value, was sold in domestic markets than in international export markets. If produce consumed on the farm is included, the domestic share rises to 7-8 times that of the export market. Value added in domestic markets (post farm gate) was at least three times that in the export sector (Figures 1 and 2).

**Marketing Channels and Regional Trade Patterns:**

The traditional marketing system, including urban wholesale markets, continues to play the dominant role in FFV (fresh fruits and vegetables) marketing in the country. Based on retail price relationships between the traditional system and supermarkets, and patterns seen in Central and South America, where supermarket development began earlier, we estimate that the supermarket share of the FFV market in Nairobi is below 10%. Direct survey evidence for Nairobi reinforces this conclusion, suggesting a market share of 4.4% in late 2003 (Table 1). Outside of Nairobi, it would certainly be lower. The two major chains – Uchumi and Nakumatt – each carry upwards of 80 horticultural products in their Nairobi stores, and each has ambitious expansion plans. Uchumi and Nakumatt are attempting, with uneven success, to bypass the wholesale markets in favor of direct procurement with an assortment of contracted commercial farmers and some organized small- and medium-sized farmers. Based on an assessment of key demand- and supply-side factors, we conclude that supermarket FFV shares will grow over time, but will remain well below 20% for the foreseeable future; traditional retail outlets served by public wholesale markets will continue to dominate the sector.

At the present time, traditional wholesale markets are unattractive to buyers concerned with assuring high quality and food safety while reducing procurement cost. New information is needed about options for designing investment programs to facilitate continued smallholder participation in fruit and vegetable value chains, while reducing overall marketing costs and prices to final consumers.

Banana and tomato imports from the region are

estimated to have no more than a 7-8% share of the Kenyan market. Orange imports (nearly all from Tanzania) may exceed 20%, while the onion import share (also nearly all from Tanzania) may exceed half. Kenya exports almost no produce to regional markets (Table 2).

**Regional Competitiveness:** Collecting wholesaler budgets are consistent with these observed trade patterns: trader profits per unit of bananas and tomatoes are higher for Kenyan produce than for imports, profits per bag of oranges are higher for the commodity from Tanzania but returns to capital are comparable, and both profit per bag and returns to capital are higher for imported onions (Table 3).

**CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS FOR POLICY**

**MAKERS:** Fresh fruit and vegetable production and marketing value chains are becoming increasingly important to a broad array of Kenyan consumers. These also hold potential market opportunities for important segments of the smallholder farming community. But investments are needed to upgrade marketing infrastructure and facilitating services for traditional participants in the system. One often mentioned force of change in the domestic horticultural is the entry of supermarkets into the domestic horticultural market. Based on a review of evidence, we reach three conclusions on this matter. First, the overall food market share of supermarket chains is likely to grow over time, meaning that these firms should be an important force of change in African food systems. Second, this growth is likely to be much slower in the FFV sector, and market shares of supermarket chains will remain substantially lower for FFV than for other food items. As a result, traditional retail outlets served by public wholesale markets will maintain a dominant market share in FFV for the foreseeable future; we suggest that this share will remain near 90% over the next decade. Third, public policy and investment towards wholesale and related assembly and retail markets will be a major determinant of the structure of the FFV production and marketing system. Forward looking investment in these markets would help establish a more integrated but diverse and competitive system in which consumers can access high quality produce in a variety of outlets, and small farmers and traders can earn

favorable returns in a progressive traditional system.

Expanding domestic and regional markets for Kenyan horticultural produce and integrating the country's smallholder farmers into profitable supply chains that satisfy these markets will require investment in three key areas: technical production constraints, "hard" and "soft" market infrastructure, and the legal and regulatory environment. The high level of investment needed means that active partnering by government with donors and private sector will be crucial.

This volume focuses on horticultural marketing. In this regard, traditional wholesale markets should be the central but not exclusive focus of investments in three key types of hard and soft market infrastructure. First, improved logistical efficiency, especially for loading and unloading, is needed to reduce costs and improve hygiene in the markets. Second, improved hygiene combined with logistical improvements will make these markets more attractive options for a broader range of retail outlets. Third, improved grades and standards, and more easily available information on prices and volume by grade of product, will increase market transparency and further attract customers.

Achieving these improvements will require that wholesale market management take on a business orientation while recognizing that it is providing a partial public good by integrating smallholder farmers into a more dynamic and competitive system while providing poor consumers with higher quality produce at competitive prices. Active partnering between government, private sector and donors will be crucial to mobilize the needed financial resources and knowledge to make these improvements. Government and donors could also play an important role partnering with supermarkets to reduce the cost to them of dealing directly with smallholder farmers. Improvement in secondary and tertiary roads is also key to modernizing the sector.

To help guide investments to relieve bottlenecks in the production and marketing system, further

applied research needs to be done in several areas, and used to develop extension messages as appropriate:

**Urban Retailing,** especially market shares for the full range of retail outlet types, the costs and standard operating procedures of each retailer's procurement system, and key bottlenecks that, if relieved, could reduce costs and increase quality.

**Product quality:** Understanding the degree and specific mechanisms of quality differentiation in the traditional system is fundamental to designing a more formal system of grades and standards that is workable and that can increase transparency and create a dynamic of constant quality improvement. Improved packaging would make an contribution to improved quality over time.

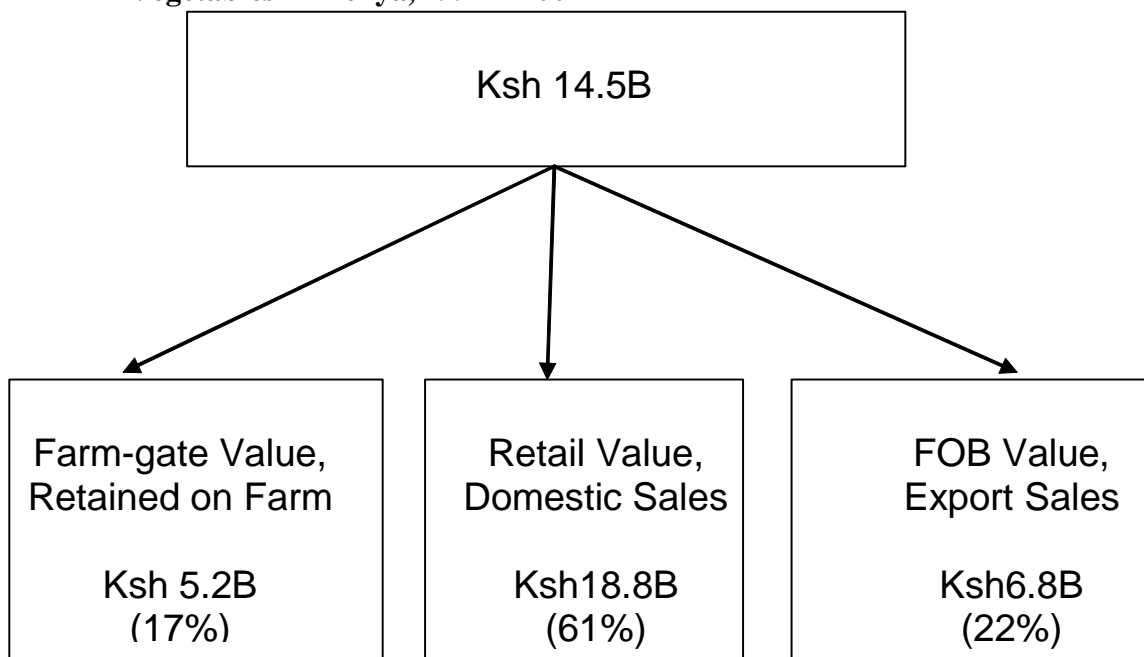
**Urban Wholesaling:** The behavior and performance of urban wholesale markets affects costs, prices, and the distribution of benefits throughout the production and marketing system. Identifying specific investments to improve logistics, hygiene, and market information requires applied research in close collaboration current and potential users.

#### **Links between urban markets and rural**

**producers:** To design programs that link small farmers more closely to market outlets, one needs to know more about the system wide "price discovery" process. One would also want to establish how many small farmers sell through associations, what cost and other marketing advantages these associations provide, and what if any price premia these organized farmers receive. Finally, it is important to know what the share of smallholder farmers vs larger commercial farmers is for the main horticultural crops.

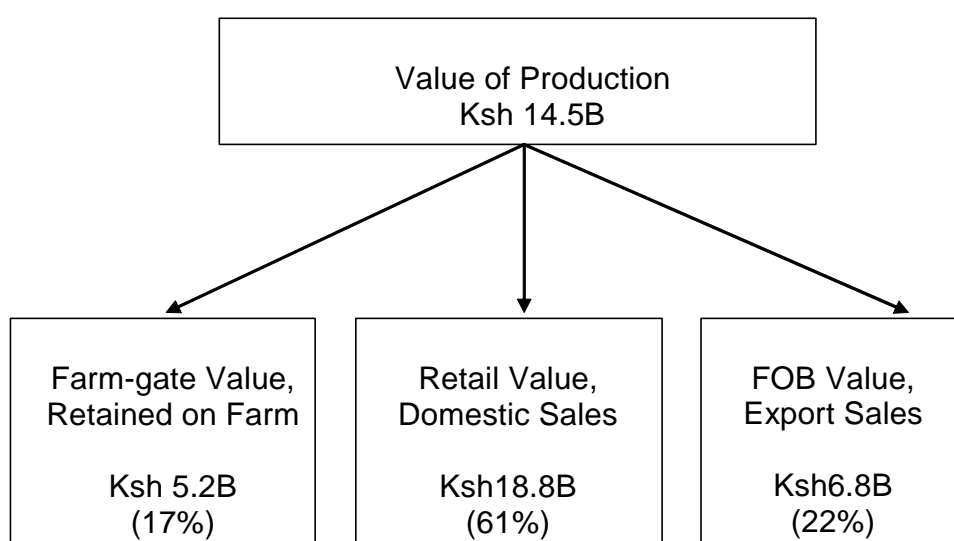
**Rural marketing:** We anticipate that many rural households will be net buyers of horticultural produce. If this is true, then the performance of the rural marketing system, including rural retailing, will affect the real incomes of net sellers and net buyers.

**Figure 1. Total Value Added (and Share) in Farm, Local Sales, and Export Sales Channels for Vegetables in Kenya, 1997 – 2001**



Source: Derived from Tegemeo/MSU 2000 household survey data, production data from MoALRD, and export data from HCDA

**Figure 2. Market Channel Shares (Farm, Local Sales, Export Sales) of Total Vegetable Production in Kenya, 1997 – 2001, valued at farm-gate prices**



Source: Derived from Tegemeo/MSU 2000 household survey data, production data from MoALRD, and export data from HCDA

**Table 1. Population Weighted Share of Different Market Outlets in Food Expenditure in Nairobi, by Food Group**

Food Group	Market Outlet						
	Super-market Chains	Small super-market	Duka/shop	Open Market	Kiosk	Butchery	Other Minor Outlets
	----- % of total expenditure over 40 food items -----						
Staples	21.0%	12.9%	49.5%	6.4%	8.1%	0.0%	2.2%
Dairy	13.9%	2.1%	55.4%	0.0%	10.8%	0.0%	17.8%
Meat	3.9%	0.4%	8.9%	11.5%	3.9%	68.4%	3.1%
Fresh fruit & Veg.	4.4%	0.3%	0.7%	56.4%	35.7%	0.0%	2.6%
Overall	11.5%	4.8%	28.7%	18.7%	14.3%	16.7%	5.4%

**Notes:** For each food group, the most commonly consumed items were selected for data collection. Staples include maize grain and meal, wheat flour and bread, rice, sugar, spaghetti, macaroni, and other pasta; dairy includes pasteurized and raw milk, cheese, yoghurt, and ghee; meat includes beef, goat, sheep, chicken, and eggs; FFV includes irish potatoes, sweet potatoes, tomatoes, cabbage, sukuma wiki, carrots, onions, french beans, bananas, cooking bananas, avocado, oranges, pawpaw, and mangoes.

**Table 2. Upper- and lower- bound estimates of import market share for selected horticultural crops in Kenya**

Crop	Formal imports, Nov 01 -- Oct 02 (mt)	Mean Production, 2001 and 2002 (mt)	Domestic Marketed Surplus, % of Production	Import Shares	
				Lower Bound	Upper Bound
Bananas	6,885	1,060,000	44	1.5	6.9
Tomato	3,255	262,500	72	1.7	7.9
Oranges	4,300	126,000	65	5.0	20.8
Onions	9,880	58,000	72	19.1	54.2

Notes: 1) Lower bound estimates assume no informal imports; upper bound assume informal imports are four times formal, based on border agent qualitative assessments. 2) marketed surplus percent is from Tegemeo/MSU 2000 household survey. This is for smallholder farms only, and thus provides a lower bound estimate on total marketed surplus.

**Table 3. Summary marketing cost build-ups for bananas, tomatoes, oranges, and onions from Tanzania, Uganda, and Kenya to Wakulima and Kongowea markets**

Commodity and Origin	Producer Price (Ksh/unit)	Sales Price (Ksh/unit)	Marketing Costs (Ksh/unit)	Trader Profit (Ksh/unit)	Return to Trader Working Capital
<b><i>Bananas</i></b>					
From Uganda (Mbale)	20	80	40	20	33.3%
From Kenya (Kisii/Nyeri)	60	140	47	33	30.8%
<b><i>Tomatoes</i></b>					
From Tanzania	180	638	279	179	39.0%
From Kenya	386	783	138	260	49.7%
<b><i>Oranges</i></b>					
From Tanzania					
Tanga	375	850	227	248	41.2%
Mweza	1,009	2,006	349	647	47.6%
From Kenya (Shimba Hills)	193	650	278	190	40.3%
<b><i>Onions</i></b>					
From Tanzania (Mangola)					
To Kongowea (Mombasa)	1,483	2,400	560	357	17.5%
To Wakulima (Nairobi)	273	550	129	148	36.8%
From Kenya					
To Kongowea (Mombasa)	1,504	2,334	686	144	6.6%
To Wakulima (Nairobi)	168	300	83	49	19.5%