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Staff Paper

**THE RISE OF KENYAN SUPERMARKETS
AND THE EVOLUTION OF THEIR FRESH
FRUITS AND VEGETABLES
PROCUREMENT SYSTEMS**

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The rise of Kenyan supermarkets and the evolution of their fresh fruits and vegetables procurement systems

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Abstract: Supermarkets are rapidly penetrating urban food retail in Kenya and spreading well beyond their initial tiny market niche into the food markets of lower-income groups. Having penetrated processed and staple food markets much earlier and faster than fresh foods, they have recently begun to make inroads into the fresh fruits and vegetables category. The important changes in their procurement systems bring significant opportunities and challenges for small farmers, and have implications for agricultural diversification and rural development programmes and policies.

37 pages

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**THE RISE OF KENYAN SUPERMARKETS AND THE EVOLUTION OF THEIR
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KEY TO ABBREVIATIONS

CBS	Central Bureau of Statistics
COD	Cash On Delivery
COMESA	Common Market for Eastern and Southern Africa
DFID	Department For International Development (UK)
EAC	East African Community
FAO	Food and Agriculture Organization
FC	Factor Cost
FDI	Foreign Direct Investment
FFV	Fresh Fruits and Vegetables
GDP	Gross Domestic Product
GoK	Government of Kenya
HACCP	Hazard Analysis Critical Control Points
HCDA	Horticultural Crop Development Authority
HPHC	Horticultural Product Handling Centre
KACE	Kenya Agricultural Commodity Exchange
MD	Managing Director
MLE	Maximum Likelihood Estimation
MoARD	Ministry of Agriculture and Rural Development
MPV	Marginal Product Value
NGO	Non Governmental Organization
OLS	Ordinary Least Squares
SKU	Stock Keeping Unit
SMS	Short Messaging Services
SMT	Strategic Management Theory
TAV	Traditional African Vegetables
TCT	Transaction Cost Theory
USAID	United States Agency for International Development

THE RISE OF KENYAN SUPERMARKETS AND THE EVOLUTION OF THEIR FRUITS AND VEGETABLES SUPPLY SYSTEMS

1. Introduction

Recent research has drawn attention to the rapid growth of supermarkets and the resulting structural transformation in the agrifood systems of developing countries (for example, Reardon and Berdegúe (2002) for Latin America, and Weatherspoon and Reardon (2003) for Africa, focusing mainly on South Africa). In this essay we demonstrate that the supermarket sector is also developing rapidly in Kenya, a poor country (with a per capita GDP of roughly a dollar a day) where supermarket growth is endogenous and indigenous – without the heavy influence of foreign direct investment (FDI) by global retail chains that plays such an important role in supermarket trends in Asia and Latin America. Supermarkets in Kenya have grown from a tiny niche market only seven years ago to 20% of urban food retail today, and are rising fast. At issue is how this phenomenon is affecting food markets facing farmers, via changes in supermarket procurement systems.

We focus on the fresh fruits and vegetables (FFV) category, because government and donors have high hopes of this being a motor of agricultural diversification for small farmers, given FFV's assumed lack of scale economies, and because the relationship between supermarkets and FFV producers tends to have fewer intermediate steps, in particular in processing; procurement system changes are therefore expected to change more directly the market facing small farmers. Moreover, FFV in Kenya is a large sector, producing 3.2 million tons of fruits and vegetables with a rural-market value in 2002 of US\$354m. (3% of GDP), and the majority of horticultural producers are smallholder farmers (providing 70% of the marketable FFV) who derive a large share of their cash income from horticulture (MoARD, 2002; Kamau, 2000). Prior work on the supermarket channel for FFV sales has focused on exports (Jaffee, 1994) including specifically to UK supermarkets (Dolan and Humphrey 2000), but the literature is bereft of studies on FFV sales to supermarkets in Kenya. Yet the great majority of Kenyan FFV goes to the domestic market (90% of the volume and 70% of the sales), and, as we show below, supermarkets in Kenya already buy half as much FFV as are exported (in volume terms). Finally, domestic FFV marketing studies, such as Dijkstra (1997, 1999a, b, 2001), do not cover local supermarkets.

The essay proceeds as follows. Section 2 discusses the collection of primary field-survey data on which the study is based. Section 3 presents data on trends in the development of the supermarket sector in Kenya. Section 4 analyses the Kenyan supermarket chains' procurement system changes for FFV and discusses the implications for farmers of these changes. Section 5 concludes with policy and program implications.

2. Data and Methods

Given the absence of supermarket (or retailer) associations and industry publications, secondary data on supermarkets in Kenya are scarce (basically limited to supermarket annual reports and articles in the popular press).

Hence this essay is based on primary, field-survey data collected by the author during March to November 2003 and April 2004. (i) In-depth interviews were conducted with the executive managers and/or FFV managers of the top five supermarket chains, plus visits to their key FFV wholesale suppliers. (ii) A short survey was administered in 79 of the 87 urban areas with over 25,000 population (according to the 1999 population census, CBS, 2002b), where all supermarket stores found in these urban areas were visited and either a manager interviewed and/or observational data collected; in total, 210 valid interviews in this category were conducted. (iii) A similar survey instrument was used to interview 250 non-supermarket retailers (smaller self-service groceries and traditional retailers such as greengrocers, open air market stalls, kiosks, street hawkers and over-the-counter shops). (iv) A survey of 450 households in Nairobi, focused on their shopping habits. (v) A varied set of additional data was gathered, including interviews with government officials, key industry experts in the retail and agri-food industry sectors, and other private sector firms, and NGOs involved in the FFV industry.

3. Patterns and Determinants of the Rise of Supermarkets in Kenya

3.1 General Trends

We use the definition used by ACNielsen-Kenya for supermarkets, as ‘self-service stores handling predominantly food and drug fast moving consumer goods (FMCG) with at least 150m² (1,625 sq.ft) of floor space’. We defined ‘hypermarkets’ as having at least 15 times that floor space (2,250m²). Using these definitions, as of 2003, there were 225 large-format stores in Kenya – 209 supermarkets and 16 hypermarkets.¹ In the text, for simplicity, we use the term ‘supermarkets’ to refer to both formats, distinguishing only where needed. Note that, while the cut-off point for the definition of a supermarket is relatively low by international standards (where the threshold is usually 300-400 m²), it is judged in relation to the traditional store size by the ACNielsen definition. However, it should be noted that the average size of a supermarket in Kenya is 9,900 sq. ft. Moreover, most (80%) of the stores are part of a chain of supermarkets. Thus, small independent supermarkets are a small share of the sector.

Supermarkets have taken market share away from traditional food retailers such as kiosks, greengrocers, over-the-counter shops, market stalls and street hawkers (Table 1). The supermarket sector had an estimated turnover of US\$520m. in 2002. Supermarket food sales represent roughly 70% of total sales – US\$365m. Using triangulation from macro-data, our consumer and retail surveys and secondary data, we estimate the total size of the urban food retail market at US\$1.9 billion. The market share of supermarkets in total urban food retailing is therefore roughly 20%. (This is similar to Indonesia now or Mexico five years ago.) Sub-supermarket-size self-service shops represent another 17% of the market, and the rest, 63%, is the share of traditional retailers.

¹ We do not include in our analysis the estimated 900 to 1,400 mini-supermarkets and convenience stores, also non-traditional retail formats, that have emerged in recent years in urban Kenya.

Table 1: Food and FFV Retailing in Urban Kenya by Type of Outlet, 2003

Type of outlet	No. of outlets	Food Sales		FFV Sales	
		US\$ m.	Market share (%)	US\$ m.	Market share (%)
Kiosks, OTC shops, greengrocers	27,000	600	32	131	36
Market stalls and street hawkers	Na	590	31	211	58
Supermarkets and hypermarkets	225	365	20	15	4
Smaller self-service shops	1,200	310	17	7	2
All types	Na	1,865	100	364	100

Note: the exchange rate used was 1US\$=Ksh76.9.

Sources: authors' estimations based on authors' retailer and consumer surveys and secondary data (AC Nielsen, 2002; CBS, 2002a, b, c; World Bank, 2004; World Gazetteer, 2004; UN Population Division, 2003; UN Habitat, 2002; UN Statistics Division, 2003).

Over the next 5 to 10 years, the supermarket sector is expected to grow at a rate similar to the current growth rate, i.e. about 18% per year since 1995². At this growth rate, and assuming a market growth (urban population growth) of 4.7% (UN Population Division, 2003), supermarkets will double their market share by 2009 and become the dominant urban food retailers by 2011. This may happen even earlier if global, Asian or South African chains include FDI in Kenya in their strategies in the near future, which is perhaps a reasonable assumption.

The supermarkets' share in FFV retail has lagged behind their overall penetration of food retail (as is common in other parts of the world, for example in Latin America, see Reardon and Berdegú, 2002), but the trends are parallel. We estimate that out of US\$364m. worth of FFV marketed to the urban consumer in Kenya in 2002, supermarkets represent US\$14m. or 4% (i.e., an estimated 35,000 MT). As expected, the share is higher in large cities; in Nairobi the market share is 6-7%.

However, it is interesting to compare supermarket sales of FFV (circa 35,000 tons) with exports of FFV – 67,000 tons (MoARD, 2002). While research and policy attention has focused either on the export market or the traditional market, this third market – the supermarket market – represents already 50% of exports in terms of volumes. Because of the higher quality, higher value-added and different product composition (e.g., shelf-ready pre-packs of Asian vegetables for UK supermarkets), the same cannot yet be set about the value. While supermarkets sold an estimated \$14m. worth of fresh fruits and vegetables in 2002, the exported FOB value was \$160m. In terms of farm value, the gap closes with supermarkets representing \$9m. and exports \$45m. as exporters have higher marketing margins than supermarkets (roughly 70% vs. 40%).

3.2 Determinants of Growth

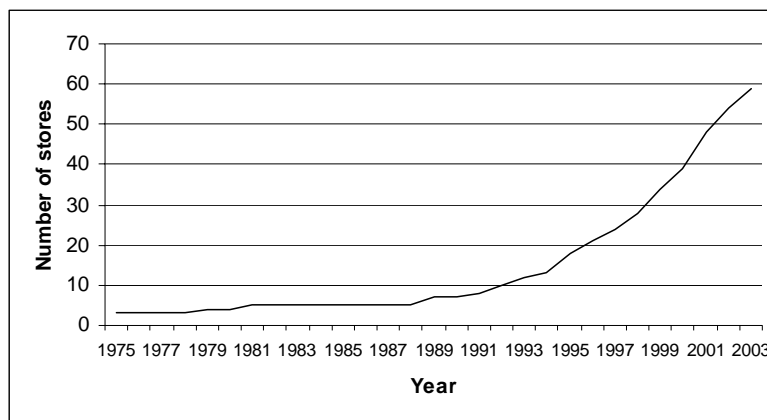
While the supermarket is not new to Kenya (the first supermarkets arose in the 1960s), their rapid growth is a very recent phenomenon, having taken off since the mid-1990s. This growth of the supermarket sector in Kenya has mainly been driven by three factors that coincide with some of those important in supermarket diffusion in other developing countries.

² We expect this because the drivers of growth (urbanization, competition, trade and market liberalization; see section 3.2) are expected to continue.

First, there has been rapid urbanization: the urban population made up 13% of the total in 1975, and 36% in 2000, and is expected to surpass the rural population by 2013 (UN Population Division 2003). Based on these UN statistics, the average urban population growth rate (4.7%) is triple that of the overall population (1.6%), as the rural population has started to decline even in absolute numbers. The populations of intermediate cities like Nakuru and Eldoret doubled between 1989 and 2002 (*World Gazetteer*, 2004). Moreover, new registrations for buses and mini-buses, mostly consisting of public service vehicles providing intra and inter-city transportation, quintupled between 1993 and 2002 (CBS, 2002b, 2003).

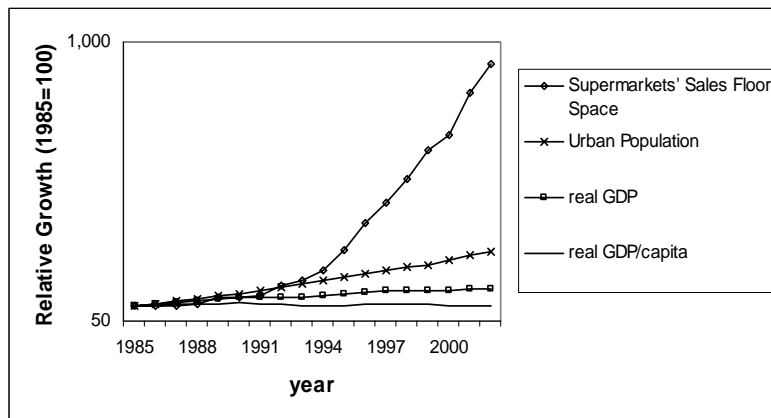
Second, trade and domestic market liberalization started in 1993. Figure 1 depicts the growth of Kenya's current top five supermarket chains over the period 1975 (when Uchumi, Kenya's largest supermarket chain, was established) to 2003. It is a kinked curve with growth really taking off in 1995, i.e., after the 1993 policy changes were starting to have an effect. The 1993 economic reforms, including liberalization and stabilization policies, had several important effects for supermarkets. (i) Import licensing removal (more imports) and market liberalization (more domestic competitors) led to a dramatic increase in product variety and shifted the retail market from a sellers' to a buyers' market in which retailers had to fight for the consumers' shilling vote. The direct consequence of the increased product variety in the marketplace is that it favored the bigger stores (supermarkets) able to stock a wider assortment of products (economies of scope). (ii) Price liberalization also played into the hands of the supermarkets because it facilitated, in Kenya, the low margin-high turnover strategy that has been the core of most of the supermarket growth around the world. (iii) There was a mild and short-lived recovery of the economy in 1995/6 (with annual real GDP growth in the 4% range) which gave consumers the buying power to try all these new products that supermarkets were marketing to them. However, note that Kenya's economy deteriorated afterwards, ending the 1990s with no growth. With a downward trend in real GDP per capita over the last half-decade (CBS, 2002a), there is no indication of a general rise in consumer incomes in Kenya. Yet, as Figure 2 shows, the supermarkets' fast growth has persisted even in these slack economic times. This is probably due to their being able to offer low-priced processed foods and staples, appealing to lower middle-income consumer groups.

Figure 1: Growth of Top 5 Supermarket Chains in Kenya, 1975-2003



Source: authors' national supermarkets survey.

**Figure 2: Growth of Supermarkets in Broader Macro Context
in Kenya, 1985-2003**



Sources: sales floor space is based on authors' supermarket survey; population data from Heston 2002; GDP data are from Econstats, 2004.

Third, while Kenya's supermarket revolution is unlike that of most developing countries outside of Africa that had massive inflows of retail FDI after investment liberalization in the mid/late 1990s (but similar in the following respect to South Africa, see Weatherspoon and Reardon, 2003), Kenya's supermarket sector growth has been almost completely indigenous and endogenous. However, inter-chain competition in domestic investment has been very vigorous, playing the role of foreign versus domestic chains' investment competition seen elsewhere. Of course, 'if' and when outside chains do enter, the intensity of the investment rivalry will increase. The entry of foreign retailers after domestic supermarkets reach a critical point in their growth is what has been observed in other developing countries (e.g., in Argentina; Ghezan et al. 2002)³. These foreign chains bring with them high levels of operational efficiency and spark a price war which forces all supermarkets to speed up the already initiated process of driving down costs and pushing into new, less competitive but also less rich markets (smaller towns, lower income neighborhoods).

Before 1993, the main supermarkets grew within the boundaries of a single town, leading to local fiefdoms. Uchumi broke this pattern in 1993 by building its first store outside Nairobi, in Nakuru, starting a national-level competition that has built-in crescendo. Most notably, the rivalry between leading chains Uchumi and Nakumatt became an important growth driver; a new strategy by one chain forces imitation and/or a counter strategy by its competitor. For example, Nakumatt's introduction of large-format stores in 1995 led to the introduction of hypermarkets by Uchumi in 1997. Uchumi's subsequent introduction of a fully-fledged FFV department in that year (coinciding with its first hypermarket in Nairobi) was followed by Nakumatt in 2001. Over time, this competition has moved from such conspicuous differentiation strategies to the more subtle price-based competition implying economies of both scale and scope.

³ The interest of South African supermarket chains to enter the Kenya markets dates back to at least 1994 when Pick'n Pay offered to buy Uchumi (authors' interview with Suresh Shah, MD Uchumi 1986-99, 27 March 2003).

3.3 A Three-Tiered Supermarket Sector with High Concentration: Emergence of Uchumi and Nakumatt as Market Leaders

Kenya's supermarket sector has three tiers (Table 2). The first tier consists of the two clear market leaders and also the leading FFV retailers, Uchumi Supermarkets and Nakumatt, which together control nearly 50% of the supermarket sector. The second tier consists of Tusker, Ukwala, and Metro Cash 'n Carry chains. These top five chains have 28% of the large-format stores in Kenya and 60% of the sales, indicating a concentrated sector (similar to Latin American and European levels of concentration). Figure 3 shows that since 1996, in terms of store size (a proxy for sales), the top five have surpassed the other supermarkets and are growing at a faster pace, increasing their dominance over time. The supermarkets in the third tier consist of small chains (of which there are about 40) and independent (single-store) supermarkets. There is only one publicly traded Kenyan supermarket (Uchumi) and one foreign-owned supermarket of significance (Metro).

While selling FFV in supermarkets is not a rarity, given that overall 4 out of 10 supermarkets sell them to various degrees, it is highly concentrated in the hands of two leading chains. Of the Ksh1 billion worth of FFV sold through supermarkets, Uchumi and Nakumatt represent roughly 70% and 20% respectively.

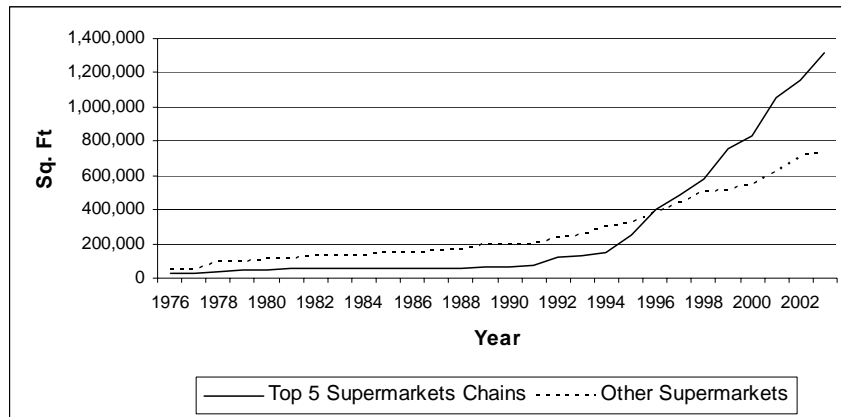
Table 2: Supermarkets and Hypermarkets in Kenya, 2003

Company	Super-markets	Hyper-markets	Total stores	Average store size (sq. ft)	Market share (est.) (%)	Stores selling FFV (%)	Ownership
<i>Market leaders</i>							
Uchumi	23	4	27	16,400	26	100	Public Kenyan
Nakumatt	4	8	12	48,700	20	100	Asian Kenyan
<i>Second tier</i>							
Tusker	7	1	8	14,500	6	25	African Kenyan
Ukwala	9	0	9	9,100	4	0	Asian Kenyan
Metro	2	1	3	28,400	4	0	South African
<i>Third tier</i>							
Small chains	71	1	72	6,200	24	40	54% Afric. Kenyan 44% Asian Kenyan 2% Other
Independents	93	1	94	4,200	16	22	51% Afric. Kenyan 45% Asian Kenyan 4% Other
<i>All supermarkets</i>							
All	209	16	225	9,900	100	41	13% Public Kenyan 41% Afric. Kenyan 42% Asian Kenyan 4% Other

Note: market shares refer to total sales and are based on sales estimated from store sizes, interviews with upper-level supermarket managers, the supermarket survey and Uchumi's annual reports.

Source: authors' national supermarket survey.

Figure 3: Growth of Supermarkets in Sales Floor Space in Kenya, 1976-2002



Source: Authors' national supermarkets survey.

Uchumi

Uchumi Supermarkets Ltd was established as a wholly government-owned company from three existing stores in Nairobi in 1975. In 1992, as part of the government's ongoing structural adjustment programmes, Uchumi became a public company traded on the Nairobi Stock Exchange. However, its three main shareholders, who jointly owned 51% of the stock in 2003, are the original ones, namely, ICDC, wholly government-owned, and KWA and ICDCI, both of which have the government as a key shareholder (Uchumi, 2003). This means that the government has a strong presence on the board of Uchumi which has to approve major strategic decisions such as investments.

A new phase in the company's history began in 2001 when Uchumi embarked on an ambitious five-year expansion plan, key features of which include an increase in the number of stores from 17 to 50, an expansion into the regional market (Uganda, Tanzania), the construction of a new distribution centre in Nairobi and the installation of a satellite-based IT system linking all its stores to this new centre. Good progress was made at first: 10 new stores (including two hypermarkets in Nairobi and one in Kampala, Uganda) had opened by December 2002 (doubling its total floor space from 215,000 to 450,000 sq. ft over this two-year period), the new distribution centre was finished by 2003 and the new IT system started in September 2003. However, a combination of high-interest short-term financing tools and investments outpacing sales growth led to the first annual loss in the company's history (for the fiscal year ending 30 June 2003). The subsequent backlash from worried investors led to the decision to put the 5-year expansion plan on hold for a year.

Uchumi took \$135m. in sales in 2003 (Uchumi, 2003), about 1% of Kenyan GDP, more or less the same as Wal-Mart/US sales are of US GDP. Uchumi today is the market leader with 27 branches in seven urban areas throughout the country (Nairobi, Mombasa, Nakuru, Eldoret, Meru, Karatina, Kisii) and one branch (a hypermarket and the company's flagship store) in Kampala, Uganda. These 28 branches include various store formats, reflecting the fact that Uchumi targets customers from all socio-economic classes. Its 4 hypermarkets with large parking areas along the main entry/exit roads in Nairobi mainly attract high- and middle-income consumers. Its smaller 'neighborhood' stores in the city's residential areas ('estates') mostly

target middle-income consumers. Its city centre stores near busy bus stages (5,000-20,000 sq. ft) mostly attract the middle- to low-income consumers.

In 1997, Uchumi was the first major chain in Kenya to introduce FFV items in its stores (as part of an overall strategy of building up 'fresh' categories: dairy, meats, bread, FFV). Starting out with some trial sales, FFV sales are now over Ksh50m. per month. Today, all Uchumi branches have a FFV section, although their size and assortment vary with the customer-base, with the most developed sections found in the hypermarkets where they can take up 7% of the sales floor space and offer over 300 stock keeping units (SKUs) from American pink sweet potatoes to zebra yellow melons (although only 100 or so are available at any one time). The FFV section in hypermarkets also includes value-added (and increasingly branded) products such as a line of organic products or pre-cut vegetable packs. In stores targeting lower-income consumers, the FFV sections are smaller, carry fewer SKUs and focus on the staple FFV items of the poor (such as kale, spinach, cabbage). Notwithstanding this broad customer targeting, FFV sales at Uchumi are still very much focused on Nairobi (90% of sales) and its hypermarkets (60% of sales).

Nakumatt

Privately-owned Nakumatt was established in Nakuru in 1985 (then still Nakuru Mattresses) and remained a small operation until it moved to Nairobi in 1992. By assertively opening stores in key locations and by expanding existing ones, Nakumatt grew into a major supermarket chain with 12 large-size branches in Kenya's three main urban centres (9 in Nairobi, 2 in Mombasa, 1 in Kisumu). Nakumatt's growth is facilitated by being part of a network of companies with cross-shareholdings (Nakumatt Holdings), which gives it excellent access to financing (investment loans), human resources (rotating managers) and physical capital (such as trucks).

In 1995, inspired by first-hand experience with large, customer-oriented US retail formats, Nakumatt introduced the supercentre store format into Kenya (i.e., department stores with a fully-fledged supermarket added à la Wal-Mart). Today 8 of its 12 branches can be categorized as supercentres. One of these, the Nakumatt Mega branch in Nairobi, has 175,000 sq.ft of floor space, making it the largest retail outlet in East Africa. The large average size of its stores explains why, although it has less than half the number of outlets of its main competitor Uchumi, Nakumatt has 30% more floor space (585,000 sq. ft vs. 450,000 sq. ft). Throughout, Nakumatt's consumer focus has been mainly on the high-income segment (50% of its customers fall into this category). In 2001 Nakumatt started selling FFV in its stores. Hesitant at first, it has now fully embraced the FFV section and is rapidly expanding it; all its branches have a modern FFV section. Chain-wide sales have grown to Ksh16m. per month and are expected to grow to Ksh50m. per month within the next three years.

Second and Third Tiers

The second tier in the hierarchy consists of the medium-sized Tusker Mattresses, Ukwala and Metro Cash 'n Carry chains with an estimated 6%, 4% and 4% of the supermarket sector respectively. All three are catering to and fiercely competing for the dollar vote of the middle- to low-income urban consumers, Tusker and Ukwala by operating stores located downtown near the busy bus stations used by consumers in this income class, who do part of their shopping

before going home at the end of the day, and Metro indirectly by supplying the smaller self-service stores located near these same bus stages as well as in the residential areas. The Tusker and Nakumatt chains are in a strategic partnership which, given the two chains complementary customer bases, targets urban households from the lowest to the highest income category.

The third tier, the remaining 38% of the supermarket sector, consists of a varied group of smaller chains and independent stores. Here we find the supermarkets located in the smaller towns as well as those that have traditionally catered to high-income groups and expatriates (e.g., settlers' stores). These stores compete with the above chains by (i) moving to and expanding in understored areas, (ii) adjusting their product assortment with specialty foods for a particular target group (e.g., expatriates) and/or (iii) developing a more personalized service. The small chains group consists overwhelmingly of 2-branch and 3-branch chains (68% and 27% respectively). About 40% of these supermarkets sell FFV.

3.4 Diffusion Patterns

Our research revealed several interesting patterns in the socio-economic and geographic diffusion of supermarkets in Kenya. First, while Kenya's white and Asian consumers were important as part of the initial narrow base of consumers for the early stages of supermarket development, we calculate that their purchases now constitute a mere 15% of total supermarket sales.

Second, supermarkets have spread from higher-income niches in the capital, to middle- and lower-middle income segments in the capital and out into secondary cities and lately into towns. Table 3 shows that they are now found in urban centers of all sizes. In 2003, nearly 60% of the stores were located outside of Nairobi and basically every provincial capital had one or more supermarkets. Taking store size into account as a proxy for sales, Nairobi still accounts for the majority (56%) of sales. In terms of store density, it is clearly in the lead with 36 stores per million, nearly three times the level of the rest of urban Kenya.

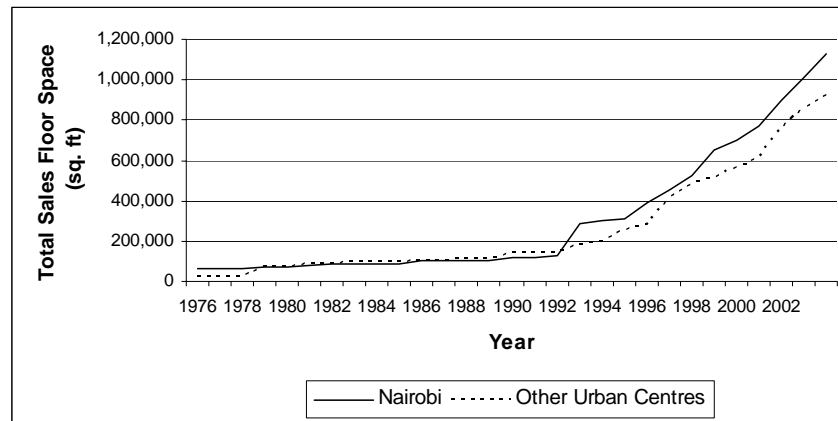
Table 3: Geographic Distribution of Supermarkets in Kenya, 2003

Name or pop. size ('000)	Urban centers		Supermarkets		Supermarket floor space '000 sq. ft		Density (stores per m.)
	No. of centers	Aggregated population ('000)	No.	%	sq. ft	%	
Nairobi	1	2,600	94	42	1,190	56	36
Mombasa	1	800	10	4	220	10	13
100-350	18	3,320	66	29	480	22	20
50-100	30	2,670	33	25	190	9	12
25-50	37	1,730	17	8	50	2	10
10-25	33	760	5	2	20	1	7
All centers	120	11,880	225	100	2,150	100	19

Sources: population data extrapolated from 1999 census data (CBS, 2002b) using urban population growth data from UN Population Division (2003) and UN Habitat (2004). Supermarket data based on the authors' survey.

Figure 4 depicts the growth of supermarkets in terms of floor space in Nairobi vs. other towns over the period 1975-2003. In the absence of historical statistics on the number and size of retail outlets, we used the year of establishment of the supermarket stores in existence in 2003 as a proxy. The figure shows that supermarkets are growing almost simultaneously in Nairobi and elsewhere.

Figure 4: Growth of Supermarkets in Nairobi vs. Other Urban Centers in Kenya, 1976-2003



Source: authors' national supermarkets survey.

Nevertheless, there appear to be two successive waves of diffusion. First, one observes the emergence of independent stores which expand to other nearby centers, becoming small local chains in the process. Then the top five chains move into town, creating a shake-out whereby the out-competed smaller chains either close down completely or move to the next, less competitive and (increasingly) smaller town, thus fuelling the first wave of diffusion. From their base in Nairobi, the top five chains have moved into Mombasa (population 800,000) and intermediate cities (population 200-350,000). Uchumi moved to Nakuru in 1993, to Eldoret in 1999 and to Mombasa in 2000. Nakumatt moved to Mombasa in 1996 and to Kisumu in 1997. Metro moved to Eldoret in 1999 and to Kisumu in 2001. Ukwala followed suit moving to Eldoret in 1999 and to Kisumu in 2003. The top five chains are now also expanding into smaller towns: Uchumi, as part of its five-year plan, opened three of its latest stores in smaller towns like Meru, Karatina (both around 125,000 inhabitants) and Kisii (75,000 inhabitants) and announced further plans for expansion into other small towns like Thika and Nyeri.

In their expansion from Nairobi, the supermarket chains select towns that have (i) large populations (in the town centre and its hinterland), (ii) many households with a regular income (implying more potential regular customers), (iii) nearby high-consumption customers such as rich white farmers or major tourist resorts, and (iv) less competition from other supermarkets. Table 3 shows that moving away from Nairobi to intermediate and then smaller towns implies moving from high to lower supermarket density (and thus less competitive towns). Growing out into underserved urban areas is considered by the Kenyan supermarket sector a big opportunity – ‘a domestic supermarket scene far from being saturated’ (Wachira, 2002; Wahome, 2001).

The growth of Kenya's supermarkets has also taken on an East African regional character with outward Foreign Direct Investment (FDI) facilitated by regional trade agreements COMESA (Common Market for Eastern and Southern Africa) and (from July 2004) EAC (East

African Community). Against the back-drop of a rapidly growing regional trade (for example, since 1998 COMESA has outgrown the European Union as Kenya's most important export market), Uchumi opened its first branch outside Kenya in Kampala (Uganda) in December 2002, a key motivation being the expectation of higher margins there (Akumu, 2003). From their regional expansion plans for the next five years it appears this is just the first drop of an upcoming flood of outward FDI by Kenya supermarkets. When interviewed on the topic, Mr. Vijay Shah, Strategy Coordinator of Nakumatt, indicated that his company plans to open branches in Uganda (2), Tanzania (2), Rwanda (1), Burundi (1), Zambia (1) and Zimbabwe (1) over the next five years. Uchumi's expansion plans include stores in Tanzania and Rwanda as well as more stores in Uganda.

Such rapid diffusion of supermarkets – the start of a retail transformation in Kenya – is bound to have, as it has had elsewhere, important effects on the agrifood systems, and markets faced by farmers. To understand these changes we now focus on changes in the procurement systems of the leading chains.

4. Supermarket FFV Procurement Systems and Requirements

Our conceptual approach to the changing structure of the supermarkets' FFV procurement system mainly draws from strategic management theory (SMT) and transaction cost theory (TCT). Each theory addresses a different side of the same coin: SMT deals with the objective of creating competitive advantage (benefit-side), TCT looks at optimizing the cost efficiency of the institutional format (governance structure) used in creating competing advantage (cost-side).

SMT postulates that economic agents develop and implement strategies which reduce competition in the industry and thus enable them to earn above normal profits (Porter 1980, Barney 1996). They do so by (continuously) creating competitive advantages⁴ which competitors cannot easily imitate or nullify because of barriers to entry (e.g., economies of scale, product differentiation, collusion in a concentrated industry, and so on). The extent to which firms can develop such competitive advantages critically hinges on how (well) they are linked to their input and output markets. In the TCT framework (Williamson 1985, 1991), economic agents (in our case the supermarket produce procurement managers) choose vertical coordination strategies that minimize the transaction costs which follow from having to deal with uncertainties caused by a combination of the agent's bounded rationality, the (potential) opportunism of their trading partners (in our case the FFV suppliers) and the presence of (physical and organizational) assets which are highly specific to the transaction (i.e., these assets lose much of their value in their next best alternative use). Vertical coordination strategies can be set out along a continuum from spot market transactions (high in flexibility, low in control) to vertical integration (high in control, but danger of x-inefficiencies) (Peterson et al. 2001).

Before the rise of domestic supermarkets, there existed two distinct FFV marketing systems, one at each of the extremes of the vertical coordination continuum: the traditional domestic system and the export system. Kenya's traditional FFV marketing system is characterised by fragmentation at both the producer and the retailer ends of the supply chain, market power with the wholesalers, long channels, direct payment to suppliers, little quality control or grading, few standards, little or no product innovation, small volume transactions and

⁴ Examples of such competitive advantages are: lower production costs, higher perceived product quality, the development of products with unique benefits that are highly appreciated in the market.

small inventories. In stark contrast, the export-oriented part of the horticultural sub-sector is highly dynamic, continuously developing new products and implementing institutional and organisational changes (such as contracts, codes of good agricultural practices, traceability systems) that have increased competitiveness and spurred a rapid growth of exports to the European Union market.

The introduction of a fresh FFV section by the leading supermarket chains in the second half of the 1990s created a third marketing system for FFV in Kenya, which over time is shifting from the traditional to the export model. At first, supermarkets relied on traditional wholesale markets, basically taking the traditional informal sector supply chains of FFV as givens and working with these. This is the way the non-leading chains still work today, and we do not therefore deal with them in this section. Overall, wholesale markets remain the main source for these supermarkets, with on average 29% of supermarket FFV supplies coming from this source. Next are direct supplies from farmers (23%), supplies from brokers (19%) and supplies from importers (11%). The remaining 18% consist of supplies from own farms and from exporters.

The FFV section in Kenya's supermarkets has played an important role in their competitive strategies. At first, simply having a FFV section was the competitive advantage, this then shifted to having a larger assortment, better quality, more reliable availability and more value-added products (as the initial focus was on high-income consumers), followed by the current focus on getting prices down (in order to reach middle-to-low income consumers) and plans are being drawn to make food safety guarantees the next competitive advantage in the FFV retailing by supermarkets. In aiming for these different objectives, supermarkets face many uncertainties when sourcing from spot markets: quality, availability, price, and so on, are all fluctuating strongly. In order to gain more control over their supply chains, supermarkets have started shifting away from spot markets along the vertical coordination continuum. While vertical integration (supermarkets owning their own farms) has emerged in Kenya's supermarket sector, it is rare and appears to be destined to disappear as those cases indicate that the costs of organizing such disparate activities under one management are high. The governance structures supermarkets are moving toward most clearly are therefore contract relationships (intended to be long-term) which provide more control than spot markets but keep overhead costs down and provide greater operational flexibility. A similar observation on the importance of long-term contractual relationships was made by Jaffee (1995) with regard to Kenya's FFV export channel.

Both to create competitive advantage and to manage transaction costs, supermarkets have implemented a number of technological, organizational and institutional changes: formal quality standards (and their enforcement mechanisms), contracts, distribution centers (centralized buying), IT systems for product flow management and communication, shorter supply channels (more direct links with farmers) and fewer (but larger) suppliers (like their customers, supermarkets prefer one-stop shopping for their procurement). As these chains grow, they are building up the market power, financial means and geographic presence to realize all these changes and to demand compliance from their suppliers. The supermarkets' FFV suppliers on the other hand have to make transaction specific investments of their own (e.g., organize their labor force to deal with short order cycles, develop staggered production systems which smoothen out supply over time, and so on) and are therefore also keen on establishing contractual relationships which help safeguard these assets to some extent. With supermarkets and their FFV suppliers continuously increasing the sophistication of their supply chain in the pattern set out above, they are creating a fundamental structural change in agri-food supply chains.

In the remainder of this section we focus mainly on the two market leaders (Uchumi and Nakumatt, which sell 90% of FFV sold through supermarkets), in order to illustrate first the difference and then the convergence of their procurement systems. A few years ago, the two leading chains had very different systems (Uchumi with a decentralized system with a preferred supplier program that emphasizes the use of medium/large farmers, versus Nakumatt, with a centralized system but dependence on an outside specialized wholesaler who relied on small growers). Driven by the same determinants (create competitive advantage, lower transaction costs), the two systems have very recently converged, however, with Nakumatt bringing procurement in-house (into the same holding company) and shifting towards medium/large farmers to ensure quality and consistency and reduce transaction costs. For supermarkets, smallholder FFV producers operating in groups could theoretically provide the same advantages as larger farmers but few such groups exist for domestic market FFV, mainly because organizing smallholder farmers in efficient and effective groups has substantial costs associated with it and few intermediaries have (by 2003) taken initiatives in this regard. However, the thousands of smallholder producers involved in Kenya's (highly efficient) export channels illustrate that it is possible (Jaffee 1995).

From an initial total reliance on traditional suppliers, the leading supermarket chains have thus started to develop the five pillars that have characterized the evolving FFV procurement systems of supermarkets in developing countries that are ahead of Kenya in terms of supermarket development (Reardon et al., 2003): namely, (i) centralization to distribution centers away from store-to-store deliveries; (ii) shift from reliance on traditional wholesalers to use of specialized/dedicated wholesalers; (iii) shift from the spot market to use of preferred supplier systems; (iv) shift from local procurement to regional, or regionalization; and (v) imposition of private safety and quality standards.

4.1 Uchumi: A Decentralised System with a Preferred Supplier Programme⁵

Centralization

FFV procurement at Uchumi is in a transitional phase from semi-decentralised to centralised. The retailer has most of its FFV suppliers deliver direct to its four hypermarkets and to the City Square branch (which housed its headquarters until 2003) in Nairobi. These five stores function as distribution centres to the smaller stores in Nairobi as well as the up-country branches. This system applies mostly to high-volume, semi-perishable items sourced domestically (e.g., onions, tomatoes, potatoes), imported fruits (e.g., citrus from Israel, South Africa, Egypt) and even some imported vegetables (e.g., garlic from China). At the same time, the smaller supermarkets in the chain have farmers supply some FFV items (such as greens) directly. The use of dedicated FFV trucks (with refrigeration) is not yet economical for the up-country branches, given the small volumes involved.

During 2003, Uchumi constructed a new (large) distribution centre (DC) of 15,000m², two units of which (one incoming, one outgoing) are equipped with cooling facilities and intended for FFV. Improving quality level and consistency is the key reason for centralizing the FFV procurement. In combination with a modern IT system that links all of its stores by satellite

⁵ The information for Uchumi's procurement system is mostly based on several interviews with Mr Nzioka Kioko, Category Manager – Fresh Produce Uchumi, his successor Mr Peter Nderu and first-hand observations by the author, interviews with branch managers and the authors' national survey.

communication (also installed in 2003) and that allows a centralized tracking of individual product items (SKUs) at each store, the DC will allow for better stock management of all SKUs (including the FFV which are sold bar-coded). With the DC facilitating the development of cold chains, Uchumi plans to introduce insulated trucks in 2004/5, at which point it will gradually start demanding investment in cold chain technology from its suppliers. All FFV items are delivered by the different suppliers directly and shelf-ready to the different procurement points. No packaging, labeling or primary processing (e.g., fresh-cut) is done by Uchumi.

Supplier selection

As most Kenyan horticultural producers lack the scale of operations to provide the large supermarket chains consistently throughout the year with the volume and quality of FFV they require, Uchumi's procurement managers purchase from a mixture of suppliers, including farmers of different sizes, traditional brokers and the wholesale market, specialised wholesalers, importers and exporters diverting their (excess or quality rejected) FFV to the domestic market. Table 4 indicates the composition of Uchumi's FFV suppliers in 1997 (the year of the first sales of FFV at Uchumi), in 2003 and in 2008 (as estimated/predicted by Uchumi's produce manager). In this table, 'farms' refers to farms that supply Uchumi either directly or via a single marketing facilitator who has a longer-term relationship with them. Examples of such market facilitators are farmer marketing associations and specialised wholesalers who work with farms through outgrower schemes (e.g., exporters, lead farmers). Marketing facilitators are still rare amongst Uchumi's FFV suppliers (some examples are given below) and in this description we group them under 'direct supplies from farmers'. By contrast, traditional brokers and wholesalers are those who bulk supplies from many sources without registering or preserving the identity of the farms. We define 'small farms' as farms with less than 10 acres, 'medium-sized farms' as farms with 10 to 40 acres, 'large farms' as farms with 40 to 200 acres and 'plantations' as farms with more than 200 acres.

According to Table 4, for vegetables, which make up 45% of the value sold at Uchumi, roughly 50% is sourced directly from growers. Medium-sized producers supply the largest share, with 25%, followed by large farms with 15%, and small farms with 10%. Brokers supply 45% of Uchumi's vegetables, while the rest (5%) is imported. Small farmers supply mostly leafy greens (kale, spinach, traditional African vegetables) and vegetables sold in small volumes (e.g., herbs). Other vegetables are supplied by the larger farmers. The latter especially applies to fresh-cut vegetable packs because most small-scale farmers do not have a packing shed, which in this case is a key requirement. Currently 75% of fresh-cut vegetable packs are supplied by large farms and this percentage is expected to increase to 90% over the next 5 years. Brokers mainly resolve shortfalls. Imported vegetables include tomatoes, onions, garlic – basic products for which local supply chains are still inadequate relative to Uchumi's needs.

Table 4: Uchumi's FFV Supply Composition by Supplier Type, 1997-2008 (%)

Type of supplier	<u>Vegetables</u>			<u>Fruits</u>		
	1997	2003	2008	1997	2003	2008
Small farms	13	10	15	5	10	10
Medium-sized farms	10	25	30	10	10	10
Large farms and plantations	5	15	35	0	15	35
Traditional brokers/wholesalers	70	45	10	70	40	10
Imports	2	5	10	15	25	35

Source: authors' interviews with Mr. Nzioka Kioko, FFV Manager, Uchumi.

For fruits, which make up 55% of the value sold, Uchumi sources 35% directly from growers, 15% from large-scale farms, 10% from medium-sized farmers and 10% from small producers. Imports represent roughly 25% of procured fruit and the remaining 40% is supplied by brokers. Small farms play only a small role with regard to fruits (examples of fruits where they are involved are watermelons, passion fruit and strawberries). For fruits there is a heavy reliance on brokers (because they buy mangoes, for example, from smallholder producers in different regions of the country as the seasons change), large-scale farms/plantations (e.g., Kakuzi, a 6,400-acre agrifood business listed on the Nairobi Stock Exchange) and imports. As a group these three suppliers represent 80% of Uchumi's fresh fruits supplies.

As Uchumi's sales of FFV increase, it is moving away from traditional brokers (and their long supply chains *and* the mostly smallholder producers they buy from) to get supplies directly from farmers. Table 4 indicates that brokers, as a source of FFV, have decreased from the main supplier category (70% in 1997) to less than 50% in 2003 (45% of vegetables and 40% of fruits). Reducing its reliance on brokers is the first priority at the moment for Uchumi's FFV procurement, and management expects that by 2008 brokers will make up no more than 10% of supplies, i.e. they will only be used to resolve shortfalls from regular suppliers (similar to Freshmark, Shoprite's FFV procurement arm in South Africa; Weatherspoon and Reardon, 2003). Direct supplies by farmers allow supermarkets to increase simultaneously control over quality, supply reliability and price stability and thus make them more competitive with traditional retailers (in terms of product quality and reduced stock-outs).

Given the increase in scale and the need to be price-competitive, the supermarket FFV procurement managers are under cost pressures to deal with fewer and larger suppliers. Table 4 indicates that large farms are the main beneficiaries of Uchumi's declining reliance on traditional brokers. Between 1997 and 2008 large farmers are expected to increase their share in Uchumi's vegetable supplies 7-fold from 5% to 35%. Absent as suppliers of fruits in 1997, large farms now supply 15% and are expected to have a 35% share by 2008. A notable example is the 13,000-acre pineapple plantation that is a vertically integrated part of Delmonte, a pineapple and other fruits processor (canned fruits, tetrapak-packaged fruit juices). The key attraction for a supermarket chain like Uchumi is that a company like Delmonte is already used to dealing in large volumes, assuring a consistent volume of high quality supplies for its processing plant.

Uchumi already relies heavily on a small group of about a 100 medium to large suppliers, especially when supplies are low. These 100 farmers form the core of an emerging preferred suppliers list. All in all, there were about 150-220 regular, registered suppliers for FFV at Uchumi in 2003 (depending on the season). This number is expected to rise to 300 over the next four years, mainly because the planned network extension to 50 stores will include several up-country branches that will add suppliers from the local farming communities. Given the current

decentralized procurement system, branch managers can (but are not restricted to) use this list of registered suppliers to order FFV in a composition that fits their clientele (payments to suppliers are still dealt with centrally). As a group, medium and large farms already make up 40% of vegetable supplies and 25% of fruit supplies. By 2008 they are expected to become the dominant suppliers with 45% of fruit supplies, and 65% of vegetable supplies. Larger suppliers are not only gaining ground because they can supply larger volumes and thus reduce transaction costs for Uchumi. These farms are also the ones which have invested in irrigation systems which give them greater control over quality as well as allowing them to produce all-year-round. One reason why Uchumi prefers direct supplies by farms is that it allows them to inspect them and observe their irrigation system first-hand. Having reliable irrigation is a *sine qua non* for farmers who want to get on the supermarkets' preferred supplier list.

Marketing facilitators or wholesalers who are specialized (in a particular product) and/or dedicated (to a particular supermarket), are rare amongst Uchumi's suppliers, but they are emerging. Currently they focus on smaller-volume FFV items that address particular gaps in Uchumi's FFV product line. The following are some examples: Family Concern, Iga Muka, and Sunripe. Family Concern is an NGO that aims to combine development and business objectives in building horticultural linkages. Having identified, besides Uchumi, that there exists a high, unmet demand for traditional African vegetables, Family Concern set out to build supply capacity for traditional African vegetables amongst smallholders. These products appeared in the FFV section of Uchumi's Ngong hypermarket in 2004. Iga Muka, a 30-member farmers' association operating in the Sagana development scheme on the slopes of Mount Kenya, succeeded in linking up with Uchumi via the Kenya Agricultural Commodity Exchange (KACE), a private sector firm that facilitates linkages between sellers and buyers of agricultural commodities, mainly by developing marketing information systems that reduce the information asymmetry between farmer and broker. Iga Muka supplies small volumes (60-100kg/week) of strawberries to Uchumi. Sunripe Ltd, one of Kenya's leading agro-exporters, produces from its own farms, but also buys from around 1,000 smallholder producers, predominantly as outgrowers through contract farming (Shah, 2004). Sunripe is Uchumi's key supplier for pre-packs of mixed vegetables. It is used to the high demands (for example, with regard to hygienic processing) and contracts often for more volume than it can sell in export markets. Since it is contracted to buy the FFV from the outgrowers, it needs a market for the excess production. Uchumi gets a high quality product while Sunripe gets more flexibility, while spreading its market risk.

Uchumi's historic relationship with the government (formerly government-owned and still with a strong government presence on its board) has had little impact on its selection of FFV suppliers, not only because Uchumi operates like a regular commercial player which has to respond to the challenges of a competitive market, but also because the government has largely been absent from the horticultural sub-sector.

Uchumi's selection of FFV suppliers is also determined by their business management skills. Compared with selling to traditional markets, selling to supermarkets implies far more formal transaction methods as well as more stringent delivery conditions. However, most relationships are informal – only a small number (about 5%) of suppliers have written contracts with the chain. These contracts stipulate the delivery volume and frequency (similar to a standing order), the quality standard for the product and (a limited set of) code of practice requirements such as non-use of banned chemicals, the use of dust covers during transportation and use of clean irrigation water (as opposed to sewage water). Although a running average price for the

year is indicated, the price is not fixed in the contract as Uchumi must be able to follow price movements in the market. Because Uchumi wants to build up long-term relationships with its farmers, its pricing policy is never to pay below the actual production cost (even if market prices drop below cost) and to balance this by paying lower prices when prices peak. Contracts also stipulate what constitutes an accepted reason for non-delivery. At this early stage in the formation of the supermarket's produce procurement system, these contracts are used more as an instrument to streamline and formalize the relationship between supermarkets and their preferred suppliers, than that it is intended as an enforceable legal document. At this stage both the farmer (who faces the risk of not being able to supply the required volume) and the supermarket (who risks having to pay farmers a price that is too high above fluctuating wholesale market prices to be competitive with traditional retail outlets) prefer contracts (in terms of volumes and prices) that have a great deal of flexibility.

Our interviews with management revealed that the percentage of farmers under contract is planned to increase dramatically to 70% within the next five years as key suppliers (who have proven their value) are identified. These key suppliers are expected to be distributed as follows: 30% as medium-sized farms, 40% as large farms and 30% as importers. Contracts will also focus mainly on products for which there exists a resolvable supply problem. For example, contracts are not needed for local pears, a seasonal item which is available in great quantity during a brief period of a few months and totally unavailable during the rest of the year.

Uchumi reduces transaction costs by requiring that listed suppliers have cell phones. About 85% of orders are placed by telephone – even to smaller producers – and for the most perishable FFV (e.g., the leafy greens) these orders are placed only 12 hours before expected delivery (evening call for next morning delivery). Suppliers should also have bank accounts, as Uchumi plans to move to payments through bank transfers on a monthly or bi-weekly basis. Suppliers without phones and bank accounts will be delisted in future.

Uchumi pays 2-4 weeks after delivery rather than the cash-on-delivery payment of the traditional systems. Suppliers to Uchumi also pay fees for breakages (unsold or spoiled produce) and for promotions. Before the introduction of these breakage fees (a flat rate of 7% of the purchase price), Uchumi used to inform farmers of the amount of breakage and ask for replacement at the farmer's cost – a system which was abolished because it increased transaction costs and suffered from the practical problem that it was difficult to know which supplier's produce was responsible for what percentage of the breakage. In terms of delivery conditions, supermarkets are much more stringent than the traditional system. For example, FFV needs to be washed and sorted (some sorting takes place at the receiving bay, but for the greater part if the product is not graded, the whole load is rejected). It also has to be supplied regularly (e.g., daily for tomatoes and greens, every 2-3 days for semi-perishables like onions), has to weigh an assured minimum, needs to be transported with great care (e.g., leafy vegetable bundles need to be transported loose, rather than stuffed into bags as is required traditionally) and, if packaged, needs to be bar-coded and labeled. Although not required at the moment, packing sheds will become compulsory.

It is evident that several benefits outweigh the above non-traditional costs and requirements of supplying to Uchumi, or this market would not attract medium-sized and large farmers that have market options. Namely, Uchumi lowers access costs and requirements for a variety of inputs. (i) Uchumi intermediates with seed, fertilizer, and chemical suppliers to negotiate lower prices and better quality for its preferred suppliers. (ii) Uchumi also intermediates with creditors for loans for investment in irrigation and trucks – and thus a written

contract with Uchumi serves as a kind of collateral substitute. These loans can be substantial – from Ksh400,000 to Ksh6m⁶. In this context, Uchumi has been negotiating with organizations like the International Finance Corporation in order to provide better lines of credit to its FFV suppliers. Once supplier-contracts become more widespread, FFV suppliers will find it easier to access credit through regular channels as it will be easier to convince loan administrators at commercial banks of their creditworthiness. (iii) Uchumi reduces information costs by organizing meetings with its FFV suppliers to inform them of market opportunities and requirements; it is also considering providing direct technical assistance to its preferred suppliers (via a full-time agronomist).

Regionalization

Although horticulture is well-developed in Kenya, especially for vegetables, and most FFV items are procured locally, imported FFV are gaining importance on the supermarket shelves. As Table 4 shows, imports are expected to increase their share of Uchumi's vegetable supplies 5-fold from 2% in 1997 to 10% in 2008. For fruits, imports are even more important, with 25% of supplies today originating from other countries. For FFV as a category, imports make up about 15% at Uchumi, at least three times the share of imports in the country's urban FFV market as a whole (estimated at less than 5% of total consumption).

Imported FFV are becoming more important for several reasons, depending on product and season. (i) They complete the year-round availability of items which are not (e.g., apples), or only during a few months in the year (e.g., pears), produced in Kenya. (ii) They are more competitively priced and address low availability due to seasonality (e.g., the mostly informal imports of pineapples and bananas from Uganda and tomatoes, oranges and onions from Tanzania). (iii) They offer produce of a quality which is not available from producers in Kenya (e.g., oranges from Israel, bell peppers from Holland). In some cases, all of these reasons apply simultaneously. For example, garlic from China is cheaper, available year-round and of a superior and more consistent quality (at least visually) than the locally grown alternative. As a consequence, imported garlic, available in Kenya's supermarkets and open air markets alike, has grown from 0 in 1997 to 645MT in 2002 (FAO, 2004).

These reasons are particularly important to supermarkets that derive their competitive advantage over traditional retailers from their broad assortment, better quality, year-round availability and (for FFV to a lesser extent) lower retail prices. Furthermore, specialized importers provide a structure supermarkets are more familiar with from their dry foods retailing: one-stop order-points which can offer regular supplies throughout the year and are accustomed to formal business methods. Uchumi does not import FFV directly, but relies on importers, as it does not yet deal in large enough volumes of these items.

Supermarkets, as they grow regionally, will look for suppliers from an increasingly wide pool, becoming regional traders in the process. For example, Uchumi's hypermarket in Kampala is closely linked in a bi-country procurement system with the Uchumi chain in Kenya.⁷ Various FFV items are exported from Kenya to the Kampala store, most notably vegetables which are not

⁶ For comparison, the average value of land in our sample was around Ksh600,000 per acre, with smallholder farms having an average size of 5 acres. These loan amounts therefore are of a similar magnitude as the value of the land owned by smallholder farmers (usually their only possible collateral).

⁷ The information in this paragraph is based on personal communication with Mr Bernard Kibaru, Uganda Country Manager of Uchumi, Kampala, June 2003.

as readily available in Uganda as they are in Kenya (such as carrots, cauliflower, herbs, pre-cut Asian vegetables). About 40% of the FFV sold in the Kampala store is imported from Kenya or elsewhere. At the same time, Uchumi is looking for opportunities to export FFV items from the 60% they source locally back to Kenya. This is considered desirable by the Ugandan government, in order to prevent the arrival of a Kenyan chain further exacerbating trade imbalances and the flooding of the Ugandan market with agri-food products from Kenya, but rather representing a ‘win-win’ situation where Uchumi helps to build a procurement system that relies on growers in both countries. No Uganda-to-Kenya trade exists within Uchumi’s FFV procurement system at this time, although pineapples imported through traditional trading channels/brokers end up on its shelves in Kenya. The extent to which this regional sourcing will become important depends on many factors, most notably (i) how fast the chain will regionalize, (ii) how fast it will modernize its FFV procurement system (especially with respect to centralization and cold chains) and (iii) the nature of suppliers found in regional markets outside Kenya.

Safety and Quality Standards

Since it first started selling FFV, Uchumi has required its preferred suppliers to dedicate all their top-grade output to it (they can sell lower grades to the traditional channels). FFV quality standards are ‘private’ (specified by the buyer, not the government) and are for the greater part limited to appearance (colour, size, blemishes, etc.). Produce is inspected visually by Uchumi personnel at the point of delivery (the five procurement points above). For example, for tomatoes the (current) Uchumi quality standard consists of about 20 specifications including for cleanliness, size, shape, weight, variety, and so on.⁸ Produce not meeting the quality standards is rejected. About 10% of FFV is rejected, due to failure to meet quality requirements. Of this rejected FFV 45% comes from small farms, 45% from brokers and 10% from medium-sized farms and importers (produce from large farms is rarely rejected). Over time suppliers learn which quality is acceptable (it varies with seasonal availability; i.e., standards are lowered when supplies are low) and they work towards supplying this quality only to supermarkets.⁹ Unlike the traditional marketing channels, selling a lower quality for a lower price is not an option.

Quality standards are applied at reception from preferred suppliers without contracts, or imposed within the contracts for the small (but rapidly increasing, as noted above) share of suppliers that have contracts. For the latter, Uchumi uses the measures for reducing quality risk identified by Hueth et al. (1999) in the case of FFV contracts in California: (i) monitoring farms in the field (e.g., irrigation system) to see if they have the capacity to produce FFV of quality; (ii) promoting management practices that lead to quality by specifying which variety farmers should grow, even assisting them to get the right seed quality to grow; (iii) measuring quality directly at the point of delivery; and (iv) sharing price risks with farmers (indirectly) via breakage fees.

Neither Uchumi nor any other supermarket in Kenya has developed its own private food safety standards; nor does Uchumi implement public food safety standards for FFV. Public

⁸ Similar standards are already developed (for some products, e.g., for tomatoes since 1985) by the Kenya Bureau of Standards, but no case of their implementation in the domestic market was encountered or mentioned in the course of our research.

⁹ This point was confirmed in our interviews with Uchumi suppliers, several of whom did mention, however, that standards were at times misused by individual receiving agents to reject their produce in favour of produce supplied by a broker with whom the agent has an informal business relationship.

health and food safety standards exist; there is in fact a Kenya standard Code of Practice for the horticultural industry (derived from the export industry) which deals with hygiene, worker welfare, environmental protection, and so on. However, our interviews with various economic actors indicated that these food safety/process standards are not (or minimally) implemented in practice (limited to, for example, cleanliness inspections of city markets). Nevertheless, Uchumi inspects the farms of key suppliers, *inter alia* to make sure no sewage water is used for irrigation (a practice observed in urban agriculture). This is a guarantee the brokers/wholesale markets cannot provide to their customers.

Another example of how food safety issues begin to come into play is that Uchumi is hesitant to procure from small farmers because they are unlikely to be able to invest in packing sheds (required for hygienic handling of produce). These sheds are not yet required by Uchumi, but before developing long-term relationships Uchumi wants to make sure that the farm has the capacity to grow with them. A third example illustrating the emergence of food safety monitoring at Uchumi is the specification for tomatoes supplied to Uchumi that they should be 'free of chemical residues'. However, detailed food safety process standards for FFV (such as the selection and use of pesticides by farmers) are not yet employed by Uchumi or any other supermarkets in Kenya, nor are products sample-wise tested for bacterial or pesticide residues. However, Uchumi believes that if it could provide a safety assurance to its customers, it could triple its current FFV sales. These FFV items could likewise be sold under the Uchumi label (already used for the Asian pre-cut vegetable packs supplied by companies like Sunripe which comply with strict EU standards). FFV suppliers who meet high quality and safety standards (similar to those used in the export sector), and who can produce competitively for the domestic market, have substantial market opportunities.

4.2 Nakumatt: A Centralised Procurement System Relying on Procurement Outsourcing through Specialised/Dedicated Wholesalers¹⁰

Like Uchumi, Nakumatt built (and started using) a new DC in 2003. Unlike Uchumi, however, the retailer has no plans for moving produce through it, as it continues to rely on specialised wholesalers, who *de facto* represent FFV distribution centres. This use of specialised wholesalers is driven by two factors. First, Nakumatt started selling FFV with some reservations at first (in 2001, four years after Uchumi) when it had only seven branches, which implied that volumes were too small to warrant an in-house procurement system. Second, Nakumatt employs a strategy of outsourcing certain product lines (e.g., clothing, furniture, books, bakery and FFV; about 30% of its sales), while it focuses on its core competence, namely, building up a strong retail brand. Firms to which such activities are outsourced operate on a consignment basis: (i) they manage the store space Nakumatt is willing to dedicate to the product category (e.g., the FFV section), retaining ownership of the stock; (ii) their product is sold by Nakumatt, which acts as their mercantile agent; and (iii) they are paid the sales revenue minus a commission (an agreed percentage of sales) by Nakumatt. In the case of FFV, this commission is currently 20% of sales and covers the use of the space (rent, water, electricity, etc.), access to the customer base, sales activities and a profit margin for Nakumatt supermarkets.

⁶ The information for Nakumatt's procurement system is mostly based on interviews with Mr Abdul Sidi (Managing Director) and Mr Rayhon Aswani (Assistant Manager) of Mugoya Vegetable Shop, Mr Mahesh (Manager) of Fresh 'n Juici, and first-hand observations by the authors, interviews with branch managers and the authors' national survey.

Nakumatt’s specialized wholesalers are Mugoya Vegetable Shop, in November 2003 replaced by Fresh ‘n Juici Ltd, for the Nairobi and Kisumu branches and Shree Ganesh for the two Mombasa branches. The need for two wholesalers is a direct result of the absence of cold chains in the domestic marketing of FFV. While transportation at night through the higher (and cooler) sections of western Kenya towards Kisumu is feasible in terms of preserving produce freshness, this is less the case when transporting to the more distant, hotter and more humid Mombasa region.

Mugoya and Shree Ganesh are greengrocers which over the years have built up a portfolio of institutional customers (schools, hotels, restaurants, government organizations, and so on) whom they supply directly. Mugoya, for example, has about 80 of such institutional customers. Catering to such a heterogeneous group, who need daily supplies in small volumes of a wide variety of fruits and vegetables, had given these wholesalers the capacities Nakumatt was looking for in 2001 when it wanted to sell FFV in its stores. However, by 2003, Mugoya and Nakumatt were no longer satisfied with their relationship. Mugoya felt that too much of its resources was going into supplying Nakumatt (relative to the revenues) at the expense of its relationships with its institutional customers. (Between 2001 and 2003, Nakumatt’s share in Mugoya’s sales grew from 0% to 40%, with most of the remainder going to institutional customers; a small percentage was sold through its own shop and to Tusker, Nakumatt’s strategic partner.) Nakumatt, on the other hand, wanted a faster growth of the FFV section as well as a higher commission. In November 2003, both parties separated amicably and Mugoya was replaced by Fresh ‘n Juici Ltd, a wholly-owned subsidiary of Nakumatt Holdings, set up in 2003 as a dedicated supplier of fruits and vegetables to Nakumatt supermarkets (this is similar to Freshmark for Shoprite in South Africa, see Weatherspoon and Reardon, 2003). Like the latter, it benefits from its embeddedness in the Nakumatt network which offers enhanced access to financial, human and physical capital. The remainder of this analysis of Nakumatt’s FFV procurement system will focus on its two (successive) Nairobi-based wholesale suppliers, Mugoya and Fresh ‘n Juici, allowing us to track its evolution over time.

Mugoya’s procurement system differs from Uchumi’s in two main areas: (i) it has a stronger reliance on supplies from smallholder producers; and (ii) it has a broad-ranging set of in-house value-adding activities (from sorting to fresh-cut packs). Table 5 provides some detail on their supplier composition.

As Table 5 indicates, Mugoya, which has about 400 suppliers, purchases 60% of its fruits and 70% of its vegetables from small producers. Although most of these suppliers are located near Nairobi, Mugoya tries to reduce its supply risk by having suppliers from different regions. This heavy reliance on smallholders is a part of a broader structure which, aside from the fact that farmers supply directly to Mugoya’s central facility in Nairobi, is not very different from the traditional system.

Table 5: Nakumatt/Mugoya's FFV Supply Composition by Supplier Type, 2003 (%)

Type of Supplier	Vegetables	Fruits
Small farms	70	60
Medium-sized farms	10	5
Large farms and plantations	5	5
Traditional brokers/wholesalers	14	20
Imports	1	10

Source: authors’ interviews with Mr. Sidi and Mr. Aswani, Mugoya Vegetable shop.

Relationships between Mugoya and its suppliers are not generally geared to the long term. Some farmers supply irregularly (in some cases only once or twice in a season) and just pass by Mugoya's facility at that time. Others have ongoing orders (e.g., 10 tons of cabbage a week) for which prices and volumes are adjusted on a weekly basis. Changes in orders are given during a previous delivery or are called-out. These orders are mostly given to a group of 35-40 larger producers (i.e., producers with 5-10 acres or more) or small-scale farmers who act as part-time brokers and bulk produce from neighboring farms. For example, there are 3-4 small-scale suppliers for cabbages, with some dropping out from time to time. No written contracts are used, partly because, according to Mugoya, they are too risky since farmers cannot guarantee volumes or do not stick to contracts, while Mugoya cannot guarantee prices. Within this context, these small-scale farmers, while mostly regular suppliers known to Mugoya, are not listed in a preferred suppliers list. Traceability is not an issue at this time.

Quality standards (as in written product specifications) are not used and products are not necessarily washed or sorted before delivery. Mugoya buys (in principle) everything farmers supply, as long as a price can be agreed. It can afford to buy FFV of a range of quality levels because it does its own sorting and has a range of customers with varying quality preferences. The best quality went to Nakumatt's FFV section because this is where (mostly high-income) customers base their buying decision in part on how fresh and good the product looks. Poorer quality goes into its own processing and to the kitchens of its institutional buyers (who process part of the FFV). Mugoya is also responsible for taking back produce which is no longer fresh enough for display in Nakumatt's FFV section (in the consignment system it retains ownership of the produce until it is bought by a consumer) but does not charge the cost to the farmers. Quality permitting, some of the produce taken back can also be supplied to institutional buyers at reduced prices (in order to avoid a total loss). Although the firm has cold storage, this is used to store imported fruits, overnight storage of left-over produce and internally processed FFV, but not as part of a cold-chain structure. Farmers are paid cash-on-delivery at prices which follow wholesale markets very closely. While this system is less demanding for suppliers than Uchumi's and hence allows a greater participation by smallholders, it also offers fewer opportunities for growth and therefore fewer dynamics.

Medium-sized and large farmers (15% of vegetables and 10% of fruits) are important as they provide a dependable regularity in the supply of key items (e.g., kale, pineapples). These are also the farmers who are listed more formally as suppliers. Brokers (14% of vegetables and 20% of fruits) are only used in the case of shortages from regular suppliers (mango supplies, for example, depend on brokers during a few months in the year when supplies are low). Imports (1% of vegetables and 10% of fruits) are less important than for Uchumi, but are of a similar composition (pineapples, bananas and ginger from Uganda, apples, pears, plums, peaches, grapes, oranges, bell peppers from South Africa, Egypt, Israel or Holland, garlic from China, onions, oranges and tomatoes from Tanzania).

Mugoya, which has 150 employees, does all its value-adding in-house in its own centralized facility. It washes, cleans, grades and sorts the produce, ripens bananas, and pre-packs fruits (e.g., apples, oranges) and vegetables (e.g., onions, potatoes). It also does some primary processing, for example making pre-cut vegetable packs for supermarket shelves (e.g., stir-fry, snow peas, French beans, baby corn), potato chips/fries for the institutional customers, and fruit juices. In order to meet customer expectations with regard to hygiene during processing, Mugoya is in the process of obtaining HACCP certification (postponed momentarily because it contemplates moving to a new, larger facility). This processing capacity implies that, from its

single facility, Mugoya can supply a supermarket like Nakumatt with all the product variety it needs to stock a fully-fledged FFV section.

When Fresh 'n Juici took over from Mugoya in 2003, its procurement system started off from a similar structure, and about half of Mugoya's suppliers shifted to it (at least for part of their supplies). It also produces all the processed vegetable packs it sells in Nakumatt supermarkets in-house. Like Mugoya, no contracts are used and quality compliance is limited to a visual inspection of the produce at the point of delivery. All supplies are delivered at Fresh 'n Juici's central facility in Nairobi, except for the (more perishable) leafy green vegetables which are delivered direct by farmers to the stores. The company has a cold storage facility and uses it in the same fashion as Mugoya.

However, Fresh 'n Juici has made some strategic changes. First, while it did get most of its current 150 suppliers from Mugoya, it did not inherit the latter's large smallholder supplier base. From our interview with Mr. Mahesh, Manager of Fresh 'n Juici, we learned that smallholders have all but disappeared as fruit suppliers and make up only about 20% of vegetable supplies, the main reason being, according to Mr. Mahesh, that they cannot manage the quality and volume requirements demanded. For kale, for example, Fresh 'n Juici wants suppliers who can supply at least 300kg twice a week. Examples of FFV items where smallholders are still involved are yellow passion fruits, greens, traditional African vegetables and herbs. Smallholder producers are replaced by large farms and imports with respect to fruits and by medium-sized farmers for vegetables. Both in importance and function, brokers remain in a similar role to that they had at Mugoya, i.e., they represent about 10% of supplies and are mainly used to deal with shortages. In terms of supplier composition, the shift from Mugoya to Fresh 'n Juici implies a convergence of the development paths of Uchumi's and Nakumatt's FFV procurement systems, at least in terms of the relative importance in the supplied FFV volume of the different types of suppliers .

Second, Fresh 'n Juici also shifted to a low margin-high turnover strategy. Suppliers, still paid cash-on-delivery, received higher prices than they got under Mugoya (i.e. close to the prices in the traditional market), while consumer prices in Nakumatt's stores were reduced. Our price survey, for example, indicated that where as Nakumatt's prices for a selection of FFV items/stores were on average 17% higher than Uchumi's in November 2003, they were only 7% higher in April 2004. Taking a new price promotion into account, whereby consumers using Nakumatt's SmartCard (a customer loyalty card) get an additional 5% discount on FFV, the price difference almost disappears.

Third, its nature as a dedicated supplier to Nakumatt also facilitated a heavier involvement of management on the sales floor. In combination with a substantial investment in extensive personnel training (Fresh 'n Juici has 120 employees), this increased attention led to a more attractive presentation of the FFV section. While it is mainly a dedicated Nakumatt (and Tusker) supplier, Fresh 'n Juici may well expand over time to include institutional buyers as well (thus also reducing its losses due to breakages). It has been given the objective (by the Nakumatt Holding group) of raising FFV sales at Nakumatt from the Ksh8m. per month under Mugoya in 2003 to Ksh50m. per month within 3 years. By April 2003 (only five months after it took over), Fresh 'n Juici was already well under way to reaching its objective as sales had doubled to Ksh16m. per month.

5. Implications for Development Policies and Programs

5.1 Importance as a Demand-Side Base for Agricultural Diversification

Supermarkets were a tiny niche in Kenya only a decade ago, but due to their 18% a year growth rate since 1995 continuously removing market share from traditional retailers along the way, they now have 20% of urban food retail. In a few years the urban population share will pass 50% (it stands at 40% today, from 15% in the 1970s), and at current growth rates supermarkets will be among the key gatekeepers to Kenyan dynamic urban markets in 5-10 years. This makes them increasingly important subjects of development policy attention for government and donors focused on helping Kenyan smallholders access dynamic urban markets and diversify their agriculture into higher-valued products.

Driven by demand-side reasons (consumers are shifting from traditional retailers to supermarkets), it is likely that the supermarket sector will continue to grow in Kenya and to displace traditional retailers – that is, following the international pattern. As the chains grow, they are more able to implement the kinds of procurement system changes discussed in this essay, which in turn drives down their costs so that they can charge lower prices and undermine traditional competitors, and so further expand – a virtuous cycle for them. There is already evidence that this pays off for them and for the urban consumers; Neven et al. (forthcoming) show that supermarkets charge on average 5% lower prices (compared with small shops) for processed foods, and although their prices are higher for most fruits and vegetables, for key ‘poor consumers’ foods’ such as spinach, the largest chains already have prices at or lower than open markets for products of similar quality.

We posit that the above-described process of supermarket development is the start of an ascending competitiveness vis-à-vis traditional retailers of fresh foods, as has been seen in other developing countries for the same reasons. While Kenyan supermarkets have moved quickly into staples and processed food markets (such as for flour and edible oils and snacks), they have only begun to make inroads into the FFV market. This follows an international pattern. FFV are an important market for the promotion of agricultural diversification for small farmers, as the production of FFV is relatively free of economies of scale, at least with respect to land size (although the production and post-harvest processes are often demanding of various forms of capital, including human, organizational, and physical capital). Despite Kenyan supermarkets having only just started merchandising FFV, the volumes they handle, and the amount they procure from Kenyan farmers, are rapidly approaching the importance of the export market (handling 35,000 tons versus 67,000 tons exported). Moreover, the lead chains are increasing their FFV sales quickly, and working costs out of and quality into their procurement systems.

5.2 Challenges to Supermarket Procurement Systems in Kenya

The front-runner chains (in a concentrated supermarket sector) are moving towards a procurement system converging to the system developing elsewhere in developing regions (Reardon et al., 2003), including centralisation of procurement and shifts from traditional brokers to specialised/dedicated wholesalers, and from spot markets to use of preferred supplier systems, and to use of private quality standards with (barely) incipient use of private safety standards. These shifts have meant, already in this early stage of supermarket development in Kenya, that supplies come mainly directly from large and medium-sized farmers and somewhat from small

farmers, and to a moderate but decreasing extent from brokers who, in turn, are supplied mainly by small farmers. These patterns and trends are driven by competition and a need for chains to reduce costs and enhance quality and consistency.

Over the next half decade, issues will probably arise with respect to supermarkets continuing to source mostly from large and medium producers producing for the domestic and export markets. As supermarket procurement volumes grow substantially, that system will be strained, and there will be a natural need to extend the grower base locally – or to import more.

On the one hand, there may be few obstacles to sourcing much more from Kenyan large/medium farmers in the short to medium term. These farmers are indeed switching from traditional to supermarket channels, but they are also increasing their overall production, including production for supermarkets – so one could argue that they will be able to handle increased sales to supermarkets in the future (Neven et al. 2005). Moreover, in other countries, such as Costa Rica, China, Chile and Mexico, we have seen medium/large farmers who were focused solely on exports turn in recent years to being major, and increasing, suppliers to local supermarkets as the profitability of such sales, and the capacity of the supermarket procurement system, have grown. Some of this growth in Kenya will, of course, come through commercial outgrower schemes which in general engage small growers. In fact, in places like Mexico much of the small farmers' involvement in the supermarket channels has been via grower/shippers who have their own production as well as outgrower schemes with small growers; they select top grade for export, top-second grade for supermarket channels, and the rest goes to the wholesale market. This seems a likely scenario over time for supply expansion to Kenyan supermarkets as medium and large growers need to expand volumes beyond their own-production capacity.

On the other hand, supermarkets can increase their produce volumes by drawing on imports, creating intra- and extra-regional trade. Note that Kenyan supermarkets (and the traditional sector brokers) are already selling cheap produce from the East Africa region and even cheaper produce from China, such as garlic. What is to prevent Kenyan supermarkets to increase sourcing cheap produce directly from Tanzania or Uganda in the region or from more distant, but very price-competitive suppliers in India or China? Kenya's leading supermarket chain (largely government-owned Uchumi) has always stuck to its policy of sourcing at least 85% of what it sells from Kenyan suppliers (Daily Nation 2004), but can it afford to continue to do so in the increasingly competitive supermarket environment? Government policy, such as regional trade policy, will also affect the extent to which supermarkets will be able to expand produce supply from external sources or will have to rely on local producers. From a policy viewpoint, the issues are mixed. The Tanzanian government reacted to Shoprite importing cheap tomatoes by imposing protection at the behest of local producers. In contrast, Uchumi indicated a willingness to source Ugandan produce to send to Kenya as part of its entry into Uganda. And Uchumi sends Kenyan produce into its Ugandan stores. The supermarket chains will be motors of trade in the region, and the debate about the pros and cons of protection and regional trade liberalization will be magnified as the chains spread.

5.3 Impending Challenges to Smallholders

The above means that small farmers are only one of several options for supermarkets to turn to as their growth strains current procurement systems and sources. And it means that supermarkets may join policy and other market-institutional changes in Kenya as key motors in transforming the food markets facing small farmers.

The squeeze on small producers, as it is manifesting itself, comes through supermarkets' reduced reliance on brokers, who source much of their stocks from smallholder producers. Smallholders are thus squeezed out as indirect suppliers via brokers to supermarkets, but smallholder supplies can replace the large farmer supplies diverted in the traditional system. Hence, at this initial stage of supermarket development in Kenya, the rise of supermarkets is not yet excluding small farmers from supplying the market, but is rather reducing the presence of their large/medium competitors from the traditional system, opening up an opportunity for them in the traditional system to a large extent, and in the supermarket market channel to a limited/modest extent at least as long as supermarkets can keep up their 18% annual growth, while sourcing mainly from larger/medium commercial farmers.

However, looking to the next 5-10 years, there are several impending challenges and opportunities that will face small farmers as the supermarket sector develops, and policy-makers and development programs should observe the situation closely in order to help farmers adapt to it.

(i) As supermarkets increase their share in urban markets and the traditional retail market concomitantly shrinks, small farmers, if they want to sell to urban markets, will increasingly have to sell to supermarkets or the surviving non-supermarket urban food market that is competing with them. The latter competition may take the form, as elsewhere in the world today, of small shops aggregating to form procurement clubs, or open air or covered markets improving quality and hygienic standards. All this means that the market requirements facing small farmers will follow an upward trend, whether directly or indirectly caused by the retail transformation.

This does not mean that small farmers should be aiming at shifting from other buyers to only selling to supermarkets, even if they are able to do so. It is clear that, with the combined vicissitudes of any given retail company (such as the trade press currently reports for Uchumi; Wachira 2004) as a client for a farmer, and the stiff requirements of participating in the supermarket channel, it behooves a farmer to manage risk, seek market options for the various grades of his/her product, and sell to a portfolio of market channels, including exports, supermarkets, and wholesale markets, not to mention keeping the rural market option.

(ii) Much of the direct sourcing from small farmers by the major chains is done at present in the 'up-country' stores that are not – yet – well connected to nationwide or regional sourcing systems. The development of efficient transport, distribution centers, and cold chains will, in Kenya as elsewhere, make it easier for the chains to source from all zones of the country. Thus, current small-farmer suppliers for up-country stores will increasingly have to compete with medium/large farmers, and competitive small farmers, throughout Kenya for a number of product markets that were formerly *de facto* protected by high transaction costs for the chain, but will soon not be. International procurement from a number of countries will extend this competitive pressure on the local small farmer competing with Chinese or Tanzanian farmers in the procurement arena.

(iii) A critical issue is the extent to which small farmers themselves will make the requisite investments (in risk management, product diversification, value added, and marketing expansion) to take advantage of the important opportunities provided by the supermarkets. Much will depend on the terms and conditions they face from the buyers (the chains or their dedicated wholesalers), such as contracts that reduce risk, limited payment periods to cut the financial burden, and so on. We have seen in other countries that small farmers, on the margin of profitability and with few if any cash reserves, are sensitive to these conditions, which are, of course, also the subject of government regulation and/or private sector commercial codes in

Europe, the United States and parts now of Latin America and Asia. Much will also depend on whether governments, NGOs, and donors build up the capacity of small farmers, in particular in groups, to sell to this channel (in particular, the vector of capital needed to meet the market requirements of the supermarket channel, including physical, organizational, social, and human capital). This essay is limited in its scope to data from retailers and wholesalers, but Neven et al. (2005) presents detailed data on grower decisions to participate in the supermarket vs. traditional market channel, and their relative costs and benefits, shedding further light on these emerging issues of grower participation.

5.4 Implications for Development Programmes and Policy

Given the impending challenges quite probably just around the corner, the next few years provide the crucial window through which government, NGO, and donor programmes can help to upgrade the upper tier of small farmers to be able to position themselves as suppliers to this dynamic urban market. The changes in the procurement systems discussed above (of supermarkets, and probably also of other urban retailers competing with them) suggest that this upgrading will need to be diverted towards increases in quality, consistency, volume, new commercial practices, and use of new technologies.

We have briefly shown that it is possible for small farmers to participate (such as the case of small farmers selling greens to Uchumi), and we believe that these experiences can and must be replicated and scaled up. This is now done mainly through traditional intermediaries who aggregate product over many small farmers and has the advantage of overcoming the volume and transaction-costs problems facing individual small farmers selling to supermarkets, but has the disadvantage of relying on a declining market (the traditional broker) and forgoing the margin. Two other options are attractive: working for a grower/shipper (supplying local supermarkets) in an outgrower scheme under contract, or supplying directly via an association bulking, grading, packing and shipping product from its members. Development programs and policy-makers can do several things to help farmers take, and prosper in, these paths.

First, governments, NGOs, and donors can facilitate small farmers' access to three key elements in order to have the capacity to supply the supermarket channel: (i) market information identifying the buyer and its requirements, and establishing a market relationship such as having an implicit or explicit contract from the supermarket or the specialized wholesaler, i.e., being on the list; (ii) viable organization/association to reduce co-ordination costs and enforce delivery from members; and (iii) the requisite physical investments (say in equipment) and managerial improvements to meet the specific product and transaction standards required by the supermarket chain. A program that aims to assist a farmer to sell to supermarkets (or outgrower schemes or wholesalers) by providing one of these but not the others will not work; for example, association-building is necessary but not sufficient. Berdegué (2001) illustrates this point with examples of successes and failures of small farmer organizations in Chile. Moreover, these elements can be mutually reinforcing, for example where having a contract (being on the preferred suppliers' list) acts as a substitute for collateral, inducing a bank to make a loan to a small farmers' group for the purchase of equipment (an example from Croatia is given in Dries et al., 2004).

Second, governments, NGOs, and donors can facilitate tri- or quadri-partite relationships that facilitate smaller farmer participation. An example can be found in Indonesia, where there is a combination of a small farmer organization (Makar Buah), a supermarket chain (Carrefour), a seed/chemical company (Syngenta), a government extension program, and a

specialized/dedicated wholesaler (Bimandiri), in a fruitful combination to market melons (Reardon, 2004). Carrefour supplies the guaranteed market, Syngenta the financing, and the wholesaler the intermediation and co-ordination. This kind of combination can also be accomplished through a donor development project, such as the USAID/Michigan State University Partnerships in Food Industry Development – Fruits and Vegetables project (PFID-F&V) in Nicaragua, where a US university facilitates the market connections for small farmer organizations with the local supermarket chains, NGOs such as Technoserve provide technical assistance, supermarket chains such as CSU and La Colonia provide the guaranteed market, and donor funds from USAID provide the financing. The project has a graduation policy whereby the small farmer-organizations progressively take over the needed investments and then maintain the market link themselves (Weatherspoon and Membreño, 2004).

Third, assistance programs focused on agricultural diversification can help small farmers with the necessary training and equipment, such as transport and cold chains, to produce those perishables for which these farmers are likely to be competitive in the supermarket market-channel. This assistance should be carried out in a way that walks the tightrope between alleviating poverty as much as possible, and inducing distortions in market or investment incentives. We have seen above that these products are mainly the highly perishable products such as leafy greens (e.g., traditional African vegetables) in which a correctly equipped smallholder can have an advantage. Assistance programs are likely to find further promising new market opportunities amongst the wide set of produce items for which supermarkets are eager to shift away from the current traditional brokers to more direct supplies by farmers (e.g., potatoes, carrots). In some cases this will imply producers from different regions to cooperate with each other in order to address the year-round delivery requirement of supermarkets currently resolved by brokers (e.g., for mangoes). By contrast, we expect rapidly increasing cost and quality competition for small farmers competing in this channel in bulk products such as bananas and tomatoes. These can be large-volume profitable enterprises, but the programs should be aware of the competitiveness bar that will steadily be raised.

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