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BATTLE OF THE SUPERMARKET SUPPLY CHAINS IN SUB-SAHARAN AFRICA: CHALLENGES AND OPPORTUNITIES FOR AGRIFOOD SUPPLIERS

Dave D. Weatherspoon, David Neven, Hikuepi B. Katjiuongua, Richard Fotsin, Thomas Reardon[1]

[1] Weatherspoon and Reardon are faculty and Neven and Katjiuongua are doctoral students at Michigan State University; Fotsin is an independent consultant. The authors are grateful for support for this work by the World Bank, Rockefeller Foundation, and USAID.

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Definition of Terms & Abbreviations

AC Nielsen, Kenya, defines

<u>Supermarkets</u>: self-service stores selling predominantly food items in fixed building structures with a selling area of at least 150m$^{2.}$

<u>Hypermarkets:</u> mainly self-service stores selling all types of products in departmental organization in fixed building structures with a selling area of at least 500m^2.

<u>Grocery Stores</u>: Over-the-counter stores with a selling area of 9-150m^2 selling predominantly food items.

<u>General Stores</u> as (mainly) over-the-counter stores with a selling area of more than 8m^2 selling all kinds of products but if food, only in small volumes.

<u>Kiosks:</u> outlets of a stable structure with a selling area of 8m^2 or less selling high turnover products such as fresh food, newspapers and drinks.

<u>Hawkers</u>: no construction, alongside the road or in front of existing supermarkets or stores.

EU	European Union
EUREP	European Private Retail Standards
FFV	Fresh Fruits and Vegetables
PNP	Pick 'N Pay
SPS	Sanitary and Phytosanitary measures
SSA	Sub-Saharan Africa

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Introduction

Researchers have only recently drawn attention to the rapid increase in the number of supermarkets in Africa. Weatherspoon and Reardon (2003), focused mainly on supermarket diffusion in South Africa and Kenya. They analyzed the spectacular gains by domestic supermarkets chains in South Africa and Kenya and, the first wave of foreign direct investment (FDI) by these chains to other countries in the region, mainly in Eastern and Southern Africa. They also described the concomitant changes in procurement systems of supermarkets and induced market change in South Africa.

Those findings upset the traditional image, held by development practitioners, policymakers, and food product suppliers that supermarkets in Africa merely occupy a tiny niche market for the richest consumers. Moreover, their research showed that there is rapid consolidation of procurement systems of supermarkets in South Africa and they are quickly extending northward in sub-Saharan Africa, implying major opportunities but also sharp challenges for producers wanting to be included in the dynamic urban markets, which are quickly being taken over by supermarkets.

At issue is how the procurement system change - and thus induced food market changes and challenges to suppliers, can be generalized in other parts of Africa. This report takes a step towards exploring this issue. It examines a spectrum of four countries, from most to least developed in terms of the supermarket sector – South Africa, Kenya, Zambia, and Uganda – and looks in depth at the procurement systems changes in all of them.

The fieldwork for this report was undertaken in those four countries from March–June of 2003, with interviews in each country with all the large and medium-sized supermarket chains and, in each country roughly 75 per cent of the small supermarket chains, 10–20 per cent of the independent retailers, two to three wholesalers, two to three processors and five to ten public wholesale and retail market sellers. Consumers, mainly in the capital cities, as well as roughly ten to fifteen producers of various size per country were also interviewed.

Each Chapter of the report focuses on the findings in the four study countries, and also includes references to other parts of Africa. Chapter2 focuses on patterns of diffusion of supermarkets by size. Chapter 3 analyzes changes in the procurement systems of supermarkets, in particular with respect to the organization and institutions of the systems used. Chapter 4 examines the implications for supply chain participants. Chapter 5 concludes with policy implications.

1. Determinants and Patterns of the Growth of Supermarkets in the Four Countries

During the last five to ten years supermarkets have spread very quickly in Southern and then Eastern Africa but, are still only starting in West and Central Africa, both several times poorer than the other two sub-regions. Tables 1 and 2 illustrate this rapid growth with a focus on the four countries studied as well as another African countries. The penetration of these chains in the urban markets of the four countries studied varies significantly and provides an interesting mix of different stages of the supermarket development process in Eastern and Southern Africa.

The frontrunner in supermarket development is South Africa with 1700 supermarkets. The supermarket sector holds a 55% share of the food retail market, displaying a level of sophistication comparable to that of industrialized countries. There are two dominant large domestic-capital chains (Shoprite and Pick ‘n Pay) with 80% of the market, three medium/small chains (Woolworths, Spar and Metro (the domestic South African chain, not the German chain) and the rest, various small chains and independent supermarkets, which have about 10% of the market. The two largest chains are battling for market share by buying groups of stores that service low to middle income consumers.

Kenya has followed suit over the past five years with rapid growth of supermarket chains to the point where today 20-30% (and rising) of retail foodsales goes through supermarkets. There are two dominant local supermarket chains; Uchumi and Nakumatt, which together represent 70% of the supermarket sector, divided equally between them. These strong local supermarket chains have made it difficult for foreign competitors to enter this market. At present, only Metro Cash & Carry and Woolworths, both South African, have entered this market but neither sells produce. However, unlike South Africa, Kenya does have a group of smaller retail chains and independent supermarkets that combined represent 25% of the market.

Zambia is a unique case in that it has one dominant foreign supermarket chain that, through the acquisition of formerly government-owned retail chains, has captured approximately 60% of the market. Shoprite not only dominates the urban markets, but also has a significant presence and market share in rural areas. In addition, Zambia has many other retailers, only a few of which can be classified as chains that represent the remaining 40%. Several of these small retailers procure produce from Shoprite's subsidiary, Freshmark.

Uganda, the country with the least number of supermarkets out of the four countries, has two foreign major chains battling for supermarket dominance. This is the only country where a South African chain (Shoprite) competes directly with a Kenyan Chain (Uchumi). Uganda, where both Shoprite and Uchumi have built their own stores in the absence of small chains that could be acquired (organic growth), illustrates the diffusion of supermarkets into voids in the market. In the absence of any significant domestic competition, these two chains captured 95% of supermarket market share in Kampala in less than three years.

It is further remarkable that in each of the four countries, and the four stages of supermarket development they represent from a small niche (Uganda), to an early intermediate stage (Zambia), to an intermediate stage (Kenya) and, to an advanced stage (South Africa), whether through domestic growth or diffusion from elsewhere, the top-two supermarket chains have a supermarket market share of 70-95% (table 1). This is higher than in any other region of the world.

Similar diffusion over countries and growth within countries can be expected in the future. Supermarket growth in Southern and Eastern Africa shows no signs of slowing down. Uchumi, Kenya's leading supermarket chain doubled its floor space from 215,000 square feet to 500,000 square feet between July 2001 and December 2002 (Wachira, 2002). Shoprite's revenues increased 12.8% and its operating profits grew by 28.4% in the first half of 2002, lending credibility to its ambition to be in most Sub-Saharan countries by 2005 (Claasen, 2002). Shoprite's main rival in South Africa, Pick 'n Pay, showed even greater growth rates with turnover rising a stunning 39.2% in 2002 (Mathews, 2003). Top managers in the supermarket industry are quoted in the press as talking about "a huge pent up demand in the retail sector", "a lot of potential in the awakening African markets", and "a domestic supermarket scene far from being saturated" (Wachira, 2002, Robinson, 2001 and Wahome, 2001). These sentiments are reflected in the expansion plans of the supermarkets. For example, over the course of 2004 Woolworths (South Africa) plans to add no less than 100 stores of a smaller convenience store format in which it will sell the same high quality of produce. Tables 1 and 2 further illustrate growth projections for all the supermarket chains.

a. Determinants of Growth

The growth of supermarkets is driven by demand and supply side factors. The growth of supermarkets on the demand side is fuelled by urbanization, population growth, increased incomes, inexpensive high quality products and relative political stability.

Necessary but not sufficient: demand-side determinants. On the demand side, urbanization is a primary explanatory factor. In Kenya for example, the population of main cities like Nairobi doubled between 1989 and 2002 (World Gazetteer 2002). Approximately 50% of South Africa's and 40% of Zambia's population live in urban areas. In addition, the average urban population growth rate far outstrips the overall population growth rate in Uganda and Kenya (United Nations, 2002). These urbanization trends are predicted to continue in many sub-Saharan African countries. In addition, relative to rural consumers, urban consumers have higher disposable incomes, less time to prepare meals and less opportunity to grow food themselves.

The greater value that consumers get in supermarkets, especially due to lower prices, the convenience of one-stop shopping, higher quality of products, and consistent product availability creates a powerful incentive for consumers to change their traditional shopping habits. For example, Shoprite's introduction of cheap meat packed in clinically transparent polythene made Ugandans give up their preferred century-old beef buying ritual of pointing out to the butcher the part they want from hanging portions of beef (Onyango-Obbo, 2001). All under one roof store formats offer consumers the convenience to buy practically everything that in the past involved a day of numerous errands (Wachira, 2002). Uchumi for example handles 50,000 different products (Thuku, 2002). Higher product quality allows supermarkets to differentiate themselves not only from each other, but also from traditional retailers like kiosks and market stalls (especially a product category like fresh produce, which in traditional markets displays a rather variable level of quality). As supermarkets grow, they build the market power and financial means to demand compliance with their grades and standards from their suppliers, thus creating a fundamental structural change in agrifood supply chains from input suppliers to the final consumer.

Supply-side drivers. On the supply side, the growth of supermarkets is driven by competition, market and trade liberalization, the introduction of new technologies and access to inexpensive credit.

Competition is the main driver behind the growth of supermarkets. South Africa and Kenya, the two countries with the strongest domestic development of supermarkets, also display the most intense level of competition. A new strategy by one competitor forces imitation and/or a counter strategy by its competitor(s). For example, Nakumatt's introduction of large-format stores lead to the introduction of hypermarkets by Uchumi, its main competitor in Kenya. In return, Nakumatt followed Uchumi's subsequent introduction of fresh produce. Competition leads to low margin – high turnover strategies, which imply economies of both scale and scope and thus fuel a never-ending need for supermarkets to increase the size of their operations while at the same time reducing costs.

Foreign Direct Investment. Market liberalization and trade liberalization policies have facilitated foreign direct investment (FDI) and have had a major impact on the growth of supermarkets. Most notable are the South African chains, whose firms' dormant capacity was unleashed upon the African continent by the advent of majority rule (end of Apartheid) in 1994 (Robinson, 2001). South African supermarket chains are at the forefront of this trend, as illustrated in table 2. Zambia provides another example. Under the privatization process in the mid 1990s, the government of Zambia provided Shoprite with various incentives to acquire, lease and renovate state-owned retail outlets that were centrally located in most of Zambia's major cities (Jaffee S., et al, 2002). Trade liberalization increases product variety in the market place and favours bigger stores that can stock more products (economies of scope).

The larger chains are better able both to invest in their own countries and to undertake FDI, as they have better access to international capital markets at lower interest rates than smaller rivals and use this cheap credit (plus substantial retained earnings from early market success), as well as the local stock markets (being public companies) to finance their expansion elsewhere in Africa (and for Shoprite, now into India, and for Pick 'n Pay and Woolworths, into Australia as well). Small supermarket chains and independents in Kenya for example, have to pay Kenyan interest rates, which can be three to four times the offshore rates to which large chains have access. It is no coincidence that most of the major chains (e.g., Shoprite, Pick 'n Pay, and Uchumi) are publicly traded, well financed firms. The stock market appears to be rewarding the aggressive expansion of supermarkets, as long as it translates into profits.

As South African companies like Shoprite or Metro Cash & Carry enter into new markets, they bring not just capital through foreign direct investment, but also sophisticated marketing and operational techniques and Western-style management (Robinson 2001, Nation's Coast, 1999). These include, amongst others, Efficient Consumer Response (ECR), centralized distribution, and information technology, all of which help to drive down costs in the system and, through competition between the chains, translate into value creation for consumers. Investments in information technology (facilitated by economies of scale) combined with more effective and efficient management structures, improve operational efficiency. Uchumi, for example, recently embarked on a major investment in the computerization of its operations (Thuku, 2002).

b. Patterns of Growth

Driven by competition and voids (under-stored areas) in the marketplace, the growth pattern displayed by supermarkets as they move through the stages discussed above is characterized by three waves of diffusion: (1) from the richer or larger countries to the poorer or smaller countries. (2) from the capital city to the smaller towns, and, (3) from the rich to the middle-income and even the poor neighbourhoods. For the four countries studied, these waves are most apparent in the countries that are in the intermediate (Kenya) and advanced (South Africa) stages of supermarket development.

Within a region, supermarkets first saturate their home-countries then they expand to under stored (and usually higher-margin) countries through organic growth or acquisition. Examples include Shoprite's and Uchumi's recently constructed stores in Uganda (Business Report, 2000, Business Mirror, 2003) and Shoprite's buying of the five stores and one distribution centre of Madagascar's Champion supermarket group (Claasen, 2002). Another remarkable example is Pick 'n Pay's growth in Namibia (9 stores), Botswana (11 stores) and Zimbabwe (53 stores). In the latter country Pick 'n Pay has become the dominant supermarket chain. In yet another example, Shoprite, seeing that the Zambian market is becoming saturated, is exploring the possibility of opening a store in Lubumbashi (Democratic Republic of Congo). At the same time, other chains (SPAR, and Fruit and Veg City both South African owned) are planning to enter Zambia to capture market share from Shoprite.

Within a given country, supermarkets first saturate large urban areas, then move out to the intermediate cities and finally expand to small towns in the rural areas. Supermarkets are thus no longer the niche players catering exclusively to the high-income consumers in the capital cities. For example, Uchumi opened its latest store in Karatina, a town of only 30-40,000 inhabitants but, at the same time the bustling centre of commerce for a wider region of 500,000 people who, before the arrival of Uchumi, had no modern supermarket available to them. The same pattern can be observed in Lusaka where Shoprite operates a store in Manda Hills, targeting high income consumers including expatriates, another in Central Lusaka near the main bus terminal targeting all income groups and, another store in the low income neighbourhood of Cherenge. In addition, Shoprite has expanded to various cities of all sizes throughout Zambia including Mazambuka, Livingstone, Chipata and the small cities in the Copper Belt area. Voids like these in Africa's retail landscape are being filled up quickly as the major supermarket chains race to fill them first.

Within a large urban area, supermarkets first focus on high-income consumers then move out into middle-income and lower income residential areas. In Kenya for example, Uchumi is opening branches in or close to residential areas in Nairobi, while some of the smaller chains focus on middle to low income consumers by opening supermarkets near the busy bus stations used by these income classes. In South Africa, Pick 'n Pay which plans to open 40 new Score and six new Boxer stores, all of which serve the emerging market (formerly disadvantaged groups) within South Africa, provides another example (Mathews, 2003).

The growth pattern of supermarkets must further be nuanced by the nature of the product market. The growth of supermarkets has been far more pronounced in dry, packaged and processed foods than for fresh foods. From the demand side, fresh foods require almost daily purchasing, especially by the poor who have no refrigeration for storage. This creates both an inconvenience and a cost, as supermarkets are not located as close to consumers as small traditional shops. In fact, for some products and locations, street hawkers in Kenya have resorted to buying from supermarkets instead of from the wholesale market. From the supply side, dry foods lend themselves much more to bulk purchases and economies of scale than less standardized and more perishable fresh items. Not withstanding the slower growth in fresh produce markets, supermarkets have in absolute terms already become major players.

From the above, it becomes clear that the nature of the supermarkets business is very different from that of traditional retailers. This different nature of the supermarket industry implies that procurement strategies are also not "business as usual" for their suppliers. The next Chapter provides an analysis of these new procurement systems.

2. Overview of Supermarket Procurement Approaches by Supermarket Size: Competition among Supply Chains

Supermarket chains differ by size of chain in their approach to procuring produce. No standards have been developed to classify sub-Saharan African supermarket chains by size according to specific characteristics. To fully discuss the issues and impacts of the growth in supermarkets, this study divided the supermarkets found in the four countries into three categories: large, medium and small. A large supermarket chain is defined as a chain that has more than 30 stores, at least one distribution centre, is publicly traded and has branches in more than one country. A medium size supermarket chain is defined as having between three to 29 stores and at least one distribution centre or warehouse. Small supermarket chains have less than 10 stores. Tables 3 and 4 illustrate the procurement approaches by supermarket chains by size.

a. Large Supermarket Chains

Large chains rely on distribution centres (DCs) to get the produce to the supermarkets within the quality criteria. As the number of stores increases in a country, the need for distribution centres rises. For example, Freshmark (subsidiary of Shoprite) has six distribution centres for its 360 stores in South Africa, one in Lusaka and a depot in Kitwe that services 19 Shoprite stores in Zambia, but none in Uganda where it only operates one store. SPAR operates six distribution centres, Pick 'N Pay has four distribution centres and Woolworths has three in South Africa. Freshmark, Pick 'N Pay and Woolworths have distrbution centres exclusively for fresh produce while SPAR has general distribution centres. Where large chains do not have a distribution centre, produce is delivered directly to the backdoor of the store. About 95% of Shoprite's fresh produce are washed and packed before delivery at the distribution centre and the remaining 5% is processed at the distribution centre before it is delivered to the stores. Most large supermarkets not only pack some produce at the distribution centre, but also add value through simple slicing and dicing of the produce at the distribution centre. Such centralized delivery systems enable large supermarkets to meet quality requirements, have greater control over inventory and restocking of stores, and to increase efficiency while reducing costs. However, these modern supply chains pose prohibitive challenges for small suppliers who have to install cooling systems and pack houses to meet quality requirements and face additional costs of refrigerated transport to the distribution centre.

Large supermarket chains prefer direct procurement approaches including contracting through grower programmes. The use of grower programmes by large supermarkets is especially observed in countries where the supermarket phenomenon has passed its small niche stage. One reason for this is that supermarkets must meet customers' needs including consistent supply and quality, food safety standards and, provide a good variety of produce throughout the year. As a result, large supermarkets require direct contact and relationships with producers. The two largest chains in sub-Saharan Africa (Shoprite and Pick 'N Pay) have similar procurement approaches while the second set of largest chains (Woolworths and SPAR) mirror each other in their procurement approaches. Both Shoprite and Pick 'N Pay control 40% of the South African supermarket sector and have 300-350 commercial producers supplying them under a "preferred grower programme," while SPAR and Woolworths each control 5% of the supermarket share and both have 100-125 commercial suppliers under their preferred grower programmes.

Most large chains have stringent quality standards and food safety requirements. All the large chains in South Africa inform their suppliers of their volume requirements, their own standards regarding pesticides and microbial residues, and quality requirements regarding size, colour, bricks, and internal pressure. Fresh fruits and vegetables are sorted by the supplier before delivery and are sorted further at the distribution centre, and some vegetables are pre-packaged by producers. According to Weatherspoon and Reardon (2003) Pick 'N Pay uses EUREP and HACCP standards, requires third party certification (QC Fresh in South Africa) and is moving to require EUREP certification of all its suppliers. It also has its own in-house capacity to test hygiene in the fields and the packing plants of their suppliers.

Woolworths', which is recognized as the quality leader in sub-Saharan Africa in terms of produce, has a more intense approach to procurement. They select the seed varieties for the farmers, are intimately involved with the production approaches used by the farmers and, they prohibit their producers from supplying other supermarket chains. All producers of Woolworth are EUREP approved and the company has no flexibility in its specifications (except for a difficult growing season such as drought conditions). Woolworths' demands year round supply, hence 95% of their vegetables are grown 12 months out of the year by all their suppliers. To meet those conditions, several product lines like tomatoes are grown in greenhouses. One of the main reasons why Woolworths does not sell produce outside of South Africa, Zimbabwe and Botswana is because of the difficulty of duplicating its strictly coordinated supply chain in other countries. SPAR is attempting to mimic Woolworth's approach for their Freshline brand. The difference is that all Woolworths' stores (including the new mini Woolworths stores) must sell only Woolworths' branded produce while only 50% or less of SPAR's stores qualify for the Freshline brand. Also, the remaining SPAR stores procure from various sources, but primarily from South Africa's fresh produce markets.

Commercial producers supply more than 90% of South Africa's large chains. The majority of grower programmes in South Africa include commercial producers who have adequate packing, cooling, labelling and shipping facilities to deliver a shelf-ready product. Overall, Pick 'N Pay buys 91.5 % of fresh fruits and vegetables for its 342 chains in South Africa from commercial producers, while commercial producers supply 93% and 98% of produce for Shoprite (through Freshmark, a subsidiary of Shoprite) and Woolworth respectively. Large supermarkets in South Africa procure from open markets mainly in the case of shortages. However, they only purchase produce by producer brand name (most of the large producers in South Africa brand their products) and only products that can be stored at ambient temperatures such as potatoes, squash and apples.

There is only one chain outside of South Africa that qualifies as a large chain in Eastern and Southern Africa. Uchumi, Kenya's largest supermarket chain uses a combination of suppliers to meet its market needs. Uchumi procures only 15% of its vegetables from commercial producers, 25% from medium-size producers and 10 % from small producers. It procures 40% of its fruit from brokers, 25% is imported, commercial producers supply 15% and small and medium-size producers supply 10% respectively. Because of the insignificant number of commercial producers in Uganda, Uchumi buys approximately 51% of its vegetables and 53% of its fruits from small producers and utilizes brokers to supply the rest. Uchumi is the smallest of the large chains and is still refining its procurement approach; the company indicated that it is interested in developing a grower programme similar to that of the South African chains.

Compared to South African chains, Kenyan chains are at an interesting crossroad in their development. They are refining their procurement practices as they expand within Kenya and outside Kenya. Presently Uchumi only procures 5% of its produce under contract whereas the South African chains procure more than 90%. From 1997, when Uchumi started selling fresh produce, brokers supplied 70% of their produce. Now brokers' supply 45% and are expected to supply only 10% to Uchumi five years from now. Shoprite in Zambia and Uganda are similarly inclined to reduce their dependence on loose relationships and the open markets and buy direct through contracts within the next few years. Without this type of arrangement, the grades and standards will not be met and consumers will have little reason to buy from these markets if they can find the same or similar quality from hawkers at a lower price.

b. Medium Size Supermarket Chains

The majority of medium size chains do not use preferred grower programmes due to their limited financial capital and human capital required to operate them. As a result, most medium size chains have limited relations with producers. In fact, unlike large chains, these chains rely predominantly on brokers for produce procurement. Medium size chains buy 100% of their fruit from brokers. Nakumatt, which operates 11 stores in Kenya, utilizes the services of two brokers (Mugoya Vegetable Shop for nine of its stores and another supplier Shree Ganesh for its two more distant stores in Mombasa), and Melissa Supermarket and Konkola Hyperama, both in Zambia, procure 100% of their fruit from various brokers. Relying on brokers who buy and deliver fruit to the individual stores is the most "traditional" way that all chains traditionally use and, the small and medium chains still must rely on. That means they receive the services (which include grading based on size and appearance, but no selection on food safety criteria, the testing of which the brokers are not equipped to do) of the brokers but must relinquish part of their margins to pay for this, which the large chains no longer have to do.

The exception to this general procurement approach of using brokers can be found in the vegetable category where a combination of brokers and various size suppliers is utilized. This dichotomous approach to procurement is explained through the strong local vegetable production and the high perishability of vegetables. Medium size chains procure on average 55% of their vegetables from small producers, and 10% to 30% from medium size producers. The largest of the medium size chains, Nakumatt, totally outsources produce procurement to two brokers as it seeks to improve the produce quality (freshness) they offer. The larger of those two brokers (Mugoya) in turn purchases 60% of its vegetables from small producers. Melissa supermarket chain also procures vegetables directly from producers in addition to buying from brokers; they primarily buy from producers with whom they have a long-term relationship. Unlike large chains, medium size chains procure a large range of produce including tomatoes, leafy vegetables, onions, potatoes and cabbage from open markets (about 10% of vegetables is procured from open markets).

Medium size chains have a unique approach to competitiveness. It is common for these chains to procure from their competitors

Medium size chains have a unique approach to competitiveness. It is common for these chains to procure from their competitors and wholesalers that supply their competitors. Many medium size chains in Zambia procure produce from Freshmark, a subsidiary of their largest competitor, Shoprite. Mugoya Vegetable Shop, the sole supplier of Nakumatt in Kenya, also supplies Tusker Matresses, a competitor of Nakumatt. One explanation for this trend is that medium size chains want to improve the quality of their fresh produce to compete but, do not have sufficient resources to accomplish this on their own and, there are very few wholesalers who can match the quality and standards offered by their large counterparts. The second explanation is that these brokers debulk the product that these stores cannot handle individually, although overall the chain has the capacity. Hence, without a distribution centre, these stores are inefficient individual units with little storage capacity so the broker fulfils that function. Lastly, to reduce increases in transportation and transaction costs large producers prefer to deliver to one place versus three locations in one city.

Most of these chains have fairly low produce grades and standard levels but most medium size chains are seeking to improve this in response to increased competition from large supermarkets. They use brokers to facilitate product inspection for grades and quality, because they do not have the in-house resources and expertise. This is an intermediate step on the quality ladder with the ultimate goal to reach the quality level of the large supermarkets. As a result, all medium size chains currently assume that fresh produce meets minimal standards (hygiene and chemical application) and are inspected by the broker (the authors doubt that all or even more than a handful of brokers actually perform this function in sub-Saharan Africa but the retailers interviewed assumed this was being done). To address poor quality and spoilage, these chains do simple packaging in the backroom of the store so that their offerings always appear fresh. For the vegetable categories that are delivered directly to the store, cursory visual inspections are considered sufficient. Some pre-packaged vegetables that are sold in these stores are rejected export-oriented produce which in fact is a high quality product but does not meet the size or colour specifications of the international market. For example, about 80% of baby-corn and snap peas sold in medium-size and other supermarkets in Zambia are produced by Agriflora, a fresh vegetable exporter that redirects its second grade produce to the domestic market due to quality issues.

c. Small Size Supermarket Chains

Small chains use a combination of approaches for fresh produce procurement. Similar to medium size chains, these chains buy 100% of their fruit from brokers. However, they use small and medium size producers, and open markets for vegetable procurement. Small producers represent as much as 70% of the vegetable supply to the small chains, the remainder comes from medium size producers and the open markets. There are a few small chains that are vertically integrated and supply their own stores with vegetables from their own farms. In general, small chains do not enter formal relationships or contracts with producers, but tend to form verbal agreements with any supplier willing to supply them. Produce is delivered directly to the store and about 80% of produce is delivered in bulk. Some chains use simple packaging techniques to make the product more appealing or offer it in a more appropriate size. Vegetables are delivered in both forms, washed and unwashed, sorted and unsorted, depending on the chain's preference. As the number of large supermarkets increases and as they move into areas targeting consumers from all income levels, small chains are finding it difficult to compete. A number of small chains have discontinued fresh produce categories in Kenya for example, and have decided to focus on other categories. For those small chains that continue to fight for market share, most offer convenience -- 'niche' destination categories such as Halal meats, fresh bread and other unique products to differentiate themselves and as offer a limited selection of fresh produce.

Grades and standards for fresh fruits and vegetables are not a major concern of the small chains relative to the other chains. Small chains do not have the resources to invest in produce buyers, food technologists or third party certifiers. They trust the supplier to meet government standards for hygiene and chemical residues. However, there are no government inspections for domestically marketed produce by government agencies in all four countries. Small chains primarily rely on visual inspections of produce at the store upon delivery by the supplier and at the open markets before purchasing.

In summary, the procurement approaches of supermarkets in sub-Saharan Africa vary by supermarket chain size and are influenced by unique factors pertaining to the level of supermarket development, structural factors and policies in the country in which they operate. The need for control over the supply chain (industrialization) drives the use of both standards and distribution centres. As a result, large supermarkets prefer direct procurement approaches and use distribution centres for fresh produce delivery and processing. Medium size chains predominantly use brokers and rely on these brokers to meet quality and safety requirements. However, most are moving toward direct contractual relationships with producers. The smaller chains have no direct coordination with producers and procure from many suppliers including open markets. Large supermarkets have as much as 95% of supermarket market share in some countries and their procurement approaches have profound implications through both the challenges and opportunities they present to producers, processors and other participants in the supply chain. Given that, the general rules are: the larger the chain, the more likely it is to (1) source directly from growers where the producer base is present, (2) source from larger growers who have the capacity to meet the stiffer requirements of the larger chains, and (3) source across borders through their regional procurement systems where the local producer base does not permit preferred supplier systems (such as in Uganda). By contrast, the smaller the chain, the more likely it is to (1) continue to source as supermarkets "traditionally" have in Africa, mainly from traditional brokers and somewhat from wholesale markets; (2) source less than the larger chains directly from local growers and, tend to do that more so in the case of vegetables than for fruit (fruit is mainly grown by exporters, and South Africa dominates the export market, and it is hard to beat them on price and quality), but (3) where they do source from local growers, it is mainly for vegetables and, a substantial share is from small and medium local growers delivering directly to the stores.

3. Implications for Supply Chain Participants

The rapid development of the supermarket sector in Africa implies that large supermarket chains already influence and, will increasingly influence the structure and conditions of the agri-food system. As they increasingly dominate the retail food market, they will determine the conditions, and the potential, for small farms and firms to sell agri-food products to the urban market – at present the most dynamic food market in Africa, due to increasing urban populations and incomes. Small farms and firms need these dynamic markets to escape from poverty. Already in South Africa and Kenya, and increasingly in other countries, in particular in East and Southern Africa, it will be crucial to understand what challenges and opportunities this deep transformation in the retail sector implies for farmers, and how to help them to meet the challenges with the design of a new generation of development programmes and policies.

The essence of the challenge to African farmers and firms supplying supermarkets is twofold. First, as supermarkets are diffusing and then rapidly consolidating their procurement systems to gain economies of scale and of coordination, this means that farmers need to supply larger volume transactions than was common in traditional markets. This implies either large-scale producers scale or, tight coordination among many small farmers who aggregate their supply to meet high-volume demand over a full year.

Secondly, there are signs of a convergence between export standards and domestic retail-product standards. There may be quality differentiation for different segments of the domestic market but, safety certification is common for all produce of a given type. Private standards are put in place by supermarkets because there is a dearth of implemented public standards and food safety. Therefore, large chains use quality and food safety differentiation of products as a means to gain competitive advantage over other retail formats.

The above two changes in the market, organizational, with consolidation and a shift to non-traditional wholesalers, and institutional, with the creation of stringent private standards – occasioned by the market's being taken over by supermarket procurement systems, imply hefty entry requirements and even barriers to many farmers. Farmers and processors have to invest in organization/coordination, modern production practices, packing shed and warehouse re-configuration (this can cost as much as US$100,000 for a single large operation), and post-harvest practices and capital, such as buying their own refrigerated trucks. These quality and safety requirements impose one set of costs but, as supermarkets move from supplying mainly upper- and middle-income markets to supplying the food markets of the poor, as they are already doing in Kenya, the former homelands of South Africa, Zambia and parts of Uganda, cost will be paramount and, that will place further burdens on suppliers to be highly competitive while meeting quality and safety standards.

Sourcing practices of chains are differentiated over fruit versus vegetables and over large, medium, and small chains, in part because the (dominant) larger chains are, as noted above, sidestepping brokers and setting up preferred supplier programmes and, the latter tend to rely on large/medium suppliers and to eschew smaller suppliers. This is partially explained by the fact that brokers and traditional wholesale markets on which medium/small supermarket chains rely (to a greater degree than do the larger chains), source from many small farmers and aggregate the product. This makes traceability and quality control difficult and is costly. Thus larger chains try to sidestep this system, and also cut out the margin of the brokers. More research among growers is needed to determine whether dealing with traditional brokers (which tend to have oligopsony power) is more or less profitable for growers that work with supermarkets.

Large South African chains outside South Africa also rely heavily on direct sourcing from local producers for vegetables. In Zambia, Shoprite/Freshmark respectively buy 40 and 25% of their vegetables from small and medium farms and, most of the rest from commercial farmers and some from imports. However, large chains outside South Africa cannot yet rely to the same extent on direct purchase from local fruit growers. Table 3 shows that the large South African chains rely nearly exclusively on imports of fruit, mainly from Zimbabwe, Zambia and Uganda. Uchumi in Kenya directly purchases 35 % from growers (spread evenly over small, medium, and large fruit growers), 40% from brokers (who in turn buy 60% of their product from small farmers and the rest from the export-market-rejects of medium and large producers), and 25% from imports from South Africa. Interestingly, about half of Uchumi's fruit sourcing is direct and from small farmers in Uganda because there are few large growers of produce in Uganda. The rest is shared evenly between brokers, who in turn buy from small growers and also import from Kenya and South Africa.

a. Cross Country Procurement Continuum

In the four countries surveyed, supermarket development and procurement from small producers raise several key issues. Figure 1 shows the supermarket concentration level along the X-axis with Uganda representing the lowest concentration and South Africa having the highest concentration. Along that same spectrum the per cent of grower programmes and 'tight' contracting arrangements increase as the South African level of supermarket concentration is approached. The figure also denotes the level of difficulty of all suppliers to meet the supermarket chains' requirements. The least restrictive cases are where supermarkets chains are just establishing themselves such as in Uganda and Zambia. Producers can still deliver to the back door of the supermarket in Uganda and, currently that is the case in Kenya with Uchumi but this will be eliminated as they implement their new grower programme through their distribution centres over the next few years, thus eliminating back door delivery. In Zambia, Shoprite for example, requires most of its deliveries be made to the distribution centre at the producers' expense. The most difficult market to supply in sub-Saharan Africa is the South African market because it is quickly adopting European and American hygiene, chemical, production, storage, packaging, processing, shipping and social standards.

The Y-axis in figure 1 denotes the probability small producers have in supplying these large chains across countries. This figure shows that as supermarket concentration intensifies, small producers' presence in the supply chain diminishes. In the Ugandan case there are thresholds beginning with minimum standards being requested. This is to a certain extent required in the Zambian case depending on the availability of the products. There is a mixed approach in Kenya and absolutely demanded in South African. It is hypothesized that there is a threshold, roughly between Kenya and South Africa's level of supermarket development concentration, where it is very difficult to almost impossible for small farmers to become suppliers to supermarkets without help (from donors, governments, or the chains themselves) because they lack the resources to meet the requirements of the chains. As noted below for example, most if not all of the small farmers supplying supermarkets in South Africa are doing so with some sort of outside assistance.

b. Large Chains Limited Response to Small Supplier Exclusion

Large chains are beginning to source from small farmers- where government, donor, and/or projects have been put in place to 'upgrade' the small farmers to meet the needs of supermarkets and to overcome the inherent disadvantages of the smaller growers in this more demanding market. Examples include Luangeni, and the USAID project "Partnerships for Food Industry Development" implemented by Michigan State University in partnership with the University of Fort Hare, in which small farmers are assisted in meeting quality standards at costs comparable to those of larger farmers, for sales of squash to the Pick 'N Pay chain in South Africa. In both cases, the supermarket chain is partnered with donors, NGOs, and the government to address supply chain constraints. The small farmers have the pull-factor incentive of selling to a stable market for good profits, and the push-factor incentive of knowing that the same chain can buy squash from large farmers.

The latter will become more and more of a pressing factor if, as predicted to be likely, there will be the same rapid exclusion of thousands of small African farmers from supply lists to supermarkets and large food manufacturers that has been observed in Latin America over the past five to ten years as similar processes unfolded.

The net outcome for the small farm and firm sector of the emergence of supermarkets will depend in the coming decade on the mix of the above three paths (centralization of procurement, a shift away from traditional brokers, and a move toward preferred supplier schemes) that supermarkets take in procurement. It is worrying to observe that large farmers are able and want to rush into supply relationships with supermarket chains, thereby taking the key positions in the supplier lists, and hopeful to note that donors and governments are beginning to see the challenge and opportunity of this retail transformation and to help small farms and firms to position themselves so as not to be crushed by the change.

A crucial element is that the rise of regional procurement systems by supermarkets will is expected to have a potentially large impact on intra-regional trade in Africa, essentially using the powerful logistical mechanisms of supermarket procurement systems to end the fragmentation of markets. This can be observed in the way that Shoprite's procurement system has integrated the produce markets of South Africa and Zambia, at least to a much larger degree than in the past. Shoprite asserts that this has reduced average prices of produce to Zambian consumers by 30%. That is good for Zambian consumers, who now reap the benefits of regional trade but it means that Zambian horticultural producers suddenly have to compete in a regional rather than in a local traditional market. Local horticulture development projects thus need to become 'trade projects' (either to compete with imports simply to survive locally or, to export to neighbours via the procurement system of the regional chain) because of the force of this integration.

c. Impacts by Supply Chain Function

The emerging supply chain, from the current developments and supermarket procurement approaches, point to a combination of two systems: one of traditional "business as usual" with low grades and standards with high wastage from products not finding markets; and the second system that is a sophisticated supply chain driven by high quality and superior standards.

The dichotomous system will create winners and losers. However, the intensity of loss depends on which system becomes dominant. In this chapter, it is *assumed that the current trends will continue and the sophisticated supermarket supply system will dominate.* This assumption is made to foster a complete discussion of the issues and due to the fact that there are no logical reasons why sub-Saharan Africa would have a different trend from what has been observed in other developing regions with respect to supermarket development and the resulting ramifications of it (Reardon, T. et al, 2002 and 2003).

Traditional Brokers: Brokers are the clear losers in the modern supply chain as supermarket chains seek to contract producers directly. Traditional brokers are not able to ensure traceability, food safety, and production methods—all of which the large chains are concerned about. There is a role for specialized certified brokers who aggregate product and offer these types of services.

Small Producers: Small producers are also at high risk of becoming marginalized in the new supply chain if they are not able to meet stringent quality and safety requirements and offer the product in a shelf ready format 365 days a year. As chains mature in a market, there is a transition away from open markets, small producers and brokers towards larger commercial producers who can meet volume and quality consistency requirements. Although all supermarket chains interviewed indicated that they are willing to procure from small producers, they strongly emphasized that the producers must be organized and have one marketing representative. Hence, in the future only organized producers who are focused on quality will participate in the more lucrative supermarket supply chain through contractual and partnerships arrangements. Two examples of such arrangements include the Pick 'N Pay partnership with small producers in the University of Fort Hare area, South Africa and, the Luangeni Project in the Chipata area of Zambia with Shoprite. In addition, Boselie et al. (2003) discuss other projects that have been successful in supplying large chains in other developing countries.

Processors: Processors are also at risk as supermarkets incorporate packaging, slicing and dicing functions into their businesses, utilize specialized firms or import highly finished products. Processors located in the poorest of the countries are particularly at risk, as it is difficult to meet consumers' standards for exciting new products similar to those originating from South Africa, Europe and the United States. In addition to product quality, imported products tend to be cheaper than locally processed products. For example, passion fruit juice manufactured locally in Uganda by Britannia is Sh300 (US $.17) more expensive than the imported juice from South Africa. A report on the competitiveness of Zambian industries (Jaffee et al, 2002) shows that imported processed goods from South Africa are 30% cheaper than locally produced products. Currently, highly processed goods in supermarket chains in Zambia and Uganda are dominated by imported brands, while local brands of processed products dominate the low value and bulky categories in all chains. Processors can improve their probability of survival by being in the contract loop with the producers since most supermarkets want to use the same producers that supply them with fresh produce to minimize inspection and transaction costs. Woolworths uses this model to insure product quality and safety for fresh and processed products.

Medium and Small Chains: Small chains and independent single-branch supermarkets were the first to experience the impact of the expansion of large chains. The rise of 1,700 supermarkets in South Africa for example is roughly equivalent to 350,000 "mom and pop" stores in terms of sales (Reardon et al., 2003). Shoprite's arrival in Uganda and Zambia has had a strong negative impact on the revenue of small stores in the area (Robinson, 2001 and Haggblade S. et al, 2002). Unless these chains identify a niche that the large chains find difficult to address, they will continue to be at risk and may be squeezed out of the market.

Furthermore, small and medium retail chains procure produce from wholesale stores owned by their competitors (large supermarket chains such as Shoprite, Megasave, which is owned by Shoprite, and Metro Cash & Carry) or wholesalers serving competitors. This approach of large supermarket chains targeting other retailers as customers, has not been observed in Latin America or Asia, and is a major threat to small chains, as it creates dependence on the large chains. It is even a larger threat to the small wholesalers who were supplying the small retailers.

However, medium and small chains can survive and even thrive in this new environment as witnessed in Zambia. Several chains offer a destination category that Shoprite does not carry such as Halal meats. Konkola Hyperama and The Pantry Shelf sell Halal meats, are vertically integrated in the vegetable categories, and they both feature products from small producers. **A combination of such niche marketing, social branding and improving produce quality are key approaches for small and medium size chains to survive the new wave of supermarket growth**.

Wholesale and Open Markets.. Traditional markets will continue to play an important role in fresh produce supply to urban consumers, especially to low-income consumers. Open markets vary in terms of hygiene conditions across the four countries. Soweto Market of Zambia for example, is a prominent distribution centre, especially for agricultural products including vegetables coming from countries such as Tanzania, South Africa and Zimbabwe. It is a dynamic market, but due to the poor hygienic conditions, supermarkets do not procure produce from this market. In South Africa, hawkers sell approximately the same value of produce as supermarkets. Supermarkets have voluntarily withdrawn procuring from the 17 open markets of South Africa in pursuit of increased quality through direct contracting with producers. Before the opening of Shoprite, Nakasero Market in Uganda was the market of choice for middle and high-income consumers, while Owino Market continues to serve low-income consumers. Since these markets are important centres for the sale of many small producers' fresh fruits and vegetables to urban consumers, improving quality, cleanliness and other hygienic conditions and, most importantly, assuring traceability of fresh fruits and vegetables, can attract supermarkets to procure from produce markets, thereby including small producers in the supermarket supply chain.

4. Recommendations

The growth in foreign direct investment by supermarket chains is a direct result of the decline of tariff/quota barriers, the free flow of capita, and, improvements in supply chain organization, logistics, and management. All of these factors make it possible to sell locally and source globally with little or no reduction in product quality. The new global markets have quickly become a *"knife edge", speeding up success and failure, increasing the stakes either way, and making it important that programme approaches change so that traditional supply chain participants end up on the winning side of change.* This report shows that supermarkets are the dominant players in the market and will expand their presence throughout the countries in question. Anecdotal evidence from Latin America suggests that the food markets for the poor are deeply affected by these changes in the food system spurred by rapid consolidation at the buying end of the supply chain. Therefore, there is every reason to rapidly adjust the nature of assistance programmes to meet the new challenges and the new opportunities for small firms and farms.

Poverty and food security programmes in response to the rapid rise of supermarkets in developing countries must assume that the rural poor are no longer isolated and insulated from the effects of global markets simply because the poor have opted not to participate in export markets. In many countries supermarkets have saturated the big city retail sectors and are spilling over into the smaller cities and rural areas. This has already occurred in South Africa and is occurring in Kenya and Zambia. This means that supermarkets have already moved, or are fast moving, far beyond the middle class food markets and the big cities, into the food markets of the poor. This affects the poor as consumers (in some cases positively, as the competition among supermarkets and other retailers can drive prices down), but also affects the poor as producers.

In terms of economic growth programmes, donors should ensure that their projects are market-demand driven, not projects that only require participantsto make incremental changes. By contrast, a market-demand driven approach would start by identifying the principal buyers that are leading the market, trending toward dominating the dynamic urban markets and setting their standards. These change agents are the supermarket procurement officers of the leading chains and, the procurement officers of the main fast-food chains and large food manufacturers.

A strategic demand driven programme should then start by understanding the buying requirements of the supermarkets and other main food industry firms. Then the suppliers' capacity to meet those requirements (quality, safety, consistency, volume, packing, packaging, cold chain, etc.) should be assessed. If the suppliers are able to meet the supermarket requirements and the project has the capacity to take the challenging but rewarding road of meeting the requirements, then the appropriate investments must be made by donors, entrepreneurs, supermarket chains and government. Examples of these types of partnerships between small producers and supermarket chains can be found in Boselie et al., 2003. However, if the decision is to supply the traditional supply chain only, then an assessment should be made of what steps producers should take (on the supply side) to gear up to meet the requirements of the wholesalers and retailers, who are continuously battling supermarkets for market share. For example, in Latin America and South Africa sometimes the wholesale/open markets and small chains/retailers that survive in the new supply chain system in developing countries are quickly taking on many characteristics of their competitors, just as one would expect in a competitive system. Thus, one sees the current formation of open markets and small shop associations, upgrading of hygiene and quality in open markets, the use of information technology and other technologies to reduce actual and transaction costs. This is done through similar approaches of consolidation of purchases, increase in demand for volumes and consistency, and a shift toward tougher requirements for quality and safety. This results in the secondary markets becoming more stringent on who supplies them just like the supermarket chains.

That means that projects focused on spurring economic growth and income-augmenting opportunities for the "poor" should no longer use the approach of business-as-usual, where the “let's-find-markets-for-what-we-produce,” philosophy dominates. This is no longer an appropriate approach since it ultimately relegates project participants to failure in such a dynamic market. Instead, even projects which elect not to sell to supermarkets but choose to help their producers to sell to the remaining secondary market, will have to mimic supermarket supply systems. These markets will be improved but, they will still lag behind the supermarket chains in terms of quality, safety, and year-round supplies. These markets will have a major emphasis on keeping costs down and efficiency up and, increasing volumes while reducing organizational coordination costs and other transaction costs.

Hence, the nature of the different types of projects should converge, even while the levels of investment and effort will necessarily vary. This e means that there should be a blurring of lines and distinctions between "local market" and "export market" type development programmes. The distinction between the global and local markets has in reality blurred, as global has become local. For example, supermarket procurement officers in Uganda commonly import tomatoes from Kenya or apples from South Africa. Now that those chains are there, and the consumers are running into the stores, voting with their money, the local producers must contend with a suddenly—regional, suddenly global, set of competitors, in their own backyards.

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A specific approach to addressing this issue would be four-pronged, organized in a set of "transaction-initiatives" aimed at small producers and processors selling particular products to particular chains.

(a) Demand side: identify buyers and their requirements, through significant interaction between the supermarket chains' procurement officers and the potential suppliers (beneficiaries of the project). Facilitate interactions among the actors in the supply chain and the supermarket. In addition, include other private sector participants such as seed companies, packaging companies, financial institutions.

(b) Supply side: identify specific constraints in the supply chains that prohibit the producers/processors from meeting the requirements, starting small with a few products to resolve constraints and organizational issues and then expanding rapidly to additional products. The latter includes significant work on production and post-harvest technologies and commercial practices of the farms or firms –and, work on seeds, cold chains, packaging, logistics, crop calendars, certification for particular attributes such as food safety, and so on. This supply side activity is meshed with iterations and feedback between buyers and sellers until both buyer and supplier are satisfied and the relationship is sustainable.

(c) Parallel activities by the project to improve the overall context of the transaction, such as linking to larger investment donors or government projects that are improving roads, installing irrigation, rural electrification, building greenhouses and pack houses, or supporting and participating in efforts to improve certification and food safety standards systems. Those actions help promote local and regional economic competitiveness and growth in trade.

(d) Lessons concerning constraints and promising practical opportunities gleaned from the above development actions, may then be fed into strategy and policy development at the country and regional levels and, into institutions in the country, to make this process sustainable.

The demarcation of the traditional roles of donors, governments and the private sector should also be blurred, each assisting in specific aspects of the project as needed. For example, supermarkets are not in the development business but are usually willing to invest in community projects if a return on investment is foreseeable. Examples of partnerships between small producers and supermarket chains can be found in Boselie, Henson and Weatherspoon (2003). Such initiatives are sine qua non in linking producers to lucrative market opportunities and their success depends on strong synergies among donors, government and the private sector to help organize producers, identify niche markets, and provide the necessary assistance that will enable producers overcome their constraints and meet the requirements of the new supply chain.

In summary, donors must provide the necessary resources and organize stakeholders to better position themselves to invest in market driven strategies versus production driven strategies that will kick-start sub-Saharan African produce markets, such that they become relevant and competitive globally. Public-private partnerships are required to ensure the survival of the traditional supply chain participants (note, the retention of the traditional supply chain itself is not suggested). Governments and donors engaging supermarket chains and other private firms as partners along with the community to meet market demands, are crucial to creating a positive future in sub-Saharan Africa.

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Table 1

Supermarket Chains and Retailers that sell Produce with respect to Market Share, Future Growth and % allocated to FFV by Country

Country	Chain/Store Name	Year Established	# of Supermarkets in Country	Market Share by Value	% of store allocated to FFV	Future Stores within 5 years	# of DCs	Future DCs within 5 years
Kenya	Nakumatt	1985	11	35	3	10	1	1
	Uchumi	1975	29	35	1-9	20	1	1
	Metro Cash and Carry[1]	1997	3	5	0	17	0	0
	Others	Varies	160<	25	varies	NA	NA	NA
Uganda	Nakumatt					2		0
	Shoprite	2000	1	55	7.5	8		1
	Uchumi	2002	1	40	9.5	2		0
	Metro Cash and Carry[1]		1	2	1			
	Payless		5	.5	varies	0	0	0
	Others	Varies	varies	2.5	varies	1	0	0
South Africa	Pick 'N Pay	1968	342	40	7		4	
	Spar	1963	492	6	7		6	
	Shoprite	1979	360	40	6		6	
	Woolworths	1931	120	6	2	100[2]	3	
	Other	Varies	1500<	8				
Zambia	Melissa	1991	3	25	10	1		
	Shoprite	1997	19	60	6-8	0	1.5[3]	0
	Other	Varies	100<	15	Varies	0	0	0

[1] Metro also have 17 convenience stores called Cash and Carry, they closed their produce section in Kenya and reduced the size in Uganda.
[2] Woolworths will add 100 stores in the next couple of years with smaller format of 220 Sq. meter store with foods only.
[3] Shoprite has one distribution center in Lusaka and one depot in Kitwe.

Table 2

Foreign Direct Investment by South African and Kenyan Supermarket Chains in the rest of Africa

Country	Chain/Store Name	# of Stores in Country	Future Stores	# of DCs	Future DCs
Botswana	Shoprite	4			
	Spar				
	Metro Cash				
	Pick 'N Pay's	11			
Egypt	Shoprite	3			
Lesotho	Shoprite	3			
Malawi	Shoprite	2			
Mauritius	Shoprite	1	2		
Madagascar	Shoprite	5		1	
Mozambique	Pick 'N' Pay				
	Shoprite	3			
Namibia	Shoprite	18[1]		1.5	
	Spar				
	Metro Cash and Carry				
	Pick 'N' Pay	9			
	Woolworths				
Swaziland	Shoprite	2[2]			
	Pick 'N Pay's	6			
Tanzania	Nakumatt		2		
	Uchumi		1		
	Shoprite	5		1	
Zimbabwe	Shoprite	3		1	
	Pick 'N Pay's	53			
	Woolworths				
	Spar	58			

[1] An additional 11 Megasave stores are in Namibia.
[2] Swaziland has an additional two Megasave stores.

Table 3
Procurement Approach by Supermarket Chain Size for Fruit in South Africa, Kenya, Zambia and Uganda.

		% of Fruits Procured by Supplier Type						Chain Procurement Characteristics	
Store	**Country**	**Small Producers**	**Middle Size Producers**	**Commercial Producers**	**Open/Wet Markets**	**Brokers**	**Imports**	**Deliver DC/Store**	**% Contracted**
Large Chains									
Freshmark/ Shoprite	South Africa	0.5	0	93	5	0.5	1	DC	93
	Zambia	0	0	0	0	1	99	DC	0
	Uganda	5	5	0	0	10	80	Store	0
Pick 'N Pay	South Africa	0	0	91.5	5	2.5	1	DC	94
Woolworths	South Africa	0	0	98	0	0	2	DC	100
SPAR	Southj Africa			80	10	10		DC	80
Uchumi	Kenya	10	10	15	0	40	25	Both	5
	Uganda	53				22	25	Store	0
Medium Size Chains									
Melissa	Zambia	0	0	0	0	0	100	Store	0
Nakumatt	Kenya	0	0	0	0	100	0	Store	0
Konkola Hyperama	Zambia	0	0	0	0	1	99	Store	0
Small Chains									
Kabulonga Supersaver	Zambia	0	0	0	0	100		DC	0
Chandarana	Kenya						100	Store	0
Rendevouz	Zambia	0	0	0	0	100		Store	0
Embassy	Zambia	0	0	0	0	100		Store	0
The Pantry Shelf	Zambia	0	0	0	0	100		Store	0
Payless	Uganda	0	0	0	100	0	0	Store	0
Tusker Mattresses	Kenya					100		Store	0

Table 4
Procurement Approach by Supermarket Chain for Vegetables in South Africa, Kenya, Zambia and Uganda.

		% of Vegetables Procured by Supplier Type						Chain Procurement Characteristics	
Store	**Country**	**Small Producers**	**Medium Size Producers**	**Commercial Producers**	**Open/Wet Markets**	**Brokers**	**Imports**	**Delivery DC/Store**	**% Contracted**
Large Chains									
Freshmark/ Shoprite	South Africa	0.5	0	93	5	0.5	1	DC	93
	Zambia	40	25	30	0	0	5	DC	0
	Uganda	20	50			30		Store	0
Pick 'N Pay	South Africa	0	0	91.5	5	2.5	1	DC	91.5
Woolworths	South Africa			98			2	DC	98
SPAR	South Africa			60 +				DC	80
Uchumi	Kenya	10	25	15	0	45	5	Both	5
	Uganda	51				28	21	Store	0
MediumSize Chains									
Melissa	Zambia	26	31	31	10	0	2	Store	0
Konkola Hyperama	Zambia	40	0	10	10	20	20	Store	0
Nakumatt[1]	Kenya	0	0	0	0	100	0	Store	0
Small Chains									
Kabulonga Supersaver	Zambia	40	10	37	10	0	3	Store	0
Chandarana	Kenya					100		Store	0
Rendevouz	Zambia	55	25	10	10	0	0	Store	0
The Pantry Shelf	Zambia	70	20	10	0	0	0	Store	0
Tusker Matresses	Kenya					100	0	Store	0

Figure 1: The Probability of Small Producers Entering the Supermarket Supply Chain Without Donor Assistance and the Level of Quality and Standards Required with respect to Supermarket Concentration.