Supermarkets\textsuperscript{3} in Urban Kenya: General Research Approach

The research presented here focuses on the impact of the rise of domestic supermarkets on urban consumers of and supply chains for fresh fruits and vegetables (FFV) in Kenya. Kenya provides an interesting case study because it demonstrates how even in a low income country in Sub-Saharan Africa supermarkets are growing with all the irrepressibility of an idea whose time has come. In Kenya, we show here how supermarkets have grown from a tiny niche at the start of the 1990s to 20% of the urban food retail sector in 2003. Furthermore, supermarket development in Kenya is currently in an early, formative stage where changes are taking place fast. This study thus allows us to capture these fleeting moments and provide a benchmark for future studies on urban food retailing in Kenya. We focused on FFV because it is an important sub-sector in the country, both from the consumer perspective (important part of the diet, the food expenditure) and the farmer perspective (great income potential for nearly 2 million small scale producers in Kenya). Within this context, this study aims to help answer the following three strategic questions, each at a different level of the supply chain: (1) at the retailer level: ‘What is the importance of supermarkets in food and FFV retailing and what is the nature of the supermarkets’ FFV procurement system?’; (2) at the consumer level: ‘What is the effect of the development of the supermarket sector on the (urban) consumers’ food and FFV purchasing behavior?’; and (3) at the farmer level: ‘What is the effect of the development of the supermarket sector on (FFV) producers’ behavior and net income?’.

The data for this study were collected over 13 months of field research in Kenya (January - November 2003, April 2004, and August 2004). Given the absence of secondary data on retail in general, and on supermarkets in particular, in Kenya, the bulk of the research effort focused on primary data collection. A total of 1,174 respondents (retailers, farmers, consumers, key informants) were interviewed.

The Rise of Kenyan Supermarkets and the Evolution of their Fruits and Vegetables Supply Systems

Research Questions

Here we go to the heart of the phenomenon under study, the importance of supermarkets, the drivers behind and patterns of their growth and the nature of their produce procurement system. The specific descriptive and research questions are: (1) what is the importance of supermarkets in terms of market share in food and FFV, growth rate and geographic spread? (2) How does growth of a supermarket chain determine: (i) the choice of the FFV supplier (in terms of their size and place in the supply chain); and (ii) the use of contracts, quality and food safety standards and centralization of procurement?

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\textsuperscript{3} ‘Supermarkets’ is a term used broadly here for all self-service retail outlets meeting minimum size criteria (150m\textsuperscript{2} in the case of Kenya) and with food lines representing an important percentage of sales (>50%).
Data and Methods
The data collection effort consisted of (1) a supermarket survey (210 respondents in 79 urban areas); (2) a similar survey of traditional retailers such as kiosks, over-the-counter shops and market stalls (250 respondents); and (3) key informant interviews. Descriptive analysis of this data set allowed for a reconstruction of the path of supermarket development in Kenya and the identification of the key drivers behind it. The nature of the FFV procurement system is analyzed through case-studies of the two leading supermarket chains in Kenya, Uchumi and Nakumatt, who jointly represent 90% of the FFV sold through supermarkets in Kenya.

Key Findings

(1) Growing at rate of 18% per year, supermarkets in Kenya have grown from a niche in the mid 1990s to 20% of the urban food market and 4% of the urban FFV market in 2003.

(2) Supermarkets have spread from the capital to intermediate and small towns, with 44% of supermarket sales and 58% of supermarket stores located outside of Nairobi in 2003.

(3) The leading supermarket chains in Kenya are evolving, with a time-lag but at a comparable speed, to the same FFV procurement system that has become the dominant format for supermarkets in middle-income developing countries: (i) while the share of brokers (and the smallholders they buy from) in the vegetable supply of Kenya’s leading supermarket chain (Uchumi) has gone down from 70% to 50% (and is expected to go further down to only 10% by 2008), the share of direct supplies by medium and large farms has gone up from 15% to 40% (and is expected to go up to 65% by 2008) and the share of smallholders as direct suppliers remains stable around 10-15%; (ii) both leading supermarket chains have moved towards the use of more centralized procurement systems for FFV; and (iii) there is an incipient use of standards for food quality and food safety, mostly linked to contracts, the use of which is expected to increase from the current 5% of FFV suppliers to 70% over the next 5 years.

Supermarkets and Consumers in Africa - The Case of Nairobi, Kenya

Research Questions
The supermarkets’ gain in market share can only be explained by a concurrent shift in consumer behavior. The specific descriptive and research questions are: (1) How important are the different income-categories of consumers as a percentage of the customer base and sales of supermarkets for food in general and FFV in particular?; and (2) What are the socio-economic determinants of the consumers’ retail outlet choice and shopping frequency decisions (at supermarkets) for food and FFV?

Data and Methods
The data for were collected through eight consumer focus groups (54 participants) and a consumer survey (445 respondents) in Nairobi. The consumer focus groups provided an initial understanding of the behavior of consumers. The data from this survey were then used to: (i) describe the nature and motivations of consumers shopping in supermarkets versus traditional retail outlets across product groups and income classes; and (ii) test, in limited dependent variable regressions, the importance of different socio-economic variables (including income) in explaining retail outlet choice and shopping frequency.

Key Findings

(1) The poor are far more important in the development of supermarkets than is generally believed: in 2003 supermarkets derive more than a third of their sales and more than half of their customers from poor and low income consumers.
In general, supermarkets have penetrated much further and faster into the consumer market for processed foods as compared to FFV. This is mainly because Nairobi supermarkets sell processed food much cheaper than do traditional shops. By contrast, supermarkets sell FFV at a higher price (on average) and are not located as close to consumers as are FFV shops. However, there are three factors that suggest that Kenyan urban consumers will shop more from supermarkets in the future for FFV: (a) younger consumers buy FFV more frequently from supermarkets; (b) supermarkets are increasingly price-competitive with many categories of traditional retailers for high-volume (commodity) vegetables like kale and tomatoes; and (c) supermarkets are developing smaller retail formats which can be located closer to consumers.

**Farm-level Perspectives on the Impact of Supermarkets in Kenya’s Fresh Fruits and Vegetables Supply System.**

**Research Questions**

Here we take the upstream, farm-level perspective on the growth of supermarkets. The research questions here are: (1) what are the determinants of the farmer’s decision regarding channel choice (supermarkets versus traditional buyers) in terms of their capacities (e.g. farm size, use of technology, use of hired labor, education of the farmer); (2) do farmers supplying supermarkets and farmers selling to traditional supply chain agents use different production technologies; and (3) do farmers supplying supermarkets benefit from this market access in terms of net incomes and/or demand reliability?

**Data and Methods**

Two farmer surveys (with 63 of the interviewed farmers supplying supermarkets and 103 supplying traditional markets), complemented with semi-structured interviews with supply chain intermediaries and input suppliers, were conducted to address these questions. The first survey takes a broader perspective, focusing mostly on kale, tomatoes and bananas (the two highest volume vegetables and the highest volume fruit in Kenya respectively). The second farmer survey, this time focusing on kale only and including detailed questions on input use and yields, addresses all three questions.

**Key Findings**

(1) The growth of supermarkets has stimulated the rise of a new class of FFV farms in Kenya. These are mostly recently established, medium-sized farms which, in terms of physical and human capacities, differ starkly from the smallholder farms that represent the bulk of the FFV production in Kenya. Especially farm size and the presence of a modern irrigation system were found to be critical determinants of participation in the supermarket channel. This stark difference points to the presence of a threshold capital vector at the entrance of the supermarket channel.

(2) Supermarket-channel farmers have adopted more capital intensive production technologies which resulted in their average land and labor productivity being 60-70% higher than those of traditional-channel farmers. While they use 20% less labor per acre than traditional-channel farmers, supermarket-channel farmers rely heavily on hired labor (80% of the workforce) and could thus become important in proving jobs for rural households with little or no land. Notwithstanding differences in the capital intensity of their production technologies, the two types of farmers have a comparable production cost per unit of output.

(3) While most traditional kale farmers sell to brokers and get a price that lets them break-even at best, supermarket-channel farmers have a 40% gross profit margin. These margins and lower market risks in the supermarkets channel has resulted in a strong growth dynamic for supermarket-channel farmers which have doubled the size of their operations over the last five years.
Implications for Development Programs

(1) The growing market share of supermarkets implies that they are becoming increasingly important as transformers of the food markets facing small farmers, and thus as agents to include in development programs aimed at improving market access to small scale farmers.

(2) Small farmers, as individual suppliers, are one of the less attractive options for supermarkets to turn to as their FFV sales increase, because of the former’s inability to deliver year-round and in the volumes and at the quality level required by supermarkets. Development programs aimed at assisting smallholder farmers to access the supermarket sector would have to make sure farmers meet the whole vector of supermarket requirements. As this implies investment and working capital requirements which mostly exceed the capacities of risk-averse smallholder farmers, development programs need not only organize farmers in groups but also look for or develop new creative ways of keeping capital requirements low and increase access to affordable credit.

(3) Supermarkets prefer to work with a selected list of proven suppliers, who grow along with them. As these farmers are already selected in the early stages of the development of the supermarket’s FFV procurement system, there is a degree of urgency in helping smallholder farmers to sell to supermarkets and build a long term trading relationship.

(4) Supermarket-induced supply chain dynamics (such as increased investments in irrigation, communication, transportation) result from an increase in scale and from an increased market reliability (long term relationships). Development programs aimed at creating similar dynamics in the traditional channel (which will dominate the FFV market for the foreseeable future in Kenya) should therefore look at investment stimulating scale increases at the wholesale and retailer level (e.g., small shops aggregating to form procurement clubs that can then contract directly from groups of smallholder farmers).

(5) In order to avoid the risk of an over-reliance on a single buyer and because supermarkets buy only the highest quality grades, farmers should look at supermarkets as one element in a portfolio of buyers.

(6) Supermarkets, as they centralize their FFV operations over a wider regional store network and as they increase their scale of operations, will stimulate regional market integration and production specialization, with the best suppliers for particular products increasingly found farther away from the area of production (this includes increased imports and exports as chains move into new countries). When selecting products and developing marketing plans for smallholder farmers, development programs should take these dynamics into account (both as opportunities and threats).

(7) Assistance programs focused on agricultural diversification can help small farmers with the necessary training and equipment 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 and inducing distortions in market. We show in this study 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). 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.